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Current Practices and Needs Assessment of Instructors in an Online Masters Degree in Education for Healthcare Professionals: A First Step to the Development of Quality Standards

Kadriye O. Lewis and Raymond C. Baker
University of Cincinnati College of Medicine

Denise H. Britigan
Walden University

Abstract

Instructional quality of online delivery is still a common concern. Quality assurance requires a comprehensive framework of several perspectives of learners' and instructors' needs including critical analysis of their teaching and learning practices with the course technology platform. Using online surveys and semi-structured interviews with 10 instructors and 29 students, this case study investigated current instructional practice, needs, and achievements of the instructors and students in an Online Masters Program for Healthcare Professionals. Although the findings indicated little real concern about the program quality, a majority of our instructors and students still believed that initiating specific course design and teaching standards in our program would maximize instructors' and students' performancein our future courses. The process we followed in this study encouraged a helpful dialogue about program expectations, including training expectations of instructors and course design/development and teaching standards (best practices) for the online master's program. We became more conscious that applying standards successfully requires more support from the instructors.

Online education places new demands on faculty, most of whom come to this new environment predominantly with classroom teaching experience. Few have experienced online courses as either instructor or student. Faculty are accustomed to functioning independently in a traditional classroom environment – developing courses without assistance from others and managing the classroom on their own. Requirements are different in an online learning environment, where consistency and organization are important to ensure a quality experience. In order to provide training and on-going support for instructors, we must approach online teaching and learning in a more global and systemic manner as we plan quality standards.

The use of high quality instructional and course design standards by instructors in online learning has numerous benefits, but not without some difficulties. Moving from traditional methods of teaching to online delivery methods of instruction is challenging due to the dramatic shifts in the perspectives of both the instructors and learners (Dringus, 2000). In this respect, most educational institutions are creating or adopting quality statements, standards, or criteria regarding their web-based distance learning programs. These standards are commonly written as

a faculty guidance manual, which typically covers issues such as the process of course proposal and approval, evaluation and assessment, expectations and requirements, and best practices in online teaching. Some address enrollment caps, teaching loads, and legal issues. These guidance documents are mostly based on university-wide standards and are not program or discipline specific.

National initiatives have been developed in some institutions to provide a consistent approach to assuring quality. One such program that has been developed for online courses is the University of Maryland's "Quality Matters" project (http://www.qualitymatters.org). This project was developed as an inter-institutional quality assurance and course improvement process to certify online courses and components. Several annotated rubric tools were created to assess areas such as 1) overall design of the course website including navigational features; 2) use of learning objectives; 3) assessment strategies, policies, and tools; 4) instructional materials and resources; 5) learner interaction; 6) course technology; 7) learner support; and 8) accessibility. Frydenberg (2002) summarized current published quality standards for electronic learning and organized them into nine domains: 1) executive/institutional commitment; 2) technological infrastructure; 3) student services; 4) design and development; 5) instruction and instructor services; 6) program delivery; 7) financial health; 8) legal and regulatory requirements; and 9) program evaluation. Others have defined a quality framework based on the similar concepts and have developed metrics to support quality learning environments and quality management. Examples are 1) the Sloan Consortium quality framework and five pillars of quality online education (Lorenzo & Moore, 2002; Moore 2005), 2) seven principles of effective education in technology based education (Chickering & Gamson, 1987; Chickering & Ehrmann, 1996), 3) guidelines for identifying and evaluating web-based courses (American Distance Education Consortium -ADEC), 4) Guiding Principles for Distance (http://www.adec.edu/admin/papers/distance-teaching_principles.html), and 5) twenty-four quality assurance benchmarks in the web-based learning environment described by Yeung (2002).

Different groups have provided varying perspectives about standards, quality, and evaluation of online instruction. Some of these provide checklists for review of the courses, peer review teams, or rubric tools as mentioned earlier. Most of these tools or approaches to assess quality of online coursework have merit in some specific areas, but online programs require more comprehensive course design and instructional standards. These standards should address distance education pedagogy with specific emphasis on instructional strategies designed to foster interaction, convey concepts, and assess student learning. Standards must provide guidance to the instructor in translating face-to-face courses into the distance delivery mode in order to achieve specific learning outcomes.

The purpose of this research study was to describe current practices, needs, and achievements of instructors and students in an online masters degree program. Since the faculty in this program developed their own courses and instructional materials, examination of the course design and teaching approaches was necessary prior to initiating standards for quality assurance. The primary research question for this study was: What are the current practices, needs, and achievements of instructors and students in the online masters program? Around this focus were the following sub-questions which guided the subsequent development of standards and best practices for online teaching in the master's program:

- How do program instructors use Blackboard to design and manage their courses?
- What options in online teaching and learning are not supported by Blackboard?

- What additional support or technological features are needed for both students and instructors?
- What instructional approaches and activities should be employed to promote online teaching and learning?
- What types of course design and instructional approaches are effective from the students' and instructors' points of view?
- What quality indicators do instructors use to develop and teach their online courses?

Background Information

The Online Master's Program for Healthcare Professionals has been offered nationally and internationally since 2002. This advanced, graduate level program was developed as a joint project between the University of Cincinnati College of Education, Criminal Justice, and Human Services and Cincinnati Children's Hospital Medical Center. It targets full-time, working physicians and other health care professionals who wish to pursue careers in medical education. Three educational themes - adult learning, curriculum and instruction, and educational research and evaluation - are the focus of this 45-credit hour program. This program is offered entirely online, allowing full-time working medical professionals the opportunity to access classes around their work schedule.

The curriculum consists of twelve core courses, an elective, a practicum, and a master's project.

Full-time and adjunct faculty of the College of Education teach courses in the program so that healthcare professionals can learn educational pedagogy from educational experts. The faculty in this graduate level program developed their own courses including course materials. Due to budget issues, we were not able to provide formal faculty training on how to teach online or how to use the course platform effectively (Blackboard). However, the first author of this paper, who has had extensive distance learning and computer-based learning experience, oriented each of the faculty one-on-one to the online teaching and learning environment.

Methods

This study used a mixed methods design with both qualitative and quantitative study approaches. The combination of these two methods strengthened and deepened the analysis via triangulation (Johnson & Turner, 2003). The quantitative part of the study examined the students' and the instructors' practices on the course platform (e.g., the Blackboard tools) as measured by using the frequency scale ranging from 1 (never) to 4 (regularly). Qualitative methods were used to obtain more descriptive information by focusing the perspective of participants (Bogdan & Biklen, 1998).

Setting and Participants

The setting for this study was a fully online program from the University of Cincinnati. The student enrollment at the time of this study was 65 medical professionals**.** Instructors communicated with students via Blackboard 5.5 and online synchronous meetings via WebEx, an internet-enabled conferencing tool.

The participating instructors had extensive prior face-to-face teaching experience, but few had online teaching experience when they began teaching in our program (years of teaching in the Online Master's program ranged from two to eight years). Ten instructors (five females and five males; one Asian and nine Caucasian; aged 31 to 60 years) and 29 students participated

in the online survey portion of the study. The semi-structured interviews involved the participation of nine instructors and eight students (four females and four males; one Caucasian/Hispanic, five Caucasian/non-Hispanic, one African American; aged 39 to 53 years). Students were selected based on their academic performance. The online students that were interviewed by telephone were living in the United States, Canada, and Puerto Rico, and had attained various levels of education in health areas (from bachelor's degree in health information management to doctor of medicine with additional subspecialty training) and occupational backgrounds in healthcare (course facilitation, drug and poison counseling, neonatology, pediatrics, dermatology, surgery). Student participants were in various stages of the master's program.

Data Collection

Data were obtained through online surveys and semi-structured interviews of instructors and students during the period from August through December 2007. Approval was obtained from the Institutional Review Board of Cincinnati Children's Hospital Medical Center.

Online surveys. Both the instructor and student surveys were developed by two of the authors (KOL and RCB) of this paper. The survey questions explored areas that were grounded in the literature as well as the Blackboard tools utilized in the online environment. Both surveys were examined by two content experts and a psychometric expert who suggested some modifications that were implemented. Later, the instructor survey was administered to the three external faculty members to determine whether the items were clear and concise. The same procedure was applied to the student survey by administering to six individuals in a graduate level course.

The instructor survey had 86 questions and the student survey had 57 questions addressing the areas of Blackboard use, course content and design, quality standards, and future needs. Both instructor and student surveys contained various question formats, such as frequency scale (regularly, occasionally, seldom, never), open-ended, and close-ended (e.g., multiple choice and multiple answers, yes/no questions that probed explanations by asking why, why not, how, in what way, etc).

Semi-structured interview question. Both the instructor and student interview questions were developed by the first two authors and paralleled the online survey questions and research objectives. The instructor interview tool consisted of a total of 19 questions (Background Questions - 6 questions, Global Questions - 7 questions, and Focused Questions - 6 questions), and the student interview included a total of 15 questions (Background Questions – 4 questions, Global Questions – 6 questions, and Focused Questions - 5 questions). Face and content validity of the interview questions were obtained through a peer review process.

Other documents. Other documents included all of the course syllabi and some of the course materials.

Both the instructor and student surveys were placed online using SurveyMonkey, a web-based tool to create/publish custom surveys, and to collect/analyze results in real time. The survey link was emailed to all instructors and the students. Two reminders were sent via email.

Semi-structured interviews were conducted with the course instructors and the students to obtain more detail about individual thoughts and feelings. We used two different methods in conducting semi-structured interviews: in-person interviews (instructors) and telephone interviews (students). Telephone interviews were conducted with the students because of distance issues.

Data Analysis

Quantitative data were analyzed through the statistical software package SPSS (descriptive statistics - mean, standard deviation, and t value). Descriptive statistics were calculated for the scale scores (e.g., frequency and percentage of answer for each of the questions of the survey). Open-ended responses in the survey were analyzed thematically (Neale & Nichols, 2001; Shank, 2006) using taped interview data that had been transcribed verbatim. The instructors' and students' survey data were triangulated with the interview data to provide a more powerful interpretation of instructor and student perceptions of the important key issues in online teaching and learning.

Analysis of qualitative data included coding of categories, which is the heart of grounded theory analysis. Codes identifying key words or labels were attached to appropriate words, phrases, sentences and whole paragraphs (Miles & Huberman, 1994). This permitted the creation of a concept map linking key factors and their relationships. Three major types of coding (open, axial, selective) proposed by Strauss (1987) and Strauss and Corbin (1990) were used. Open coding allowed development of categories of concepts and themes emerging from the data without any prior assumptions. Axial coding facilitated building connections within categories. Selective coding allowed choosing one category to be the core category and relating all other categories to that category. The third author analyzed data as an external data coder for the qualitative data. The purpose was to achieve high inter- and intra-coder reliability. In addition, data and methodological triangulation were applied to all categories obtained from the instructors and student responses.

In addition to survey and interview data, we analyzed some of the course documents and artifacts (e.g., course syllabi, instructional materials and course content). These data sources provided evidence of pedagogical and course design approaches used by the instructors as well as their actual course practices.

Results

The analysis of the data revealed the following themes:

Course Platform Technology (Blackboard)

Instructors' and students' experience with Blackboard. Instructors' experiences with the current course platform varied from two years and more. Most of them had learned the basics of Blackboard by attending the university sponsored training and/or received help from someone with Blackboard experience. A few were self-taught and used online tutorials to figure out the capabilities of the specific tools in Blackboard. Students' experiences varied from less than a year to three years. Eighty-six percent of students had not taken any online courses, and 89% had not received Blackboard training previously. Their first encounter with the Blackboard system started when they received the program orientation, which included basic features of Blackboard and course expectations.

Overall, the data indicated that both the instructors and students found Blackboard to be a flexible, useful, effective, user-friendly tool in aiding their teaching and learning, even for a computer novice. They also thought that this platform accommodates different kinds of teaching styles and learning preferences.

Instructors' and students' practice on the course platform. Using the basic features of Blackboard, all the instructors were able to create a positive instructional environment by posting syllabi and course materials, posting weekly discussion questions (feedback and interaction), providing references to external web links, and utilizing email (Table 1). Eighty percent of the instructors were not able to use the advanced features of Blackboard such as assessment tools (tests, survey, and grade book) and course tools (chat, calendar, file share, digital drop box, and electronic board). However, they indicated that they were slowly exploring some of the advanced tools in Blackboard. According to the survey results, only four instructors (40%) requested training on specific tools such as connecting to library resources, grade book, group pages, testing strategies, group work, and other high-end operations. During the interviews, the majority showed an interest in a refresher course on all the features/tools available in Blackboard and how they can be used. Syllabus design, innovative teaching strategies, and peer interaction approaches were subjects most requested by instructors for further training.

Most of the responses from the students and instructors regarding the use of Blackboard tools were in agreement except for the communication tool (email use) and the course tools/student tools (Digital Dropbox, File Share, Calendar, Tasks, and the Electronic Board - $p = 0.05$).

Differences in the use of those tools were related to the roles and responsibilities of each group. For example, the administrative tool (Calendar/Task) for deadlines was not frequently used; instead the instructors provided important dates through emails and the announcement page. Students mostly use their own email programs rather than the email system built into Blackboard. On the contrary, instructors reported that it was convenient to send group or individual emails through Blackboard since all the students' email addresses and names are available within the system and they did not need to create their own distribution list using their own email program.

The survey results showed that all the instructors reported that they informed students about the presence of new materials on Blackboard by means of both announcements and email, which was corroborated by the student survey.

Table 1

Use of Blackboard Tools

Instructor Survey Question: How often do you use the following Blackboard tools in your teaching to online master's students?

Student Survey Question: How often have you used the following Blackboard tools in the courses you have taken so far?

Blackboard Tools	Respondent	N	Mean*	S.D	t-value
File Share	Students	28	2.54	1.07	4.20**
	Instructors	10	1.30	0.67	
Course Calendar	Students	28	2.36	1.13	3.50**
	Instructors	10	1.30	0.67	
Tasks	Students	28	2.43	1.20	4.67**
	Instructors	10	1.20	0.42	
Sending email	Students	29	2.72	0.96	-5.75**
	Instructors	10	3.90	0.32	
Electric Blackboard	Students	28	1.71	1.08	3.49**
	Instructors	9	1.00	0.00	
Announcements Course Documents Course Information Assignments Staff Faculty Information Discussion Board, Groups Group Pages Learning Units Personal Pages Web Resources External Links Collaboration Tools/Chat Digital Drop Box Tests/Quizzes Surveys Grade Book	No significant differences between instructor and student responses.				

* Based on frequency scale where 4 = regularly and 1 = never

** $p<.0.05$

Course materials and discussion boards were perceived as being highly relevant tools. Discussion board activities were the students' favorite activities. In addition, both the instructors and students perceived that most of the tools on Blackboard course management can support active leaning, collaborative work, communication skills, critical thinking, and evaluative skills. All those tools were cognitively stimulating and gave them opportunities to gain knowledge, read, write, and reflect as they interact with course content.

Blackboard limitation. A few instructors identified limitations of the Digital Dropbox as not being intuitive, confusing to some students, and not visible to the other students' submissions. Other least favorite features included the following:

- Subject-specific things such as mathematical equations and characters can be difficult to communicate (especially the older version of Blackboard).
- The course shell in Blackboard permits little customization by the instructor, limited to changing the menu style and color and adding a banner.
- The sender's copy of e-mail messages in the email track feature does not reflect the address to which it was sent. That is, the sender's name appears in both the "To" and "From" lines.
- When a test is copied from one course to another, the item order is altered.

The instructors also reported on some of the things they were not able to do in Blackboard, such as:

- Automatic grading of open-ended response
- Assign partial credit to an alternative logical answer in a multiple-choice question.
- Formatting email messages (the plain text messages are often boring and difficult to read).
- Drawing
- Podcasting
- Audio and video conferencing integration (The Elluminate Live! online conferencing tool is now available)
- Voice communication - real time chats on line (Blackboard has virtual classroom, but it is not voice integrated).

Course Design and Content Development

All instructors designed their online courses to accommodate their own teaching styles and course content. Before they developed their courses 80% had read about how to design effective instruction for online classes. Fifty percent created an entirely new course for online delivery while 50% adapted a current face-to-face course for online delivery. Thirty percent redesigned a current course to take advantage of online tools. Only one instructor co-developed the course with a co-instructor when teaching for the first time. One instructor consulted an e-learning expert and added hands-on activities to take the place of activities an instructor would normally do in the classroom or in small groups.

All instructors developed their course syllabus, weekly outlines, and/or lesson plans, including their own course materials, but a few instructors created their teaching materials collaboratively with the aid of technical support from their departments. One brought in finished supplemental materials (e.g. CD-ROM). The course syllabi were the main medium to state the instructors' expectations and the course requirements, although the content of the syllabi was variable. As for the instructional materials, most of them consisted of text-based materials, pdf articles/handouts, and PowerPoint presentations. These were the regularly-used content-focused

materials, which students found very useful for their learning purpose. A few students noted that PowerPoint presentations with narration, videos/animations, and videoconferencing would be helpful, especially when communicating the core concepts in certain subjects. The interview data also confirmed the same results. A few instructors had provided audio-feedback, but due to recording quality the students did not like them.

Eighty percent of instructors self-reported that they understood the intellectual property rights pertaining to their online course materials, but only 30% of them had checked and cleared their online materials for the copyright infringements. However, 90% of the instructors knew the appropriate source of information on the topic.

Blackboard Teaching and Learning

Instructional approaches. Instructors' instructional approaches and activities included giving positive feedback, making the material applicable and relevant to the students' lives, creating an environment for questions to be asked and answers to be discussed, requesting honest reflection from students, requiring accountability for assignment deadlines, and building on small successes toward targeted goals. Seventy percent of instructors provided discussion board forums for different types of communication (e.g., "Water Cooler," "Course Issues," "Ask the Instructor," "Student Feedback," "Reflective Journal," and "Course Design").

All the instructors monitored students' use of Blackboard, although the methods of monitoring varied from reading student posts and keeping track by hand to electronic monitoring using the Blackboard tool (performance dashboard). While 45% of students did not know of a mechanism to allow an instructor access to or capture of information regarding their individual performance in the course activities, 55% of students were aware of the instructors' tracking and measurement strategies of their progress.

Instructors expressed the challenges of their teaching as time commitment, student diversity, keeping up with technology, and absence of best practices for using Blackboard. Student challenges included not enough advising and feedback from instructors as well as from fellow learners, and a preference for assignment of short projects instead of one long project. Student interviews revealed that students were more satisfied with the structured courses that use clear expectations, weekly outlines, assessment rubrics, application-level project examples, and more interaction with peers and instructors.

Group and discussion board activities. Sixty percent of instructors incorporated group work activities into their courses. The student survey results confirmed this by providing specific names of the courses and instructors. Ninety percent of instructors promoted peer interaction through discussion board activities, mandatory weekly participation/peer feedback requirements in assessment criteria, group work opportunities, and collaborative projects. All students reported that they had sufficient peer interaction in their courses.

Assessment and rubric. Most instructors (80%) and students (73%) reported that assessment of online activities occurred. Students reported that instructors tracked and evaluated student interaction by using a checklist of participation, a rubric (e.g., frequency of contributions, originality/impact of ideas in enhancing the quality of discussions, and overall responsiveness to others), monitoring the discussion forum closely, and sending private email to students whose interactions are problematic.

Ninety percent of instructors facilitated discussions online using multiple methods:

- Participation with comments on various discussions and encouraging further discussion through questioning and scaffolding

- Posting more specific questions for discussion among class members
- Posting a weekly question (referred to by the instructor as a "jumping off" point)
- Responding to students who were not getting adequate responses from classmates
- Highlighting some item (like a student's posting) that had been neglected, but was worth considering

Although approximately half of the students did not think the instructors facilitated the student interaction online, 52% agreed that their instructors assisted and facilitated the discussion board activities using the methods mentioned above, including providing insightful questions or reflective statements. One student commented:

> *Some are better than others; some simply monitor and provide a summary at week's end, while others engage in interaction and facilitate the discussion, which I think is much better. While I am a fan of self-directed learning, I think some instructor input is beneficial. We are paying for their expertise...*

Students indicated that online courses required too much time spent reflecting on someone else's response to a question as opposed to seeing how the instructor, who is teaching the concept, would react to the responses.

Instructors' use of rubrics and assessments, such as assignments, quizzes, and exams, was variable. Some instructors subjectively evaluate the discussion forum to show "that they [students] are reading and understanding the material in the book and are able to apply it to things that they are involved in."

Instructors' future plans on the use of Blackboard. Instructors identified their need to improve their courses and highlighted the importance of effective time and classroom management issues. One instructor emphasized that online teaching seemed to take more time; therefore, more organization and better time management strategies were needed. They felt that responding to every posting was not effective time management and only served the purpose of demonstrating their online presence to the students.

One of the instructors noted that students appreciate regular communication and timely written feedback on their progress, which required developing a faster and more detailed feedback mechanism. Another instructor was always looking for opportunities to relate course materials, teaching techniques, and ideas to the students' work lives. One instructor stated "that many students are looking for an online community - for support, for humor, for reflection." Another commented:

> *Be prepared to spend a great deal of time responding to student work -- both their written assignments and their discussion board participation. They know exactly when and how much you are on Blackboard and they know exactly how long you take to respond to their written work. They also know and appreciate the difference between "generic" responses and detailed, individual responses.*

Quality Assurance and Standards

Perspectives on quality assurance. Half of the instructors believed there should be standards or guidelines for teaching courses on Blackboard for the Online Master's program. Half were unsure or had mixed feelings. The students likewise had mixed responses to this question with two thirds finding merit in guidelines. However, 56% of instructors and 64% of students believed that having instructional and course design standards for this program would be helpful for more standardized instruction. Two-thirds of the students believed that all instruction in the online courses should be conducted using the same standards for consistency

and quality assurance. Instructors looked at the quality issues from different perspectives, including standards as a means of quality control, caution against rigid standards that would hamper creativity and innovation, and selection of a few exemplary courses to aid in course development.

Course design and instructional standards. Some instructors emphasized that standards would give more rigor to any program and incorporating instructional design standards would help increase the general quality of the masters program. In general, most of the instructors were in favor of incorporating instructional standards into their courses on the condition that they are able to maintain some individuality in course design and teaching practices. They felt that course design should vary with the instructor and the course content to avoid being rote and boring for the students. One of the students' comments confirmed this concern by saying:

> *There has been a variety of ways that instructors have used blackboard and various different criteria between what is expected in each class I have taken. I like the variety and the uniqueness that each instructor brings to each class, and, as long as what is expected is outlined initially, I think that if each course were set up similarly, it would be less interesting.*

In general, students expressed satisfaction with the courses. Most of them indicated that some instructors are better at online instruction than others and that standards would improve the quality of instruction across all courses. They felt that each course should have standards to improve consistency and appearance/structure, but should not limit the instructor's ability or dictate what the course should look like (e.g., diversity makes the program interesting). A few of the students stated that the standards should be used with great caution so as not "to squelch creativity among the faculty." To ensure course quality, they felt the following standards would be important and ensure the educational value of the activities:

- Consistency in the amount of work on the discussion board and amount of required reading
- Consistency in location of syllabi, weekly assignments, and course submission sites
- Rubrics should be posted so students know what to expect, but each professor should be in charge of creating their own rubric according to his/her expectations and feedback from prior classes.

Discussion

Instructional quality is still a concern in online learning. Although several studies on the quality of online learning have been conducted, the factors that contribute to success in online learning have not been adequately described. The literature has described several online education courses that failed to meet quality standards set by researchers and institutions (Garrett, 2004; Oliver, 2005; Zhao, 2003). On the other hand, Yang and Cornelious (2005) questioned the quality of instructors who teach online courses. Many studies used multiple perspectives to evaluate quality, such as student grades and test scores, attitudes, absence of face-to-face interaction, faculty experiences, student satisfaction, accessibility of course material, and the ease of using technology (Thurmond, 2002). The Institute for Higher Educational Policy (2000), in examining case studies of six college and university web-based programs, developed 24 benchmarks that are essential in ensuring quality in Internet-based distance education. The benchmarks focus on (a) student, faculty, and institutional support, (b) course development, (c)

teaching/learning, (d) course structure, and (e) evaluation and assessment. In order to obtain evidence to increase the quality of online education, the combination of instructional design, course structure, teaching pedagogy, technology, and instructor/student support systems should be examined to see their effects on student success in an online environment.

In the current study we focused on the instructors' and students' current instructional practice on the technology of the course platform, including instructional strategies, course design, and the needs of faculty and students. This process encouraged dialogue about program expectations, including training expectations of instructors and course design development and teaching standards (best practices) for the online master's program. Our instructors were confident that their instructional goals of communicating content to students were met through their ability to post their course documents, provide discussion questions, and post grades on Blackboard. However, it is clear that they need on-going support for various levels of technology training, not just in the initial stages of course development.

Quality is a continuous learning process and requires frequent adapting of best practices to meet the needs of our program instructors and students. In general, our instructors agreed on the importance of quality standards based on best practices as a means of improving the quality of their work. They even suggested some resources such as participating in Quality Matters (QM) Standards (http://www.qualitymatters.org), which is a faculty-centered, peer review process designed to certify the quality of online courses and online components. Other resources that are available include Chickering and Gamson's (1991) seven principles of good practice in teaching-learning, North Central Association of Colleges and Schools Guidelines for Distance Education (http://www.ncahlc.org/), Ohio Learning Network (http://www.oln.org/), and the Western Cooperative for Educational Telecommunications (WCET): Best Practices for Electronically Offered Degree and Certificate Programs (http://www.wcet.info/2.0/).

A limitation of this study was that it investigated a small program with instructor and student perceptions of only one online platform (Blackboard). Because this study involved students in online classes of different subjects with different instructors who have varied teaching preferences, the Blackboard implementations may have been affected. It is possible that if there are problems with the implementation of a course tool, student perceptions will be adversely affected and these perceptions will negatively affect the outcome of this and future studies. For example, if the course tool is not used by the instructor effectively, students may not use it. Standards should only be used to enhance the course and ensure the educational value of the activities without regard for the teaching platform.

Conclusions and Recommendations

The results of this study have significant implications. If our courses are to be brought to a uniformed quality structure using instructor best practices, we should adopt or develop a workable set of guidelines and benchmarking that describes critical elements of effective learning. The following recommendations, based on our study and published research in online learning, may help devise a successful plan in order to develop and infuse quality standards for online coursework:

1. Provide a measure of the quality of existing course materials as well as provide a guide in the development of new materials or modules.
2. Use a sample course and materials as a template or foundation on which instructors can build a new course, customizing it as necessary. The template provides the basic course

structure and navigation, introductory information modules, and suggestions for content to enhance the course site. Using the template also speeds up development time and may also facilitate the course development process for new online instructors - for example, a course syllabus template that shows all the key components and content areas in detail.

3. Develop a strategy that will provide continuous support and evaluative feedback and self-criticism for self-improvement of the instructors. One approach would be to use validated published rubric tools such as QM standards that will help assess current course design (needs assessment) in order to highlight quality issues from several perspectives. Assessment can be self-assessment, peerassessment, or supervisor assessment based on these rubrics.
4. Provide resources and training opportunities for instructors to help them create an online learning community through a permanent online program orientation course and to support them monetarily to participate in existing online teaching certification programs.
5. Use published quality standards such as those of Frydenberg (2002) to aid assessment and serve as a framework for guideline development.
6. Develop a viable relationship with the instructors, and pursue a bottom up approach so the impetus for implementing standards comes from the instructors.

Overall, the findings of this study are promising for initiating specific standards in our program in order to maximize instructors' and students' performance in the future courses. The instructors' and students' perceived quality indicators will assist us in making informed decisions about the quality of our program courses. The biggest challenge is designing standards without being rigid or prescriptive. However, by providing one-on-onehelp to our instructors, this process can be informative, helpful, and constructive.

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