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# Beliefs Regarding Faculty Participation in Peer Reviews of Online Courses

Andria F. Schwegler<sup>A</sup>, Barbara W. Altman<sup>B</sup>, Lisa M. Bunkowski<sup>C</sup>

*Prior to implementing a voluntary, unofficial Quality Matters peer review process for online courses at our institution, several faculty members openly expressed concerns about the process. To systematically identify and examine how highly endorsed these beliefs actually were, we used the Theory of Planned Behavior (Ajzen, 1985) to investigate faculty beliefs and their plans to participate in the peer review. This behavior prediction model provided a logical theoretical basis for this investigation because it targets intentions to perform volitional behaviors and directly examines salient beliefs underlying attitudes, subjective norms, and perceived behavioral control toward the behavior. Though differences in belief endorsement between faculty members who chose to participate in the peer review and those who did not could not be tested statistically due to small sample sizes, a qualitative examination of the endorsement of the modal belief statements provided useful information about faculty members' perceptions of completing the peer review. Our results indicated that many of the concerns and criticisms of the peer review process were not as highly endorsed as initially assumed. Our objective examination of faculty beliefs, instead of reliance on hearsay and a vocal minority, was useful in identifying genuine faculty concerns that could be directly addressed. Our data provided directions to guide administrative changes in our process to increase participation in internal peer reviews with the goal of improving the online course design quality.*

*Keywords: peer review, online course design, faculty beliefs, Quality Matters, faculty attitudes*

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Quality Matters (QM) is one of the most widely accepted set of standards guiding the online course design quality. As of 2013, QM reported over 600 member institutions, and over 22,000 faculty and instructional designers trained on the QM standards and course review process (Quality Matters, 2013). The core of the QM approach is a rubric covering eight overarching student/learner focused standards, with a total of 41 specific course design standards. To ascertain whether an online course meets these standards, a faculty developer submits a course to the faculty peer review process. The goal of this process is continuous course improvement so that any identified weaknesses are corrected, based on constructive peer feedback (Finley, 2012).

When initiating a peer review of online courses, subscribing institutions have the option to participate in either official QM reviews or unofficial internal reviews. Official QM reviews include a Master Reviewer, a Subject Matter Expert, and an external Reviewer who constitute the peer review committee, and successful completion of the process leads to the official QM designation as a quality assured course. Unofficial reviews do not receive the QM designation, but they allow institutions to select their own peer review committee members to accommodate unique institutional needs and course improvement goals. Both official QM reviews and internal peer reviews are governed by the same set of standards and consensus protocols for determining when standards are met.

The choice to participate in official versus unofficial reviews is determined at the institutional level, along with the policy of mandated versus voluntary peer review. For institutions undergoing an organizational change to implement QM, offering participation in an unofficial internal peer

review on a voluntary basis is a way to gain faculty buy-in in the process. Obviously, when participation is not optional, faculty members do not need to accept or endorse the process to prompt participation, but when the process is optional, what prompts faculty members to participate in the peer review? More specifically, what do faculty members believe about the peer review process when it is implemented at their institution? How are these beliefs related to plans to participate? How can beliefs be used to modify procedures with the goal of increasing participation rates? To provide initial answers to these questions and guide our QM implementation process, the present research investigated faculty beliefs regarding the introduction and first wave of reviews in a QM peer review process. The goal of this research was to improve our understanding of faculty beliefs regarding voluntary completion of a peer review of an online course so that revisions to our process and new institutional changes could be designed to increase faculty participation and ultimately improve our online course quality.

## Literature Review

To systematically investigate faculty beliefs and plans to participate in a peer review, the Theory of Planned Behavior provided a logical theoretical basis for this study because it targets volitional behaviors and directly examines salient beliefs regarding the behavior. Ajzen's Theory of Planned Behavior (Ajzen, 1985, 1991, 2012) is one of the most widely applied behavior prediction models in the social psychology literature. In a recent reflection, Ajzen (2011) noted that the theory was cited 22 times in 1985, and citations have grown steadily to 4,550 in 2010. A review of the model's significance found this

research to have the highest scientific impact score among U.S. and Canadian social psychologists (Nosek et al., 2010).

The Theory of Planned Behavior model is shown in Figure 1 (Ajzen, 2013a). The key tenets of the model include direct and indirect measures of attitudes, subjective norms, and perceived behavioral control that are used to predict intention, which subsequently predicts behavior (Ajzen, 1991, 2012, 2013a). According to this expectancy-value model, which weights beliefs about actions by their value, behavior is the actual manifestation of an individual's action in a particular circumstance. Intention is the proximal predictor of a person's behavior and indicates an individual's willingness/readiness to demonstrate that behavior. The model postulates a strong relationship between intention and behavior for those behaviors that are under one's own volitional choice. Intention is predicted from an individual's attitude toward the behavior, subjective norms regarding the behavior, and perceived behavioral control over the behavior. Attitudes are defined as "the individual's positive or negative evaluation of performing the behavior" and are assessed by having individuals respond to bipolar adjective scales regarding the behavior under examination (e.g., good-bad; Ajzen & Fishbein, 1980, p. 6). Subjective norms are "the person's perception of the social pressures put on him to perform or not perform the behavior in question" (Ajzen & Fishbein, 1980, p. 6). This social pressure is measured as a general sense of what important others think one should do. Finally, perceived behavioral control is one's sense of his or her ability to perform the behavior under examination, which can be assessed by having individuals rate the extent that performing the behavior is up to them and whether they perceive they have control over it.

Underlying these attitudes, norms, and control perceptions are one's beliefs which are weighted by the subjective value of these beliefs. Specifically, behavioral beliefs are the accessible thoughts a person holds regarding a certain behavior. These beliefs are tempered by one's evaluations of the outcomes associated with these beliefs. In terms of the model, each of a person's behavioral beliefs is multiplied by the outcome evaluation associated with that belief. Then, each of these products is summed to form an indirect assessment of one's attitude toward the behavior. In a similar manner, normative beliefs are the salient expectations perceived by individuals that are set by members of a relevant referent group (e.g., family members, co-workers). These beliefs are weighted by one's motivation to comply with these expectations, and the sum of products (i.e., each belief multiplied by the motivation to comply with it) constitutes an indirect measure of one's subjective norms regarding the behavior. Finally, control beliefs are thoughts regarding factors in the setting which may either impede or enhance the performance of the behavior. These factors are weighted by the power each control factor holds over the individual. One's level of perceived behavioral control is the sum of products (i.e., each control factor multiplied by its power of control) to perform the behavior.

Given the wide application of the theory, several notable meta-analyses speak to the model's utility in predicting intentions to engage in a multitude of behaviors. For example, in a review of 185 independent and varied applications of the model conducted prior to 1997, Armitage and Conner (2001) found that across all behaviors studied, the correlation of intention and perceived behavioral control was significant, with perceived behavioral control accounting for 27% of the variance

in intention ( $R^2 = 0.27$ ). In addition, the multiple correlations of attitude, subjective norm, and perceived behavioral control accounted for an average of 39% of the variance in intention ( $R^2 = 0.39$ ). Their meta-analysis supported the overall efficacy of the model though they called for further study of the subjective norm component and attention to differences in self-report versus observed behavior measurement.

In a meta-analysis of 33 studies, Cooke and French (2008) examined the model's overall ability to predict intention to participate in health screenings and subsequent attendance behavior. Their meta-analysis found the strongest relationships between attitudes and intentions and the weakest relationships between subjective norms and intentions. For attendance behavior, they found a medium-sized relationship between intention and behavior and a small relationship between perceived behavioral control and behavior. These findings support the overall efficacy of the model, consistent with Armitage and Conner's findings.

In a more recent meta-analysis predicting health-related behaviors, McEachan, Conner, Taylor and Lawton (2011) analyzed 206 papers, representing 237 tests of the theory. Like previous meta-analyses, their study showed a strong relationship between intention and behavior, and perceived behavioral control predicted a small proportion of the variance in behavior. Attitude, subjective norm, and perceived behavioral control emerged as the strongest predictors of intention relative to other variables added to the model, and attitude was consistently the strongest predictor. The purpose of this research, like that of Cooke and French (2008), was to propose interventions to modify behavior that could be examined in further research. Taken together, these meta-analyses high-

light the overall efficacy of the model in behavior prediction. Unfortunately, applications of the Theory of Planned Behavior to teaching online, predicting faculty behaviors, and revising higher education practices are extremely limited. Of the few studies in this area Celuch and Slama (2002) applied the theory to a business school course to evaluate the impact of faculty-led interventions on student behavior. These researchers used pre- and post-course assessments to examine how variables in the Theory of Planned Behavior impacted learning critical-thinking skills in a marketing course. Their findings show that some variables, specifically attitudes from the Theory of Planned Behavior, were accurate predictors of changes in behavior and confirmed the positive effect of the course's pedagogy on critical thinking. Specifically, they reported that certain systematic elements of the course such as expectation setting, opportunities for practice, and constant feedback were system interventions that positively impacted observed instances of critical thinking behaviors.

Utilizing a portion of the Theory of Planned Behavior, Alshare, Kwum, and Grandon (2006) examined faculty intention to teach online at one American and two Korean institutions. Their model included two factors derived from previous research on faculty adoption of online courses, communication efficacy, and flexibility. The third factor was subjective norm taken directly from Ajzen's (1991) work. In this context, subjective norm was defined as the combined social pressure of school administrators and close faculty members to teach online courses. The hypothesis that subjective norms had a positive relationship with the adoption of online teaching was supported at both the American and Korean institutions.

More closely related to the current project, Hartmann (2011) used the Theory of Planned Behavior to explore whether institutional level interventions would alter faculty willingness to submit research grant proposals in what had been a traditional teaching institution. The hypotheses grounding the case study were derived directly from the theory and stated that a faculty member would be more likely to intend to write and actually submit a proposal for funding when that individual “believes that submitting funding proposals is a desirable and valued behavior; sees other similar people successfully writing and submitting proposals; and perceives they are able to write and submit proposals, that obstacles can be overcome” (Hartmann, 2011, p. 48).

A number of interventions were put in place to test the behavioral change regarding attitudes, subjective norms, and perceived control. For example, to change attitudes regarding submitting research grant proposals, interventions included publishing a monthly newsletter and promoting public awards and recognition. To change perceptions of subjective norms, interventions included welcome letters to new faculty and department chairs emphasizing the importance of funded research, published college-wide statistics, and faculty workload allocations. To change perceived behavioral control, grant writing workshops, how-to manuals, and tutorials were offered to faculty along with administrative support. The case study findings, documented over a 10-year period, show average annual grant proposals rising, with indirect cost support to the college increasing steadily. The case study concludes that managerial interventions can impact faculty members’ intentional behaviors to increase their participation in submitting sponsored research.

## The Present Research

Previous research involving the Theory of Planned Behavior supports our expectation that the model can be used to identify and measure faculty members’ underlying beliefs, attitudes, subjective norms, and perceptions of control regarding voluntary decisions to participate in a peer review. As such, we used the Theory of Planned Behavior to provide a process for eliciting faculty beliefs regarding participating in a peer review as we introduced an internal QM peer review process at our institution. After the beliefs were identified, we had faculty members, those who volunteered to participate in a peer review and those who did not, evaluate the statements. Their ratings provided the basis for revisions to our procedures and for the development of interventions to increase participation in a peer review, which should subsequently improve our online course offerings.

## Method

### Participants

Research participation was offered to all faculty members who were eligible to participate in the peer review process during its first year of implementation (i.e., four semesters from Summer 2012 through Summer 2013). To be eligible to participate in the peer review, faculty members must have taught at least one fully online course on the recently-adopted learning management system. Of these eligible faculty members ( $N = 60$ ), 19 faculty members volunteered to participate in the peer review process for at least one course. Of these peer review participants, eight faculty members also volunteered to participate

in this research, a 42% participation rate. Of the 41 faculty members who chose not to participate in the peer review, six faculty members volunteered to participate in this research, a 15% participation rate.

Though participation in the peer review process was incentivized with a \$1000 stipend for successful completion, participation in this research study was not incentivized. Faculty members received no compensation for their participation in this research, which was entirely voluntary and was not linked to peer review outcomes. The researchers, who worked with faculty members on their peer reviews, were blind to the research participation status of all faculty members until the peer review process was concluded at the end of its first year. This research was reviewed and approved by the Institutional Review Board of Texas A&M University Central Texas.

### **Pilot Questionnaire**

Utilizing the Theory of Planned Behavior requires the development of a survey questionnaire that is based on the salient attitudes, subjective norms, and perceptions of control regarding the behavior for the target group. Therefore, the initial step in developing our primary questionnaire was documenting faculty comments and beliefs regarding the introduction of the peer review process.

Prior to implementing our internal peer review, many faculty members openly expressed concern about the process and were reluctant to participate. The only previous experience the majority of our faculty members had with a similar process was when department chairs visited their classrooms to complete their administrative faculty evaluations. These faculty evaluations tend to be stress-provoking events for most faculty members because the outcomes of

the observations are directly associated with contract renewals and merit raises. So, when the peer review was discussed at our institution, many faculty members equated it with an administrative review and were not receptive.

Among the criticisms initially targeted at the peer review of online courses were claims that the comments regarding course revisions made during the context of peer review would be an infringement on the faculty course developer's academic freedom. In addition, faculty members who had previous experience with only a review of their teaching (i.e., evaluation of course delivery) were not familiar with distinguishing between course design and course delivery and held persistent beliefs that confounded the two concepts.

Faculty-generated concerns and criticisms of the peer review process were consistently directed to the Online Coordinators (i.e., faculty members who carried administrative duties to work with faculty to teach online), who were responsible for introducing and explaining the process to the faculty in their respective colleges. Immediately prior to implementation, the Online Coordinators recorded this information on a pilot questionnaire, which was used to create the main survey for this research. The behavior targeted in both the pilot questionnaire and the main survey was defined as "completing the TAMUCT peer review process for one online course by the end of the current semester." The pilot questionnaire included three, open-ended items to elicit behavioral outcomes mentioned by faculty members (i.e., advantages and disadvantages of completing the peer review and "what else comes to mind when you think about" completing this process). Normative referents for the peer review process were elicited with four open-ended questions that request-

ed a list of the individuals or groups who would approve, disapprove, be most likely to complete, and be least likely to complete this process. Perceived behavioral control regarding the peer review process was elicited with two, open-ended items that requested a list of any factors or circumstances that would make it easy and difficult to complete the internal peer review.

Each Online Coordinator independently responded to the pilot survey with the concerns and comments that faculty members in the respective college made. The surveys were collected approximately one week after being distributed and the responses compiled. Similar comments were combined (e.g., “I will learn some new techniques for online teaching” and “See what others are doing...so I can borrow good ideas”), and some comments were reworded to communicate a neutral affective tone (e.g., “People who want to get out of the required training”). All faculty comments that were listed by the Online Coordinators on the pilot survey were represented on the final survey as a set of modal faculty beliefs. The combined, revised list of behavioral beliefs that were expressed by faculty members when the peer review process was introduced are listed in the first column of Table 1, the normative beliefs are listed in the first column of Table 2, and the control beliefs are listed in the first column of Table 3. Few control beliefs were elicited by the pilot study so these beliefs were supplemented with example items from Ajzen (2013b).

### Final Peer Review Survey

The final survey consisted of 79 items assessing each of the constructs proposed by the Theory of Planned Behavior. This “Peer Review of Online Courses: Opinion Survey” included six statements

that were direct measures of faculty members’ attitudes toward completing the peer review process rated on 7-point scales ranging from 1 (*extremely good*) to 7 (*extremely bad*), 1 (*valuable*) to 7 (*worthless*), 1 (*pleasant*) to 7 (*unpleasant*), 1 (*enjoyable*) to 7 (*unenjoyable*), 1 (*difficult*) to 7 (*easy*) (reverse scored), and 1 (*unnecessary*) to 7 (*necessary*) (reverse scored). When examining the inter-item reliability of these statements, the item assessing how necessary completing the peer review process was displayed low correlation with the rest of the items and was removed. The remaining five items were averaged into an overall measure of attitudes (Cronbach’s  $\alpha = 0.90$ ). Lower scores indicate more positive attitudes toward completing the peer review.

Direct measures of norms consisted of five items. Norms indicating what most other faculty members do were measured by responses to the following items, “faculty who are similar to me will complete the peer review process” and “most faculty will complete the peer review process” on 7-point scales ranging from 1 (*definitely true*) to 7 (*definitely false*). Norms indicating social pressure to complete the peer review were measured by responses to the following items, “most of my colleagues whose opinions I value approve of me completing the peer review process” rated as 1 (*agree*) to 7 (*disagree*), “most people who are important to me think that I 1(*should*) to 7 (*should not*) complete the peer review process,” and “it is expected of me to complete the peer review process” rated as 1 (*definitely true*) to 7 (*definitely false*). When examining the inter-item reliability of these statements, the items regarding “faculty who are similar to me will” and “it is expected of me to” complete the peer review process produced low correlations with the rest of the items and were removed. The remaining three items were averaged into an

overall measure of norms (Cronbach's  $\alpha = 0.69$ ). Lower scores indicate more supportive norms regarding completing the peer review.

Direct measures of perceived behavioral control were assessed by four items, including "I am confident that I can complete the peer review process" and "I have full control over whether I complete the process" rated as 1 (*definitely true*) to 7 (*definitely false*). One item assessed agreement with the statement that "whether or not I complete the peer review process is completely up to me" 1 (*strongly agree*) to 7 (*strongly disagree*), and one item measured whether completing the peer review process is 1 (*impossible*) to 7 (*possible*) (reverse scored). When examining the inter-item reliability of these statements, the item assessing how possible completion of the peer review process was displayed low correlation with the rest of the items and was removed. The remaining three items were averaged into an overall measure of perceived control (Cronbach's  $\alpha = 0.72$ ). Lower scores indicate more perceptions of control over completing the peer review process.

Intention to complete the peer review process for one online course by the end of the current semester was assessed by four items. Participants rated the following statements, "I plan to complete the process" on a 1 (*extremely likely*) to 7 (*extremely unlikely*) scale, "I will make an effort to complete the process" on a 1 (*definitely will*) to 7 (*definitely will not*) scale, "I intend to complete the peer review process" on a 1 (*strongly agree*) to 7 (*strongly disagree*) scale, and "I am going to complete the process" on a 1 (*definitely true*) to 7 (*definitely false*) scale. These items were averaged into an overall measure of intention (Cronbach's  $\alpha = 0.99$ ). Lower scores indicate stronger intentions to participate in the peer review process.

Research participants' past behavior in the internal peer review process since its inception was assessed with two open-ended items requesting the number of courses submitted and the number of courses successfully completing the peer review process. All but three participants had no courses reviewed through the internal peer review process prior to their participation in this research. Research participants' actual behavior regarding peer review completion was recorded at the end of the initial round of peer reviews (i.e., 15 months after the project was implemented) with a 0 (*non-participant*) and 1 (*participant*) distinction. All research participants who started the peer review process successfully completed it before the review process was closed.

Indirect measures of attitudes (i.e., behavioral beliefs and outcome evaluations), norms (i.e., normative beliefs and motivation to comply) and perceived behavioral control (i.e., control beliefs and power of control factors) were assessed with the beliefs elicited from the pilot study presented in Tables 1–3, respectively.

For the indirect measure of attitudes, each behavioral belief listed in Table 1 was written as the conclusion to the statement "Completing the TAMUCT peer review process will" and was rated on a 7-point scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). The positive items phrased in terms of benefits of participating in the process (i.e., items 1 through 7) were reverse scored. Each outcome evaluation was adapted to fit as the conclusion to "For me to" and was rated on a 7-point scale from 1 (*extremely good*) to 7 (*extremely bad*). Lower scores indicate more supportive beliefs regarding completing the peer review process. Consistent with the Theory of Planned Behavior model, each behavioral belief was multiplied by the corresponding outcome evaluation prior to summing

all the products for the composite indirect measure of attitudes.

For the indirect measure of norms, each normative belief listed in Table 2 was written as the subject to the statement “think(s) that I should complete the TAMUCT peer review process for one online course by the end of the current semester” and was rated on a 7-point scale from 1 (*extremely likely*) to 7 (*extremely unlikely*). Motivation to comply with each referent was inserted in the blank “Generally speaking, how much do you care what your \_\_\_ thinks you should do” and was rated on a 7-point scale from 1 (not at all) to 7 (very much), which was reverse scored. Lower scores indicate more supportive beliefs regarding completing the peer review process. Consistent with the Theory of Planned Behavior model, each normative belief was multiplied by the corresponding motivation to comply prior to summing all the products for the composite indirect measure of norms.

For the indirect assessment of perceived behavioral control, each control belief listed in Table 3 was adapted to fit the blank “How often do you encounter \_\_\_” and was rated on a 7-point scale from 1 (*very rarely*) to 7 (*very frequently*). The items regarding receiving assistance from the Online Coordinator and receiving incentives to complete work were reverse scored. To assess the power of control factors, each control belief was inserted at the beginning of the statement “it would make it more difficult (or easier as noted in Table 3) for me to complete the TAMUCT peer review process for one online course by the end of the current semester” and was rated on a 7-point scale from 1 (*strongly agree*) to 7 (*strongly disagree*). All items were reverse scored except the items regarding receiving assistance from the Online Coordinator and receiving incentives to complete work.

Lower scores indicate more supportive beliefs regarding completing the peer review process. Consistent with the Theory of Planned Behavior model, each control belief was multiplied by the corresponding power of control factor prior to summing all the products for the composite indirect measure of perceived behavioral control.

## Procedure

Our recently independent, regional university began offering online courses in Fall 2009 and became a QM-subscribing institution in Fall 2010. Concurrently, the institution submitted our “Institutional Plan for Distance Education” to the state’s Higher Education Coordinating Board, outlining 17 fully online programs to be implemented over three years. During this high online growth period, University leadership was committed to providing institutional supports (e.g., training, incentives, mentors) to faculty to design high quality courses and put in place a culture where online quality was valued. In support of this goal, the Online Coordinator (OC) position was created in which one faculty member from each college assumed part-time administrative duties to facilitate and mentor faculty teaching online courses. All OCs were QM Certified Peer Reviewers and taught fully online courses. As our procedures evolved, QM training was made mandatory for faculty teaching online courses, and submitting a course for peer review became a voluntary but incentivized option. The University’s QM goal was that as many faculty as possible would submit their courses for peer review so that course improvements could achieve design quality as demonstrated through meeting QM standards. By summer 2012, we had trained 56 of our faculty members on the QM Rubric when we introduced our peer review process.

The decision to develop an internal process at our institution, rather than adopt the official QM process, was based on a consensus of faculty preference. Our faculty wanted to be personally engaged in the peer review process, and they were reluctant to involve external reviewers, whom they believed might not understand our unique institution. In addition, some faculty members expressed concern about a pre-existing, external procedure being “imposed” upon them. To gain faculty support, we tailored our peer review process to allow faculty ownership of it and reassure them that they would have the chance to revise their courses before any official reviews were undertaken.

In our process, faculty members intending to submit a course for peer review made the request through the Distributed Learning and Instructional Technology Office, which informed the respective college OC. During the initial contact with the faculty member, the OC invited the faculty member to participate in this research study. Potential participants received a copy of the IRB approved Informed Consent form and a link to the online survey administered via Survey Monkey. Faculty members were instructed to return the signed Informed Consent form to a designated staff member in the institution’s research office, not to the OC, and then complete the online survey. Because each OC collaborated as a facilitator and mentor with each peer review participant on course revisions prior to the course being submitted to the internal peer review team, all OCs were blind to the research participation status until all peer reviews were completed.

To initiate the review process, the faculty course developer conducted a self-review of the course using the QM Rubric by identifying the location in the

course where each standard was met. The purpose of the self-review was to get faculty familiar with using the Rubric as a peer review tool and allow them to systematically examine their course from a reviewer’s perspective to reduce their apprehension and assist them in making revisions to the course before revealing it to the peer review team. While the faculty course developer completed the self-review, the faculty member’s college OC conducted an independent review of the course. After the faculty course developer and the OC completed their reviews, they met to discuss revisions to the course. Faculty members were under no obligation to implement any of the revisions suggested by the OC, who served strictly in a support role to assuage faculty concerns regarding administrative evaluation. Once the faculty course developer was satisfied with the course, it was opened to the peer review team.

To be eligible to serve for an internal peer review team, each reviewer completed the Applying the Quality Matters Rubric course (APPQMR), the established, basic QM Rubric course. Once the review teams were set and the course opened to the peer review team, the OC stepped out of the process, and the faculty Chair of the review team was responsible for scheduling timelines, leading team meetings, and closing the review in the QM Course Review Management System. The peer review was conducted in accordance with the official QM process and met/not met numbering thresholds. If the course did not meet the threshold requirements on the initial review, the faculty course developer consulted with the peer review team and made revisions to the course until it earned enough points to meet requirements. Eligible faculty members received a \$1,000 stipend when their courses successfully completed the entire peer review process, and

these courses were distinguished as internally quality assured. As part of the transition when training to teach online became mandatory, prior successful completion of the peer review was sufficient evidence of online course development proficiency to exempt a faculty member from taking the required training to teach online, which rendered the faculty member ineligible for the incentive. Faculty members who volunteered to peer review courses also received a small stipend (i.e., \$250 for every three courses reviewed).

At the close of the fourth and final semester of peer reviews following this procedure, each college OC sent an email invitation to participate in this research study to the faculty members identified as eligible to submit a course for peer review but who choose not to participate. These individuals received an electronic copy of the Informed Consent form and a link to the online survey. They were instructed to return the signed Informed Consent form to the staff member in the institution's research office prior to completing the online survey. Research participation was closed for all faculty members at the beginning of the Fall 2013 semester.

## Results

The means and standard deviations for each behavioral belief and outcome evaluation rated by faculty members during the introduction of the internal peer review process are listed in Table 1 by the peer review participation status. Each belief was multiplied by its outcome evaluation, and all products were summed to compute the indirect measure of attitude.

The means and standard deviations for each normative belief and motivation to comply rated by faculty members during the introduction of the internal peer review

process are listed in Table 2 by the peer review participation status. Each belief was multiplied by its motivation to comply, and all products were summed to compute the indirect measure of subjective norms.

The means and standard deviations for each control belief and power of the control factor rated by faculty members during the introduction of the internal peer review process are listed in Table 1 by the peer review participation status. Each belief was multiplied by its power of control factor, and all products were summed to compute the indirect measure of perceived behavioral control.

The means and standard deviations for the direct and indirect measures of attitudes, norms, perceived behavioral control, and intention are presented in Table 4. Group means by the peer review completion status are also presented. All participants who submitted a course to the peer review successfully completed the process by the end of the 15-month data collection period.

The correlation coefficients among direct and composite indirect measures of attitudes, norms, control, intentions, and behavior are presented in Table 5. When examining the relationship between the direct assessments of attitudes, norms, and control with the indirect assessments of these constructs, respectively, only the two measures of attitude were highly correlated for this small sample. The direct measure of attitudes was positively correlated with the composite indirect measure of attitudes. The direct measure of norms was not highly correlated with the indirect measure of norms, and the direct measure of perceived behavioral control was not highly correlated with the indirect measure of control.

Additional analyses including multiple regression that were planned could not be computed due to the small sample size.

## Discussion

Though differences between participants' and nonparticipants' belief endorsement could not be tested statistically due to unexpectedly small sample sizes, a qualitative examination of the endorsement of the modal belief statements provides some useful information about faculty members' perceptions of completing the peer review. Analyzing the data with a qualitative lens after quantitative analysis conforms with mixed method approaches that point out the advantages of complementarity, in which the alternative method can enhance or clarify the results from the initial method used, leading to an improved understanding of the phenomenon under study (Greene, Caracelli, & Graham 1989; Johnson & Onwuegbuzie, 2004; Molina-Azorin, 2012).

When measured directly, both participants in the internal peer review process and those who did not participate held relatively positive attitudes toward completing the peer review (see Table 4), an unexpected outcome given the reluctance and skepticism expressed by some faculty members when the process was introduced. Of course, these positive attitudes may not be representative of those held by all faculty members given that those who held the most negative attitudes may have refused to participate in the peer review and this research. But, if these negative attitudes remain for some, they were not pervasive to affect all faculty members.

For our sample, consistent with the direct measures of attitudes, the behavioral beliefs underlying participants' and nonparticipants' attitudes regarding the peer review process were positive (see Table 1). Both groups believed that completion of the peer review would allow them to improve their courses, learn new techniques,

and gain a better understanding of the quality. Both groups indicated moderately positive beliefs that completion of the peer review would be useful in their promotion and tenure packets and would help other faculty members improve their courses. Nonparticipants were more likely to believe that the peer review would be effortful and time consuming than participants in the process. Initial concerns regarding faculty not getting along and infringement on academic freedom were not highly endorsed by either group. Both groups agreed that these outcomes would be bad, but neither group believed that these outcomes were very likely. Neither group held strong beliefs that the peer review process would be confusing or require changes that they did not want to make to their courses.

Regarding norms, on the direct measure, both participants in the peer review process and those who did not participate held beliefs supportive of completing the peer review process (see Table 4). Examining this scale by item, both participants and nonparticipants thought that valued colleagues (participants  $M = 2.25$ ,  $SD = 1.17$ ; nonparticipants  $M = 2.00$ ,  $SD = 1.10$ ) and important people (participants  $M = 2.25$ ,  $SD = .71$ ; nonparticipants  $M = 1.50$ ,  $SD = 1.00$ ) would approve of them completing the peer review process. However, when asked whether most faculty members will complete the peer review process, both participants ( $M = 4.13$ ,  $SD = 2.10$ ) and nonparticipants ( $M = 4.50$ ,  $SD = 1.05$ ) failed to acknowledge this item as definitely true. This is not a surprising outcome given that peer review of online courses had just been introduced.

Consistent with direct measures of norms, the normative beliefs underlying participants' and nonparticipants' perceptions regarding the peer review process and their motivations to comply with normative

referents were supportive of completing the peer review (see Table 2). Both participants and nonparticipants believed that Department Heads, Online Coordinators, School Directors (i.e., Deans), the distance learning office personnel, and administrators in the Provost's office supported completion of the peer review process, and faculty members were motivated to comply with these referents. However, colleagues, those who teach online and those who do not, were less likely to be endorsed as sources of support for completion of peer review, and faculty were less motivated to comply with these referents. This is a paradoxical finding because colleagues who teach online are the peers who are performing the peer review of courses. Similarly, both participants and nonparticipants did not believe it was likely that students would think they should complete a peer review of an online course, though faculty members indicated that they did care what students thought they should do. Paradoxically, students are the direct beneficiaries of a course improved by a peer review, but faculty members did not believe that students thought they should complete one.

Regarding perceived behavioral control, on the direct measure, participants in the peer review process were less likely than nonparticipants to agree that completing the peer review was entirely up to them and that they had full control over it (see Table 4). It appears that the participants acknowledged that the peer reviewers would have some control over the process. Nonparticipants in the peer review indicated more control over (not) completing the process.

On the indirect perceived behavioral control items, both nonparticipants and participants in the peer review acknowledged that unanticipated demands on their time were frequent and would make it dif-

icult to complete the peer review (see Table 3). But, the two groups held divergent beliefs on several control related items. Nonparticipants reported more frequent problems using the learning management system, more family obligations, more employment demands, and more feelings of being ill that would make it difficult to complete the peer review process than did participants. Both groups indicated that disagreements with colleagues were rare, but if they occurred, peer review participants thought these disagreements would make it more difficult to complete the peer review process than did nonparticipants. Those who did not participate in the peer review thought that having assistance from the Online Coordinator would make it easier to complete the process. Those who chose to participate in the peer review were already working with the Online Coordinator to start the process but reported less reliance on the Online Coordinator. Neither group reported that incentives to complete work were frequent, but both groups acknowledged that incentives would make completing the peer review process easier, particularly the nonparticipants, though completion of the peer review process was already incentivized.

Not surprisingly, participants in the peer review process indicated stronger intentions to complete the process than did nonparticipants. Participants also indicated less variability in their intentions than did nonparticipants, who responded less consistently regarding their intentions to complete the process (see Table 4).

## Implications

Looking at our research results as a whole, many of the initial concerns and criticisms of the peer review process were not as highly endorsed as initially assumed.

An objective examination of faculty beliefs, instead of reliance on hearsay and a vocal minority, was useful in identifying genuine faculty concerns that can be directly addressed. Consistent with the previous research, most notably Hartman (2011) who used the Theory of Planned Behavior to design interventions geared to changing behaviors, our data suggest some initial directions to guide administrative changes in our process.

Based on this research, we are revising the delivery of our process in an attempt to increase participation in our internal peer review. Despite institutional recognition and monetary incentives, the majority of faculty members at our institution chose not to participate in the peer review. Apparently, institutional supports alone are not sufficient when introducing the peer review to faculty members who have experienced only administrative reviews of teaching. We are exploring additional ways to support faculty participation in peer reviews. For example, as indicated in this research, limited faculty time and perceived difficulty of completing the process were concerns endorsed by faculty. Therefore, we are examining how we can link our required training to teach online with our peer review process to consolidate what faculty members perceive as two distinct processes with different goals. Though both the prerequisite training to develop a course so that it can be taught online and the peer review performed after the course has been taught at least once share the same goals of course development and revision, our faculty do not necessarily view the processes as related. By incorporating the peer review process with the conclusion of the required training, course development and revision in the light of the QM standards would be a direct application of training. Linking the processes would allow faculty to utilize

near transfer of learning from training and make it clear that course development is the goal instead of merely completing trainings to gain the ability to teach online and then participating in a peer review if time permits. Consolidation of the faculty workload may create the perception of one process that is directly applicable to their primary responsibilities. Related to this issue, we also intend to reframe our QM training and course development activities to better emphasize their linkage to improved student learning. The finding that our faculty perceived that students would not desire their involvement in the peer review was concerning, given that the foundational element of the process is improving courses so that student learning improves. We think that understanding this linkage is critical to fostering faculty buy-in to the process.

To demonstrate to faculty that peer review is a valid use of their limited time and that their effort will produce visible results, we are planning to showcase peer reviewed courses as model course exemplars for other faculty. It is our goal to create a teaching and learning community in which faculty members openly share course improvement ideas. If effective, this practice may increase the incentive to participate in peer reviews without increasing the cost of the process. We are currently hosting faculty brown bags to set the conditions and are drafting a plan to establish a new peer-to-peer mentoring program to support our peer review process.

Another revision to our internal procedures with the goal of increasing peer review participation is increasing the incentive to become a peer reviewer. Though we had several faculty member volunteers to review courses even before we included a small stipend, a small group of faculty members shouldered a heavy review workload. Expanding our pool of trained inter-

nal peer reviewers will increase the level of training of our faculty overall and better distribute the course review workload. An alternative to alleviating our staffing limitations is to shift to external peer reviews once faculty members have a better understanding and buy-in of the peer review process.

## Future Research

Two additional research streams are suggested by this initial study. The first is expansion of the original project to include other institutions that are at a similar point in QM implementation (i.e., hosting voluntary, internal peer reviews) to increase the available participant pool. Initially, after we identified and assessed faculty members' beliefs, we planned to test the utility of attitudes, norms, and perceived behavioral control in predicting faculty intention to participate in the peer review and then predict actual behavior from intention. However, at the close of our data collection period when the researchers were no longer blind to the research participation status of our peer review participants, we realized that our sample size was too small to support such an examination. A power analysis confirmed this concern. Given the  $R^2$  from the current dataset (i.e.,  $R^2 = 0.32$ ), a sample size of at least 34 participants would be needed for a test of the model with power = 0.90 and  $\alpha = 0.05$  (Cohen & Cohen, 1983). Though our total number of eligible faculty members was large enough to support such a test, we were not able to recruit enough participants for this entirely voluntary, un-incentivized research study. With a larger sample of faculty who are being introduced to the QM peer review at other institutions, a broader picture of the accommodations that are made to the process to gain faculty buy-in could be obtained. In addition, given that

norms are group-specific expectations, groups of faculty members may hold different norms at other institutions. Conducting this study on a larger set of institutions would allow for more general statements regarding faculty beliefs and motivations to comply with expectations regarding the peer review of courses. Such research may also shed light on the direction that norms and attitudes shift as faculty members embrace peer review as a method of continuous course improvement.

A second stream of research will be directed at improving the feedback provided during the course of internal peer reviews. A cursory review of comments provided to faculty course developers at the close of this initial set of internal reviews revealed substantial inconsistencies across reviewers. Given that we firmly believe that internal peer review is a tool that is helping our institution build a culture of continuous course improvement, promoting more rigorous standards for acceptable reviewer comments may have the potential to more efficiently improve the course quality. To evaluate this prediction, this research team is planning to systematically examine the content of the comments provided by our peer reviewers to evaluate the extent that feedback provided to faculty course developers was consistent with the QM training that reviewers received (e.g., that reviewers referenced specific Rubric standards and provided evidence from the course). The results of this research will shed light on the nature of comments that peer reviewers make and suggest areas for revision of training and minimum content standards for comments. Follow-up research is planned to determine whether revisions of training and comment standards positively affect the content of reviewer comments and assist faculty course developers in improving their courses.

## Conclusion

In this paper we have presented a preliminary research study using the Theory of Planned Behavior, a well-supported model of behavior prediction, to examine beliefs that underlie faculty participation in the peer review of online course design quality. While the results of this study were limited due to the small sample size, the qualitative interpretations presented lead to both refinements in our institutional processes and avenues for future research. Online course quality is an important goal, not only in our newly independent University with a rapidly growing online presence, but in all institutions of higher education with online programs. Peer review and use of an established benchmark, like the QM Rubric, command scientific inquiry to improve their application. The findings of this study are an important first step to this ongoing line of inquiry.

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	<u>Participants</u>				<u>Nonparticipants</u>			
	<u>Belief</u>		<u>Evaluation</u>		<u>Belief</u>		<u>Evaluation</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Help me improve my course	2.00	0.93	1.13	0.35	1.50	1.22	1.00	0.00
Give me the opportunity to earn the incentive	2.63	2.20	1.63	0.92	1.83	1.33	2.17	1.47
Keep me from taking the required training	5.29	1.98	4.25	1.91	5.83	2.04	4.83	2.64
Allow me to learn some new techniques	2.57	1.27	1.25	0.46	1.83	1.60	1.17	0.41
Help me gain a better understanding of quality	2.00	0.93	1.50	1.07	2.00	2.00	1.33	0.82
Support my Promotion and Tenure packet	2.63	0.92	1.25	0.46	2.83	1.94	1.83	0.75
Allow me to help other faculty improve their courses	3.25	1.58	1.88	0.83	2.83	1.47	1.50	0.55
Be time consuming and effortful	4.88	1.36	2.88	1.55	6.00	1.55	2.67	1.37
Require changes I do not want to make	3.63	1.41	3.63	1.41	2.17	1.94	3.67	2.07
Require me to commit time that I do not have	4.63	0.74	4.13	1.25	5.17	1.72	4.83	2.04
Subject me to faculty members not getting along	2.88	1.46	5.13	1.36	2.33	1.97	6.00	1.27
Be an unfamiliar process and cause me to be confused	2.50	1.60	4.25	1.67	3.00	1.58	4.00	1.10
Be an infringement on my academic freedom	2.25	1.49	5.63	1.19	2.00	2.00	5.67	1.37

Table 1

Behavioral Beliefs and Outcome Evaluations (i.e., Indirect Assessment of Attitudes) Expressed by Faculty Members during the Introduction of the Internal Peer Review Process by Peer Review Participation

	<u>Participants</u>				<u>Nonparticipants</u>			
	<u>Belief</u>		<u>Motivation</u>		<u>Belief</u>		<u>Motivation</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
My Department Head	2.00	1.07	1.57	0.79	2.67	1.97	1.67	0.52
My Online Coordinator	1.75	1.04	1.63	0.74	1.67	0.41	1.80	0.84
My colleagues who teach online	3.50	0.76	2.25	0.89	3.33	1.03	3.17	0.98
My colleagues who do not teach online	4.13	0.99	3.13	0.99	3.67	1.86	4.33	1.87
Administrators in the Provost's Office	2.75	1.58	2.13	0.99	3.00	2.00	2.17	0.75
My School (College) Director	1.88	0.99	1.71	0.76	3.17	1.83	1.83	0.75
University Distance Learning Personnel	1.50	0.76	1.75	1.04	2.33	1.97	2.50	1.38
Students	4.13	1.73	1.63	0.74	4.33	2.50	1.83	0.98

Table 2

Normative Beliefs and Motivations to Comply (i.e., Indirect Assessment of Norms) Expressed by Faculty Members during the Introduction of the Internal Peer Review Process by Peer Review Participation

	<u>Participants</u>				<u>Nonparticipants</u>			
	<u>Belief</u>		<u>Power</u>		<u>Belief</u>		<u>Power</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
If I encountered unanticipated events that placed demands on my time	5.50	0.76	4.63	1.51	5.83	0.98	5.17	1.47
If I had problems using Blackboard when teaching online	2.50	1.93	4.63	1.92	3.83	1.72	5.83	2.04
If I had family obligations that placed unanticipated demands on my time	3.63	1.77	4.29	1.25	5.17	1.17	5.67	1.37
If work or employment placed unanticipated demands on my time	4.75	1.67	4.88	0.99	6.00	1.10	5.33	1.51
If I felt ill, tired, or listless	2.50	1.69	4.50	1.41	4.00	1.67	4.83	1.94
If I had information or assistance from the Online Coordinator (easier)	3.36	1.69	3.75	1.67	2.33	0.82	2.00	2.00
If I had disagreements with my colleagues	1.63	0.74	4.14	1.68	1.50	0.55	2.17	1.94
If I had monetary or other incentives (easier)	5.50	1.41	3.13	1.89	5.67	1.21	2.00	1.10

Table 3

Control Beliefs and Power of Control Factors (i.e., Indirect Assessment of Perceived Behavioral Control) Expressed by Faculty Members during the Introduction of the Internal Peer Review Process by Peer Review Participation

	<u>Total</u>		<u>Participants</u>		<u>Nonparticipants</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Direct Attitude	2.31	1.07	1.98	0.57	2.77	1.45
Indirect Attitude	138.50	51.28	133.57	45.16	145.40	63.79
Direct Norm	2.79	0.95	2.88	1.14	2.67	0.70
Indirect Norm	55.64	30.96	48.00	29.77	64.80	33.12
Direct Control	2.14	1.20	2.54	1.40	1.61	0.65
Indirect Control	137.39	32.38	125.71	29.82	151.00	32.19
Intention	2.11	1.69	1.38	0.63	3.08	2.21

Table 4

Means and Standard Deviations for Direct and Composite Indirect Measures of Attitudes, Norms, Perceived Behavioral Control, and Intention by Peer Review Participation

	Direct Attitude	Indirect Attitude	Direct Norm	Indirect Norm	Direct Control	Indirect Control	Intention	Behavior
Direct Attitude	—							
Indirect Attitude	0.66	—						
Direct Norm	0.27	0.52	—					
Indirect Norm	0.02	0.30	0.28	—				
Direct Control	0.32	0.58	0.43	-0.03	—			
Indirect Control	0.18	0.36	-0.23	0.18	-0.24	—		
Intention	0.48	0.28	-0.16	-0.07	0.01	0.60	—	
Behavior	-0.38	-0.12	0.11	-0.28	0.40	-0.41	-0.52	—

Table 5

Correlations among Direct and Composite Indirect Measures of Attitudes, Norms, Control, Intention, and Behavior

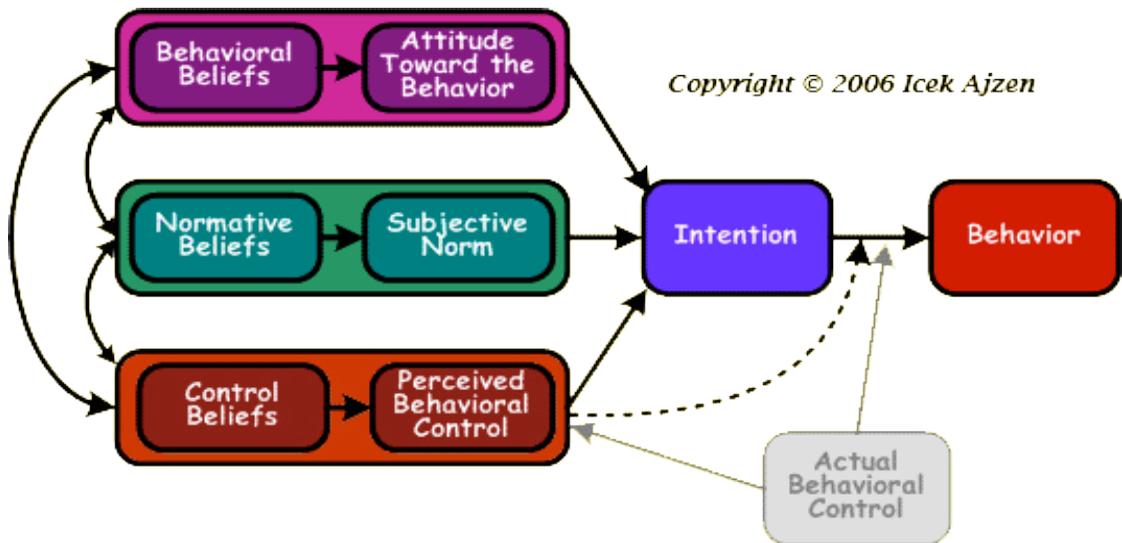


Figure 1. The Theory of Planned Behavior. The beliefs on the left of the figure are multiplied by their respective values and summed to create an indirect measure of attitudes, subjective norms, and perceived behavioral control, respectively. These beliefs and their value underlie one's attitude, subjective norm, and perceived behavioral control regarding a target behavior. One's attitude, subjective norm, and perceived behavioral control are also directly measured and predict one's intention to perform a target behavior. One's intention to perform a behavior is used to predict one's actual behavior. One's perceived behavioral control can be used to serve as a proxy for one's actual behavioral control and can be included with intention to predict behavior.

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