Mixed-Methods Research Study:

Student Perceptions of Online Course Components

Linked to High-Quality Online Course Design Standards

and the Relationship to Student Learning Outcomes

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Introduction

Online learning is a growing facet of higher education in the United States, thus it is important for institutions to understand the implications of high-quality online course design standards. Understanding both instructors' and students' perceptions of online course design components will provide valuable data on the importance and effectiveness of these standards. This research study will analyze online learners' perceptions of high-quality course components including advantages, disadvantages and obstacles related to these standards and the effects these standards have on learning outcomes.

Statement of the Problem

As online programs become more popular, it is incumbent upon institutions to ensure that online learners are benefitting from effective online course designs. Effective online course design standards, provided by researchers and third-party organizations, ensure that students are participating in online environments which are conducive to academic success. Although nationally recognized and research-based course design standards are available to institutions and educators of online courses and programs, empirical evidence of students' perceptions of the standards is lacking. Institutions throughout the United States have trained instructors and studied faculty perceptions of effective online course design standards, but research does not exist on student perceptions of online course design standards and how specific online course design standards affect their learning outcomes.

Review of Literature

A review of existing literature in the field of online learning will provide insight on the evolution of online classroom environments. Existing research describes what is known about rapidly-changing technologies and how existing technologies are utilized and enhanced. As new technologies are introduced into online learning environments, educators must properly integrate and design online course content with the use of these technologies. Pierce (2018) explains that "online learning has evolved from a content-consumption experience that just delivers learning to a more collaborative environment where students work with instructors and peers to solve real-world problems" (p. iii). Although online educators are often trained on how to utilize educational technologies and pedagogical best practices in online environments, student perceptions should be continuously analyzed to ensure that the ever-changing components of online learning are being integrated efficiently. Analyzing the student learning outcomes and how they align with student perceptions will provide a clear picture of what works best for students in this course delivery modality.

The Growth of Online Learning

According to the National Center for Educational Statistic's "The Condition of Education 2016" report, 41 percent of full-time college students and 80% of part-time college students were employed in October of 2014 ("Characteristic of Postsecondary Students," 2016). Due to the financial needs and family duties of America's student population, online learning provides increased access to post-secondary education.

Arizona State University, an institution who has had exponential online enrollment growth, has seen a 60 percent growth in their online freshman enrollments in 2018 since the fall 2016 semester. Arizona State University supports more than 35,000 in 175 undergraduate and

graduate online degree programs ("The Changing Face of the American Student," 2018, para. 2). As the demand for these programs rises, institutions require additional resources to adequately support, retain and train online educators and students.

Benefits of Online Courses and Programs

Offering courses and programs in an online format provides learners with various benefits to their lifestyles, learning styles and preferences. Research has shown that some students with poor perceptions of face-to-face course modalities, due to previous negative experiences in traditional learning environments, have certain personality traits that make online courses a better fit for them (Ragusa, 2017, p.16).

Due to students' lifestyles, personal and family responsibilities and employment duties and schedules, online learning provides access to education which otherwise may not be feasibly accessible. The flexibility of online course requirements (i.e., assignments, collaboration, scheduling of required courses) increases the likelihood of completion of academic programs (Bond, 2014, p. 72).

Fully online programs at institutions of higher education have been shown to build a sense of community among students in the same online program. Online learners perceived a sense of belonging as they shared a common trait of completing a program of study in the same modality with the same physical/technology constraints (Bond, 2014, p. 72). The sense of a learning community provides learners with an additional support system outside of the resources offered by an institution.

Advantages of Online Course Quality Standards

Online course instructors who utilize research-based online course design standards are provided with a roadmap for designing new or redesigning existing online courses. Following

researched-based online course design standards ensures that the online courses provide students with a positive online learning experience which increases the likelihood of academic success. Southeastern Louisianan University implements Quality Matters workshops as a resource for providing its faculty with high-quality online course design standards (Budden & Budden, 2013, p.382). At Southeastern Louisiana University 86 of 709 faculty members were certified in Quality Matters in order to improve the design of the online courses which they deliver. The Quality Matters certified instructors shared that the certification recommended including directions to students on how to acquire technical support, guidelines for appropriate online behaviors and increased visibility of online course information (Budden & Budden, 2013, p.382). Additionally, the certification impacted the quality of materials included in classes, helped faculty focus on material to be covered over the entire semester and improved the structure of the online class, provided students a stable and consistent interface among all course offerings and outlined a framework for the construction of online classes to assure quality (Budden & Budden, 2013, p.382). The majority of the Quality Matters certified faculty members believe that the certification should be encouraged and rewarded by the institution's administration (Budden & Budden, 2013).

Barriers of the Online Course Modality

Individuals' personal interest in the subject matter of a specific course plays a role in whether students prefer to complete courses online or in a face-to-face format; students who have a strong interest or find a specific course topic "difficult" prefer to study and interact with their instructors, peers and content in a face-to-face format (Ragusa, 2017, p.16). Online course formats may present students with a feeling that a sense of belonging, with peers and instructors, does not exist.

Students enrolled in face-to-face courses are in regular contact with their instructors and classmates within the physical classroom environment. In online courses, a similar expectation exists for regular contact and collaboration with faculty and students. Heindel (2014) studied the perceptions of students in online programs in relation to the interaction they experienced. The study showed that students experience a lower level of instructor-student as well as student-student interaction in distance education courses and programs (Heindel, 2014, p.153).

Students who exhibit specific individual traits and academic practices are best-suited for online courses and programs. Dunagan (2017) explains that "Online students are successful because intrinsic factors such as self-regulation, self-efficacy skills, and self-motivation. These self-regulation factors include goal-setting, not allowing themselves to be paralyzed by failure and remaining confident in the ability to be successful" (p.94). Without having motivation and self-regulating characteristics as a learner, keeping up with strict deadlines for activities and due dates for projects will be difficult to manage. Conversely, in face-to-face learning environments, teachers and peers are physically present and due to greater accessibility, are able to attempt to increase motivation and keep students on track with their coursework.

Implementing and maintaining online programs at any institution requires resources (i.e, technical, pedagogical, academic, and administrative) in order to properly support the needs of learners and instructors alike. Pierce (2018) notes that faculty rarely take the initial step of integrating technologies, including online course technologies, due to time and university administration constraints. Additionally, financial resources need to be allocated and approved by universities' appropriate parties in order to procure licensing and support systems for instructors and students. Pierce (2018) explains that "university administrators rarely agree to pay for an individual instructor's technology choices when they are already paying for a

Learning Management System (LMS). Additionally, universities do not have the information

technology (IT) manpower to assist instructors in learning how to use, or to troubleshoot,

hundreds of new web technologies" (Pierce, 2018, p. 67). An infrastructure, including

components such as adequate personnel, support systems, system integration with student

information systems, and system security, is necessary to properly integrate online courses and

programs.

Best Practices for Integrating Online Course Design Standards

Preparing to deliver an online course is a large task for online educators. It is important

for online teachers to design their courses, based on online course design standards, well in

advance to ensure that the facilitation of the online course is not interrupted by issues that arise.

As with face-to-face courses, lesson planning consumes a large amount of time. Oberg (2015)

explains that majority of online faculty feel that teacher preparation for creating and designing

engaging online course content is the most time-consuming component of delivering an online

course (p. 114). Ensuring that all design standards are met, in addition to traditional lesson

planning, makes online course design a more laborious process. Oberg (2015) states that

"teachers in synchronous online environments must put the same effort into lesson planning as

traditional classroom teachers, if not more, to ensure that elements of active learning are present"

(p.114).

Learners' sense of belonging in an online learning environment provides them with a

feeling that their participation and efforts are being appreciated by their course facilitators and

peers. Dunagan (2017) notes that "the importance of community should not be underestimated,

for it is the sense of community, that creates the connection with the course and increases student

persistence" (p.136). This sense of community often continues after an online course ends as

students build relationships with their peers which have the potential to last during the remainder of their academic careers and may continue in their professional careers (Dunagan, 2017, p. 136). Training online educators on the proper utilization of community-building educational technology tools can enhance students' sense of belonging.

Summary

This literature review provides a foundation of current practices of implementing online course design standards and how online course design affects student learning outcomes. A review of the known barriers of online courses provides a framework for researchers on areas of need and how to remedy these issues. Research is lacking on the perceptions of online learners on components of nationally recognized online course quality standards and how these perceptions relate to student learning outcomes. The research questions addressed in the research study will benefit online educators, instructional designers and institutions of higher education.

Theoretical Framework

The Technological Pedagogical Content Knowledge (TPACK) framework is the theoretical basis for this research. TPACK is comprised of four core components: (a) content knowledge, (b) pedagogical knowledge, (c) technological knowledge and (d) a synthesis of the previous components known as Technological Pedagogical Content Knowledge (Chai et al., 2013, p. 32). This theoretical framework is referenced throughout the design and analysis of this study as the purpose is to analyze the perceptions of online learning design components and the relationship to their success in such courses. Using the TPACK framework will allow the study of online learners' perceptions of design standards and outcomes, examine the effects of online course content, online pedagogical actions by online instructors and technological knowledge and support within online environments.

In relation to TPACK's technological component of online course design, this study will analyze the components of online course environments including the technology support services available to them and technology resources which aid them in successfully achieving online course learning objectives. The pedagogical knowledge component of TPACK will be referenced as the online course designs' instructional method will be analyzed to determine its relationship to student success and perceptions. The content knowledge component of TPACK will be aligned with the data collected regarding students' outcomes in the discipline of the students' respective online course. The research will synthesize the results from the previous components in order to determine which components contribute to the student learning outcomes and the perceptions of online learners in regards to online course design standards.

The TPACK framework is an appropriate theory to utilize in this study as the online course quality standards referenced in this study are comprised of content, pedagogical and technological components. This study will provide a collection of data on how the aforementioned components relate to online learners' outcomes and perceptions of their learning environment.

Research Questions

Research Questions:

What are students' perceptions regarding high-quality online course design standards?

What online course design standards contribute to student learning outcomes?

How do the themes exposed from students' responses explain how learning outcomes are affected by online course design?

Methodology

A mixed methods, survey and interview-based, explanatory sequential research design will be utilized in this study. The research will collect quantitative and qualitative in order to address the research questions and both sets of data will be analyzed and merged in order to explain and build from each set of data (Creswell and Creswell, 2018, p. 215). The researcher utilized an explanatory sequential design as quantitative data was collected from the student surveys and followed with a collection of qualitative data from interviews of the students (Creswell and Creswell, 2018, p. 221). A mixed methods design is appropriate for this study as quantitative data collected from the surveys will be expanded by conducting a set of interviews. These interviews will provide a more in-depth understanding of the variables included in the survey questions.

Quantitative data will be collected from a closed-ended question survey in order to collect student outcomes data, perceptions of the level of importance pertaining to online course quality design standards, and how students rate the correlation between these standards and their final grades in their online courses. The second phase of the research will collect qualitative data, by way of interviews with the students in the sample in order to collect in-depth information on why they feel certain online course design standards are important and how they affect their academic performance in online learning environments. The sequence of data collection is important in this study as the researcher's goal is to gain a deep understanding of the survey responses.

Triangulation of the quantitative and qualitative data provides this research with validation of the data. Comparing the responses collected from the closed-ended survey with the qualitative interview answers from the second phase of the study provides a convergence of data (Wong and Cooper, 2016, p. 55). Additionally, the qualitative interview responses may expose

variables of the study which were not shared in the students' survey responses. The qualitative

data collection phase will provide an opportunity to analyze variables which are not directly

addressed in the survey questions, extrapolated from student perceptions of online course design

and their level of achievement in their online courses.

In order to converge the data collected from the closed-ended surveys and interviews, the

researcher analyzed groups of quantitative data with qualitative interview data (Creswell & Plano

Clark, 2007, p. 235). For example, quantitative data will be grouped by poor, neutral and positive

perceptions of online course design standards and how they relate to learning outcomes. The

qualitative interview data will be used to determine similarities and differences when compared

to the quantitative results.

Sampling

This research design allowed the researcher to collect data from a large sample of

participants. The researcher purposely selected 40 online instructors who teach online courses

and are aware of the online course quality design standards. These instructors were purposely

selected from the Quality Matter's online instructor database. Quality Matters is a nationally

recognized non-profit organization which promotes collaboration, research and community-

based opportunities for online faculty, administrators, instructional designers and other online

learning professionals ("Quality Matters," 2018). As Patton (2015) explains, purposeful

sampling in a sequential mixed methods study provides quantitative data which determines

overall themes of a specific phenomenon; qualitative data, collected from interviews, will

provide a more in-depth understanding to illuminate what the collected quantitative data means

(p. 306).

The researcher expects a 25% response rate from the contacted instructors, therefore, 10 out of 40 online instructors are expected to participate in the study. The 10 online instructors will disseminate the electronic survey to their students by way of a URL within their online course environment. The researcher anticipates an average online course enrollment to have 20 students. This would provide a sample size of 200.

The researcher is affiliated with Quality Matters, therefore, has access to a database with a large number of online instructors who are also affiliated with Quality Matters. A potential and anticipated challenge in the selection of the sample is locating online instructors who are currently teaching an online course when the research study is taking place. In order to address this challenge, 40 online instructors will be contacted to request their participation in the study. A 25% acceptance rate will provide the research with an adequate sample size.

Utilizing the online course instructor database will provide the researcher with a collection of instructors from across the United States. This will provide the study with data from various student populations (demographics, socio-economic backgrounds, educational experiences and lifestyles) and from various types of institutions of higher education (community colleges, private college/universities and public institutions).

A similar and highly-cited research study utilized a sample size of 76 survey respondents and utilized a power analysis to determine this number (Bianchi-Laubsch, 2014, p. 72). A sample size of 200 for this study, will address a potential of low-response rates from sample of students. The researcher will provide a user-friendly electronic survey in order to increase the return rate.

In addition to the collection of quantitative data from 200 participants, qualitative data will be collected from the students by way of interviews. Ten students will be selected to participate in the interview process. This number was determined as the researcher intends to

collect five students with average-above average expected final grades and five students with

poor-below average expected final grades. This variation will provide a deeper insight as to why

students with different learning outcomes answered in certain ways in the survey and to analyze

the relationship between learning outcomes and perceptions of online course design.

Procedures

The researcher has completed and submitted an Institutional Review Board (IRB)

application to the chairperson of the IRB at the researcher's affiliated institution (New Jersey

City University). Upon approval of the application, the research will commence. The completed

IRB application with applicable information (such as anticipated state date, risks, vulnerabilities,

etc.) can be referenced in Appendix D.

Immediately following the receipt of approval from the chairperson of the IRB, the

researcher will contact online educators from the Quality Matters database which is available to

all individuals with a Quality Matters subscription. Online instructors will be sent an email

describing the research study (see Appendix E), how the study will benefit future online

students' experience with online courses and programs, and provide logistical information on the

delivery and facilitation of survey distribution and interviews. Once the researcher has obtained

approval from the online instructors who have been contacted, the online instructors will

disseminate an online survey's URL to their online course environment within their institution's

Learning Management System (LMS). The instructors will post the link, as seen in Appendix C,

to the survey within an announcement in their online course asking their students to participate in

the study during the 12th week of the academic semester. This will allow for students to complete

the survey while being able to reflect on their online course's design and performance in the

course.

In an effort to produce a high response rate from participants, a 27-question Likert-scale survey was created utilizing *Qualtrics* survey software and disseminated electronically by way of URL. The Likert-scale question will consist of five levels of agreement or disagreement with the proposed statements. The survey questions, as seen in Appendix B, will address the various areas of nationally recognized online course quality standards. Quality Matters standards were referenced in order to construct the survey questions ("Standards from the Quality Matters Higher Education Rubric, 6th Edition," 2018). Additionally, the participants will answer a question related to their expected final grade for their online course. Quality Matters does not provide a student survey regarding their experience with Quality Matters Certified Courses, nor does one exist on their website. The researcher contacted the Quality Matters organization to request permission to use the Quality Matters *General* and *Specific Review Standards* as part of the distributed survey; permission was granted (see Appendix G).

The distributed surveys include a question asking for participants' email addresses. The researcher will purposely select ten students from the sample of 200 survey respondents and will reference the email address in the submitted survey to request participation in the interview. The researcher will collect five students with average-above average expected final grades and five students with poor-below average expected final grades. This variation in students will provide an in-depth understanding into what online learning feel about online course design.

Interviews will be facilitated by the researcher during the 15th week of the academic semester. The interview questions, listed in Appendix A, will provide the study with qualitative data which expose an in-depth explanation of their online course experience. This interview will be semi-structured in order to allow for the researcher to collect data that may have been unexpected in relation to students' perception of their online course's design. The interview

questions were designed in order to collect descriptive answers in addition to their closed-ended

responses in the survey which they completed. The questions provide opportunities for the

participants to confidentially share what they liked about the design of their online course

experience, what they would change about the course if they were to register for the course

again, and how specific online course design standards and components affected their learning

outcomes. The researcher created the interview questions while referencing Quality Matters

course quality design standards.

        In order to promote and increase the likelihood of participation in the interview process, a

$25 Amazon gift card will be offered to willing participants. Funds for this purpose will be

provided by the researcher. An informed consent form must be completed by the participants

prior to the interview (see Appendix F).

        The interviews will be conducted by way of web-conferencing software, specifically

Blackboard Collaborate Ultra. Utilizing this tool will allow the researcher to interview students

who are located throughout the United States as the sample of students will be selected from a

nation-wide database. The web-conferencing software allows for the sessions to be recorded

which enables the researcher to transcribe and code the qualitative data for analysis purposes.

The participants will be informed that their names and the recordings of the interviews will be

destroyed once the research has been completed and will not be included in the final research

document.

Potential Issues and Limitations

        The researcher anticipates a 25% response rate from online instructors as they may not be

teaching an online course during the fall 2019 semester at their institution. In order to address

this issue, the research will reach out to 40 online instructors from the Quality Matters database,

in order to preemptively address a low response rate; the researcher expects 10 online instructors to agree to distribute the online survey link to their students.

Although the researcher ensures 100% confidentiality with handling their answers, participants may be reluctant to answer questions due to concerns that their answers may be shared with their instructor. The researcher will assure them that confidentially is of the upmost importance to this research study. Students may feel that participating in an interview is not the best use of their time. In order to address this issue, the research will offer a $25 Amazon gift card to those students who are requested to participate.

This research study was limited to a 15-week semester while quantitative and qualitative data is collected in the last three weeks of the term. This limited time frame restricts the researcher from addressing unknown or unforeseen logistical issues which arise.

The researcher is certified by Quality Matters as a Peer Reviewer, an online facilitator of the "Applying the Quality Matters Rubric" workshop, and an online facilitator of the "Improving Your Online Course" workshop. Although the researcher is not employed by Quality Matters, he is a subscriber of the organization's services and tools. This position may involve a level bias as an "imbalance of power" may exist between the researcher and online students (Creswell & Creswell, 2018, p. 184).

The Researcher's Position

The researcher is an Educational Technologist and Assistant Director of Online Learning at New Jersey City University. His professional duties and responsibilities include training online instructors on best practices in instructional design for web-enhanced, blended and online courses as well as supporting online students with various technical issues which arise in their

online course environments. The researcher is also a doctoral student in New Jersey City

University's Educational Technology Leadership program.

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Appendix A:

Student Interview Questions

1. How did the level of quality of your online course design affect your attitude throughout the duration of your online course?

2. What components of your online course contributed to your expected final grade in your course?

3. Why do you feel they have an impact on your final grade?

4. What obstacles have you encountered in relation to the design of your online course?

5. If one of your peers asked you about the best part of your online course experience was, what would you say to them?

6. If one of your peers asked you about the worst part of your online course experience was, what would you say to them?

7. What disadvantages would exist if your online course was delivered in a face-to-face format?

8. What design components of the online course would you change if you were to register and complete this course again?

9. Were you able to navigate your course easily throughout the duration of your online course? If so, what design components contributed to your answer. If not, what could have helped?

10. Explain how easily accessible contact information for these technical or academic support services would be beneficial to you or your peers.

Appendix B:

Survey Questions

The purpose of this study is to analyze the perceptions of online learners regarding online course quality design standards and their relationship to student learning outcomes. You are being selected to participate in the study as you are currently enrolled in an online course at an institution of higher education in the United States.

This survey is comprised of 25 questions and will require approximately 30 minutes to complete.

Your survey responses will be kept strictly confidential and will not be shared with your instructor. Your participation will not affect your grade in your online course.

Please note whether you agree to the follwoing terms and to participate in this research study:

I agree to participate in a study entitled "Student Perceptions of Online Course Components
Linked to High-Quality Online Course Design Standards and the Relationship to Student Learning Outcomes," which will be conducted by Daniel Ward, doctoral student at New Jersey City University. The purpose of this study is to analyze online learners' perceptions of high-quality course components including advantages, disadvantages and obstacles related to these standards and the relationship to student learning outcomes.

I understand that I will be required to answer questions regarding my online course design individually. My participation in the study should not exceed one hour.

I understand that my responses will be anonymous and that all data gathered will be confidential. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the state of New Jersey, New Jersey City University, the principal investigator, or any other project facilitator.

If I have any questions or problems concerning this study, I may contact Dr. Ashok Vaseashta, chair of the NJCU Institutional Review Board, at 201-200-2453 or avaseashta@njcu.edu. I may also contact the researcher, Daniel Ward, at dward@njcu.edu.

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I agree to particpate in this research study and agree to the terms.
I do not agree to particpate in this research study and/or do not agree with the terms.

The researcher may contact you requesting an interview depending on your survey responses. This information will remain confidential.

Email Address

Phone Number

I am a...

- ○ Freshman
- ○ Sophomore
- ○ Junior
- ○ Senior
- ○ Other

How many online courses have you completed?

- ○ None. This is my first online course experience.
- ○ 1-2
- ○ 3-4

- ○ 5 or more

What is the closest grade you expect to receive in this online course?

- ○ A
- ○ B
- ○ C
- ○ D
- ○ F

Please rate each of the statements from Strongly Agree to Strongly Disagree. Please note that each statement requires a follow-up statement requiring you to rate the level in which the component had an effect on your final grade.

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
You were introduced to the purpose of the course	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
Instructions were provided to properly get started on your course work and to find course components	○	○	○	○	○
Follow-up: The previous	○	○	○	○	○

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
statement/course component had an effect on my final grade					
The course provided learning objectives which were clear and you knew what needed to be done to meet each objective	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○

Please rate each of the statements from Strongly Agree to Strongly Disagree. Please note that each statement requires a follow-up statement requiring you to rate the level in which the component had an effect on your final grade.

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
The course tools and technology in the course provided opportunities for engagement in the online environment	○	○	○	○	○

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
Learning activities provided an opportunity for interaction with your classmates	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
The assignment and/or assessments were appropriate for the learning objectives	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○

Please rate each of the statements from Strongly Agree to Strongly Disagree. Please note that each statement requires a follow-up statement requiring you to rate the level in which the component had an effect on your final grade.

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
The course design facilitated readability and minimized distractions.	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
The course provided alternative versions of auditory and visual content.	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
The course provided information on technical support services available to you.	○	○	○	○	○
Follow-up: The previous	○	○	○	○	○

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
statement/course component had an effect on my final grade					

Please rate each of the statements from Strongly Agree to Strongly Disagree. Please note that each statement requires a follow-up statement requiring you to rate the level in which the component had an effect on your final grade.

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
The course grading policy was clearly stated	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○
The learning objectives were designed appropriately for this level of course.	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○

	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
The instructional materials represent up-to-date theory and practice in the discipline	○	○	○	○	○
Follow-up: The previous statement/course component had an effect on my final grade	○	○	○	○	○

Appendix C:

Qualtrics Survey Link

https://njcu.co1.qualtrics.com/jfe/form/SV_1Y79GEQTiOX1EzP

Appendix D: IRB Application

Note: Some fields in the IRB application do not expand in order to view the entire inputted text. Therefore, some of the completed fields, which do not provide sufficient space, are provided in the space below:

Proposal Title:

Mixed-Methods Research Study: Student Perceptions of Online Course Components Linked to High-Quality Online Course Design Standards and the Relationship to Student Learning Outcomes

Data Sources:

How was this number determined?

A review of highly-cited existing literature (which utilized a power analysis) was reviewed and referenced in order to determine the sample size.

If Yes, how will participants be selected or recruited?

40 online instructors will be purposely selected from the Quality Matter's online instructor database. Quality Matters is a nationally recognized non-profit organization which promotes collaboration, research and a community-based opportunities for online faculty, administrators, instructional designers and other online learning professionals ("Quality Matters," 2018). 10 out of 40 online instructors are expected to participate in the study. The 10 online instructors will disseminate the electronic survey to their students by way of a URL within their online course environment. The researcher anticipates an average online course enrollment to have 20 students. This would provide a sample size of 200.

Will subjects be compensated for their participation? If yes, please briefly describe the compensation:

10 students will be interviewed in order to collect qualitative data. These students will be compensated with a $25 Amazon gift card funded by the researcher.

Briefly describe the research methodologies to be used in this study:

A mixed methods, survey and interview-based, explanatory sequential research design will be utilized in this study. The research will collect quantitative and qualitative in order to address the research questions and both sets of data will be analyzed and merged in order to explain and build from each set of data. The researcher utilized an explanatory sequential design as quantitative data was collected, from the student surveys, first and followed with a collection of qualitative data from interviews of the students.

The completed IRB application is included on the following page:

NJCU Institutional Review Board Application for
Review of Research Proposal

Email: IRB@njcu.edu

FOR OFFICE USE ONLY			
File Number			
Review Type	Exempt ☐	Expedited ☐	Full☐
PI			

Date of Submission   11/28/19

Proposal type:
■ Original   ☐ Revised*

*If this is a revised application, there is no need to complete the remainder of this form. However, please describe in detail the changes that you have made in response to the IRB's

concerns. _____

Principal Investigator	Daniel Ward
Proposal title	Mixed Methods Research Study: Student Perceptions of Online Course Components Linked to High Quality Online Course Design Standards and the Relationship V
Proposed start date	8/1/19
Anticipated duration of research	1 year

Type of Research

☑ Student/Classroom project
☐ Faculty project
☐ Staff project
☐ External researcher project (All external researchers must have an NJCU sponsor.)

NJCU Investigators (Please list additional investigators as necessary.)

Principal Investigator (For all student research, the faculty advisor is the PI.)

Name   Dr. Chris Carnahan
Department Educational Technology
Telephone   201-200-3078
Email   ccarnahan@njcu.edu

Co-Investigator (including student researchers)
Name   _____
Department _____

Telephone   _____

Email   _____

Co-Investigator(including student researchers)

Name   _____

Department   _____

Telephone   _____

Email   _____

Co-Investigator(including student researchers)

Name   _____

Department

Telephone   _____

Email   _____
                     _____

*Any NJCU investigator who plans to work on this project either with or for a Principal Investigator or a Co-Investigator at another institution must identify those investigators and their institutions.

External Investigators

Name   _____

Title   _____

Institution   _____

Name   _____

Title   _____

Institution   _____

Name   _____

Title   _____

Institution   _____

Name   _____

Title   _____

Institution   _____

NJCU Sponsor (if the researcher is not affiliated with NJCU)

Name   _____

Department   _____

Telephone   _____

Email   _____

Data Sources

Number of participants __200_____

How was this number determined (e.g., power analysis)   How was this number determined? A review o_____

Does this project require the collection of new data?   ■ Yes   ☐ No

   If Yes: How will participants be selected or recruited?   40 online instructors will be purposely sel___

   Will subjects participate on a fully voluntary basis?   ■ Yes   ☐ No

   Will subjects be compensated for their participation?   ■ Yes   ☐ No
      If yes: Please briefly describe the compensation.
         10 students will be interviewed in order to collect qualitative data. These students w___

   Does this project make use of human tissue or cell lines?   ☐ Yes   ■ No

Briefly describe the research methodology(ies) to be used in this study (e.g., focus group, participant observation, survey, experiment).
A mixed methods, survey and interview-based, explanatory sequential research design will be util___

Does this project use data that have already been collected for a non-research purpose or by another researcher?

                                                              ☐ Yes   ■ No

   If yes: What is the source of the data?

   _____

   Are the data accessible in the public domain?   ☐ Yes   ■ No

   If no: Are fields included that would allow identification of individuals, either directly or indirectly?
                                                              ■ Yes   ☐ No
   If yes: Please explain briefly how participant confidentially will be safeguarded
      Email addresses are included in the survey in order to contact potential interviewee___

Participant Risks

Will participants be exposed to any stresses (e.g., anxiety, pain, etc.) or physical harm (e.g., injury, infection, etc.) in connection with this research?   ☐ Yes   ■ No
   If yes: Please briefly explain what risks may be involved in the research, what specific steps will be taken to minimize and monitor the risk, and what will be done to compensate and/or treat participants who are harmed by the research.

   _____

Does the research design require that participants be deceived?   ☐ Yes   ■ No

   If yes: Please briefly explain why deception is necessary and what steps will be taken to reduce potential harm from this deception.

   _____

Potentially Vulnerable

Populations Will this research involve:
Physically/Mentally Challenged Individuals

Young children (ages 0-13)	☐ Yes	◼ No
Older children (ages 14-17)	☐ Yes	◼ No
Senior Citizens (over age 65)	☐ Yes	◼ No
Pregnant Women	☐ Yes	◼ No
Prisoners	☐ Yes	◼ No

If yes to any of the above: Please briefly explain how the rights of this (these) population(s) will be protected.

_____

Informed Consent

Will participants be fully informed about:

The voluntary nature of their participation and the freedom to withdraw without penalty at any time	◼ Yes	☐ No
The purposes and procedures of the research	◼ Yes	☐ No
Any reasonably foreseeable risks or discomforts	◼ Yes	☐ No
Any benefits to them or to others from the research	◼ Yes	☐ No
The extent to which confidentiality will be maintained	◼ Yes	☐ No
The compensation and/or treatments available if injury occurs	☐ Yes	☐ No

(This question need only be answered for research that involves risks.)

Whom to contact for information about the research participants' rights and any research-related injury	◼ Yes	☐ No

If the answer to any of the above is no, please briefly explain why the research requires an alteration of the standard elements of informed consent.

_____

How will participants' informed consent be documented? Please check all that apply.

☐Signature on written consent document
☐Signature on document to be read to the participants and witnessed by another party
■Written documentation of informed consent will not be obtained because one or more of the
following criteria is satisfied (check all that apply):

   ■ The only link between the subject and the research would be the informed consent
   documentation and the primary risk is loss of confidentiality.

   ■ The risks to participants, including risks associated with the loss of privacy, are no greater than
   those ordinary encountered in daily life and the research involves no procedure for which written
   consent is normally required outside of the research context.

Who will obtain the informed consent from the participants?

■ Principal Investigator
☐ Co-Investigator
☐ Sponsor (in cases where PI is not affiliated with NJCU)
☐ Other
☐ Not applicable

Please include your protocol summary (5 pages maximum) and your recruitment materials (as applicable).

External Reviews and Funding

Has this protocol been reviewed by an Institutional Review Board or Human Subjects Review
Committee at another institution(s)?   ☐Yes ■No

If yes: At what institutions(s)?

_____

What is its status?   ☐Approved   ☐Rejected   ☐Pending (or provisionally approved)

Has this protocol been submitted for Federal Funding?   ☐Yes   ■No

If yes: Agency or Organization:——————————————————————————————————

         Submission Date: ————————————————————

         Funding Start Date: _____ ☐Anticipated   ☐Actual

         Contact Person: ———————————————————————

         Contact's Telephone: _____

Has this protocol been submitted for any other types of funding?   ☐Yes   ■No

If yes: Agency or Organization: _____

Submission Date: _____
Funding Start Date:
_____   ☐Anticipated   ☐Actual

Contact Person: _____
Contact's Telephone:
_____

Proof of NIH or CITI Certification
Please provide documentation of current CITI and/or NIH certification in human subjects research for all researchers involved in this project.

Certificate of Agreement

The signatures of all researchers involved in this project must be provided.

I certify that I agree to comply with the requirements of both NJCU and the Office for Human Research Protection (OHRP) of the United States Department of Health and Human Services as described in 45 CFR §46.

_____   11/28/2019
PI Signature   Date

_____   _____
Co-PI Signature   Date

_____   _____
Co-PI Signature   Date

_____   _____
Co-PI Signature   Date

_____   _____
Co-PI Signature   Date

Please submit the completed application and accompanying documents as one document or pdf to IRB@njcu.edu and kresch@njcu.edu.

All applications must be submitted by the NJCU faculty or staff member who is serving as the Principal Investigator (PI). Neither students nor external researchers may submit an application.

Appendix E:

CITI Certificate

Appendix E:

Letter Requesting Voluntary Participation

Dear Dr./Professor XXXXX,

Dear XXXXX,

My name is Daniel Ward and I am an Education Technology Leadership doctoral student at New Jersey City University. I am conducting a research project which will analyze the perceptions of online course quality design standards and their relation to student learning outcomes.

I am reaching out to you to request your voluntary participation in this study in order to contribute to research pertaining to online students' online course participation, satisfaction and success. If you are willing to participate, you must be teaching an online course in the Fall 2019 academic semester and share a link to a 25 question survey to your students. One or more of your students may be asked to participate in a 30-minute interview in order to collect in-depth qualitative data pertaining to their survey questions. Students who have been selected to participate in an interview will be provided with an Amazon $25 gift card. Your name, the names of your students and names of your institution will be remain confidential and will not be included in the final research document.

Upon receipt of your agreement to participate in the study, I will provide you will a URL to distribute to your students in your online course via an announcement during the 12th week of the fall 2019 academic semester.

If you agree to this study I will happily provide the results to you for your review.

Thank you for your time and anticipated response!

Regards,

Daniel Ward

dward@njcu.edu

Appendix F:

Informed Consent for Interviewees

I agree to participate in a study entitled "Student Perceptions of Online Course Components Linked to High-Quality Online Course Design Standards and the Relationship to Student Learning Outcomes," which will be conducted by Daniel Ward, doctoral student at New Jersey City University. The purpose of this study is to analyze online learners' perceptions of high-quality course components including advantages, disadvantages and obstacles related to these standards and the relationship to student learning outcomes.

I understand that I will be required to answer questions regarding my online course design individually. My participation in the study should not exceed one hour.

I understand that my responses will be anonymous and that all data gathered will be confidential. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the state of New Jersey, New Jersey City University, the principal investigator, or any other project facilitator.

If I have any questions or problems concerning this study, I may contact Dr. Ashok Vaseashta, chair of the NJCU Institutional Review Board, at 201-200-2453 or avaseashta@njcu.edu.

_____   _____
Participant Signature   Date

_____   _____
Principal Investigator Signature   Date

Appendix G:

Permission to Use Quality Matters Standards in Survey

Hi Daniel,

Thanks for the email and good luck with your dissertation and research. I am forwarding a link to our website that has information on "How to Reference & Use QM in Research."

Item 1.2 on that page states if you use the QM Standards in survey questions you can cite it this way:

"1.2 An end-of-text APA style citation would be "Standards from the Quality Matters Higher Education Rubric, 6th Edition. Quality Matters. Retrieved from https://www.qualitymatters.org/sites/default/files/PDFs/StandardsfromtheQMHigherEducationRubric.pdf"

Does that help?

Thanks,

Jim

Quality Matters

1997 Annapolis Exchange Parkway

Suite 300

Annapolis, Maryland 21401

(866) 851-4984

info@qualitymatters.org

www.qualitymatters.org

Daniel Ward wrote:

Hello,

 I am a doctoral student of Educational Technology Leadership. I plan to study the perceptions of online students on design components of their online courses (and the relation to their learning outcomes) while referencing the titles of the QM General Standards. I will not be referencing or including the annotations in my research. How would I go about requesting permission to include the General Standards in my study?

 Thank you for your anticipated response!

 Daniel Ward