ONLINE QUALITY COURSE DESIGN VS. QUALITY TEACHING: ALIGNING QUALITY MATTERS STANDARDS TO PRINCIPLES FOR GOOD TEACHING

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Abstract

Problem: *Given previous research in the areas of online course design and principles for good teaching, more research is needed to examine the connection between good design and good teaching.* ***Research Questions:*** *How do the 2013 QM higher education rubric standards align with the seven principles for good practice in undergraduate education? What additional principles for practices for good undergraduate education may be necessary?* ***Research Method:*** *An online survey was conducted in which participants were asked to align the 2013 Quality Matters higher education rubric standards with the seven principles for good practice in undergraduate education developed by Chickering and Gamson (1987).* ***Data collection Procedures and Analysis:*** *Using a Web-based survey, participants categorized the QM higher education standards into the seven principles or added a good teaching principle based on their perceptions and experience. Responses were calculated and distributions were provided.* ***Findings:*** *The participants noted good alignment with the majority of the principles for good teaching. However, participants indicated the smallest alignment between the QM standards and the following two principles of good teaching: Gives Prompt Feedback and Emphasizes Time on Task. Findings also noted an eighth principle of good teaching: Professionalism.* ***Conclusions and Recommendations:*** *The results of this research have definite implications for QM, online faculty, and instructional designers. As QM continues to update general and specific standards, the results of this research may provide thought for consideration for future revisions of the rubrics. As Gives Prompt Feedback and Emphasizes Time on Task were rated the lowest for alignment with the QM standards, this may indicate the QM higher education rubric may need to be edited to more fully align with these principles of good teaching. It may also indicate the intended specific langugage in the QM rubric may need to be edited for clearer understanding. Online faculty may become more aware of the importance of conducting quality reviews of online courses. Faculty and instructional designers may also become cognizant of how good design impacts good teaching along with the principles for good teaching. It may be to their advantage to also consider an eighth priciple of good teaching–-professionalism .*

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Introduction

In an online teaching and learning environment, quality course design impacts the quality of teaching. Much research has been completed on the Quality Matters (QM) Program, which is an international organization working to improve the design of online and blended courses. QM rubrics have been created to assist in the design of quality online courses. Research has also been conducted on Chickering and Gamson's (1987) seven principles for good practice in undergraduate education (Chickering & Gamson, 1999). Combining research on both quality design and quality teaching in the online environment is essential to assist faculty in helping students achieve set learning outcomes.

Chickering and Gamson (1987) reviewed the literature to investigate good principles of teaching. The following resulted from their research as the seven principles for good practice in undergraduate education. Good teaching practice does the following:

1. encourages contact between students and faculty,
2. develops reciprocity and cooperation among students,
3. uses active learning techniques,
4. gives prompt feedback,
5. emphasizes time on task,
6. communicates high expectations, and
7. respects diverse talents and ways of learning.

The seven principles for good practice in undergraduate education have been recognized as an effective method for the evaluation of teaching and course design. Although originally used to establish the best practices for the face-to-face (F2F) environment, the seven principles have been applied to online teaching. Ritter and Lemke (2000) noted the use of the Internet can faciliate good educational practices. Students believed the use of email encouraged student-faculty contact and prompt feedback was facilitated with the use of the Internet. Students also noted Internet materials allowed for more efficient use of time and enhanced learning.

Newlin and Wang (2002) encouraged "the application of the seven principles of good practice in undergraduate education to guide the design and implementation of Web-based courses" (p. 325). Good design was recognized as important to good teaching as research found the development of good online courses was guided by pedagogical practice instead of simply being driven by technology. McCabe and Meuter (2011) also found effective learning environments can be created when aligning course design and development with the seven principles.

Sowan and Jenkins (2013) noted the quality of hybrid courses can be improved by applying the seven principles of good practice in undergraduate education to course design and delivery. This practice emphasizes that a connection can be drawn between course design and delivery (teaching) and student mastery of course content and the achievement of learning outcomes. The connection

between course design and delivery was reemphasized as an important concept during the review of research for the development of the 2011-2013 QM Higher Education Rubric. Swan (2003) analyzed student perceptions and found clear and concise course design, interaction with instructors and active discussions with peers, were some of the major factors in the creation of learning communities.

Purpose

The purpose of this research was to align the QM higher education rubric standards to the seven principles of good practice in undergraduate education. Through this process, it is a secondary goal that instructional design and delivery are emphasized and connected to good teaching.

Research Questions

The research was guided by the following questions:

1. How do the 2013 QM higher education rubric standards align with the seven principles for good practice in undergraduate education?
2. What additional principles may be necessary for good undergraduate education?

Review of Literature

Quality Matters (QM) was started by MarylandOnline, Inc. through a Fund for the Improvement of Post-Secondary Education (FIPSE) grant project in Fall 2003; the goals were to develop an "inter-institutional quality assurance and course improvements in online learning" (QM, 2013a, para. 1). Upon completion of the grant, QM continues as a self-supporting organization based upon the subscription payments and certification fees paid by institutions. QM has established itself as a successful consortium of individuals, institutions, and organizations that have a common understanding of and desire for online course quality. QM serves as a leader in quality assurance of online courses.

The QM Program has developed standards in rubric format, based on a wealth of research used to evaluate the design of online and blended courses as well as "the expertise of experienced practitioners" (QM, 2013b, para. 1). The QM 2013 higher education rubric contained 8 general standards and 41 specific standards. Each specific standard was assigned a point value to be used during the course design assessment for use by a team of reviewers. The review team is comprised of one team leader, one content expert, and one peer reviewer who have all completed extensive training through QM. Twenty-one (21) specific standards are assigned higher point values and all must be met in the review.

The eight (8) general standards included the following. The number in parentheses after the general standard notes the number of specific standards

included under each general standard.

1. Course overview and introduction (8)
2. Learning objectives/competencies (5)
3. Assessment and measurement (5)
4. Instructional materials (6)
5. Learner interaction and engagement (4)
6. Course technology (5)
7. Learner support (4)
8. Accessibility (4)

The specific standards are all directly related to the overall general standard. For example, a few specific standards are paraphrased below for Standard 3: Assessment and Measurement.

- Assessments measure learning objectives.
- Assessments are varied and appropriate.
- Course grading policy is clearly stated.

QM rubrics were developed to assess course design, not the course delivery or quality of teaching. The QM higher education rubric is reminiscent of ADDIE, the popular Instructional Systems Design (ISD) model. The ADDIE model serves as a framework for many instructional designers and training developers. The ADDIE model guides the development for building effective courses or training through the following five phases: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation (Branch, 2009). When developing instructional materials, a variety of theories may also be investigated including constructivism, social learning, cognitive learning, etc. When investigating instructional theories, delivery begins to connect to appropriate design.

In the analysis phase of the ADDIE model, the learners, delivery options, learning theories, and pedagogical considerations are analyzed. These considerations help clarify learners' knowledge/skill base, learning environment, and instructional objectives. The design phase incorporates the learning objectives, content, assignments/exercises, assessment instruments, and media selection for appropriate lesson planning. These components are evident in the QM rubric. The design phase is typically completed in a logical, organized, and detailed manner so that targeted strategies (based on intended outcomes) can be identified and later developed, implemented, and evaluated.

During the ADDIE development phase, instructional designers take the blueprint design and create and assemble it in a usable, formative format. This phase may include extensive testing and revision to create a course with appropriate navigation, content, interaction, and other components to be utilized in an effective teaching environment. Hence, good design impacts good teaching. Once the course is tested and revised, the implementation phase allows for an

evaluation of the design as it is put into place. Therefore, further updates or re-design work may be necessary to the design or delivery components. During a QM peer team review, investigating good design is also recognized and emphasized.

The ADDIE evaluation phase is not the final phase, but is ongoing throughout all phases, as there are formative and summative evaluations included in this phase. Consequently, the evaluation phase plays an essential role in the on-going course evaluation and revision process. On-going course evaluations create a continuous cycle with overlapping components in which design influences delivery and delivery influences design. Through formative and summative course evaluations, faculty and instructional designers can make appropriate course changes to enhance learning. Figure 1 provides additional information for understanding the ADDIE model.

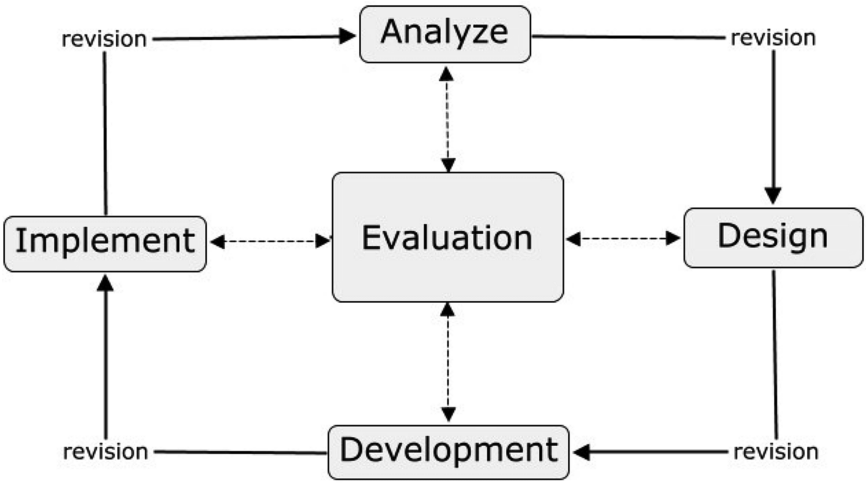

Figure 1: ADDIE model in graphic format. Retrieved from Phases of ADDIE, n.d.

Contreras (2013) noted, "Effective instructional design also helps an instructor to teach, to guide and support learners, and to promote meaningful and active learning" (para. 1). With this in mind, good design influences good teaching. Therefore, with good course design through QM and the ADDIE model, it is optimal to compare the QM standards to good teaching principles–the seven practices for good undergraduate education. Through this process, instructional design and delivery are emphasized and are being connected to good teaching.

Henninger and Hurlbert (2006) noted the importance of recognizing the seven principles is based on an "underlying view of education as active, cooperative, and demanding" (p. 5). Being active, cooperative, and demanding are also effective

components of well-designed online courses. The QM rubric standards emphasize student engagement and cooperation. Students have also indicated instructors who utilize the seven priniciples in courses were perceived as experienced and caring, not only about the students, but also cared that the instruction was of good quality (Batts, Colaric & McFadden, 2006). Further, Batts et al. (2006) noted the seven principles are accepted as quality instructional strategies and are evident in online courses.

Basing further research on the seven principles, Graham, Cagiltay, Lim, Craner, and Duffy (2001) developed a list of "lessons learned" for the online environment. Instructors should provide the following:

- clear guidelines for interaction with the students;
- well-designed discussion assignments facilitating meaningful cooperation among students;
- challenging tasks, sample cases, and praise for quality work communicating high expectations; and
- the opportunity for students to choose project topics incorporating diverse views into online courses.

With continual research in the area of good teaching, the Education Commission of the States (1995) developed the *Making Quality Count in Undergraduate Education* report noting 12 attributes of quality undergraduate education. These include the following:

- The culture must have
  - high expectations;
  - respect for diverse talents and learning styles; and
  - an emphasis on the early years of study.
- A quality curriculum requires
  - coherence in learning;
  - synthesis of experiences;
  - ongoing practice of learned skills; and
  - integration of education and experience.
- Quality instruction incorporates
  - active learning;
  - assessment and prompt feedback;
  - collaboration;
  - adequate time on task; and
  - out-of-class contact with faculty.

Filimban (2008) found clear instructional design and delivery to be based on a student's understanding of clearly stated expectations and strategies for meeting learning outcomes. Meaningful feedback and opportunities for collaboration played important roles as well. The importance of effective course design was echoed by Thornton and Grant (2007) as course design was identified as one of

the three primary themes within the best practices for online instruction. The other two best practices included instructional effectiveness and interactivity/interconnectedness. As further noted by Crews and Wilkinson (2011b), questions about instructor-to-student (I2S), student-to-instructor (S2I), and student-to-student (S2S) are important to include in the end of course evaluations to assess the course design and delivery.

Swan, Matthews, Bogle, Boles, and Day (2010) revised a course based on the QM standards and better student outcomes were achieved. Hence, the standards for good course design enhanced student outcomes which further enhanced student learning. Swan et al. (2010) noted student performance may have improved due to the fact that the QM redesign directed instructors to focus on linking objectives to outcomes translating to effective course activities and/or interactivity. Therefore, it could be stated that the delivery/teaching was enhanced as well. Additional studies have been completed that note the QM standards (which impact good course design) have an affect on student learning (Hall, 2010; Moallem, 2007; Swan, 2003). If properly designed with interaction, clear structure, and strong content (Driscoll, Jicha, Hunt, Tichavsky, & Thompson, 2012), online courses can offer a learning environment equally as effective as the traditional F2F classroom.

Business educators have been active in online teaching and have researched distance learning and online learning to enhance the literature and their own courses. Through involvement in online learning and development, business educators have been involved as online course designers as well. Therefore, QM is of importance to the business education course development and delivery process. Gueldenzoph (2003) investigated the constructivist theory in relation to online learning. The constructivist theory includes learning that provides opportunities for students to engage and reflect, develop inquiry and problem solving skills, and move through the various levels of Bloom's taxonomy to achieve the set learning outcomes. To effectively develop this learning environment in an online course, good design and teaching principles must be implemented. For the design of collaborative learning through online discussions, Du, Yu, and Olinzock (2011) researched the impact of question prompts to engage students in the learning process.

The QM standards include general and specific standards related to learner interactivity and engagement, but specifically provide a rubric with 8 general standards and 41 specific standards to assess the quality of the course design for online courses. The implementation of online learning has also prompted business educators to investigate quality assurance (Chapman & Henderson, 2010), assessment in an online environment (Crews & Wilkinson, 2011a), and workload management strategies (Crews, Wilkinson, Hemby, McCannon & Wiedmaier, 2008). It is important for business educators to investigate perceptions and best practices in offering online degrees as well (Crews, 2006; Crews & Brown, 2003).

Participants

Participants in the study included all 493 attendees at the QM 2013 conference and 64 National Association for Business Teacher Education (NABTE) representatives for a total of 557. As noted previoulsy, business educators are active participants in researching, designing, and teaching online courses. QM conference participants are involved in the same dimensions of online learning. Therefore, both business educators and QM attendees were included in this study. Of all participants, 47% were faculty members, approximately 30% were instructional designers, and the remainder of participants (23%) classified a profession as "other." Ninety-five (95) percent of the participants previously taught online courses and of those, 55% taught online courses for more than 10 years, and approximately 26% taught for 4-6 years. Prior to the survey, approximately 96% of participants had heard of QM, while 4% noted never having heard of QM. Approximately 93% of survey participants were aware of the QM Higher Education Rubric prior to the completion of the survey.

QM certified peer reviewers comprised 44% of participants, while 56% were not certified peer reviewers. Of the 44% certified peer reviewers, the majority (53%) had served as a certified peer reviewer for 1-3 courses, while 25% had reviewed 4-6 courses. The participants identified themselves as faculty, instructional designers, online program coordinators, directors of centers for teaching and learning, and other educational professionals.

Data Collection and Results

The collection of data was accomplished through an anonymous Web-based survey. All participants were emailed a link to the survey. The initial email resulted in seven undeliverable emails. The email addresses were corrected and the survey was resent. However, one email continued to be undeliverable through all four emails requesting participants to complete the survey. Therefore 556 participants received all four email requests, each sent approximately two weeks apart. The responses provided by the participants varied from 117-181 responses on the various specific QM standards. However, consistently, at least 117 participants responded to all specific standards for all but 7 of the specific standards. Therefore, an approximate 21% return rate was achieved.

As noted previously, participants were asked to review the QM higher education rubric specific standards and categorize them based on Chickering and Gamson's seven principles for good practice in undergraduate education. If participants believed the QM specific standard could not be categorized into any of Chickering and Gamson's standards, an option to note "other" and add a different principle of good teaching based on their perceptions and experience was provided.

Table 1 delineates the findings as the specific standards were collapsed into the overall general standards. For example, Standard 1 has eight (8) specific standards. As noted previously, these specific standards are all directly related to the overall general standard. Therefore, using a multiple response categorization,

Table 1.

Percentage of Participants Categorizing Eight QM Standards into the Seven Principles of Good Teaching

Standard	Principle of Good Teaching							
	Encourages Contact Between Students & Faculty	Develops Reciprocity & Cooperation Among Students	Encourages Active Learning	Gives Prompt Feedback	Emphasizes Time on Task	Communi-cates High Expectations	Respects Diverse Talents & Ways of Learning	Other
1. Course Overview & Introduction (n = 181)	20.1%	16.2%	8.8%	0.7%	2.7%	39.9%	3.5%	8.1%
2. Learning Objectives or Competencies (n = 146)	1.9%	1.4%	26.1%	1.5%	5.1%	49.2%	7.8%	6.8%
3. Assessment or Measurement (n = 130)	1.9%	0.8%	21.4%	14.4%	3.8%	28.8%	23.7%	5.2%
4. Instructional Materials (n = 123)	3.4%	1.1%	25.1%	1.8%	8.4%	25.1%	19.9%	15.0%
5. Learner Interaction & Engagement (n = 121)	7.4%	24.0%	30.0%	15.7%	7.0%	10.7%	2.5%	2.7%
6. Course Technology (n = 120)	2.9%	1.7%	43.0%	0.3%	16.1%	8.9%	12.1%	15.0%
7. Learner Support (n = 119)	11.8%	1.1%	10.7%	5.1%	7.1%	9.3%	34.6%	20.3%
8. Accessibility (n = 117)	0.6%	0.2%	7.1%	0.6%	5.7%	1.3%	78.7%	5.8%

all participants' responses were combined for each of the seven principles of good teaching per standard. Through multiple response categorization data analysis, responses to aligning specific standards within each general standard can be combined to result in one percentage across each general standard.

Based upon the participants' responses, the eight (8) QM general standards align most with the following three (3) principles of good teaching:

- Communicates high expectations
- Encourages active learning
- Respects diverse talents and ways of learning

In fact, three of the QM general standards were categorized by over 40% of participants into specific principles of good teaching:

- Standard 8: Accessibility—78.7%—Diverse Talents and Ways of Learning
- Standard 2: Learning Objectives/Competencies—49.2%—Communicates High Expectations
- Standard 6: Course Technology—43.0%—Encourages Active Learning

In addition, four of the QM general standards were aligned with 25% or more of the survey participants noting Communicate High Standards. Three QM general standards were aligned with 25% or more of the survey participants noting Encourages Active Learning and two aligned with 35% or more participants noting Respects Diverse Talents and Ways of Learning. Instructional Materials was noted with 25% each for both Encourages Active Learning and Communicates High Expectations.

Standard 1: Course Overview and Introduction aligned (39.9%) with Communicates High Expectations. All other general standard alignment percentages were under 35%. However, 25% or more of the participants aligned the standards with one of three of the good teaching principles.

Four of the seven principles were rated by less than 25% of the participants. Encourages Contact Between Students and Faculty was rated by 20.1% and Develops Reciprocity and Cooperation Among Students was rated by 24%. Gives Prompt Feedback and Emphasizes Time on Task were good teaching principles rated the lowest for alignment with any QM standards, with 15.7% and 16.1% (respectively) of the participants noting such alignment.

In the highest "Other" category, rated with 20.3%, participants noted another teaching principle may be necessary to specifically categorize Learner Support. Instructional Materials and Course Technology were also noted by 15.0% for the "Other" category. Participants were instructed to choose "Other" if they perceived none of the current seven teaching principles aligned well with the standard. The comments provided by the participants in the "Other" category were analyzed and grouped into common themes. These themes were then developed into word clouds for easy viewing. The larger the word in the word cloud, the more often this word was noted in the participants' comments. These word clouds are provided in

Figures 2 – 4 below.

Figure 2: Standard 4—Instructional materials "Other" comments word cloud.

The specific standards connected to the general standard of Instructional Materials include the following concepts: materials and resources being current, materials contribute to the achievement of objectives, materials noted as required or optional, materials are cited properly, and materials provide a variety of perspectives on the course content. Participants noted through the "Other" option that the other principles for good teaching include relevant, professionalism, clarity, academic integrity, and best practices.

Figure 3: Standard 6—Course technology "Other" comments word cloud.

The specific standards connected to the general standard Course Technology

include the following concepts: tools are current and the tools support engagement and the achievement of objectives. The specific standards also noted appropriate navigation and access to technology. Participants noted through the "Other" option that another principle for good teaching was accessibility. It is not clear why participants did not align this with Standard 8: Accessibility. However, other participants noted principles including quality, good design, accessibility, student support and success, clarity, and professionalism.

Figure 4: Standard 7—Learner support "Other" comments word cloud.

The specific standards connected to the general standard Learner Support include clear course instructions, student support areas, and resources to help students succeed. Participants noted through the "Other" option that the other principles for good teaching include learning resources, learning support, clarity, structure and organization, and professionalism. Professionalism was a recurring theme between the three "Other" categories. Clarity was also expressed in two of these categories.

The highest specific standards within the seven principles and the other category are provided in Table 2. The percentages for the specific standards are listed from highest to lowest.

Table 2.
Highest Specific Standard Within the Seven Principles and Other Category

Standards	Communicates high expectations	Develops reciprocity and cooperation among students	Emphasizes time on task	Encourages active learning	Encourages contact between students and faculty	Gives prompt feedback	Respects diverse talents and ways of learning	Other
1.7: The self-introduction by the instructor is appropriate and available online.					96.6%			
8.2: The course contains equivalent alternatives to auditory and visual content.							93.1%	
6.2: Course tools and media support student engagement and guide the student to become an active learner.				88.2%				
1.4: Course and/or institutional policies with which the student is expected to comply are clearly stated, or a link to current policies is provided.	73.5%							
1.8: Students are asked to introduce themselves to the class.		72.0%						
5.3: The instructor's plan for classroom response time and feedback on assignments is clearly stated.						60.3%		
6.3: Navigation throughout the online components of the course is logical, consistent, and efficient.			37.5%					
4.3: All resources and materials used in the course are appropriately cited.								31.4%

With almost a 100% alignment, the self-introduction of the instructor is essential. The next three highest percentages align with the previously noted three (3) principles of good teaching in which most participants noted the best alignment with the eight (8) QM standards.

- Respects diverse talents and ways of learning
- Encourages active learning
- Communicates high expectations

Of the eight specific standards noted, three represent Standard 1: Course Overview & Introduction; one represents Standard 4: Instructional Materials; one represents Standard 5: Learner Interaction & Engagement; one represents Standard 6: Course Technology; and one represents Standard 8: Accessibility. Standards 2, 3, and 7 did not result in any of the highest percentages when analyzing the specific standards. The lowest percentages reemphasize the principles of teaching that were rated in the overall rating of the general standards as well. They include Gives Prompt Feedback, Emphasizes Time on Task, and the "Other" category.

Conclusions and Implications

Gives Prompt Feedback and Emphasizes Time on Task were rated the lowest for alignment with any of the QM standards (15.7% and 16.1% respectively). They were also rated lowest when examining specific standards. This low rating may indicate the QM higher education rubric may need to be edited to more fully align with these principles of good teaching. It may also indicate the intended specific standards need to be worded more precisely to align with the principles of good teaching, or possibly additional specific standards are necessary to help create a more connected alignment. With 93% of survey participants aware of the QM Higher Education Rubric prior to the completion of the survey, specific langugage in the QM rubric may need to be edited for clearer understanding.

The highest percentages in the "Other" categories were noted for Learner Support (20.3%), Instructional Materials (15.0%), and Course Technology (15.0%). Participants were instructed to choose "Other" if they perceived none of the current seven teaching principles aligned well with the standard. The "other" ratings may indicate additional principles of good teaching may be necessary for effective online course design and teaching. When analyzing the participants' responses for "Other," principles of teaching, professionalism, and clarity were recurring themes among the three highest "Other" percentages as noted by participants. The clarity can be included throughout a well-designed course through learning outcomes, feedback, and other aspects. However, professionalism may need to be more specifically applied. The "Other" percentages may indicate there is an eighth principle for good teaching: Professionalism.

When reviewing the good principles of good teaching, professionalism may be assumed, but it would be appropriate to add an eighth principle, to ensure

it is emphasized. Therefore, the principles of good teaching should include the following:

1. encourages contact between students and faculty;
2. develops reciprocity and cooperation among students;
3. uses active learning techniques;
4. gives prompt feedback;
5. emphasizes time on task;
6. communicates high expectations;
7. respects diverse talents and ways of learning; and
8. emphasizes professionalism.

The results of this research have definite implications for QM, online faculty, instructional designers, and business educators. As QM continues to update general and specific standards, the results of this research may provide thought for consideration for future revisions of their rubrics. Online faculty may become more aware of the importance of conducting quality reviews of online courses. Faculty may also become cognizant of how good design impacts good teaching along with the principles for good teaching. As instructional designers consider how to design and develop quality online courses, and as online faculty teach courses, the principles of good teaching should be considered. It may be advantageous to also consider an eighth principle of good teaching–-professionalism .

Additional research to determine how business educators effectively ensure quality design and how that influences quality teaching in an online environment would be beneficial. It would also be important to research how business educators include professionalism in online course design and teaching.

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