



*The Effect of Quality Matters™ Training on
Faculty Perceptions of Their Ability to Design,
Develop, and Deliver Online Courses*

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Agenda



- Problem Statement
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<http://bcoe.kennesaw.edu/facultyonline/>

**Numbers are like people;
torture them enough and
they'll tell you anything.**

Problem Statement



- Kennesaw State University (KSU) is making great strides to develop and promote online learning.
- Perhaps the faculty may not know how to develop pedagogy for this new medium, or understand what makes a good learning experience.
- A significant factor for embracing new technologies may be the faculty's perceptions and attitudes towards distance learning.

Purpose of the Study



- Using the theoretical framework of social cognitive theory and self-efficacy (Bandura, 1997; Schunk, 1994; Ormrod, 2007). The purpose is to increase online learning self-efficacy through the introduction of the Quality Matters™ framework.
- The objective of this study is to determine if there is linkage between faculty training and faculty perceptions of their ability to be successful online teachers.

Research Questions



1. Can training with the Quality Matters™ framework positively increase faculty perceptions of their ability to design, develop, and deliver online courses?
2. Is there a relationship between faculty perceptions of their ability to design, develop, and deliver online courses and demographic variables like age, gender, ethnicity, and faculty rank?

Quality Matters Framework



- KSU is implementing the [Quality Matters™ \(QM\)](#) framework (MarylandOnline, Inc., 2006) to ensure excellence in their online courses.
- The QM framework is a series of rubrics and tools for peer-review and improvement of online instruction.

Rubric Parts:

1. Course overview and introduction
2. Learning objectives
3. Assessment and measurement
4. Resources and materials
5. Learner engagement
6. Course technology
7. Learner support
8. Accessibility

➤ *Participants*

***n* = 17 pre-test, *n* = 14 post-test**

Participants Demographics and Professional Status

Category	N	%	Category	N	%
Sex			Rank		
Male	8	47%	Professor	5	29%
Female	9	53%	Associate Professor	5	29%
Age Range			Assistant Professor	3	18%
25-35	2	12%	Instructor	2	12%
36-49	8	47%	Lecturer	2	12%
50-62	6	35%	Employment		
63-70	1	6%	Full-time	14	82%
Race			Part-time	1	6%
American Indian	1	6%	Adjunct	2	12%
Asian	1	6%	Self-reported Computer Skills		
Black	1	6%	Novice Skills	2	12%
White	14	82%	Intermediate Skills	8	47%
			Experienced Skills	7	41%

Measures Background



- Kinuthia (2003) from Ga. State, developed an instrument to examine faculty participation in web-based instruction. Demographic information and many of the questions regarding the computer competencies.
- Miltiadou and Yu (2000) designed a valid instrument, the Online Technologies Self-Efficacy Scale (OTSES), to study self-efficacy in online learning. The section of the instrument focuses on the perceptions of online learning were based on the OTSES.

- *Questionnaire sections:*
 1. Demographic & professional experience
 2. Computer competencies
 3. Perceptions of online teaching
 - Given twice on pre and post tests
- Five-point Likert scale
- Used Survey Monkey to collect results
- Informed consent agreement on instrument

Sample Questions



Please rate the following statements using the following scales:

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

1. I feel online learning is useful
2. I feel online learning is important
3. Traditional face-to-face classes are better than online classes
4. Online classes are not as effective as traditional face-to-face classes
5. I feel confident designing curriculum and instruction for a traditional face-to-face course
6. I feel an online class is just like a face-to-face class
7. I feel my students will learn more online than in a traditional face-to-face class
8. I feel confident I understand the major components of an online course
9. I feel confident writing objectives for an online course
10. I feel confident designing curriculum for an online course
11. I feel confident building instructional activities for an online course
12. I feel confident I can manage a class online
13. I feel confident creating assignments for students in an online course
14. I feel confident evaluating students in an online course
15. I feel confident design an online course
16. I feel confident I can teach an online course
17. I feel I can be a successful online instructor

Procedures



- Participants volunteered and attended a face-to-face training workshop offered on three different days
- Before the training, the participants were surveyed with a pre-test questionnaire
- After the training the participants were asked to complete a post-test questionnaire.
- Post-test only asked section three of the questionnaire, perceptions of online learning

Results Procedures



- Reversed the scores of the negatively worded questions
- Computer competency section – calculated index score for each participant
- Perception of online learning pre-test – calculated index score for each participant
- Perception of online learning post-test – calculated index score for each participant
- Used paired sample *t* test for analysis

Results RQ1



- A significant increase from pre-test to post-test was found ($t(13) = -6.526, p < .001$)

Means and Standard Deviations

Variable	N	M	SD
Computer Competence Rating	17	67.41	10.83
Pre-test Attitude Rating	14	51.71	11.75
Post-test Attitude Rating	14	62.57	7.04

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Upper	Lower			
Pre-test Attitude – Post-test Attitude	-10.857	6.225	1.664	-14.451	-7.263	-6.526	13	.000

Results in English



- Mean - average
- Standard Deviation - spread of data from the mean
- Stand Error Mean - SD divided by the square root of the n ($n=14$)
- Confidence interval – 95% confidence – further from zero the better
- t – further from zero, less chance happen randomly
- df – degrees of freedom $n-1$
- Sig value – p value less than .001 (smaller the better)

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Upper	Lower			
Pre-test Attitude – Post-test Attitude	-10.857	6.225	1.664	-14.451	-7.263	-6.526	13	.000

**Q: Did you hear about the
statistician who was thrown in jail?**

**A: He now has zero degrees of
freedom.**

Correlation & Reliability



- Correlation analysis of the pre-test and post-test indexes showed a high Pearson correlation value of .901 ($n = 14$)
- Cronbach's alphas for the sections were in acceptable range
- Computer competency questions alpha = .87 ($n=17$)
- Pre-test perception questions alpha = .91 ($n=16$)
- Post-test perception questions alpha = .81 ($n=16$)

Results RQ2



- Relationship between faculty perceptions and demographic variables like age, gender, ethnicity, and faculty rank
- A factorial analysis of variance (ANOVA) was performed
- A Bonferroini-adjusted p -value of .05 was used to measure age, gender, ethnicity, and faculty rank
- There was no significant difference found regarding age, gender, ethnicity, or faculty rank in perceptions of ability to teach online

Discussion



- Changing attitudes is an important first step to creating change - affirms the RQ1
- The sample was self-selected and possessed a high level of computer skills
 - 47% ($n = 8$) Intermediate Computer Skills
 - 41% ($n = 7$) Experienced Computer Skills
- Perhaps these faculty members are the early adopters of technology within the College of Education (Rogers, 2003). Therefore, it may not be too difficult to change their perceptions.

Discussion



- Interesting – no significance because of sex, race, or faculty rank – RQ2
- Perhaps because of the same selection process
- However, we need to capitalize on this change in attitude

➤ Very small sample size!!

Problems with getting faculty to attend

Limitations



- Does a change in attitude produce more online courses?
- Does the correlation between faculty excitement translate into more classes.

Implications



- Practice, Policy & Leadership
- The University must sustain this momentum with additional training, resources, and support
- Vital to have technical support and instructional design support ready and available to the faculty
- Leaders must facilitate training to improve the faculty skills and provide release time
- Tenure and promotion must value online learning as scholarship

Future Research



- Repeat of this study with a larger sample
- Does the change in faculty attitude translate into more online courses?
 - Create mechanism for tracking creation of online courses
- Does QM translate into quality courses?
 - Empirical study to test for quality in the online classes.

Questions?