

Developing a Twenty-First Century Faculty:
Institutional Structures and Strategies for Online Instruction

By Alice Bedard-Voorhees

© 2006 For Use or Transmission with Author's Permission
Direct Requests to bedardvoorhees@earthlink.net

Introduction

Higher education faculty members are part of the 21st century workforce and are simultaneously charged with educating the “21st century citizens” who attend colleges and universities (Carew, 2004; Miles & Wilson, 2004). The defined competencies for the 21st century include these categories: “Communication skills...computational skills...community skills...critical thinking and problem-solving skills...information management skills...interpersonal skills such as teamwork...personal skills...and technology skills” (Miles & Wilson, 2004, p. 90). In addition to naming learner competencies, a partner effort has been the identification of what is termed “21st century learning” (Carew, 2004, p. 6). This K-12 and American Association of Community Colleges effort characterizes such learning as experiences that “ 1) Emphasize core subjects; 2) Emphasize learning skills; 3) Use 21st century tools to develop learning skills; 4) Teach in a 21st century context; 5) Create 21st century content; and 6) Use 21st century assessment to measure skills” (Carew, 2004, p.6).

Like other workplace-learning organizations, higher education is likewise challenged by changing times to identify added or adapted functions, and also challenged with the assessment of workforce capacity for carrying out new practices (Senge, 1991; Barger & Kirby, 1995; O’Banion, 2000). Especially in the last twenty or so years, higher education has been charged by political and public bodies for accountability for learning outcomes, transferability, fiscal efficiency, and the incorporation of technology. While the attraction to higher education is the tradition of learning, it is the driving forces of change that have surfaced faculty development needs, especially in online deliveries where the logistics of delivery contrast with familiar methods of instructional development.

For many states, financial resources have not expanded to accommodate the increasing demands on institutions. A call to prove what students have learned became evident with the national report card, vocalizations that higher education needed to respond to the preparation of the twenty-first century workforce (Carew, 2004, Miles & Wilson, 2004), and increasing enrollment by learners in online courses (Carnevale & Olsen, 2003). Partially in response, community college faculty have developed online or hybrid deliveries. And, while general opposition to such delivery has greatly diminished (Berge & Muilenburg, 2001), the degree of enthusiasm for adoption is affected directly by administrative and faculty investment. If institutions are to increase their capacities for delivering effective learning experiences via online courses, addressing the needs of faculty development will necessarily involve addressing organizational development and support (O'Banion, 2000).

As is the case for all professional development, the first step to defining professional development is needs assessment. In online learning, the needs assessment calls for consideration of the academic organizational culture, a plan for leadership and support, and the identification of faculty skills. Surfacing existing professional development models from a variety of sources for what might be learned is also of value in this process (Senge, 1991).

Defining Online Faculty-Development Needs

The Academic Context

The discussion of faculty development for online teaching now includes such terms as workforce and training, in addition to the term professional development. Both training and organizational development literature reinforce that the value of training or professional development is only as good as its power to enact the change that the effort was designed to facilitate (Robinson & Robinson, 1995). Facilitators of such efforts (academic or other) also

recognize the attitudinal or affective processes that accompany the cognitive elements that are part of the change (Baltzar, 1991). Expression of the affective often surfaces the issues in the organization itself (Gaff, 1997).

A traditional expectation at both the four-year and community college levels is that faculty have discipline expertise and to varying degrees and will continue to develop that expertise through ongoing scholarship. Technological developments now make possible the ability to access research materials in faster, more efficient ways, capacities with attached costs. Technology as a learning medium has become both an employer and student-related expectation as well, since the world that learners enter call for professional engagement that includes communicating with other via technology, collaborating in groups via technology, and creating information via technology (Bates, 2000; Carew, 2004; Wilson and Miles, 2004). And while well-educated learners were once defined as learners who also had content expertise; competitive graduates now have technology skills which often include the use of both common software and specific, discipline-specific tools, such as CADD for drafting, or at least one kind of accounting or bookkeeping software. Additional expectations easily include online communication and collaboration skills, technological extensions of “soft skills” (Carew, 2004).

These various technological capacities also make possible the creation of new knowledge at a more rapid rate and with it the demand those faculties keep up with an expanding body of knowledge. One of the challenges is how to make decisions about what students should learn, while a number of faculty have limited if any preparation related to curriculum development or other instructional elements.

In the academic culture, where the faculty role has been identified with expert status, the idea of a changing body of knowledge and the use of technologies has surfaced stress and

anxiety from some of its members. One such example of this fear is reflected by a recent remark from a faculty: that a faculty did not want to risk using a technology if she might appear less than competent, and in turn such a display might undermine student confidence in her discipline expertise. And, while PowerPoint does not a faculty make, the denial of the use of technological tools on the part of faculty is equally unnerving. A paper recently presented at the Rocky Mountain Modern Languages Association Conference posited that full-time faculty who refused to adopt technology-based deliveries were contributing to the decrease in full-time positions because technology-savvy adjuncts were being hired to pick up course offerings (Rothfork, 2004).

As if these challenges are not enough, both two and four-year institutions continue to see a decline in the number of full-time teaching positions. These statistics create an additional set of challenges, since the growth of distance education provides opportunity for increased enrollments (Carnevale & Olsen, 2003). Both convenience and the attraction of online learning to a younger generation of tech-savvy learners are just two reasons for increased enrollments (Ryland, 2004).

A systems approach to the adoption of distance education is important if an institution is to successfully incorporate distance-education models as one of its integral instructional deliveries (Golden, 2004). Just as technological developments drive a number of expectations for creating online learning in the first place, the decision to offer online education invites a number of changes from all parts of an institution, whether the online learning is at a small scale or a large scale. In addition to direct instructional capacities, the full realm of support calls for administrative leadership, technology purchases, student and faculty technical support and security, and academic support for such transactions as book purchases, and registration and

transcribing (Lynch, 2002, WICHE/WCET, 2001; Elliott, Ambrosia, & Case, 1999; Colorado Community Colleges Online, 2004).

Organizational Leadership and Support

Since the eighties, faculty who were early adopters explored distance education strategies on their campuses. As the message spread that technology was the solution to becoming higher education of the future, some campuses mandated investments in technology with or without training or professional development. Expert, experienced leaders in technology-based education remark to the academy that the adoption of the technology by an institution has a number of implications; that such a plan needs to provide for investment in all critical elements of support and operations, provide for its operations over time, and allow for upgrades, maintenance, and the personnel providing those functions. (Ryland, 2004; Bates, 2000). In developing this expertise, leaders themselves need to become comfortable with technology (Golden, 2004). To this end, savvy leaders will place distance education on their strategic planning agendas, incorporate change-management plans, and incorporate project management for building successful implementations (Guskin & Marcy, 2003; Bates, 2000). More so, such structures should incorporate parallel efforts at the department level, since such system-wide efforts need to be informed from the bottom up and conversely communicated by the institutional decision-makers from the top down. Included in such efforts is the provision of models that show how such implementations might work and to what positive effect (Kirkpatrick, 2001).

The Role of Leadership

The reticence of administrators toward the offering of online deliveries is now typically a non-issue (Berge and Muilenburg, 2000). This may well be due to the evidence that distance

learning efforts are both a growth opportunity (Carnevale & Olsen, 2003) and a common part of higher education instructional deliveries, driven by student expectations (King, 2001). Berge and Muilenburg's (2001) later study did find that faculty time and compensation was the top barrier to distance deliveries, a finding important for departmental leadership. How scholarship and service activities are credited for performance review also enter into this discussion, including such requests as credit for the creation of learning objects (Kolitsky, 2003). The charges to deans and faculty chairs can be defined in these ways: Deans are asked to provide an authoritative voice on institutional practices and are critical actors in faculty contract discussions (Bright & Richards, 2001): A dean can accept or refuse to acknowledge digital research-based products as part of faculty performance, and a dean can forward the opinion that it is time for digital contributions or peer-technology training be considered in the realm of activities. As the role of the chair is to advocate on behalf of the faculty, and act as a conduit between faculty and the larger institution, a faculty chair can likewise forward capacity with willing faculty through departmental team-building (Lucas, 1994).

Until recent times, administrators were blessed or blamed with judgments about institutional costs. But now both faculty and administrators face directives for cost, content, and quality by decision makers. Both administrators and faculty are challenged to work together to forward a voice over such decisions, and a part of this effort is to get faculty to think in fiscal terms about curricular issues. One example of a voice-over-cost practice can be seen in the results of a survey of faculty by administrative library staff at the University of Idaho: when given the choice of a customized "My Library" service over more database sources, faculty chose the investment in additional databases or content, including a request for more digital graphics. They also said they needed more instruction on how to use such resources (Jankowska,

2004). Jankowska also reported that the institution also realized that administrative efforts to best utilize the budget toward library acquisitions could also be better utilized with additional training of the faculty.

An often overlooked area is technical and instructional support for online faculty. In *Managing Technological Change: Strategies for College and University Leaders*, scholar-practitioner Tony Bates (2000) notes that ignoring faculty support is a serious oversight to successful distance education efforts. So whether it is the faculty bringing forward fiscal budget projections from the faculty side, or whether it is the Chair or the Dean, at least one of these leaders needs to forward the provision for faculty technical and instructional support. Models for doing so are included in a later section of this paper.

Faculty as Continuous Learners and Metacognition

Recognizing the emotional side of the change equation. Baltzar (1991), an IT specialist with Maricopa Community College District, provides an analysis of the success of early technology adoptions based on the Bouldin's 1989 Concerns-Based Adoption Model. Participants experienced what Bouldin called "stages of concern" and "levels of use" (as cited in Baltzar, 1991, p. 12). The Concern-Based Adoption Model addresses the total needs of learners moving from Bloom's affective, then cognitive domains, and on to the psychomotor taxonomies. This continuum provides a way to understand the learner's emotional response, then need for information, and at last moving to the skill/technology-based part of the learning. The beginning first three stages of concern: awareness, informational, and personal align with Bloom's affective taxonomy. Baltzar (1991) continues by saying that the participants then needed language to discuss the change, examples to see how the technology worked, and then given a safe learning environment to learn the use of the application. She also reports how the administration

enthusiastically motivated users to apply the technology through contests and rewards (Baltzar, 1991). This model continues with Maricopa today. In visiting the home page of their object repository, a person will observe that contests are used to motivate departments to contribute new objects to the learning object repository known as the Maricopa Learning Exchange (MLX) (Maricopa Community College District, 2005).

Leaders' investment in a safe environment. In 1998, four Houston area provosts invested in a shared faculty development initiative know as COW. It was the first of what was intended to be an annual workshop series to educate faculty to the expectations related to preparing and delivering online classes. Faculty were paid to attend the initial workshop and were also paid extra or released to develop a course. They then were re-convened to showcase their work and share feedback about the experience itself. In rating the professional development initiative, seventy-four percent of the one hundred-fifty participants rated the workshop as “excellent” and twenty-six percent rated it as “good.” No ratings were lower (Kidney, 2004, History of Cow). Participants named these features as contributors to COW’s success: 1) The structure of the sessions themselves supported faculty networking, 2) Sessions provided a balance of theory and practice, 3) The workshops provided a chance to work with the tools, and 4) Faculty were given a safe learning environment.

Kidney (2004) ends this project summary with a list of considerations for future sessions, based on additional faculty feedback: 1) Faculty want to have a chance to develop course content as they take the workshop; 2) Faculty want more time for question and answer during the sessions; 3) Faculty want more of the experience to happen online; 4) Discipline-specific workshops are desirable for some topics. Last, Kidney reports that an administrative workshop is also under consideration to “better enable administrators to understand the time, effort, and

commitment required to design, develop, and deliver online instruction” (2004, “Future Derivatives of Cow”).

Skill Sets for Online Faculty

Defining the skill sets. Recommended faculty skill sets are those which serve good instruction in both online and face-to-face environments, though the use of the technology itself as the means for convening the class is important. Additional differences do exist in some aspects of online deliveries; to that end we can see the additions made to those practices by Chickering and Erhmann (1996). An additional impetus is as faculty become more facile in online deliveries, they may also realize which models are better deliveries for some courses as well all as how new tools and new strategies might strengthen the learning experience in an online delivery.

Several sources are helpful in identifying online faculty development needs: 21st Century Learning (Carew, 2004), Chickering and Gamson’s (1987) best practices, and the Western Cooperative of Educational Technology’s best practices (2001). The design of such training for online faculty includes these topics: learning-to-learn, instructional design and assessment, human development theory, online facilitation skills; such skills include instructional, technological, communicative, and facilitative competencies (Moore, Winograd, & Lange, 2001; Elliot, Ambrosia & Case, 1999).

Informal learning networks as well as formal training provide opportunities for the professional development of online faculty. While some sources indicate the team model for the development and support of online instruction, a single faculty may shoulder all of those roles, or may be expected to be part of a team that accomplishes this same feat (Williams, Paprock, & Covington, 1999). Most obviously, the easiest efforts involve early adopters (Bates, 2000), but

examples of sound efforts include early trainings which focus on proficiency, with more advanced trainings for developing faculty excellence.

Immediate Training for Proficiency

Priority skills. Faculty may or may not need to create the content, depending on institutional culture. However, initial professional development would include an introduction to instructional policy, technical training for the operation of the given delivery platform, and very importantly, training to transactional expectations in the online environment (Pratt and Palloff, 1999; Elliott, Ambrosia, & Case, 1999; Salmon, 2000). For example, included in the transactional elements are expectations for learners in the course, and institutional expectations for such exchanges such as tone, timeliness, and amount of communication, and informational privacy (Pratt & Palloff, 2001; CCCOnline, 2004; Salmon, 2000). If the instructor is expected to develop the course content or work with a designer, the basics of instructional design, and design policies and procedures are recommended. Guides such as *You Can Teach Online* (Moore, Winograd, & Lange, 2001) can prove helpful, if the institution has not developed its own. Accounts of faculty racing toward the term date to hurriedly hurl content into cyber classrooms do exist and such hasty actions can impact the course experience in a negative way, even though determined learners have been known to persist in terrible courses.

Technological proficiency. Faculty need to know the procedures for the tools they are about to use, and orientation, documentation, and additional support during the early adoption phases are part of the first of WICHE's defined practices (2001). In this writer's experience, faculty who are very uncomfortable with the technology may even del-select from going online during hands-on training, and this can actually be a desirable situation.

The desirable end to faculty technology training, is the same as for the learners they will have in their classes—the knowledge of participants about how the tools serve their teaching goals, clear instructions and tasks to help them succeed at the learning, and assurance that there is a learning curve for all who are learning about new tools. As a competency-oriented practitioner, this writer has argued for faculty training that focuses on the core processes within course management systems, as opposed to information overload about the capabilities of an entire technological system. The required training must also be completed before a faculty can be issued a contract; additionally the chair receives communication about prospective faculty having difficulties in the training, and the chair can opt to provide extra technical coaching and support if the faculty is motivated to make it up the technology learning curve.

Transactions and an understanding of learner characteristics and the conditions of learning. A range of learners now enter the online classroom, both adults and more traditionally-aged learners. The literature characterizes each group's needs differently, though they share at least one common skill-gap. Understanding their developmental needs is key to providing a quality learning experience. Both adults and traditional-age college students who most currently are called .coms, millenials, or “digital immigrants,” (Prensky, 2001) can include recent immigrants from other countries, home-schooled learners, and learner whose education has been interrupted, though they are now returning to a formalized system of education. Such adults like to have choices in what they learn, lean toward self-directedness (Knowles, Holton, & Swanson, 1998) and would like learning to be enjoyable (Wlodowski, 1998). A significant number can be characterized by a fully digital childhood. They are very comfortable with technology and are used to multi-tasking. Thrive on interactivity; a common expectation is that activities provide immediate feedback and are fun. Digital natives sometimes exhibit a lack of deeper thinking

goes with the developmental expectations for this age group (Prensky, 2001). Familiarity with the learner populations and likely expectations and means can help the faculty consider their part in interacting and responding to a variety of learner expectations and needs.

Transactions: the faculty role in course facilitation. The role of course interaction in a course is important and can take a number of forms, involving peer-to-peer interaction, and faculty-to-learner interaction (Thurmond and Wombach, 2004; Pratt & Paloff, 2001). It is important for learners to know faculty members are present, positive, and attentive to learner questions and participation (Coppola, Hilz, & Rotter, 2001; Rossman, 1999; Graham, Calgitay, Lim, Craner, & Duffy; 2001). While it does take time and experience to refine facilitation skills, there are a number of practices first time faculty can immediately incorporate: introducing themselves, sending first day welcome emails, timely responses to emails, discussion posts, and communicating about the usual amount of time for grading papers are all practices faculty should learn about in their initial training. An example of standards which support observable behaviors for positive facilitative interactions, view CCCOnline Faculty Gold Document at http://www.cconline.org/faculty/faculty_goldstar.htm (CCCOonline, 2004). Since questions may well develop once the course is in process, faculty should also be given the name of a peer or their chair as a person they can talk to if they have questions or concerns about transactions with learners.

Instructional Design

If each faculty is also to design the course, professional development for proficiency does become more elaborate. The beginning point is an understanding of instructional design process. Reigeleith (1999) an instructional-design theorist states that good instructional design considers the conditions, materials, and interactions that will create the desirable learning

conditions. In addition to Chickering and Gamson (1987) and Chickering and Erhmann (1996), Salmon (2000, 2002), Paloff and Pratt (2003) write about how the importance of clearly expressed expectations, Salmon (2002) also stresses instructional scaffolding so that learners can have checkpoints as guides.

First and foremost in all design processes is an audience analysis which includes system and student requirements (Lynch, 2002). Hanna, Glowacki-Dudka, and Concericao-Runlee (2000) and Bramucci (2001) add that while course design and content determine interactive needs, the audience will drive choices about technology and course elements in order to meet the given audience capacities. Lynch (2002) remarks that courses should be designed for ease of navigation and accessibility by general users and those with assistive devices, interaction within the course with self, others, faculty, and content, and graphics that add to the content. Technical design specifications play an important role in embedding the content in a way that supports the learning process (Bramucci, 2001; Clarke and Mayer, 2003).

Learner-Centered models acknowledge that learning involves an individual making sense of new information or strategies in a personally relevant way (Visible Learning Project and Georgetown University, 2002). Learner-centered models call for shifts in a number of instructional components are good matches for adult learner characteristics: shifts in the role of the teacher to guide and coach, more learner responsibility and choices (learner control), and content as discovery (Weimer, 2002). Learner-centered models also provide for a large amount of formative assessment, a good practice supported by a wealth of sources (Chickering and Gamson, 1987; Angelo & Cross, 1993; Weimer, 2002; Walvoord & Johnson, 1998; Morgan & O'Reilly, 1999).

Training for Excellence

As the COW survey indicated, once faculty were initially trained, they requested more topics for professional development (Kidney, 2004). Many systems now include ongoing development opportunities as a way of advancing faculty technological and instructional skills. Examples of groups who routinely do so are the Maricopa Community College System (Elliot, Ambrosia, & Case, 1999; Colorado Community Colleges Online, 2005). Using StudyMate software to create rehearsal loops and how to incorporate RSS feeds into courses are examples of two technological subjects incorporated into ongoing CCCOnline faculty development offerings (CCCOOnline, 2005).

Advancing facilitative abilities. A more elaborate facilitation of online learning transactions includes a knowledge of how learners experience change, a recognition of the affective issues of learning and confidence, the part of scaffolding in building confidence and self-directedness, and community building skills for both learning and retention.

In addition to the faculty's content expertise, the very large role of online faculty is the faculty's ability to bring learners into community, and the ability to build the scaffolds that enable learners to develop self-directedness as well as confidence. Gilly Salmon (2000, 2002) describes intake and strategies that move the learner the actual into a more self-directed role with the course-content, and also identifies three reasons for disruptive communication behaviors, the rational for their occurrence, and advice on faculty actions relative to these occurrences. Sarcasm or a demanding tone, says Salmon (2002), can occur because a learner has anxiety about the use of the technology, about understanding the performance expectations in the course, or a sense of disconnection which sometimes occurs in the virtual space. The disconcertedness

can be compared to Mezirow's (1991) description of the learner's loss of balance in an unfamiliar learning situation. A valuable faculty skill to be gained from professional development is that a faculty learns to view such initial behaviors as signals related to anxiety, and learns to engage in email intended to answer concerns, or an invitation to set a phone conference.

Further Instructional Design

Instructional scaffolding. Content is certainly one aspect of instructional delivery, but the design of the learning experience is an equally important consideration for the success of as many learners as possible in a given course. Scaffolding is what it suggests literally, a series of platforms that support a person or a series of platforms that allows a person to ultimately perform a task at a higher level. Scaffolding can be used to at least two ends: one is to provide the learner with directive structure until he or she develops confidence in how he or she will proceed in the given learning for a course (Salmon, 2002; Salmon, 2000), or a provision of a set of steps along a course as a means of supporting the learner to successful completion of a larger project (Wlodowski, 1999). A third type of instructional scaffolding involves the design of graphically-structured information to save the learner time in organizing the knowledge, so that he or she can move to higher level processing that information more quickly (Belofatto, Bohl, Casey, Krill, Dodge, 2001).

Further development of the reflective-practitioner. Stephen Brookfield has written much about the role of reflective practitioner—that of considering the evidence of what has just occurred in a given term and after exploring such experience through thought and writing, determining how that knowledge will impact further action (Brookfield, 1995; Bell & Gillett; 1996). Pratt and Palloff (1999) remark that faculty need to practice such reflection if they are in

any way to expect learners to also develop and practice more developed thinking habits. For faculty in online environments, such reflection might include an understanding of self in changes related to the institution or the online environment itself.

Assessment practices to increase learning and lessen the grading load. Last, and importantly, is what the literature has to say about assessment. Angelo and Cross (2003) write that good assessment is based on the faculty understanding of what goals drive a course, which is the intersection of the course outcomes with the faculty's learning-related goals. The power of assessment is for faculty to use learning measures as communication about whether learners are succeeding in a given learning experience (Weimer, 2002). Angelo and Cross (1993) offer many best practices to increase learning.

Without professional development, faculty often have little preparation for assessing student learning (Jamieson, 1999). The types of exams faculty had as learners may influence the exams they give, and may not really be serving the learning that matters most for a given course. There is also the matter of more or fewer students performing well, and in addition to that matter is the turn-around time for scoring the assessments themselves, especially if they contain higher-order tasks. To all of these concerns, add the issue of learner misrepresentation and plagiarism. Weimer (2002) levels charges against the worst of traditional assessment practices—that the intent of some assessments have been to weed learners out of the class, that other assessments have been meant to see how far the learners could take the exploration of a concept, and that assessments have been stressful events.

Like Weimer (2002), one of their recommendations is that assessment should be learner-centered (Cross & Angelo, 1993). Formative assessment is the feedback about how learning is going, and it can move in either direction from learner to faculty or faculty to learner. This type

of feedback provides communication about how the process is going, and conveys to the learner the faculty's concern and interest in the learner's experience. In the online, formative assessment can be about content, dynamics, or technology.

Cross and Angelo's (1993) significant number of classroom assessment techniques known as CATS (Classroom Assessment Techniques) can be adapted to the online class as well. It is a matter of logistics to adapt a CAT online. An example of an online CAT is to provide an anonymous Question and Answer discussion topic in each unit for any questions related to that unit—a safe space to ask questions about concepts or assignments is it akin to the “muddiest point” CAT (1993). Formative assessment may also be a way to reduce stress about performance and assessment, which many learners experience (Weimer, 2002).

Assessment is the discourse about how the learning process is going, and the success is to have assessment inform better learning. In the online, individual, formative feedback can occur in the course room if it is done in a positive fashion. In the WebCT platform, faculty can respond publicly as well as privately to discussion posts, so the public option can be used to give the positive remarks, with additional coaching points made privately. Lynch (2002) adds to the formative assessment discussion in addressing the value of reflective papers by learners. She (Lynch, 2002) remarks on a number of available vehicles: journals, beginning, middle, and end reflections, and specific reflective assignments. Courseware may have journal features; private discussion threads can be set up to serve a similar function. Additionally, by participating in reflective feedback throughout the course, students can assist in co-creating the course to meet their learning needs (Angelo & Cross, 1993).

As an added formative activity, Angelo & Cross (1993) and John Bean (2001) remark that peer reviews can be constructive for more than one reason: the activity allows learners to

see what is being done by peers, and it allows learners to evaluate (higher level) work .

Questions to guide peer review to a higher level of evaluation are helpful. Using the course room as in a face-to-face classroom is a way to have the course room used as the place we demonstrate as well as talk about the learning.

As for summative assessment, or the assessment attached to a grade-for-performance, Angelo and Cross (1993) recommend faculty communicate course assessment philosophy and practice in several places: in the opening email to the learner about what matters in the course and how it supports learner success, what learners will be expected to know or show as the result of the learning experience; in the syllabus, with each assignment as the assignment is given, and by expressing willingness to give feedback as a learner is working on a project. An insight from this work is the development of rubrics that could be given to learners at the beginning of the assignment with the instructions to review their work against the rubric as they prepared it for submission. Learners can also be asked to complete and attach the rubric with the evaluation of the project. Even the difference between the faculty's evaluation and the learner's is opportunity for a learning discussion.

Lessening the grading load, yet still providing feedback. If the purpose of assessment is to provide evidence that learning is either in progress or accomplished, learning when to use technology to lighten the load is a very useful skill or skill set for faculty (Chickering and Erhmann, 1996). Utilizing test-making software is one example. If the point is to have learners increase their chance of retention around certain concepts, allow learners more than one opportunity to take an exam can provide increased opportunity for learner success. Separating objective items from hand-scored short- or long- essay items is another strategy. By placing all objective items in one session, that part of the test can be mechanistically graded, with

immediate feedback for the learner. Automated feedback can be included to explain why certain items constituted incorrect answers, or automated feedback can refer the learner back to the text for a review of the material. The faculty can now hand-score the essay items, but in the meantime has provided feedback for some the material.

A related strategy is the use of the discussion area for learner practice and more formative feedback. Faculty sometimes ask learners to turn in homework for the sake of demonstrating where they are with learning and applying concepts. Rather than having the learner each send the assignment to the faculty for scoring, having learners post the assignment in a discussion area. Two needs are thus met, learner opportunity to process the content and get feedback, and a strategy that will encourage good instructional practice while reducing the virtual paper burden.

Conclusion

If colleges and universities are to prepare learners who have a solid knowledge in a given discipline, have solid communication skills, know how to continue to learn, work in groups, and use ever-developing tools in their fields, faculty need professional development to help them master the same goals. Helping faculty understand the changes in the higher education workplace and how change is experienced are important organizational development needs to be addressed. Though this writer does not support the mandate for faculty to teach online, creating a culture that requires the basic use of technology as a course tool (such as online syllabi) is a possible route for faculty to weigh the move to online instruction. Training faculty for short-term proficiency and long-term instructional excellence are realistic strategies. Providing colleague-mentors for first-time faculty provides the kind of scaffolding that is recommended for increasing their confidence (Jamiesson, 2004).

Successful integration of professional development is a system-wide effort and is emphasized by leadership as a priority investment and source of recognition. It's best when structured as a part of the current faculty work, and not an added burden (Jamieson, 2004). Such expectations for learning and performance should also inform performance and evaluation scales. New faculty learning and perspectives on becoming better facilitators of learning with the opportunities technology affords should become the central topic of communications in those institutions who wish to achieve these priorities for its entire faculty, in both online and other delivery modes.

References

- Angelo, T., & Cross, K.P. (1993). *Classroom assessment techniques*. San Francisco: Jossey-Bass. Some content retrieved March 2, 2005, from <http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/assess-2.htm>.
- Baltzar, J. (1991). People and process: Managing the people side of information technology. *Educause professional paper series # 7*. Retrieved on February 2, 2005, from <http://www.educause.edu/ir/library/pdf/PUB3007.pdf>.
- Barger, N.J. & Kirby, L.K. (1995). *The challenge of change in organizations. Helping employees thrive in the new frontier*. Palo Alto, CA: Davies-Black.
- Bates, A.W. (2000). *Managing technological change: Strategies for college and university leaders*. San Francisco: Jossey-Bass.
- Bean, J. (2001). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom*. San Francisco: Jossey-Bass.
- Belafotto, L., Bohl, N., Casey, M., Krill, M., & Dodge, B. (2001, June 19). Transformation scaffolds. Retrieved on February 2, 2005, from <http://webquest.sdsu.edu/scaffolding/transformation.html>.
- Bell, M. and Gillett, M. (1996). Developing reflective practice in the education of university teachers. *Different Approaches: Theory and Practice in Higher Education*. Proceedings HERDSA Conference 1996. Perth, Western Australia, 8-12 July. Retrieved March 17, 2005, from <http://www.herdsa.org.au/confs/1996/bell.html>.

- Berge, Z.L. and Muilenburg L.Y. (2000). Barriers to distance education as perceived by managers and administrators: Results of a survey. In Melanie Clay (Ed.), *Distance Learning Administration Annual 2000*.
- Berge, Z.L. and Muilenburg L.Y. (2001). Obstacles faced at various stages of capability regarding distance education in institutions of higher learning. *Tech Trends* 46(4), 40 – 45.
- Bramucci, R. (2001). Ideas for distance learning. Retrieved on March 15, 2005 from http://fdc.fullerton.edu/learning/STG2001_IDEAS.htm.
- Bright, D., & Richards, M. (2001). *The academic deanship: Individual careers and institutional roles*. San Francisco: Jossey-Bass.
- Brookfield, S.D.(1995). *Becoming a critically reflected teacher*. San Francisco: Jossey-Bass.
- Carew, D. (2004, Spring). Educating the 21st century citizen. *Community College Week*, 3, 6. Retrieved on February 10, 2005, from *The Catalyst*, http://www.findarticles.com/p/articles/mi_qa4011/is_200404/ai_n9366427.
- Carnevale, J., & Olsen, F. (2003, June 13). How to succeed in distance education. *Chronicle of Higher Education*. Retrieved on February 3, 2005, from <http://www.chronicle.com>.
- Chickering, A., & Gamson, Z. (1987). Seven principles of good practice in undergraduate education. *AAHE Bulletin*, 37, 3-7.
- Chickering, A., & Ehrmann, S. (1996). Implementing the seven principles: Technology as a lever. *AAHE Bulletin*, 37, 3-6. Retrieved on March 11, 2005, from <http://www.tltgroup.org/programs/seven.html>.
- Clark, R.C., & Mayer, R. (2003). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. San Francisco: Pfeiffer.
- Colorado Community Colleges Online. (2004). *CCCOonline E-learning quality assurance manual (2nd Ed.)*. Denver, CO: Colorado Community Colleges System.
- Colorado Community Colleges Online (2005). Surviving WebCT. Retrieved on March 2, 2005, from http://www.cconline.org/faculty/training_CourseDescriptions.htm.
- Coppola, N. Hiltz, S. R., & Rotter, N. (2001). Becoming a virtual professor: Pedagogical roles ALN. *Proceedings of the 34th Hawaii International Conference on System Sciences*. Retrieved on February 20th, 2005, from http://www.alnresearch.org/JSP/papers_frame_1.jsp.
- Elliott, B., Ambrosia, A., & Case, P. (1999). A systems approach to asynchronous distance

- learning: A community college model. In M. Boaz, B. Elliot, D. Foshee, D. Hardy, C. Jarmon, and D. Olcott (Eds.), *Teaching at a distance: A handbook for instructors* (pp. 65-73). New York: League for Innovations in the Community College and Archipelago/Harcourt Brace.
- Golden, M. (2004, July). Technology's potential, promise for enhancing student learning. *THE Journal*, 31(12), 42 (2p.). Academic Search Premier.
- Graham, G., Calgitay, K., Lim, B., Craner, J., & Duffy, T. (2001, March/April). Seven principles of effective teaching: A practical lens for online evaluation. *The Technology Source*. Retrieved, June 15, 2004, from <http://ts.mivu.org/default.asp?show=article&id=839>.
- Guskin, A., & Marcy, M. (2003, July/August). Dealing with the future now. *Change*, 35(4), 10 (12 p). Academic Search Premier.
- Hanna, D., Glowacki-Dudka, M., & Conceicao-Runlee, S. (2000). *147 Practical tips for teaching online groups: Essentials of web-based education*. Madison, WI: Atwood.
- Jamieson, P. (2004). The university as workplace: Preparing lecturers to teach in online environments. *The Quarterly Review of Distance Education* 5(1), pp. 21-26.
- Jankowska, M. (2004, January). Identifying university professors' information needs in the challenging environment of information and communication technologies. *Journal of Academic Librarianship*, 30(1), 51 (16p). Ebscohost.
- Kidney, G. (2004, June). When the cows come home: A proven path of professional development for faculty pursuing e-learning. *THE Journal*, 31(11), 12 (4p). Ebscohost.
- Kirkpatrick, D. (2001). Staff development for flexible learning. *The International Journal for Professional Development*, 45(2), 168 – 176.
- Knowles, M., Holton, E., & Swanson. (1998). *The adult learner (5th Ed.)*. San Francisco: Jossey-Bass.
- Kolitsky, M. (2003). Institutional policy issues. Retrieved on March 12, 2005, from http://venus.atlantic.edu/kolitsky/NLIIPolicies_v2.swf.
- Lucas, A. (1994). *Strengthening departmental leadership: A team-building guide for chairs in colleges and universities*. San Francisco: Jossey-Bass.
- Lynch, M.M. (2002). *The online educator: A guide to creating the virtual classroom*. New York: RoutledgeFarmer.
- Maricopa Community College District. (2005, January 5). Maricopa learning exchange. Retrieved on March 20, 2005, from <http://www.mcli.dist.maricopa.edu/mlx/index.php>.

- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.
- Miles, C., & Wilson, C. (2004, Summer) Learning outcomes for the 21st century: Cultivating student success for college and the knowledge economy. In A. Serban & J. Friedlander (Eds.), *New Directions for Community Colleges No. 126: Developing and implementing assessment of student learning outcomes* (pp. 87 – 100). San Francisco: Wiley/Jossey-Bass.
- Moore, G., Winograd, K., & Lange D. (2001). *You can teach online: Building a creative learning environment*. New York: McGraw-Hill Higher Education.
- Morgan, C., & O'Reilly, M. (1999). *Assessing open and distance learners*. London: Kogan Page.
- Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass.
- Palloff, R., & Pratt, K. (2001). *Lessons from the cyberspace classroom: The realities of online teaching*. San Francisco: Jossey-Bass.
- Palloff, R., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. San Francisco, CA: Jossey-Bass.
- Prensky, M. (2001, October). Digital natives, digital immigrants. *On the Horizon* 9(5), 1-6. Retrieved on January 27, 2004, from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Reigeluth, C. (1999). *Instructional design theories and models: A new paradigm of instructional theory vol. II*. Mahwah, NJ: Lawrence Erlbaum.
- Rothfork, J. (2004, October). How distance methods and academic management software subvert the university. Paper presented at the meeting of the Rocky Mountain Modern Languages Association. Boulder, Colorado.
- Rossmann, M. H. (1999). Successful online teaching using an asynchronous learning discussion forum. *Journal of Asynchronous Online Learning*, 3(2), 91-97.
- Ryland, J. (2004). Technology and the future of community colleges. *American Association of Community Colleges*. Retrieved on March 1, 2005, from http://www.aacc.nche.edu/Content/NavigationMenu/ResourceCenter/Projects_Partnerships/Current/NewExpeditions/IssuePapers/Technology_and_the_Future_of_the_Community_College.htm.
- Salmon, Gilly. (2000). *E-Moderating: The key to teaching and learning online*. London: Kogan Page.

- Salmon, Gilly. (2002). Hearts, Minds, and Screens: Taming the Future. Keynote speech. EduCAT Summit: Innovation in e-Education 3rd-5th April 2002. Hamilton New Zealand. Retrieved on February 20, 2005, from <http://sstweb.open.ac.uk:8282/oubs/gilly/download/Hearts3.htm>.
- Senge, Peter. (1990). *The 5th discipline: The art and practice of the learning organization*. New York, NY: Doubleday/Currency.
- Thurmond, V., & Wambach, K. (2004, January). Understanding interactions in distance education: A review of the literature. *International Journal of Instructional Design and Online Learning* 1(1). Retrieved February 15, 2005, from http://www.itdl.org/journal/Jan_04/article02.htm.
- Visible Knowledge and Georgetown University. (2002). Learner centered. Retrieved June 11, 2004, from <http://crossroads.georgetown.edu/vkp/resources/glossary/learnercentered.htm>.
- Walvoord, B. E., & Anderson, V. J. (1998). *Effective grading: A tool for learning and assessment*. San Francisco: Jossey-Bass.
- Weatherford, J. (1994 – 2004). Instructional simulations: An overview. In B. Hoffman (Ed.), *The encyclopedia of instructional technology*. San Diego: San Diego State University. Retrieved on March 3, 2005, from <http://coe.sdsu.edu/eet>.
- Weimer, M. (2002). *Learning-centered teaching: Five key changes to practice*. San Francisco: Jossey-Bass.
- Western Interstate Commission on Higher Education/ Western Cooperative for Electronic Telecourses (WICHE/WCET). (2001). Best practices for the delivery of electronic degrees and programs. Retrieved on February 10, 2005, from WICHE/WCET (2001). <http://www.wcet.info/resources/accreditation/Accrediting%20-%20Best%20Practices.pdf>
- Williams, M., Paprock, K., & Covington, B. (1999). *Distance learning: The essential guide*. Thousand Oaks, CA: Sage.
- Wlodkowski, R. (1999). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults (Rev. ed.)*. San Francisco: Jossey-Bass.