

Scholarship of Teaching and Learning Grant Proposal

**Student and Faculty Perception of “Quality Matters” Certified Online Courses**

Instructional Systems Technology

Dr. Florence Martin (Co-PI)

Associate Professor, Department of Educational Leadership, College of Education

Dr. Ayesha Sadaf (Co-PI)

Assistant Professor, Department of Educational Leadership, College of Education

Dr. Patti Wilkins (Co-PI)

Clinical Associate Professor, Department of Educational Leadership, College of Education

Educational Researcher

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Associate Professor, Department of Educational Leadership, College of Education

October 31, 2016

## **Abstract**

Quality Matters (QM) is a nationally recognized, faculty-centered peer review process designed to certify the quality of blended/ online course design. Quality Matters has been adopted as the quality framework for online and hybrid courses at UNC Charlotte and faculty are being encouraged to work towards applying the 43 QM standards into their courses and receive QM certification to enhance quality in online learning. Twelve courses have been QM certified in 2015 and 2016 at UNC Charlotte and eight of those courses are from the instructional systems technology program.

As part of this SOTL project, a team of faculty from the Instructional Systems Technology and Educational Research programs would like to work on the following three goals

- 1) examine student perception on the QM certified courses in the IST program by conducting a survey based research study using Dillman tailored-design survey method
- 2) showcase QM certified courses and present the student perception data in workshops for other faculty on campus and
- 3) create a video repository including faculty and student benefits of engaging in a QM certified online.

The results from this project will benefit the larger UNC Charlotte community of faculty who are interested in earning QM certification for their courses. The results will also benefit other universities who are interested in adopting QM as their quality matters framework.

## Budget Request for SOTL Grant Year 2017-2018

Joint Proposal?      X    Yes            No

\_\_\_\_\_ Student and \_\_\_\_\_ Faculty Perception of “Quality Matters” Certified Online Courses

Title of Project

Duration of Project      \_\_\_\_\_  
January 2017 – December 2018

Primary      \_\_\_\_\_  
Florence Martin; Ayesha Sadaf; Patti Wilkins; Lynn Ahlgrim - Delzell

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UNC Charlotte SOTL

Exploring the use of learning analytics from Moodle to enhance student

Grants Previously

learning and engagement in online courses - 2014

Received (please

Allocate operating budget to Department of      Educational Leadership

		Year One
Account #	Award	January to June
Faculty Stipend	Transferred directly from Academic Affairs to Grantee on May 15	\$ 12,000 (\$3000 for Martin; \$3000 for Sadaf; \$3000 for Wilkins \$3000 for Ahlgrim-Delzell)
911250	Graduate Student Salaries	
911300	Special Pay (Faculty on UNCC payroll other than Grantee)	
915000	Student Temporary Wages	
915900	Non-student Temporary Wages	
920000	Honorarium (Individual(s) not with UNCC)	
921150	Participant Stipends	
925000	Travel - Domestic	

926000	Travel - Foreign	
928000	Communication and/or Printing	
930000	Supplies	
942000	Computing Equipment	
944000	Educational Equipment	
951000	Other Current Services	
<b>GRAND TOTAL</b>		<b>\$ 12,000</b>

		<b>Year Two</b>
<b>Account #</b>	<b>Award</b>	<b>July to June</b>
Faculty Stipend	Transferred directly from Academic Affairs to Grantee on May 15	
911250	Graduate Student Salaries	
911300	Special Pay (Faculty on UNCC payroll other than Grantee)	
915000	Student Temporary Wages	\$1000
915900	Non-student Temporary Wages	
920000	Honorarium (Individual(s) not with UNCC)	
921150	Participant Stipends	\$300 (incentives for respondents – 6 survey/6 video recorded interviews)
925000	Travel - Domestic	\$3000 (\$1000 for Martin; \$1000 for Sadaf; \$1000 for Wilkins;
926000	Travel - Foreign	
928000	Communication and/or Printing	

930000	Supplies	
942000	Computing Equipment	
944000	Educational Equipment	
951000	Other Current Services	
<b>GRAND TOTAL</b>		<b>\$ 4,300</b>

**Attachments:**

1. Attach/provide a narrative that explains how the funds requested will be used.
2. Has funding for the project been requested from other sources? \_\_\_ Yes \_\_\_X No.

If yes, list sources.

## **Budget Narrative**

### **Faculty Stipends (\$9,000)**

Summer stipends of \$3,000 for the Co-Principal Investigators, Dr. Florence Martin, Dr. Ayesha Sadaf, Dr. Patti Wilkins and Dr. Lynn Ahlgrim-Delzell.

Dr. Florence Martin will be responsible for managing this project and also lead faculty showcases of the QM certified courses.

Dr. Patti Wilkins will be responsible for working with the graduate student to develop the videos. Dr. Wilkins will also showcase her QM certified courses.

Dr. Ayesha Sadaf will be working on getting her courses QM certified and showcase her courses and in assisting with the research presentations.

Dr. Lynn Ahlgrim-Delzell is the educational researcher who is responsible for instrument development, administering the survey and analyzing the data.

The IST faculty will present the findings of the survey based research on student perception of QM certified courses at a conference. All the faculty will collaboratively work to publish their work.

### **Travel – Domestic (\$3000)**

Additionally, \$1000 for each is requested for dissemination of findings by way of conference presentations for the Instructional Systems Technology faculty to present at conferences.

### **Participation Stipends (\$300)**

We would like to give away \$25 gift cards for 6 survey respondents through a drawing in Spring, Summer and Fall 2017 semesters. Two gift cards will be given in Spring, two in Summer and two in Fall semester. We would also like to give away \$25 gift cards for 6 interview participants.

### **Graduate Assistant Stipend (\$1000)**

We are requesting \$1000 for a graduate assistant who will be responsible for videotaping all the interviews for the video repository.

**Equipment**

We will use existing resources in the department (digital camcorder, tripod and dvds) to create videos.





Office of the Dean  
9201 University City Blvd.,  
Charlotte, NC 28223-0001 (704) 687-8722,  
<http://www.uncc.edu>

September 26, 2016

Scholarship of Teaching and Learning Grants Committee  
Center for Teaching and Learning  
UNC Charlotte  
9201 University City Boulevard  
Charlotte, NC 28223

Dear Review Committee:

I am pleased to recommend the Scholarship of Teaching and Learning Grant proposal, *Faculty and Student Perception of "Quality Matters" Certified Online Courses*. This project has the potential to impact the quality of online teaching and learning in the College of Education, across our campus and throughout our UNC System. Led by Drs. Martin, Wilkins, Sadaf, and Ahlgrim-Delzell, this project seeks to examine student perceptions regarding QM certified courses through survey based research. The project leads also seek to showcase their QM certified courses and share the information gained through research with faculty on campus by offering various workshops. Finally, they will create a video repository that highlights faculty and student benefits of engaging in QM certified courses.

Online teaching and learning is valued at UNC Charlotte. Our campus supports the Quality Matters initiative and is working with faculty to increase the number of courses that are certified. The Instructional Systems Technology Program currently houses two-thirds of the courses across the university that have QM certification. This speaks volumes to the expertise that these faculty have in creating quality online learning environments for our students. This project will enhance collaboration with Distance Education and the Center for Teaching and Learning.

I highly recommend this project. It will assist in adding to our knowledge base about quality online teaching and learning. The project faculty are well equipped to carry out the project while informing the college, university and UNC System. I am fully supportive of this effort.

Sincerely,

A handwritten signature in cursive script that reads "Ellen McIntyre".

Ellen, McIntyre, Dean  
College of Education





UNC CHARLOTTE  
Extended Academic Programs

The University of North Carolina at Charlotte  
9201 University City Boulevard  
Charlotte, NC 28223-0001

October 5, 2016

Dear Dr. Martin,

On behalf of Distance Education at UNC Charlotte, please accept this letter of support for you and the team of faculty from the Department of Educational Leadership for the Scholarship of Teaching and Learning Grant Proposal.

The goals of the project align with initiatives for this office to grow the number of QM certified courses at UNC Charlotte:

- Examine student perception on the QM certified courses in the IST program by conducting a survey based research study
- Showcase QM courses and present the student perception data in workshops for other faculty on campus and
- Create a video repository including faculty and student benefits of engaging in a QM certified online course.

We look forward to learning more about your study and the results of this important research not only for the benefit of students in the Instructional Systems Technology program, but also for UNC Charlotte students at-large. Please consider adding your study to the growing research bank at Quality Matters that supports the effort of integrating quality in online courses across the globe.

Best wishes,



Jody A. Cebina  
Director, Distance Education and Summer School



Shanna Coles  
Quality Matters Campus Coordinator  
Program Manager, Distance Education and Summer School



Educational Leadership  
9201 University City Blvd  
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September 26, 2016

Scholarship of Teaching and Learning Grants Committee  
Center for Teaching and Learning  
UNC Charlotte  
9201 University City Boulevard  
Charlotte, NC 28223

Dear SOTL Grants Committee:

As chair of the Department of Educational Leadership, I am challenged with providing guidance on delivering high-quality programs and classes to adult learners. Online and hybrid classes provide adult learners the convenience they need to attend classes, but these courses are often criticized for not having the same rigor as face-to-face courses. After seeing Quality Matters (QM) Standards, all online and/or hybrid teachers need to incorporate these standards.

It is my pleasure to endorse the Scholarship of Teaching and Learning Grant proposal, *Faculty and Student Perception of "Quality Matters" Certified Online Courses*. This project will provide valuable information and resources to help all of us at UNC Charlotte improve our online/hybrid course delivery. The following features of the proposal will enhance teaching: (a) ongoing work related to learning outcomes as a part of Quality Matters Certification; and (b) opportunities to collaborate with others on campus, including the Distance Education Office, and the Center for Teaching and Learning and share expertise in the areas of student engagement and student success in online environments.

The project personnel have the knowledge and experience to successfully implement this proposal. Drs. Martin, Wilkins and Sadaf have each published multiple papers related to the design and implementation of technology-rich innovations and developing online programs of study and how they may be evaluated and improved. Dr. Ahlgrim-Delzell's extensive expertise in educational research further ensures a high-quality project.

I am confident that the outcomes of this work will inform UNC Charlotte's efforts in advancing student success, and result in many contributions to the body of knowledge on the use of quality matters for distance education courses and programs and this project is likely to increase the general knowledge about how teaching and learning should be handled online. I fully support this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Claudia Flowers".

Claudia Flowers  
Department Chair, EDLD



## Student and Faculty Perception of “Quality Matters” Certified Online/Blended courses

(2393 words)

### A. Specific Aims

In the fall of 2012, 6.7 million students were reported to be enrolled in at least one online higher education course (Allen & Seaman, 2013). At UNC Charlotte, the numbers of both undergraduate and graduate students taking fully online courses is on steady increase. In summer 2016, UNC Charlotte had 28 Distance Education (DE) academic programs and 1181 students enrolled in DE programs. [Quality Matter \(QM\)’s](#) quality assurance processes have been developed to improve and certify the design of online and blended courses. QM has been adopted as the quality framework for online and hybrid courses at UNC Charlotte and faculty are being encouraged to work towards applying the 43 QM standards into their courses and receive QM certification to enhance quality in online learning. The quality matters framework includes 43 standards in eight categories: course overview & introduction, learning objectives, assessment & measurement, instructional materials, course activities & learner interaction, course technology, learner support, and accessibility & usability.



Twelve courses have been QM certified in 2015 and 2016 at UNC Charlotte and eight of these courses are from the instructional systems technology program. [See list of UNC Charlotte QM recognized courses.](#) This project seeks to enhance the quality of online courses offered at UNC Charlotte and showcase the benefits of QM certification to both the students and faculty.

## **Purpose**

The purpose of this project is to examine student and faculty perception of Quality Matters certified courses to enhance the quality of teaching and learning that occur in a collection of courses in the 100% Online Master's Program in Instructional Systems Technology (IST) in the College of Education at UNC Charlotte. The IST Program at UNC Charlotte became a fully online program in 2010 and the IST Program currently has eight QM certified courses with three more under development to be sent for QM review.

## **Objectives**

As part of this SOTL project, a team of faculty from the Instructional Systems Technology and Educational Research programs would like to work on the following three objectives:

- 1) examine student perception on the QM certified courses in the IST program by conducting a survey based research study using Dillman tailored-design survey method
- 2) showcase QM courses and present the student perception data in workshops for other faculty on campus and
- 3) create a video repository including faculty and student benefits of engaging in a QM certified online.

As a program that focuses on instructional design and distance education and offered 100% online, we believe that we are particularly well-positioned to share online course design practices with other programs. This may serve as a model for other higher education programs seeking to improve the quality of their online courses.

## **Research Questions for Objective One**

Objective one includes the following research questions:

1. What are online student perceptions of the impact of QM standards in QM certified IST courses on their learning?
2. What are online student perceptions of the impact of QM standards in QM certified IST courses on their course engagement?

## Rationale

The overarching goal of this project is to improve the quality of online student engagement and learning. This project will advance that goal by exploring students perception of QM certified courses towards their success (learning and engagement) in online learning.



Instructors who are considering using Quality Matters may use this knowledge for their adoption of Quality Matters. Instructional designers may use this knowledge to recommend best practices on online course design. Administrators may use these results to set aside funding for training of instructors/instructional designers to design successful online programs. Bringing

together these points of view will help improve online student engagement and learning and increase the number of students in online courses.

Some of the [benefits of adopting QM as stated by the Center for Teaching and Learning](#) include:

- Improved student learning outcomes and retention in online courses
- Alignment of course outcomes and learning objectives to the critical course resources and materials within the curriculum
- National recognition for University courses that meet Quality Matters standards
- Access to the QM Learning community for collaboration
- Support for the University's commitment to excellence in teaching and learning
- Increase in research opportunities through Scholarship of Teaching and Learning (SoTL) programs

## **Impact**

This project will impact all UNC Charlotte students who take online or hybrid courses as Quality Matters also applies to hybrid courses. Understanding the perception of how QM standards impact student learning and engagement may inform the design of online courses at UNC Charlotte and elsewhere. This may improve learning and engagement in online courses throughout UNC System. Results from this study will also be shared with the Office of Technology-Based Learning and Innovation at UNC General Administration.

## **B. Literature Review**

Given the recent rapid growth of online education, identifying “best practices” for facilitating student learning and engagement in online environments has gained considerable interest (Nistor & Neubauer, 2010; Patterson & Mcfadden, 2009; Rovai, 2003). Quality Matters (QM) is one of the most widely-adopted set of standards of best practices in online course to

promote student learning. It is a faculty-driven, peer-review process to continuously improve quality in online course design based on the constructive feedback (Finley, 2012).

A few researchers have been studying the outputs of QM Standards. For example, Finley (2005) measured learner satisfaction after implementing course design improvements recommended by QM Peer Reviewers and found that learners were more satisfied in terms of course navigation and requirements to succeed in the course. In another study, Aman (2009) explored the impact of QM on learners' satisfaction with their online courses. Aman collected survey data on learner satisfaction from 554 learners and found a significant positive relationship between learner satisfaction and QM peer-reviewed courses. In another recent study, Young (2014) explored learners perceived knowledge and study process in the hybrid/blended format ( $n=321$ ) and in the face-to-face format ( $n=186$ ) of the same course designed to meet QM Standards. Results showed that learners in the hybrid/blended format were more motivated, had more positive attitudes, and reported gaining knowledge to a greater extent than learners in the face-to-face course.

Although a few researchers have studied learner attitudes and satisfaction related to QM design courses, research related to learner perception of their learning and engagement in online courses is limited. With a massive growth in the number of university students taking online courses, online course quality in terms of improving student engagement and learning is an important goal. This proposed project will reveal student perceptions of the impact of QM certified course on their learning and engagement and recommend best practices in online course design.

## **C. Methods**

### **QM Certified Courses**



Eight online courses from the Instructional Systems Technology program at the College of Education have been Quality Matters certified.

Course Number	Course Title	Course instructor and designer
EIST 5100	Technology Integration in Education	Dr. Patti Wilkins
EIST 6110	Instructional Design	Dr. Florence Martin
EIST 6120	Current Trends in Instructional Systems Technology	Dr. Florence Martin
EIST 6135	Learning, Media, Resources, and Technology	Dr. Patti Wilkins
EIST 6150	Design, Development, and Evaluation of Online Learning Systems	Dr. Florence Martin
EIST 6101	Learning Principles in IST	Dr. Patti Wilkins
EIST 6170	Human Performance Technology	Dr. Florence Martin
EIST 6130	Instructional Multimedia Development	Dr. Florence Martin

**Project Goal 1.** Examine student perception on the QM certified courses in the IST program by conducting a survey based research study.

### Research Design

This will be a descriptive study to describe student perceptions of the impact of QM standards on learning and engagement. A cross-sectional survey using the social exchange theory and tailored design method (Dillman, Smyth, & Christian, 2014) will be disseminated to the approximately 100 students in the eight QM certified classes offered in the IST program. The survey will be created by graduate students registered in RSCH 8112 (Survey Research Methods) during the Spring 2017 semester. This course provides registered students with the opportunity to create and disseminate real surveys as a way to engage with the course material with the guidance of the course instructor (Lynn Ahlgrim-Delzell). The SoTL team will serve as the client to provide the list of student participants and review and edit the survey items as

necessary. The student participants will be asked to rate each QM standard on a scale from 1 to 4 (no impact, a little impact, some impact, a lot of impact) on the impact of the standard on their (a) learning and (b) engagement. The survey will be piloted with a small group of previous EIST students who have taken one of the eight QM certified selected for this study, but are not currently enrolled. Once approved by the SoTL team and piloted, the survey will be disseminated using SurveyShare in Spring 2017, Summer 2017, and Fall 2017.

### **Data Analysis**

Data will be collected across three semesters of EIST QM certified courses. Data from each semester will be combined into one SPSS 23 database. The survey will first be analyzed using descriptive statistics. A frequency (percent) table will be generated to examine the frequencies of each response option for impact on engagement and a second table for impact on learning. Then the data for each standard will be examined for possible differences among the three semesters and eight courses using a chi-square test for independence. Any differences noted among semesters or courses, will be explored in an attempt to identify potential explanations for differences. Open-ended question(s) regarding the difference between QM certified/not certified courses will be analyzed using a qualitative content analysis technique to identify themes.

**Project Goal 2.** Showcase QM courses and present the student perception data in workshops for other faculty on campus

We will work with Center for Teaching and Learning and with the College of Education to schedule workshops where we can showcase the QM certified IST courses. In these demonstrations, the faculty will walk the participants through each QM standard and how they

have designed it in their courses along with sharing the student perception data from taking a QM certified online course.

**Project Goal 3.** Create a video repository including faculty and student benefits of engaging in a QM certified online course.

A video repository including 6 interviews with IST students on benefits of participating in QM certified online course will be created. The three IST faculty will also be interviewed by the 4<sup>th</sup> co-PI on the benefits of teaching QM certified online courses. The videos will be used to encourage the other faculty on the benefits of teaching online with QM certified courses which enhances student learning and engagement. The videos will be alpha and beta tested by three other faculty and or students prior to making fully accessible online.

**D. Evaluation**

Evaluation for each of the goals is described below. Evaluation of the research portion of this grant follows typical quality indicators for a descriptive study using a survey. Evaluation of the two other goals to create a showcase presentation and video repository include utility, usability, and feasibility indicators.

Project Goals	Evaluation Methods	Instruments/Techniques
1. Examine student perception on the QM certified courses in the IST program by conducting a survey	<ul style="list-style-type: none"> <li>• Content validity of the survey is provided by the direct connection to the QM standards.</li> <li>• Generalizability will be demonstrated by the</li> </ul>	<ul style="list-style-type: none"> <li>• Series of cross-sectional surveys using the QM rubric with both closed- and open-ended questions.</li> </ul>

	<p>response rate of returned surveys. Techniques for obtaining adequate response rates will be implemented such as an incentive, personalized emails, and periodic reminders.</p> <ul style="list-style-type: none"> <li>• Quality of the survey will be assessed through a pilot with a small group of previous EIST students.</li> </ul>	
<p>2. Showcase QM courses and present the student perception data in workshops for other faculty on campus</p>	<ul style="list-style-type: none"> <li>• Utility of the showcase will be measured by the amount of satisfaction experienced by the people who attend a workshop through a CTL survey.</li> <li>• Number of people who attend a showcase</li> </ul>	<ul style="list-style-type: none"> <li>• CTL survey</li> </ul>
<p>3. Create a video repository of interviews of faculty and students discussing the benefits of a QM certified</p>	<ul style="list-style-type: none"> <li>• Feasibility and usability of the video repository will be obtained during alpha and beta testing by accessing the</li> </ul>	<ul style="list-style-type: none"> <li>• Critical evaluation of an online video for Grades 6-college (Schrock, 2011).</li> </ul>

course	technical and content aspects of the videos. <ul style="list-style-type: none"> <li>• Number of views of videos once uploaded.</li> </ul>	
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## E. Knowledge Dissemination

Researchers will participate in dissemination efforts of presenting at conferences and also in publishing the results in a number of venues in the area of instructional technology. Effective online course design and facilitation practices from quality matters courses will be shared with the faculty in the entire university and also with the other schools in the university system. IST faculty have been sharing their QM certified courses through face-to-face workshops and webinars at department, college and university level. Student perception data on these QM courses will also be shared in these workshops. Some of the specific venues for dissemination include:

- **UNC Charlotte:**
  - Participation in UNC Charlotte’s annual SOTL Showcase
  - Discussions with the Center for Teaching and Learning
  - Discussions with College of Education Faculty
  - Discussions with the Distance Education Faculty
- **Professional Conferences:** Papers or posters will be presented at:
  - The Association for Educational Communications and Technology
  - The Sloan Online Learning Consortium
  - American Educational Research Association
- **Manuscripts:** We anticipate submitting manuscripts to the following venues:

- The American Journal of Distance Education
- Online Learning

## **F. Human Subjects**


A Human Subjects Protocol application for the Institutional Review Board (IRB) is currently under development and will be submitted by the beginning of Spring 2017 semester if this SOTL proposal is funded. It is understood that the research focus of this project cannot begin until IRB approval is granted.

## **G. Extramural Funding**

We will use the results to support a request for funding from the National Science Foundation.

## H. Timeline

The following is a timeline for the project:

Timeline	Spring 2017	Summer 2017	Fall 2017	Spring 2018	Fall 2018
					
<b>Goal 1 Examine student perception on the QM certified courses in the IST program</b>	Survey Development  IRB approval  Pilot  Data collection	Data Collection	Data Collection	Data Analysis  Writing the Report	Presenting at conferences
<b>Goal 2 Showcase QM courses and present the student perception data in workshops for other faculty on campus</b>				Develop showcase presentation  Faculty Showcase(s)	Faculty Showcase(s)
<b>Goal 3 Create a video repository including faculty and student benefits of engaging in a QM certified online</b>			Video recording & editing	Alpha & beta testing  Developing the video repository	

## References

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- Finley, D. L. (2005). *Effect of a QM reviewed course on learner evaluation*. (Unpublished final report). [2004 QM Research Grant] Largo, MD: Author.
- Nistor, N., & Neubauer, K. (2010). From participation to dropout: Quantitative participation patterns in online university courses, *Computers & Education*, 55(2), 663-672.
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