SUMMARY

◆ Reports on a project to develop quality assurance policies and procedures for the design and assessment of online courses

◆ Examines crucial issues in assessing online teaching and learning

Developing a Quality Assurance Process to Guide the Design and Assessment of Online Courses

DAVID DAYTON AND MARY MCSHANE VAUGHN

AN IMPORTANT QUESTION FOR HIGHER EDUCATION

In its fourth annual survey report on the state of online teaching in U.S. higher education, the Sloan Consortium estimated that more than 3.2 million students took at least one online course in fall 2005—a nearly 40% increase over the previous year (Allen and Seaman 2006). According to the report, about three in five chief academic officers at U.S. colleges and universities agreed that online education is critical to the long-term strategy of their school (9). Roughly the same number agreed that online learning is equal or superior to face-to-face instruction in terms of learning outcomes (11).

Nevertheless, this latest Sloan Consortium report also notes that serious concerns persist about the quality of online learning, with almost 40% of chief academic officers still believing that online teaching is inferior to face-to-face instructional formats (Allen and Seaman 2006, 11). Two reasons this belief remains widespread seem obvious:

◆ Many colleges and universities have failed to adopt quality standards and assessment practices for online instructional design and delivery.

◆ Many faculty jump into online teaching, as both of us did, with little or no training and only minimal input and support from experts in online instructional design and technology.

Hiltz and Turoff (2005) contend that online instruction has entered a chaotic second stage of the diffusion process, marked by wide variance in the quality of courses and programs. They link heightened competition in higher education directly to "the need to provide quality online instruction as a matter of long-term survival" (2005, 62). Wang (2004) agrees and notes, "As universities and businesses alike implement updated strategies, they are redefining venue and pedagogy. Consequently, they must also redefine measures of quality" (15).

Technical communication scholars have produced a solid foundation of theory and research about e-learning, most recently and notably in *Online education: Global questions, local answers* (Cargile Cook and Grant-Davie 2005a, reviewed in this issue), a compilation of 18 essays on a diverse and comprehensive range of issues. Naturally, defining and measuring quality is among them. In the summer and fall of 2004, we developed a quality assurance (QA) checklist and recommended policies and procedures to guide the design and assessment of online courses offered by Southern Polytechnic State University (SPSU), a small technology- and business-oriented school located in suburban Atlanta. We did not have the benefit of consulting this volume at the outset of our project, but we are grateful to have found in several of its chapters post-hoc support for the standards that we selected to guide the assessment of

online courses. We are gratified to find ourselves now able to contribute to an expanded compendium of local answers to global questions about online pedagogy and program development.

We begin by summarizing the context of our project and our search for a QA framework that would fit the specific institutional goals and constraints at SPSU. We then present the framework of principles we settled on, provide the rationale supporting our choice, and explain how we adapted this framework to better suit our situation at SPSU. We then recount how the framework we recommended influenced the development of a new student feedback questionnaire for online courses at SPSU. We also describe the current status of the project to implement a QA review process for online courses, using an expanded version of the checklist we developed. In closing, we discuss some implications of our experience that may be helpful to others working in higher education.

SEARCHING FOR A LOCAL ANSWER

In 2003, the SPSU Distance Learning Task Force, led by the Dean of Extended University, developed a strategic plan that gave high priority to establishing instructional design guidelines and a QA review process for online courses. In May 2004, the dean charged us with the task of developing course design guidelines. We began by gathering and analyzing information on undergraduate and adult learning theory, quality standards for online instruction, and case reports from faculty at various universities who had developed QA best-practices guidelines or standardized questionnaires for student evaluation of online instruction. Our survey of the literature included books, journals, Web sites, and Web-published articles and reports.

Using the search term "quality" along with various terms for online learning plunged us into a welter of discourse in higher-education policy and administration, educational technology, instructional systems design, and distance education. We sifted through publications of many types covering a range of topics with overlapping aims and concerns:

◆ High-level principles and standards for online distance learning programs and courses
◆ Pedagogical practices found to be most effective for online instruction
◆ Factors associated positively and negatively with student satisfaction in online courses
◆ Development and testing of questionnaires for student evaluation of online courses
◆ Compendia of tips, techniques, and guidelines for information architecture, information design, usability, and accessibility of course Web sites and online learning modules delivered through a Web-based platform such as WebCT

Chickering and Gamson's Seven Principles

Numerous articles and book chapters offer opinions regarding characteristics of effective online courses, but few that we found provide a comprehensive framework for defining quality, and most of those few did not strike us as authoritative enough, or simple enough, or comprehensive enough for our purposes. We found one set of good practice principles, however, that was referenced and applied more often than any other: Chickering and Gamson's Seven Principles (1987).

If we had come across the Seven Principles prior to our project, we had not noticed them. When we found them during our literature review, they seemed so exactly what we were seeking that we wondered why we had not known about them long before. Their usual order of presentation obscures obvious groupings that make them easier to recall. Thus, we present them here organized by the themes that we see as sorting them into groups of two, three, and two. Good practice in undergraduate education accomplishes the following goals:

Creates a Learning Community
1. Encourages contacts between students and faculty
2. Develops reciprocity and cooperation among students

Presents Appropriate Challenges
3. Uses active learning techniques
4. Emphasizes time on task
5. Communicates high expectations

Fosters Individualized Motivation and Growth
6. Gives prompt feedback
7. Respects diverse talents and ways of learning

In presenting the Seven Principles, Chickering and Gamson (1987) write:

> *These principles seem like good common sense, and they are— because many teachers and students have experienced them and because research supports them. They rest on 50 years of research on the way teachers teach and students learn, how students work and play with one another, and how students and faculty talk to each other. (3)*

When we began to focus on Chickering and Gamson's "The Seven Principles for Good Practice in Undergraduate Education" (1987), we had already collected a large, chaotic collection of texts with something to say about quality in online distance learning The more we read about the history of the

Seven Principles (Gamson 1995; Chickering and Gamson 1999) and how they had been widely adapted and applied at various universities (for example, University of Guelph 1998; Ohio Learning Network 2005; Arizona Board of Regents 2005), the more we became convinced that these principles should serve as our organizing framework. We found ample support in authoritative sources to justify our choice (Institute for Higher Education Policy 2000; Meyer 2002; Kuh 2002; Shea, Pickett, and Pelz 2003; Sherry 2003). We then discovered that adapting the Seven Principles to produce inventories of good practice for online instruction had already been accomplished (Chickering and Erhmann 1996; King 1997; Graham, Cagiltay, Lim, Craner, and Duffy 2001; Panitz 2002). A colleague of ours with a doctorate in instructional technology mentioned that his dissertation study of exemplary online courses had found support for the Seven Principles among the factors he identified as most important for quality online teaching (Hopper 2000). Our own experience as university teachers convinced us that the Seven Principles encapsulate the qualities of excellent courses, whether online or classroom-based:

- Rich and plentiful contact between teacher and student
- High expectations for student performance
- Active learning activities and assignments
- Student-student interaction and cooperation (if not, indeed, true collaboration)
- Sufficient but not excessive time required to complete assignments
- Timely feedback on participation and completed work
- Efforts to respond to students as individuals and to treat their interests, experiences, perspectives, and special talents as resources to heighten motivation and enrich learning

Ultimately, we selected the Seven Principles as the foundational framework for our Quality Assurance Checklist for Online Courses (see Appendix A) principally because they are

- Research-based and widely accepted
- Suitable for grounding both formative and summative assessment, and for both traditional and online courses
- Broad enough to allow ample flexibility in applying them, yet concrete enough to be mapped to specific, easily observable characteristics of course design and teaching practice

Additional support for the Seven Principles

We had one more excellent reason for building our QA checklist on the Seven Principles: They align well with the quality standards, guidelines, and benchmarks published by regional accrediting organizations and other national organizations that make it a key part of their mission to promote quality in higher education.

Three reports from the realm of higher-education policy and administration are frequently cited in reference to quality standards for online distance learning:

- *Quality on the line: Benchmarks for success in Internet-based distance education* (Institute for Higher Education Policy 2000)
- *Best practices for electronically offered degree and certificate programs* (Council of Regional Accrediting Commissions 2001)
- *Quality assurance for whom? Providers and consumers in today's distributed learning environment* (Twigg 2001).

Cargile Cook and Grant-Davie (2005b) find that these three reports agree on "[s]ix key measures of quality online instruction" (231), which we restate in condensed form here:

- Students receive adequate orientation, preparation, and expectations.
- Courses have appropriate and clearly communicated goals and expectations.
- Assignments are well-defined and directly support the learning goals.
- Learning activities are varied and involve ample interaction with faculty and other students.
- Instructors give timely feedback.
- Students benefit from academic and technical support services.

Cargile Cook and Grant-Davie (2005b, 231) note that "These guidelines or benchmarks are not so different from popularly cited measures of effective traditional or onsite education, such as the seven principles developed by Chickering and Gamson . . . . " They add, however, that "effective instruction in the online classroom requires instructors not only to think about practices that have worked in onsite classrooms, but also to take into account differences in practice necessitated by the online learning/teaching environment" (232). In this regard, they stress the importance of the first two markers of quality listed above.

In her exhaustive review of the literature, *Quality in distance education: Focus on online learning,* Mayer (2002) reviews the Seven Principles, the Institute for Higher Education Policy benchmarks report, and the Council of Regional Accrediting Commissions best-practices report referenced above, along with other similar reports from organizations with a stake in promoting quality in higher education. Meyer advises that "if you or your institution needs a good set of guidelines, the best choice may be a combination of these standards, choosing and selecting those standards that fit the institution's needs and discarding those that may be of less importance" (83).

In the tables in Appendix A, we compare the framework we chose and the checklist we developed (also in Appendix A) to other published sets of quality principles and best practices.

IMPLEMENTING THE QA FRAMEWORK

Having settled on the Seven Principles as a framework, we began to gather, edit, and sometimes invent specific distance-learning suggestions for achieving each principle. We identified 11 sources that either gave specific attributes of quality online instruction or gave practical examples or tips for designing and conducting an online course. Each quality attribute, annotated with a code indicating its source, was typed into a spreadsheet and then manually assigned to one of the Seven Principles. The hundreds of specific entries were then edited to eliminate redundancy, sub-categorized, and edited further, resulting in the Distance Learning Course Quality Assurance Checklist found in Appendix A.

The rhetoric of QA checklists

An important goal guiding our project from the start was to enable SPSU to document its compliance with the quality standards for online programs explicitly endorsed by the Southern Association of Colleges and Schools (SACS). In our report to the Distance Learning Task Force and the Deans Council, we presented three general questions to sum up the areas of the SACS best practice framework that our project addressed:

1. Curriculum and instruction.   Do the institution's online programs and courses foster and achieve a sufficient level of interaction between students and instructors, and among students?

2. Faculty support.   Does the institution help instructors identify and incorporate appropriate changes in teaching methods and materials made possible and desirable by the use of information technologies to deliver instruction?

3. Evaluation and assessment.   Does the institution have well-defined procedures for continuously evaluating the quality of online programs and courses, and are these integrated into the institution's mechanisms for documenting continuous self-assessment and improvement?

We argued that SPSU should seek a QA framework that, implemented in a consistent, integrated set of procedures, would enable the university to respond positively with ample evidence to all three questions. We noted that the SACS best practices specifically mention several key markers of quality that connect to several of the Seven Principles:

◆ Appropriately rigorous standards
◆ Adequate student-student and instructor-student interaction, including timely feedback
◆ Suitable changes in methods and materials compared with traditional classroom-delivered courses

It was particularly significant to us that the SACS best practices report endorses student-student interaction as a spe-cific practice promoting quality in online courses because we expected that some faculty at SPSU would argue that student-student interaction was not a desirable element of every online course. Through specific suggestions in our checklist, we hoped to convince such faculty that student-student interaction could be incorporated into an online course in a variety of potentially enriching ways. Some faculty needed to know that we were not pushing them toward collaborative, discovery-based learning activities that they believed were not feasible or necessary in courses teaching fundamental knowledge in their disciplines.

The QA framework and checklist we recommended met with no resistance in the Distance Learning Task Force and the Deans Council. We attribute the ready acceptance of our recommendations to the persuasiveness of the checklist, which we presented as a tool for conducting a heuristic design review, similar to a heuristic evaluation of a Web site or software application interface. In the version of the checklist we presented (see Appendix A), the Seven Principles are couched as general questions. These high-level questions are subdivided into much more specific statements of good practice; under those statements of good practice, bullet list items represent concrete, observable actions, activities, and artifacts of the course design and teaching that would be evidence of the practice in question.

In the report recommending our QA framework, we envisioned that a faculty member designing or revising an online course would use the checklist as a set of guidelines, viewing the bullet list items as suggestions. Later on, another person conducting a QA review of the course could treat the individual items as examples of elements to look for in assessing the degree to which a particular practice was incorporated into the design or delivery of the course. In presenting our report to the Distance Learning Task Force and Deans Council, we went no further into details of implementation.

Arrival of the distance learning instructional designer

By January 2005, the start of the semester after we submitted our report, our QA checklist had been approved and was handed off to the newly hired distance learning instructional designer, SPSU's first. This person was already quite familiar with the Seven Principles and quickly expanded the checklist to include suggestions of more course elements and activities that could be added to achieve each of the principles. He distributed an expanded version of the checklist to guide faculty in developing a new distance learning course or improving an established one. He also created a version of the expanded checklist with a scoring rubric. (We will discuss the fate of that scoring rubric later in the article.)

After the checklist was delivered to the distance learning

instructional designer, our project entered its second phase. The Dean of Extended University appointed us, along with the distance learning instructional designer and one other member of Distance Learning Task Force, to an ad hoc committee. Our charge was to recommend policies and procedures for reviewing new and existing online courses.

After a false start, the plan we came up with placed the responsibility for course assessment and approval squarely with each of SPSU's four schools and their sub-units, the departments. The chair of each department would be responsible for obtaining an assessment of course content by an expert in the material. A parallel assessment of the course design, based on the Seven Principles checklist, would be performed by the instructional designer. The department chair or dean would then be responsible for approving the course based on the results of both assessments: the one focused on content and the one focused on instructional design.

The hiring of a new vice president for academic affairs, who assumed his post in July 2005, put the QA implementation plan on hold. However, the instructional designer sought volunteers for course reviews from among faculty in Computer Science and Quality Assurance, and he conducted those reviews in the spring and fall of 2005. Meanwhile, the Distance Learning Task Force moved ahead with the development of a questionnaire for students to use in evaluating online courses and instructors.

Revising the student feedback questionnaire

In our 2004 report to the Vice President for Academic Affairs and Deans Council, we recommended that SPSU revise the student feedback questionnaires used for online courses, aligning the questionnaire with the Seven Principles. At the time, SPSU was using the Student Instructional Report (SIR) II to gather student feedback for traditional courses and hybrid courses (part online, part traditional). A version of the SIR II for obtaining student feedback in online courses was available from the owner of the instrument, the Educational Testing Service, but SPSU was not willing to pay for it. In addition, many faculty teaching online courses did not want to use it because they had been complaining about the SIR II for years, seeing within its 40+ questions a heavy weighting toward lecture-and-exam courses.

The lack of an instrument for gathering student feedback about online courses and instructors presented a problem for tenure-track faculty at SPSU. They had to show evidence of teaching effectiveness in their annual reports and in the dossiers they submitted when applying for tenure and promotion. It was rumored that teaching online had led to a perceived paucity of student feedback in some recent tenure packets.

In fall 2005, the distance learning task force created a

subcommittee to develop a student feedback questionnaire for distance courses. The subcommittee included distance learning faculty, the distance learning instructional designer, and key members of Extended University's technical and marketing staff. After a pilot-test period when use of the new questionnaire was strictly voluntary, the new instrument was adopted for online courses. The questionnaire has 46 questions, 20 of which concern academics. Four questions address technology, and 22 address general distance learning student services and support. The current SPSU administration also values narratives as evidence of teaching effectiveness, so although the scoring basis of the new questionnaire is different from the SIR II, the differences can be explained within the tenure packets.

The committee that composed the new student feedback survey for online courses noted the Seven Principles framework in their deliberations. Although they did not adhere to the Seven Principles closely in creating the initial part of the survey focused on traditional academic aspects of instruction, we find that 16 out of the 19 fixed-choice items in that section (84%) can readily be categorized into six of the Seven Principles. The most heavily represented principle is faculty-student interaction with six items covering availability, timely response, clear explanations, clear overview in the syllabus, and clear communication of learning goals and guidelines for completing assignments. The questionnaire also asks about timely feedback, but also includes items asking about the effectiveness of the feedback and the adequacy of grade explanations. We find that active learning, time on task, and student-student interaction account for two items each on the questionnaire; and whether the instructor conveyed high expectations is the focus of one item.

Only one of the Seven Principles, then, is not represented in the new student feedback questionnaire: respect for diverse talents and ways of learning. And only three of the "Academic Core Questions" on the survey are not directly related to the Seven Principles: a question about the instructor's mastery of the subject matter, one about the instructor's overall effectiveness, and one asking whether the materials purchased for the course were well used.

Status of the QA process at SPSU

Not long after he was hired at SPSU in January 2005, the distance learning instructional designer began to use a set of checklists he developed based on the checklist we handed over to him. One version of his course-review checklist presented a set of guidelines for faculty who came to him for help in designing or revising WebCT courses. As design guidelines, chock full of concrete suggestions, that checklist contributed to individualized, just-in-time, and only-on-request training of faculty.

The distance learning instructional designer used the

same checklist embedded in a scoring rubric when a department requested a review of an existing course. In the fall of 2005, he carried out one such review of an online course that one of the authors taught. She considered the review to be comprehensive, thorough, detailed, and constructive. That review demonstrated that a course could receive a so-so rating on some of the principles but still be a considered an effective, well-designed course overall.

In those early course reviews, the distance learning instructional designer was careful not to assume too much: He refused to score any element of the course that he thought required the judgment of a subject matter expert. He also acknowledged when areas of practice he found to be weak might be considered satisfactory by the instructor. His review report highlighted praise where praise was due and provided insightful and inventive specific suggestions for bolstering certain aspects of the course so that the overall learning design would move closer to the ideal embodied by the Seven Principles.

Emphasizing formative critique and offering tailor-made constructive suggestions are crucial to the type of review we thought would make for a successful QA process. Our 2004 report to the Deans Council recommended that the QA reviews should initially be seen mainly as a way to offer course design assistance and training for the faculty involved. After faculty had been given the ideas and resources to improve their courses, we thought it would be appropriate to have reviews aimed more at summative evaluation; however, we thought that such reviews should still seek maximum flexibility in the application of the Seven Principles and that feedback from them should focus on specific goals for improvement, with concrete suggestions for ways that those goals might be achieved.

Working with the Dean of Extended University and the Distance Learning Task Force, the distance learning instructional designer did an exemplary job in 2005 of carrying out the vision we had for a QA course review process. In 2006, the post-course QA reviews were conducted for departments that requested them and for all courses developed by faculty who received extra compensation from the Dean of Extended University to develop online courses. In the fall of 2006, the Distance Learning Task Force was slated to take up the issue of formalizing a policy recommendation regarding online course review procedures; however, that process was interrupted by the departure of the distance learning instructional designer for another job.

Left in limbo at the time this article was written is a new draft reviewer's rubric for online courses that has concerned some faculty and us because it is much more prescriptive than the checklists and rubrics used in 2005. At the end of the 2006–2007 academic year, the distance learning task force had tabled concerns about the course design and delivery requirements in the reviewer's rubric. It is expected that these will be revisited, possibly after the university hires a director of distance learning.

IMPLICATIONS AND RECOMMENDATIONS
In this closing section, we draw out some of the implications of our project for faculty and program administrators involved in planning and administering online distance learning courses and programs.

The first implication we want to highlight may seem counterintuitive: Within individual departments or programs, the existing quality assurance mechanisms, however explicitly or indirectly articulated, may suffice for guiding the design and teaching of online courses. It may not be necessary to design a separate QA process for online courses. For example, in summarizing the development of the online master's program in technical communication at Texas Tech in the late 1990s, Rude (2005) describes an approach to quality assurance that presumes a well-established collective understanding of what constitutes effective pedagogy.

Articulating a detailed quality framework for online courses may be necessary only when the group planning the policies and procedures spans interdepartmental and interdisciplinary boundaries. The broader the institutional focus of a QA initiative, the more likely it would benefit from a process similar to the one that we have described and that SPSU implemented for the most part.

To summarize, we would recommend these steps for designing and implementing a QA process for online distance learning:

1. Seek a consensus definition of quality in online instruction by delineating a set of high-level principles, all or most of which also describe aspects of quality in any kind of university course.

2. Build a flexible QA checklist based on the adopted principles: for each principle, compose imperative statements describing general characteristics of course design or teaching. Under each of these ideal characteristics, list examples of observable discrete elements of a course design or online teaching activity.

3. Promote the QA checklist as good-practice guidelines for faculty to use in designing new or revising existing courses.

4. Use the QA checklist to create a rubric for peer evaluation of courses (formative) or summative evaluation by a non-peer specialist in online instruction; summative evaluations should still emphasize constructive suggestions and the discretion of the individual instructor.

5. Use the QA checklist as a touchstone for the redesign of student questionnaires used to evaluate online courses and instructors.

Specifying the characteristics of excellence

In their discussion of approaches to defining quality for online distance learning, Cargile Cook and Grant-Davie (2005b) describe an issue destined to become the fault line of many a committee meeting:

> *The dilemma, then, is whether to specify the characteristics of excellence and run the risk of institutionalizing a narrow definition of quality in online education, or whether to accommodate a diversity of teaching methods and styles with broader, looser criteria, but in so doing settle for measuring only minimal, common standards. (243)*

As an example, they cite the Institute for Higher Education Policy's quality benchmarks study, which opted to eliminate some benchmarks regarded by many educators as non-essential for quality online courses. Two research-validated benchmarks left off the final list describe efforts to accommodate diverse learning styles and to promote collaboration among students (Institute for Higher Education Policy 2000, 23–24). In choosing to base our QA framework on the Seven Principles, we were concerned that we might encounter resistance from SPSU faculty over the two principles addressing those same ideals.

Instead, the SPSU administration and faculty adopted the QA framework and checklist without modification except for the changes made by the distance learning instructional designer, who added numerous specific practices to the examples of how the general principles can be implemented. In addition, the SPSU committee that developed a course and instructor evaluation questionnaire for students included items that can be linked to all of the Seven Principles except one: respect for diverse talents and ways of learning. The feedback questionnaire also gives far more emphasis to expectations for faculty interaction with students than for student-student interaction. Nevertheless, we think the newly adopted student feedback questionnaire for online courses is more reflective of the Seven Principles than the questionnaire used at SPSU to seek student opinions about traditional and hybrid courses.

We conclude that the acceptance of our QA framework at SPSU owes much to our strategy of interpreting the most idealistic of the principles broadly and pragmatically. This is demonstrated best by how we construed the principle enjoining instructors to respect diverse talents and ways of learning. The suggested to-do list of specific practices related to this principle contains mostly commonplace practices (see Appendix A):

- Provide means for students to ask for and receive assistance in understanding course materials
- Consider assessing students' learning styles in the beginning of the course

- Be mindful of accessibility issues
- Create a welcoming, safe, nurturing online environment
- Provide course content in a logical, consistent manner
- Incorporate a variety of techniques for presenting course material

Our advice about the choice of a QA framework, then, can be summed up this way: Keep it simple and concise, but not overly reductive; idealistic, but tempered with pragmatic flexibility; and adaptable to all kinds of courses, not just those taught online. T**C**

APPENDIX A: SPSU QUALITY ASSURANCE CHECKLIST FOR ONLINE COURSES

The high-level questions for each of the seven sections below are adapted by Panitz (2002; see the References at the end of this checklist) based on the principles from A. Chickering and S. C. Ehrmann's 1996 article "Implementing the Seven Principles: Technology as lever," *AAHE bulletin* (October): 3–6.

1. In what ways does the online course design encourage contact between the students and the instructor?

Use a variety of communication techniques to connect with students
- Personalize communications with students
- Know students by name by the end of the first two weeks of class, and use it in chats and emails
- Provide a picture of yourself
- Plan for increased time for student interactions compared with traditional courses
- Provide feedback to students in a manner that is non-threatening and constructive
- Give negative comments to students privately
- Have question/answer session periodically throughout "class"
- Make summary remarks available in discussion for all students
- Serve as mentor or informal advisor to students

Provide clear guidelines for interaction with students
- Set clear standards for instructors' timelines for responding to messages
- Provide appropriate instructor contact information
- Establish policies describing the types of communication that should take place over different channels
- Include a schedule of chat times

Use online course features to encourage communication
- Use real time features such as chat rooms and whiteboards

◆ Use asynchronous tools such as discussion boards and e-mail
◆ Maintain separate e-mail account for web courses
◆ Forward responses to frequently asked questions to all students to avoid duplication and ensure consistency of responses
◆ Provide telephone access as necessary
◆ Consider conducting a teleconference during and at the end of the course to discuss successes and problems

2. How does the learning environment foster reciprocity and cooperation among students?
Formalize expectations for discussions
Establish and publish a discussion tool protocol that explains why tools are being used, what students are expected to do and how they will be evaluated

Provide the tools for student interaction
◆ Organize Web site to enable student interaction with the content, other students and instructor
◆ Provide discussion forums encouraging open and honest dialog
◆ Set up teams of students to interact via discussion boards and e-mail
◆ Encourage students to hold virtual study sessions via chat or bulletin boards

Facilitate student interactions
◆ Include "warm up" period with light-hearted exercises aimed to help students get to know each other
◆ Allow students to introduce themselves
◆ Ask students to share backgrounds and interests
◆ Ask students to publish online bios and/or photos to allow other members of the class to visualize them

Encourage group collaboration
◆ Create social interaction through group collaboration to facilitate high achievement
◆ Encourage problem solving in groups via discussion board or e-mail
◆ Create learning communities, study groups, or project groups within the class
◆ Encourage students to work in groups using problem-solving activities to develop topic understanding
◆ Post papers, etc. so that students can respond to others' work

3. In what ways is active involvement of the students facilitated throughout the course?
Provide opportunities for students to discuss the course material
◆ Actively involve students through writing and interaction

◆ Provide opportunities for students to articulate and revise their thinking to insure accuracy of knowledge construction
◆ Devise assignments to encourage students to employ critical thinking strategies
◆ Encourage students to "talk" about what they are learning via discussion boards
◆ Craft questions to foster discussion and understanding
◆ Assign students to present work to the class via bulletin board postings, chat, presentations

Provide content that enables critical analysis and reflection
◆ Make content available to students in manageable segments
◆ Assure that content is easily navigated
◆ Make use of ancillary resources available as part of the course content
◆ Provide internal communication tools for students to elaborate on course content
◆ Provide content that adds value in addition to questions
◆ Connect chats to modules, textbook, course content, and assignments

Have students record observations and self-assessments
◆ Provide students with ample opportunity for self-assessment
◆ Require students to keep an observation/reflection journal

Use real-world data or situations in assignments
◆ Present problem-solving situations in a realistic context
◆ Give assignments that provide students ample opportunity to practice and apply concepts and skills in realistic and relevant ways
◆ Use real world experiences in teaching content to make subject matter more relevant
◆ Ask students to relate outside events or work experiences to the subjects covered
◆ Give students concrete, real world situations to analyze
◆ Use simulations or labs in class

4. How are students given prompt feedback for learning activities?
Set expectations in writing
◆ Provide clearly defined statements informing students what to expect in terms of instructor response time

◆ Have students agree on expectations regarding times for student assignment completion and faculty response

Provide prompt feedback on assignments
◆ Return assignments with comments quickly – within the stated period of time
◆ Provide weekly guidance to the class
◆ Make sure comments on student work are constructive
◆ Grade assignments consistent with criteria set forth in the syllabus/module
◆ Give students detailed feedback on performance early in term
◆ Contact students who miss a chat
◆ Provide both information feedback and acknowledgment feedback. Information feedback provides information or evaluation. Acknowledgment feedback confirms that some event has occurred

Use quizzes and tests for feedback
◆ Use built in, auto-graded quiz feature when appropriate
◆ Give proctored examinations or other assessments
◆ Tie quizzes and tests to course objectives
◆ Prepare classroom exercises and problems that give students immediate feedback on performance (self tests, for example)

Provide quick feedback in both synchronous and asynchronous settings
◆ Provide students with continuous feedback and frequent support via e-mail, chat, and discussion postings
◆ Take an active role in moderating discussions, providing feedback, and participating in other interactive components

5. Is the course organized so that students and the instructor use their time efficiently and effectively while focusing on the learning objectives?
Communicate time requirements clearly
◆ State time-achievement expectations at the beginning of class
◆ Clearly state expectations defining minimal levels of student participation
◆ Establish clear goals and communicate these to students
◆ Set specific expectations for students with respect to a minimum amount of time per week for study and homework assignments
◆ Clearly communicate to students the amount of time they should spend preparing for class
◆ Make it clear to students the amount of time needed to understand complex material

◆ Recognize that online courses need deadlines

Manage course time effectively
◆ Emphasize the importance of good study skills throughout course
◆ Use TA to help with tasks, or assign some course tasks to students
◆ Identify which key concepts (and methods of teaching them) can be covered in the amount of time available
◆ Create interactive learning environment, but do not overwhelm students (or instructor) if interaction is too time consuming
◆ Give students adequate time for completing assignments
◆ Consider both in class and out of class time requirements
◆ Underscore the importance of regular work, steady application, sound self pacing, and scheduling

6. How does the course design communicate high expectations?
Provide clear and detailed written guidance on expectations in the syllabus
◆ Clearly delineate institutional policy on cheating and plagiarism at start of course
◆ Write objectives at the appropriate level of Bloom's taxonomy
◆ Present objectives clearly to students as part of the syllabus and learning module, if applicable
◆ Explain group member roles and guidelines, and protocols if group does not function properly
◆ Provide a guide to overall class structure
◆ Provide a guide to appropriate tone and persona
◆ Provide weights and values of graded components of course
◆ Explain grading criteria clearly
◆ Communicate how the integrity of student work in assignments and exams is assured
◆ Clearly define expectations for participation
◆ Provide course objective and learning outcomes for the course in a clearly written, straightforward statement
◆ Tell students that you expect them to work hard

Ensure that content and assignments are challenging
◆ Assure that content and requirements are as demanding as a face-to-face course with identical or similar content
◆ Explicitly communicate expectations, including deliverables
◆ Provide corrective feedback on assignments
◆ Help students set challenging goals for their own learning
◆ Provide lists of suggested extra reading that support key points

Reward excellence publicly
- Provide examples of past students' projects, papers, etc. for students to refer to
- Celebrate in class successes—name students or group
- Challenging tasks, sample cases and praise for quality work communicate high expectations
- Publicly call attention to excellent performance by students

7. How will the learning environment be structured to accommodate diverse talents and ways of learning?

Provide means for students to ask for and receive assistance in understanding course materials
- Students seek assistance in understanding and mastering different learning strategies
- Encourage students to ask questions when they don't understand
- Provide extra material or exercises for students who lack essential background, knowledge, or skills

Consider assessing students' learning styles in the beginning of the course
- Find out about students' backgrounds, learning styles, interests at the beginning of the semester
- Give a Myers-Briggs type learning style assessment in the beginning of class

Be mindful of accessibility issues
- Provide equal access to the shared conversation in the course
- Address accessibility issues: presentation of course materials complies with web accessibility standards as outlined by such entities as W3C, BOBBY, IDEA, ADA, WebAIM, the National Organization on Disability

Create a welcoming, safe, nurturing online environment
- Ensure that an equitable environment exists for gender differences in learning styles, reduction of barriers to participation and communication
- Include cooperative and collaborative learning to distribute workload through group and support female students' preferred method of connected learning
- Promote gender equality by encouraging females to post messages while asking males to subside if a pattern of male domination is noticed
- Discourage snide remarks, sarcasm, kidding, and so forth, in chats

Provide course content in a logical, consistent manner
- Present course content in a manner that hierarchically structures the sequence of information

- Establish and maintain a consistent style for the course materials
- Content is presented in a logical progression
- Explain theory from a practical approach first, then add the structural approach
- Design with a consistent structure, easily discernable to students of varying learning styles

Incorporate a variety of techniques for presenting course material
- Provide a variety of communication techniques for students to use to enhance online learning
- Provide opportunities to collaboratively construct knowledge based on multiple perspectives, discussion, and reflection
- Enhance content by the use of affiliated tools such as discussion, links, notes, quizzes, audio, video, self tests, etc.
- Use visual and auditory stimuli to motivate students and address different learning styles
- Vary types of interaction
- Present and engage materials in a variety of ways
- Balance activities for all styles: books, hands on, visual, etc.
- Use diverse teaching activities to address a broad spectrum of students

Table A1 and Table A2 compare the framework we chose and the checklist above to other published sets of quality principles and best practices.

CHECKLIST REFERENCES

An Excel document listing specific sources for each item in the checklist is available on request to Mary McShane Vaughn (mvaughn@spsu.edu).

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WebCT. 2005. *Customer success: Exemplary course project.* Links to 2003 and more recent versions of the Exemplary Course Rubric. http://www.webct.com/exemplary.

TABLE A1: OTHER SETS OF GOOD-PRACTICE PRINCIPLES COMPARED TO THE SEVEN PRINCIPLES

Key Article(s) and Abstract	Relation to the Seven Principles Framework
Knowles, M. S. 1980. *The modern practice of adult education: From pedagogy to andragogy.* Englewood Cliffs, NJ: Cambridge Adult Education. Principles for designing effective instruction for adult learners (*andragogy,* a term coined by Knowles).	Every university-level course should incorporate these principles to some extent. Our checklist includes them, but does not highlight them, in the wording of disparate elements under the principles of faculty-student interaction, student-student interaction, active learning, and respect for different learning styles.
Langlois, D. E., and C. R. Zales. 1992. Anatomy of a top teacher. *Education digest,* 57(5): 31–34. Based on a review of over 700 studies, authors identified the eight most important characteristics of effective teachers.	Only two of the Seven Principles are explicitly in the list: high expectations and respect for diverse ways of learning. However, we find that rich and varied faculty-student and student-student interaction are implied and three of the eight characteristics relate to active learning, timely feedback, and time on task. We find that all these characteristics readily fit within specific practices we have associated with the Seven Principles in our QA checklist.
Angelo, T. A. 1993. "Teacher's dozen": Fourteen general, research-based principles for improving higher learning in our classrooms. *AAHE bulletin* (April): 3–7, 13. From his review of 50 years of research on teaching effectiveness, Angelo extracted 14 principles to guide good practice. Some of these were incorporated by a committee establishing a QA framework for online teaching at Bradley University. See the following item.	The Seven Principles are contained within Angelo's 14. Angelo adds principles that can readily be incorporated into a checklist organized by the Seven Principles. For example, Angelo's 14 includes that principle that "Learning requires focused attention, and awareness of the importance of what is to be learned" (3), a principle covered in our checklist under accommodating diverse talents and ways of learning.
Kerns, B., S. Elhouar, M. J. Sterling, J. M. Grant, M. McGowan, A. Rubash, K. Neely, and R. Wolffe. 2005. Ten principles of effective teaching and practical examples for the classroom and Blackboard. http://blackboard.bradley.edu/faculty/Recommended _Ef_Use_BB/RecommendedEffUseOfBb.pdf.	Bradley University's expansion of the Seven Principles into ten seems influenced by particular principles found in Angelo's list of 14. We recommend that anyone involved in formulating QA guidelines for online courses should include in their research and analysis Angelo's 14 principles and the implications for teaching assessment related to them discussed in his article.
American Distance Education Consortium. 2003. *ADEC guiding principles for distance teaching and learning.* http://www.adec.edu/admin/papers/distance-teaching_principles.html. Six "Guiding Principles for Distance Teaching and Learning," which are explicated along with a complementary list of ten characteristics of quality Web-based teaching and learning.	Four of ADEC's six principles cover three of Chickering and Gamson's seven: active learning, student-student interaction, and support for diverse ways of learning. The other two are having clear and well-focused objectives and outcomes and contributing to transformative goals of student empowerment and critical thinking.

TABLE A2: ADDITIONAL RUBRICS AND CHECKLISTS FOR QA IN ONLINE LEARNING

Key Article(s) and Abstract	Relation to Our Seven Principles Checklist
American Council on Education. (2001). *Distance learning evaluation guide.* Washington, DC: American Council on Education. http://www.itcnetwork.org/ACECheck1128.pdf. The ACE brochure is worth looking over, and a copy is available online (see References). It divides the evaluation criteria into categories that run parallel to the high-level guiding principles of the three reports mentioned in the article (IHEP 2000; CRAC 2001; Twigg 2001): Learning Design, Learning Objectives and Outcomes, Learning Materials, Technology, Learner Support, Organizational Commitment, and Subject.	We concluded that this checklist contained nothing essential that we had not already included in our QA checklist. We recommend against using the ACE checklist as the basis for the kind of QA process we designed. The ACE checklist covers topics outside the purview of an individual faculty member designing and teaching an online course; in addition, it poses questions at a high level of abstraction without defining specific examples or giving concrete descriptions of practice.
http://www.QualityMatters.org. This is the product of a multi-year project funded by the U.S. Department of Education. The Web site includes comprehensive documentation, including the latest versions of its course evaluation rubric and the literature review supporting the rubric's specific standards and criteria (see Kane 2005 below). Kane, K. 2005. *Research literature and standards sets support for Quality Matters review standards.* http://www.qualitymatters.org/Documents/Matrix%20of%20Research%20Standards%20FY0506.pdf.	We believe that anyone involved in formulating QA guidelines for online courses should consult the Quality Matters rubric and supporting materials, particularly this literature review. We believe that all of the criteria in the Quality Matters rubric are found in either the general policies for distance learning at SPSU or in the expanded checklist developed from the original list we developed. However, we enthusiastically recommend the QM rubric and, especially, the annotated literature review linked to the QM criteria and general standards presented in Kane (2005).
Sunal, D., C. Sunal, M. Odell, and C. Sundberg. 2003. Research-supported best practices for developing online learning. *Journal of interactive online learning,* 2 (1): 1–40. http://www.ncolr.org/jiol/issues/PDF/2.1.1.pdf. A critical review of research studies to identify factors contributing to the effectiveness of online courses. From the studies most closely meeting the research quality criteria, the authors extracted a list of 51 best practices for online learning environments (34–40). The list is organized into four categories: student behaviors (8 items), faculty-student interactions (16), technology support (2), and learning environment (25).	Our checklist incorporates a number of items from the authors' Checklist for Online Interactive Learning (COIL) on the last three pages of the article cited here. We believe that our checklist is clearer and more persuasive to faculty because of its top-down, deductive organization based on the Seven Principles.
WebCT. 2005. *Customer success: Exemplary course project.* Links to 2003 and more recent versions of the Exemplary Course Rubric. http://www.webct.com/exemplary	A number of the items we included in our checklist come directly from the 2003 version of the rubric. We believe that the rubric gives too much emphasis to the specific course delivery platform.

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DAVID DAYTON has a PhD in technical communication
and rhetoric and taught technical communication at Southern
Polytechnic State University from 2001 to 2005. He now teaches
technical writing and information design at Towson University
in Baltimore County, MD. He has taught several different
courses entirely online, at both the undergraduate and graduate
level. Contact: dr.david.dayton@gmail.com.

MARY MCSHANE VAUGHN (PhD in Industrial and Sys-
tems Engineering) coordinates the Quality Assurance master's
program—an all-online program—in the Department of Indus-
trial Engineering Technology at Southern Polytechnic. She is a
senior member and Certified Six Sigma Black Belt of the Ameri-
can Society for Quality, a senior member of the Institute of In-
dustrial Engineers, and a member of the American Statistical
Association and the American Society for Engineering Educa-
tion. Contact: mvaughn@spsu.edu.