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Student Perspectives on the Presence and Usefulness of Navigational Course Elements in Distance Education Courses

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STUDENT PERSPECTIVES ON THE PRESENCE AND USEFULNESS OF NAVIGATIONAL COURSE ELEMENTS IN DISTANCE EDUCATION COURSES

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Approved by
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APPROVAL OF DISSERTATION

We, the faculty supervising the work of **Christopher Joseph Sochor**, affirm that the dissertation, **Student Perspectives on the Presence and Usefulness of Navigational Course Elements in Distance Education Courses** meets the high academic standards for original scholarship and creative work established by the EdD Program in **Leadership Studies** and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

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Completion of this document and degree during a time of personal hardship and a global pandemic was a test of personal determination. This research is for current and future distance education students. Education can and does change lives. It is our job as educators to reduce and eliminate barriers to education, especially for our Appalachian demographic. This degree is for me.

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Table of Contents

List of Tables

Abstract

The Quality Matters *Standards for Course Design* (2018) rubric is a course development rubric for online courses in higher education. General Standard 1 provides a list of specific review standards that are integral in the development of courses, including course expectations, course structure, learning guidance, communication expectations, technology skill requirements, criteria for student assessment, and overall course organization. Student feedback is necessary in order to determine whether students view elements of the course overview and introduction as present in their courses, and whether those elements are useful for the successful completion of their online course. This research utilized a mixed-methods approach, with a survey being sent to all students enrolled in an online degree program at a midsized regional university during the Spring 2021 term. The results of this study indicated students found all elements of Quality Matters Standard 1 to be somewhat to mostly always present in their courses. Study findings indicate students perceive all elements to be somewhat to mostly useful in their successful completion of an online course. These findings indicate students find General Standard 1 rubric elements as useful in the successful completion of an online course.

Chapter One: Introduction

Distance education began as correspondence courses, delivering instructional materials to homes, and has transformed to be a technology-driven, pedagogically-sound way for students around the globe to complete full online degrees. In the Fall 2018 semester, 34.7% of college students were enrolled in at least one distance education course (National Center for Education Statistics [NCES], 2020b). During the Fall 2012, 25.5% of enrolled students were taking at least one distance education course, showing steady growth from 2012 to 2018 (NCES, 2020b). With 70% of academic leaders rating the learning outcomes of distance education courses equal to or superior to face-to-face courses, distance education has become a mainstream and effective course delivery method (Allen & Seaman, 2013).

Beginning in 1965, institutional participation in the Department of Defense's Advanced Research Project Agency's (ARPANET) project paved the way for emerging technology to be used as a way to effectively communicate with learners and other academics (Emmerson, 2005). The "ARPA" network launched their first transmission on October 29, 1969, from the University of California Los Angeles to the original computer at Stanford Research Institute International (SRII) (SRII, n.d.). As developmental advancements and access to communicative technologies increased, academic leaders invested in the idea of distance education as a course delivery method that deserved special pedagogical considerations. The rise of the standardization of course development began with an Accrediting Commission in 1955 within the Distance Education and Training Council (Emmerson, 2005). In 1982, the National University Teleconferencing Network (NUTN) was created as a consortium between the Smithsonian Institute and 66 universities to address barriers confronting the rapidly growing types of distance education offerings (Moore & Kearsley, 1996). Many of the same barriers universities faced in

the 1980s are still barriers today: limited financial resources, student enrollment, and the continual evolution of technologies (Emmerson, 2005). NUTN provided support services to its consortium members, such as: technical support for the maintenance of the technology used, collaboration for course development, guidance to technological industries, and professional development (Emmerson, 2005). Course content was delivered via satellite television in the 1980s, and via Direct Broadcast Satellites (DBS) in the 1990s (Emmerson, 2005).

In 1999, the implementation of a distance education learning management system created by Blackboard, Inc. modernized the course delivery system. With the availability of a consistent method to deliver content and assess student work came the rise in groups whose focus was on the standardization and pedagogical development of online courses. The MarylandOnline (MOL) consortium created the outline for the Quality Matters (QM) program, with the goal of creating a scalable measuring system to ensure the quality of the development and finished product of online courses (QM, n.d.). Today, Quality Matters is a nonprofit organization whose mission is to "promote and improve the quality of online education and student learning nationally and internationally" by developing research-supported and practice-based sets of standards and "fostering a culture of continuous improvement by integrating QM standards and processes into organizational plans to improve the quality of online education" (QM, n.d., para. 10).

Using the Quality Matters rubric workbook, *Standards for Course Design (2018)*, instructors and instructional designers follow a pre-determined set of standards when developing a new or updating a previous distance education course. This study focuses on General Standard 1: Course Overview and Introduction, which sets the framework for what can be called navigational aids in a distance education course. According to Sung and Mayer (2012), the presence of navigational aids, or signaling aids, produces significantly higher success results in

students according to a usability scale. The usability scale included satisfaction of use, awareness of lesson structure, awareness of lesson length, awareness of location, ease of navigation, lesson comprehension, and lesson learning (Sung & Mayer, 2012). Sung and Mayer's (2012) results indicate students learned more from courses that contained navigational aids. When students first access a distance education course, the landing page should contain navigational aids that help them learn the overall structure of the course, how the course will be completed, and information specific to the course to aid them in successful course completion.

What is often missing in the conversations regarding distance education course design and development is the perception of the usefulness of those elements by the main consumers of those courses: the students. It is not enough for educators to determine what the most important elements of instructional design should be without incorporating feedback about the usefulness of those elements to students and their role in student success in a course.

The setting for this study was Marshall University, a public university in Huntington, West Virginia. As of December 2020, the university offered the following online degree programs or certificates: 2 doctoral programs, 18 master's degrees, 8 baccalaureate degrees, and 13 graduate certificates. As of Fall 2019, there were 12,862 total full-time enrolled students, with a class average size of 20. Marshall University is located in the Appalachian region, with only 18% of students being out-of-state or international.

Marshall University allows all students to enroll in distance education courses, but ecampus students are currently enrolled in an online degree program and will not participate in any course with a delivery method that is not distance education. Students who are enrolled in online degree programs participate in distance education courses that have undergone a course development approval process through the Office of Online Learning. This review process is

based on the Quality Matters *Standards for Course Design*. As of January 28, 2020, all distance education courses at Marshall University are expected to be designed to these Quality Matters standards.

Problem Statement

The *Standards for Course Design* General Standard 1 covers the course overview and introduction, stating "the overall design of the course is made clear to the learner at the beginning of the course" (QM, 2018, p. 10). Course developers often fail to gather the students' perspectives on the presence and usefulness of the elements of the course overview and introduction that have been deemed important; therefore, the student perspective is needed to determine whether students view the elements of the course overview and introduction as useful aspects that contribute to their successful completion of a distance education course. Therefore, the purpose of this study is to examine the students' perceptions of the presence and usefulness of navigational aids, which include the specific review standards of *Standards for Course Design* General Standard 1.

Research Questions

The following specific questions guided this study:

1. To what extent are elements of QM General Standard 1 present in distance education courses?
2. To what extent do students perceive the elements of QM General Standard 1 to be useful in the successful completion of distance education courses?
3. What are the differences, if any, based on selected demographic/attribute variables in the student perceptions of the usefulness of the QM General Standard 1 for successful completion of distance education courses?

3. Are there elements in the course overview and introduction area that are currently not included, but would be beneficial to their success in the course?

Operational Definitions

The following definitions were developed for use in this study:

Age: age of student at the time they are responding to the survey.

Course Experience: the number of distance education courses the student has completed.

Degree Program: the level of degree program the student is currently completing, such as Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctorate, or Certificate program.

Gender: the self-reported gender of the student.

Grade Point Average (GPA): self-reported student overall grade point average.

Presence: availability of the element in the navigational module of the course (Start Here module) or course Syllabus.

Usefulness: the extent to which a specific course element is useful to students in introducing the course structure and how to navigate the course successfully.

Significance of Study

The Quality Matter's *Standards for Course Design* is the most popular distance education course development rubric used in the United States. Since there is growing interest among curriculum theorists in including students in the course-building process, we should also consider the needs of the students when developing distance education courses. Since comfort with technology and cultural considerations vary widely among students, study findings can enhance

the conversation regarding what current students view as the most useful elements in ensuring a successful start and completion of a distance education course.

As the needs of students have changed through the years, so has the definition of "traditional" student. Historically, traditional students were identified as those students in the 18–22-year age range. With the prevalence of online degree programs, access to technology, economic considerations, and changing family structures, the "traditional" college student age is now 24 (NCES, 2020a). Online course development experts should expect to incorporate changes in the delivery of distance courses which use adult pedagogy and account for the needs of non-traditional students. The results of this study can contribute to ongoing conversations regarding the development of online course pedagogy for all types and ages of learners.

Delimitations

The possible delimitations of this study included the scope of the project and the exclusion criteria of the population to gain the sample. Delimitations included the use of one university, students enrolled only as ecampus during one semester, and looking only at Quality Matters General Standard 1.

Summary

As technology has advanced over the past 100 years, so has the ability to reach students globally. The first ARPANET telecommunication in October of 1969 is an example of how educational technology has benefited from technological advances in sectors outside of education. While distance education may not be the driving force behind these advancements, the ability to harness technology and develop acceptable content standards means that knowledge was soon transferred into the minds of people who may not have otherwise been able to get an extended education. Student-and-instructor-developed Quality Matters programs bring the

process of learning and course development to the front of the course-building process, incorporating traditional and adult learning pedagogies. To properly complete a feedback loop in the development process, we must determine how students perceive those elements to be present in their distance education courses, as well as how useful students perceive these elements to be in their successful completion of the course.

Chapter Two: Literature Review

Chapter two contains the related literature that provides the foundations for this study. This review of literature is organized into the following sections: significant milestones in distance education, distance education pedagogy and quality standards, theories in design standards, studies in the efficacy of navigational aids in distance education, students as active participants in curriculum building, student online-readiness expectations, growth in distance education, faculty experience with distance education prior to COVID-19, COVID-19 impact on parental views of distance education, COVID-19 impact on students' views of distance education, COVID-19 impact on institutions, and COVID-19 effects on distance learning. A brief summary of the literature review is provided in a final section.

Significant Milestones in Distance Education

Distance education had already begun by 1850, when Caleb Phillips, a teacher, placed an ad in the *Boston Gazette* stating that anyone wishing to learn his new method of shorthand could receive weekly lessons delivered by mail to their homes around Boston (Emmerson, 2005). In 1873, Anna Ticknor founded the Society to Encourage Studies at Home, which also delivered lessons by mail around the Boston area (Emmerson, 2005). In 1874, Wesleyan University in Illinois became the first institution of higher learning to offer "in absentia" programs for both undergraduates and graduates (Emmerson, 2005). By 1878, John H. Vincent founded the Chautauqua Literary and Scientific Circle, the first nationwide adult learner correspondence school (Emmerson, 2005). The first higher education level, nationwide correspondence program was developed by the University of Chicago in 1892, and "by 1930, there were 39 American universities offering courses by correspondence" (Emmerson, 2005, p. 2).

From the early 1900s, until a technological revolution in the 1960s, all of the distance education opportunities were available as correspondence courses or programs, delivering course materials through the U.S. Post Office (Emmerson, 2005). The gap in the advancements of correspondence courses from the 1930s to the 1950s can be explained by many cultural events occurring in the United States and around the world (Emmerson, 2005). The Great Depression created many economic hardships in the United States, employment policies kept potential students from seeking an education, and World War II spawned both economic and military service hardships (Emmerson, 2005).

The University of Wisconsin's Articulated Instructional Media Project (AIM) began in the 1960s, and was the first higher education project that integrated the use of technology into distance education courses and programs (Emmerson, 2005). AIM provided instructional materials through prints, radio broadcasts, televisions, recorded tapes, and telephone calls (Emmerson, 2005). Certain findings from the research conducted by the AIM project are still incorporated in the design of distance education courses, such as developing self-paced courses and the necessity of a team to aid in the development of a course or program (Moore & Kearsley, 1996).

With a military research focus, the Department of Defense's Advanced Research Project Agency's (ARPANET) project was developed in 1965 as a way to both ease the stress put on the U.S. Postal Service, and build a communication network between Stanford Research Institute, UCLA, UC Santa Barbara, and the University of Utah (Emmerson, 2005). Working with the International Telecommunications Satellite organization, NASA launched the Applications Technology Satellite-6, with the goal of providing better communication to remote, poor, or rural areas in the United States (Emmerson, 2005).

By 1981, the ARPANET had transitioned from a military research focus to commercial use, benefitting higher education (Emmerson, 2005). The University of Alaska was the first university to take advantage of the new satellite communications in the early 1970s (Emmerson, 2005). The Instructional Television Fixed Services (ITFS) enabled a consortium of universities and the military to provide satellite instruction from 1975 to 1982 (Emmerson, 2005). The consortium, called the "University of Mid-America," disbanded in 1982 due to the high cost of providing satellite courses, low student enrollment, and insufficient funding (Emmerson, 2005).

In 1995, the state universities in New York created a consortium of 55 members, the State University of New York Learning Network (SLN) (Emmerson, 2005). The purpose of SLN was to provide distance education courses to students at a convenient time and pace (Emmerson, 2005). The SLN is still active today as SUNY Online Teaching, an entity which focuses on a faculty development process that consists of four stages and seven course design steps, based on research-based practices and the inclusion of instructional designers (State University of New York, 2020).

The first fully online degree programs were offered in 1989 by the University of Phoenix and Connect Ed (Emmerson, 2005). By 1999, the United States Department of Education's Distance Education Demonstration Program started a postsecondary school pilot program which offered federal financial aid to go toward distance education programs (Emmerson, 2005). The leading learning management system, CourseInfo LLC, was formed in 1996 (Gilfus Education Group, 2009). In 1997, Blackboard, Inc., was founded by Michael Chasen and Matthew Pittinsky as a consulting firm for a global learning consortium, and focused on standardizing online learning development (Gilfus Education Group, 2009). The company started developing web-based scripts at the request of a Cornell University statistics instructor who wanted to incorporate

more technology in her teaching (Gilfus Education Group, 2009). The Cornell University system was a part of the ARPANET project, the communication connection project that linked higher education institutions together and was a precursor to the modern internet (Gilfus Education Group, 2009). Blackboard's software designers worked with distance education technology leaders to develop product and platform strategies that were based on the technical and pedagogical needs of instructors (Gilfus Education Group, 2009). In 2000, the CourseInfo name was dropped and Blackboard became the industry-leading standard until 2020 (Gilfus Education Group, 2009).

Distance Education Pedagogy and Quality Standards

The Distance Education and Training Council (DETC) was created in 1955 to "ensure the quality of distance education" (Emmerson, 2005, p. 10). The council continues today as the recognized United States Department of Education's national accrediting body for institutions who offer all of their programs as distance education programs (Emmerson, 2005). Since course development was the responsibility of each of the institutions participating in the Instructional Television Fixed Service (ITFS) system, courses would have been more likely to be team-checked for quality assurance by meeting basic design expectations.

Blackboard, Inc., as the emerging industry-leading learning management system, incorporated technology and pedagogical considerations with the implementation of a course delivery system. Blackboard states that "students have enhanced learning experience when using the online tools associated with its web-based learning management system" (Chawdhry, 2011, p. 21). Blackboard contains student engagement tools to match their pedagogical considerations. These tools include Discussion Boards, Journals, Blogs, and third-party tools used to increase learner to learner, and learner to instructor, interactions.

In March of 2020, Canvas, an open-source learning management system, surpassed Blackboard as the industry leader in the North American market, with 35% of student enrollments, compared to Blackboard's 31% (Busta, 2020). This shift in company domination was concurrent with Blackboard's announcement it had sold its open-source learning management system, Moodle, to Learning Technologies Group, Plc., for $31.7 million (Busta, 2020). During the 2010s, Blackboard had acquired so many other companies that their project development and completion became too unwieldy for the company to handle, missing dates and technological promises over a number of years. The reason Blackboard cited for selling off their open-source project was so they could focus more on their foundational learning management system, Blackboard Learn, and focus on completing development of Blackboard Learn Ultra (Busta, 2020).

The implementation of the learning management system led a group of Maryland academics, members of the MarylandOnline (MOL) consortium, to consider a set of standards that would help pave the way toward the standardization of distance education courses to ensure course equivalency across multiple institutions (Quality Matters, n.d.). The MOL consortium was awarded a Fund for the Improvement of Post-Secondary Education (FIPSE) grant from the U.S. Department of Education (Quality Matters, n.d.). MOL spent 2003-2006 creating a rubric of course design standards. Quality Matters incorporated a peer-review process with the goal of training faculty, providing guidance on course quality, and certifying that online courses would be held to the same standards across multiple institutions (Quality Matters, n.d.). When the grant ended in 2006, Quality Matters remained as a nonprofit organization led by members of the MOL consortium (Quality Matters, n.d.).

In 2014, Quality Matters (QM) became a standalone company, separating from the MOL consortium (Quality Matters, n.d.). Today, the Quality Matters Higher Education Rubric Workbook, *Standards for Course Design* (6th ed.), serves over 60,000 members and is the set of standards most frequently considered by institutions of higher learning (Quality Matters, n.d.).

The QM Rubric consists of eight General Standards, each with their own specific review standards:

1. Course Overview and Introduction
2. Learning Objectives (Competencies)
3. Assessment and Measurement
4. Instructional Materials
5. Learning Activities and Learner Interaction
6. Course Technology
7. Learner Support
8. Accessibility

The eight General Standards are used in context with the most popular method of course development used by instructional designers, the Universal Design for Learning (UDL) guidelines. The goal of UDL is to change the environment and design of the course to meet the needs of learners, rather than expecting the learners to change their learning styles (Universal Design for Learning, 2018). The UDL framework is aimed to "guide the design of learning environments that are accessible and challenging for all," and to support and motivate learners to be "resourceful, knowledgeable, strategic, and goal-driven" (Universal Design for Learning, 2018, para. 1).

The first official version of UDL guidelines was created in 2009, and the guidelines are meant to emphasize the "three large brain networks that comprise the vast majority of the human brain and play a central role in learning" (Universal Design for Learning, 2018, para. 11). Those three networks include the "affective network," the "recognition network," and the "strategic network" (Universal Design for Learning, 2018, para. 11). UDL persists as a design framework for course development that expects developers to "think about how different tools and resources can be leveraged to reduce barriers and support all learners to engage in challenging ways of thinking" (Universal Design for Learning, 2018, para. 12).

Theories in Design Standards

The growth in distance education was driven by changes in society, technological innovations, demand for educational growth, the needs of diverse students, and changes in the educational sector (Methotra et al., 2001). Since the rise of the use of the learning management system, educators have cited a lack in appropriate pedagogy for distance education (Guo, p. 2). According to Guo, the problem is two-fold and consists of external and internal factors; the external factors include a lack of recognition of distance education as a legitimate form of education, and the internal factors include the development of appropriate pedagogy that may help eliminate the external factor of the quality of distance education (Guo, 2012, p. 2).

In 2011, Anderson and Dron developed a three-part generation typology of distance education pedagogy and argued that the three generations apply to today's pedagogical standards. The first generation, Cognitive Behaviorist Approach, was defined and practiced in the latter part of the 20th century by theorists such as Watson, Thorndike, and Skinner, and focused on the "individual and necessity for measuring actual behaviors and not attitudes or capacities" (Anderson & Dron, 2011, p. 82). These theoretical ideas led to the development of

the Keller Plan and Gagne's Events of Instruction. During this first generation, the most effective communication was one-to-one, such as teleconferencing (Anderson & Dron, 2011, p. 83).

The second generation, the Social Constructivist Approach, was influenced by the work of Vygotsky and Dewey, and can be attributed to the rise in technological innovations that created more opportunities for synchronous and asynchronous learning (Anderson & Dron, 2011). In 1989, Michael Moore created the theory of transactional distance, arguing flexible interaction was a viable substitute for structure in distance education (Moore, 1997). According to Moore, "the transaction that we call distance education occurs between teachers and learners in an environment having the special characteristics of separation of teaching from learners," which leads to "special patterns of learner and teacher behavior," and the psychological space created between learner and teacher creates a space of "potential misunderstanding" (Moore, 1997, p. 22). This theory created a structure of instructional processes defined by such objectives as: presentation of materials, support of the learner's motivation, stimulation around analysis and criticism, academic advising, arrangement of assessments, and the arrangement for the creation of student knowledge (Moore, 1997, p. 25).

According to Moore (1997), the move from correspondence courses and teleconferencing, to learner-driven and autonomous content delivered via audio and video, has a "greater potential for peer support and peer generation of knowledge," which can be used to reduce the psychological space between learner and instructor (p. 38). As such, common themes in pedagogy were derived from the Social Constructivist Approach: new knowledge built from the foundation of previous knowledge, content in shaping learner development, learning as an active process, language as a social construct, metacognition and evaluation that provide learners

a way to self-assess, a learner-centered environment, and the application of knowledge in real world contexts (Anderson & Dron, p. 84).

Connectivist Pedagogy, the third generation of distance education pedagogy, appeared as a result of the connectivism approach to technological advancements, and focuses on "building and maintaining networked connections that are current and flexible enough to be applied to existing and emergent problems" (Anderson & Dron, 2011, p. 87). This pedagogical approach that utilizes connectivist theory is centered on the belief students are active social networkers with their own internet presence, and as such, should be given the opportunity to collaborate with instructors to approach the content as evolving (Anderson & Dron, 2011, p. 88). The focus on teaching in this theory is leading by example, and student contributions are considered to be made in the areas of self-reflections and peer review, creating digital artifacts, and problem-solving (Anderson & Dron, 2011, p. 88).

Connectivist Pedagogy has strongly influenced pedagogical considerations in contemporary distance education models. Researchers such as Anderson and Dron (2011), and Hall (2008), have argued the connectivist approach requires a great amount of energy from the instructor, and common student complaints lead students to feel lost and confused. McLoughlin and Lee (2008) argued that part of the difficulty can be attributed to learning multiple technologies; however, Anderson and Dron argued an "inherent fuzziness of goals, beginnings, and endings implied by a connectivist approach" do not fit well with formal and traditional courses (2011, p. 89).

Studies in the Efficacy of Navigational Aids in Distance Education

The primary purpose of navigational aids in distance education courses is to alleviate the disconnect between instructor and learner and introduce the course goals, instructions on how to

get started in the course, how to interact with the instructor, and how the course content will be delivered. The Quality Matters Rubric for Higher Education focuses on course design instead of the content being delivered (Quality Matters, p. 5). The accuracy of content is the responsibility of the instructor. General Standard 1: Course Overview and Introduction, introduces the overall design of the course, course purpose, structure of the course, communication expectations, course policies, technology requirements, computer and digital literacy skills needed, expectations of course or prerequisites, a self-introduction of the instructor, and a self-introduction by learners (QM, pp. 10-11). These specific elements of General Standard 1 are aimed at reducing some of the student complaints associated with Connectivist Pedagogy, specifically the aspects of course goals and beginnings. Guo notes autonomous behaviors, such as self-direction, are important characteristics a distance education student must possess. Distance learners also need procedural learning strategies more than conventional face-to-face learners (Guo, pp. 28-29).

Guo's studies on graduate students' communication with instructors and tutors over the course of 12 weeks found of all the communications recorded in the study, none revolved around understanding the course content or problems with communication (Guo, p. 51). Moreover, Guo found the most important aspect in respect to learner interaction with the content depended on the scheduled release of content modules (Gou, p. 58). Still, what Guo uncovered from the student perspective is positive learning experiences are also tied into how students can seek support and use technology. This information is typically found in course content or syllabi, focused on what can be considered navigational aids in the course overview, purpose, and course policies, which include technological expectations for the course (Guo, p. 60).

Ralston-Berg (2014) used the Quality Matters standards to examine student perceptions of course quality, arguing students are consumers of courses who may have a differing perspective on what constitutes a quality course. The 2014 Ralston-Berg study was a national study garnering data from 3,160 students in 22 states with an age range of 18-65, the largest age range being 26-44 years of age (Ralston-Berg, 2014, p. 117). The survey was created using student-centered language and asked respondents to rank each course characteristic on a four-point Likert scale as to how the item contributes to student success (Ralston-Berg, 2014, p. 118). The results of the 2014 study showed that while students ranked all QM items as important (given a score of three by QM), students collectively scored some of those items worth less than two points (Ralston-Berg, 2014, p. 118).

Seven survey questions directly related to the course overview and introduction. Students and QM ranked "clear instructions tell me how to get started and how to find various course elements" as the most important aspect of this specific navigational element (Ralston-Berg, p. 119). The item with the biggest negative differentiation by students compared to QM was "a statement introduces me to the purpose of the course and its elements." The first element students scored as more important than QM was "minimum preparation or prerequisite knowledge I need to succeed in the course is clearly stated." The next most significant element students scored as more important than QM was "minimum technical skills expected of me are clearly stated." The least popular course overview and introduction element, "I am asked to introduce myself to the class," was scored the lowest, but matched the QM score of one (Ralston-Berg, p.119).

A 2015 study by Hixon et al. conducted on 183 students from a Midwestern university examined the students' perceptions of the quality of the design of their courses developed using

the Quality Matters rubric. According to the authors, academic leaders are concerned with the retention of online students, and academic quality is a major component of attracting and keeping students in programs (Hixon et al., 2015, p. 27). The research questions focused on what students value in a college course and how the students' ratings of the importance of the QM standards are consistent with the ratings of standards by course designers and developers (Hixon et al., 2015, p. 28).

Each Quality Matters Standard contains a subset of elements and each subset is given a numerical value, with three points given to essential, two points given to very important, and one point given to important. The 2015 study asked students to rate these elements on the same 1-3 scale, but also added a rating of zero for "not at all important" (Hixon et al., 2015, p. 28). Students ranked the following elements as most important: "Clear instructions tell me how to get started and how to find various course elements (Hixon et al., 2015, p. 29). Researchers found, regardless of the course delivery mode, the two most important elements for students were:

- Provide clear instructions for how to get started in a course and a clear explanation of how to navigate course materials and resources.
- Clearly explain how students' work will be assessed and how grades will be calculated (p. 30). This element is found in the Assessment and Measurement element of the QM standards.

The results indicated students placed high value on Standard 1.1 (Clear instructions tell me how to get started and how to find various course elements), with students ranking this QM 3-point requirement an overall mean score of 2.61 out of 3 (Hixon et al., 2015, p. 34). The second standard related to General Standard 1 was Standard 1.2 (A statement introduces me to

the purpose of the course and its elements.), with students ranking this QM 3-point requirement a 2.05 out of 3 (Hixon et al., 2015, p. 34)

A 2019 study on the impact of Quality Matters rubrics on student learners in distance education courses found a "positive relationship between learners' perceptions of course quality with the courses designed using QM guidelines (Sadaf et al., 2019, p. 215). Of the nine General Standards, respondents in this study ranked elements on a scale of importance, with "A Lot" being the highest ranking. The following General 1 elements are listed with the percentage of students who determined these elements to be the most highly ranked in regard to importance:

1.1 Instructions are clear – 77.55%

1.2 Learners introduced to purpose of the course – 73.47%

1.3 Clearly stated etiquette expectations – 55.10%

1.4 Clearly stated policies – 63.27%

1.5 Clearly stated minimum technology requirements – 40.43%

1.6 Clearly stated prerequisite knowledge – 45.83%

1.7 Clearly stated minimum technical skills – 42.86%

1.8 Self-introduction by the instructor – 71.43%

1.9 Learners introduce themselves – 75.92% (Sadaf et al., 2019, p. 223)

The low importance of minimum technology requirements and minimum technical skills stated could be caused by the distance learners' understanding of what a distance education course requires prior to enrolling in the course. Students can understand they have to have a certain amount of technical skill and availability of technology prior to taking the course. The same can be said for course pre-requisites, but generally students are not able to schedule a course unless they have met the pre-requisites required for the course. What is clear, according to

this study, is students place a high value on instructions, course purpose, and interaction with the instructors and other learners (Sadaf et al., 2019).

Students as Active Participants in the Curriculum Building

Jagersma (2011), argued students have historically been "silenced stakeholders" in the curriculum building process, but the student role is expanding (p. 2). Freire, a curriculum theorist, argued including students in an active role in developing their education would aid in dissolving the contradiction between educators and students (Jagersma, 2011, p. 2). Theorist Eisner questioned the availability of opportunities students have to "formulate their own purposes and to design ways to achieve them" (Eisner, 2001, p. 371). In 2009, Thompson argued mass education turned a student into a "passive, docile recipient of adult knowledge" (p. 673). Jagersma suggested there was a common theme emerging from the information presented by these curriculum theorists: student engagement in the learning process increased when "their voices were heard" (Jagersma, 2011, p. 6). The process of including students in the design of their education does have barriers, including the students' comfort level in being used to being guided through an educational system that already includes a set of guidelines and expectations (Albers, 2009). Shattuck (2015), the head researcher at Quality Matters, noted the importance of including learners in the development of the Quality Matters rubric.

Student Online-Readiness Expectations

Though students go through K-12 programs as being mostly passive recipients of an education, once they hit the college-level they are expected to be active participants in their learning. While distance education students were once expected to be self-disciplined, motivated learners, the focus to a more social type of learning has led to more student collaboration in group projects and interaction tools, such as Discussion Boards. This type of interactive learning

is prevalent in the Quality Matters course development rubric. Students today must be more comfortable with written communication skills and being a part of a group (Minnesota State University, 2020).

Suggestions for students to be a successful online learner have now started to incorporate effective communication skills as an asset. Minnesota State University lists "effective and appropriate communication skills" above basic technical skills (Minnesota State University, 2020, para. 10). According to Minnesota State (2020), instructors are unable to pick up on non-verbal cues in an online environment, so self-advocacy via effective communication is a must-have skill. Stansbury (2017) lists "they actively participate" and "they communicate with others" as attributes of a successful online student (paras. 2 & 5). Central Michigan (n.d.) lists "engagement" as a crucial aspect of online learning, stating students have access to "a diverse population that has something meaningful to contribute" (para. 7). The institution lists potential friendships with support and motivation, with a common goal of obtaining a quality education, as a reason why students should interact with their classmates (Central Michigan, n.d.).

Growth in Distance Education

According to the National Center for Education Statistics (NCES), there were 6,932,074 students enrolled in distance education courses at post-secondary institutions in the fall of 2018 (National Center for Education Statistics, 2020a). This number reflects that during the Fall 2018 semester, 34.7% of college students were enrolled in at least one distance education course. During the Fall of 2012, 25.5% of college students were enrolled in a distance education course, with an overall increase of 9.2% of college students taking a distance education course (NCES, 2020b). The data obtained from NCES (2020b) indicated in the Fall of 2018, 16.3% of students were enrolled exclusively in distance education courses. According to NCES (2020b) data, 9.1%

of undergraduates and 19.7% of graduate students were enrolled only in distance education courses in the same semester. Undergraduate students made up 27.6% of students enrolled in some distance education courses, and 9.7% of graduate students were enrolled in some distance education courses in the Fall 2018 semester (NCES, 2020b).

COVID-19 Impact on Distance Education

As of June 15, 2020, 4-year institutions were expecting a decline of 6-8% in enrollment due to COVID-19. The global pandemic that was created by the COVID-19 virus sent almost all secondary and higher education students in the United States from the classroom to the online classroom environment. When parents of 2020 high school graduates who were considering college were asked to score the quality of remote instruction their child received, the respondents of the survey gave an overall score of 5.6 out of 10 (Bustamante, 2020). The parents stated they had concerns with poor content quality, little collaborative learning, inconsistent instruction, little to no interaction with instructors, poor instructor preparation, and limited technical knowledge by instructors (Bustamante, 2020).

Among the high school seniors who were intending on enrolling in a 4-year institution in Fall 2020 before the COVID-19 virus, 11% decided they were no longer going to attend college in Fall 2020 (Bustamante, 2020). At least 53% of students indicated their family's financial situation had been affected by COVID-19, and 44% said they were unlikely to change their minds about enrolling (Bustamante, 2020). Of those students who had decided to enroll in college in Fall 2020, 24% of students indicated they were likely to change their minds about what college they would attend because of COVID-19 (Bustamante, 2020).

In March of 2020, many postsecondary institutions made the decision to move from face-to-face instruction to online instruction to ensure the safety of students, faculty, and staff.

According to EducationData, of students who were enrolled in college prior to March 1, 2020, 49% indicated their family's financial situation was affected by COVID-19 (Bustamante, 2020). Of enrolled students, 41% of those students indicated their opinion of their school worsened after COVID-19, and 97% of those responding students attended institutions where all instruction had switched online (Bustamante, 2020). Despite a degenerated opinion of their school instruction, 62% indicated they were still likely to be enrolled in the same school next term (Bustamante, 2020).

While distance education has been growing steadily, COVID-19 was the real test of high use scenarios on a mass scale. By April 2020, 98% of institutions had moved the majority of their courses to an online environment, 95% suspended travel for faculty and staff, 93% implemented work-from-home policies for staff, and 43% invested in new online learning resources (Bustamante, 2020). The immediate concerns of college presidents were students' mental health, employee mental health, short-term financial costs, accelerated rates of student attrition, accessibility to online learning platforms and tools, faculty readiness for online learning, and technological readiness for online learning (Bustamante, 2020).

The Center for Disease Control (CDC) issued guidance for institutions in March 2020, including the implementation of alternative teaching methods, or distance learning. During this time, the CDC, along with accrediting bodies, temporarily waived some requirements for institutions to shift to online learning. The flexibility was limited to courses that were interrupted by COVID-19, but did not extend to courses which required clocking hours for a licensure. Institutions had to utilize technology to allow students to submit work electronically, could reduce the length of the academic year, and could allow students to take a leave of absence as

long as 180 days without it negatively affecting their participation in their program (Bustamante, 2020).

Distance learning can be extremely challenging for students and faculty who are not prepared to immediately change their course delivery method. For students who have had to switch to distance education, completion rates can be up to 22% lower than if they had finished in a face-to-face setting (Bustamante, 2020). There are also gaps among certain demographics, including students with lower grade point averages, male students, and students of color, when referring to distance education (Bustamante, 2020). Most students who enroll in distance programs do so because face-to-face instruction does not fit well within their lifestyle. For faculty who have not had meaningful experiences in transitioning course materials to an online course environment, many may struggle with adapting to preferred online course pedagogies.

From September 22 – October 5, 2020, Gallup and the Lumina Foundation surveyed 4,000 undergraduate and 2,000 graduate students in the Lumina-Gallup Student Study. The sample was weighted to give an accurate representation of the current population of college students (Marken, 2020). Of the students who were taking classes mostly in-person prior to COVID-19, 29% of students in 4-year programs said the quality of instruction was about the same, 44% said it was slightly worse, and 16% said it was much worse after the switch to online learning (Gallup, 2020). According to student responses, improving online course quality is a critical factor in retaining students (Marken, 2020). One-third of students considered taking a break from college in Fall 2020, but of those, only 15% reported low quality education as the top reason (Marken, 2020). The top concerns were the COVID-19 virus itself, emotional stress, and cost of attendance (Marken, 2020).

While it is too early for statistics for the 2021 – 2022 academic year, there are a few insights as to how the pandemic has, and still is, changing the way students approach their education modality. According to NCES (2020b), 19.6 million students attended a college or university in Fall 2019, compared to 21.0 million in Fall 2018. There were 7.3 million students enrolled in a distance education course in Fall 2019, compared to 12.3 million college students who were not enrolled in any distance education courses (NCESb, 2020).

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), 1.37 billion students had been sent home from campuses and/or had their courses moved online by April 2020 (UNESCO, 2020). While enrollment in distance education courses or online degree programs has continually risen over the past 20 years, the frantic changes in course modality due to COVID-19 may have created continued opportunity for growth in online learning by exposing educators and students to the possibilities of an online education. Students and instructors were exposed to new technology, and institutions were able to assess the feasibility of large-scale remote learning modes (Nworie, 2021).

A study conducted to assess instructor attitudes toward online learning and top faculty priorities in planning for the Fall 2020 term, researchers' ideas for planning courses had changed between May 2020 and Fall 2020 (Fox et al., 2020). Researchers determined instructors spent more time in Fall 2020 preparing for increasing student engagement in class, providing timely feedback, ensuring accessibility with course content, redesigning courses for online delivery modes, increasing student collaboration, and assessing student learning accurately and securely. (Fox et al., 2020). This study also asked faculty what types of evidence-based teaching practices they plan to improve or implement in their course with the highest enrollment. The top teaching practice was creating clear expectations and routines, with 82% of faculty stating this would be

their top priority, an increase of 43% from the previous year (Fox et al., 2020). Like the top priority of creating clear expectations and routines, the next two highest priorities, informing students in advance about course learning outcomes and informing students in advance about exactly how they will be assessed, are elements of QM's General Standard 1 (Fox et al., 2020).

In order to keep driving the momentum forward, administrators should be aware of cultural attitudes toward distance education on their campuses, and commit to forging new partnerships on campuses with faculty, educational technology units and support personnel, and faculty development offices (Nworie, 2021). Administrator's may need to adjust their institution's strategic plans and the amount of support, both in funding and personnel, that is required in order to grow and sustain quality online courses (Nworie, 2021). According to a report from *Inside Higher Ed*, 78% of instructors stated they received aid from an instructional staff member, such as an instructional designer or a teaching and learning center (Lederman, 2020).

Summary

While distance education began as a correspondence courses, utilizing physical mail services, online learning has grown into a common learning experience based on content being delivered through learning management systems to students around the globe. The creation of quality control initiatives, based on a set of standards for course design, continues to allow institutions and accrediting bodies a way to maintain and review online course initiatives at their institutions. While online learning was a growing modality prior to COVID-19, the immediate and emergency switch to remote learning has expanded the growth of distance education by default. Millions of students and instructors were moved from the brick-and-mortar classroom to virtual classrooms, creating a need for faculty and students to embrace technological skills that

may have extended their educational technology arsenal. It is imperative for institution administrators to continue to ensure quality control initiatives and build on the momentum that emergency remote learning created. Cultural climates on campuses are greatly affected by administrator response, and funding and personnel support will be key to sustaining the growth in technological advances in the classroom and distance education overall.

Chapter Three: Methods

Chapter three contains a description of the methods that were used in this study, including the research design, population, instrument development and study framework, limitations, and delimitations.

Research Design

This study utilized a mixed method, cross-sectional case study, using data collected at one time by one survey. According to McMillan (2016), cross-sectional surveys are used to gather information from individuals and compare differences or relationships in responses, based on individual demographics.

Population

The population of this study included all students who have taken a distance education course at Marshall University. Students enrolled as ecampus students during the Spring 2021 term were used as a nonrandom convenience sample (N = 975). Ecampus students are enrolled in online degree programs only.

Instrument Development and Study Framework

The researcher used Qualtrics to develop and distribute a survey in which students were asked to score the level of usefulness of each of the *Standards for Course Design* General Standard 1 elements. The first part of the study asked students to include information about themselves, which are considered the independent variables: gender, course experience, age, and what type of degree they are completing. Since technological and cultural considerations widely vary, asking students to identify themselves among these independent variables provides data that can be used to further theories in online course design.

For part two, students were asked to score each question according to the presence and usefulness of the course element. Each specific review standard of General Standard 1 has specific and multiple course elements related to the standard. Students scored presence and usefulness separately for each question, using a 5-point scale. The last element of the study included one open-ended question asking students for suggestions of useful navigational course elements that were not included in the survey.

Data Collection

Participants completed the survey using Qualtrics. Each participant self-reported characteristics and attributes that were later used to determine if there were any significant differences between the perceived presence and usefulness of General Standard 1 course elements based on those independent variables. There were no descriptions or summaries of the elements provided to students. Respondent raw data were exported from Qualtrics and analyzed using SPSS. Independent-samples t-test, one-way analysis of variance (ANOVA), and Tukey's HSD test were used to analyze the data.

Limitations

The potential limitations for this study were the data collection method, lack of generalizability, potential researcher subjectivity or bias, and concerns with accurate responses in regard to questions about the presence of course elements. This study utilized a survey in which students were asked to self-report on their recollection of the presence of certain course elements. It is common for instructors to receive questions from students when the answer is in the syllabus; whether students are not fully reading the syllabus, or just unable to recall the information, either one of these could affect the recall of students, therefore the accuracy of responses, when asking about the presence of course elements.

The framework for this study and survey reflects the course development expectations in the Standards for Course Design (QM, 2018). The researcher planned to mitigate this issue on generalizability to note that the survey questions also ask students to rate the usefulness of the course element, and allowed the student to provide suggestions for useful course elements in an open answer box. Whether or not students find a particular course element, or navigational aid, useful, can be applied to course design universally, regardless of the course development criteria that were used when designing the course.

Prior to the survey being sent to the nonrandom sample, a pilot study was conducted with four students and four faculty members to determine reliability and verify validity. The elements of the survey are components of the 6th Edition of the Quality Matters higher education rubric, lending test-retest validity to the survey instrument related to the use of this specific rubric edition. Interrater reliability was established with consistency among responses between pilot students and the sample.

Use of a normed and standardized development rubric lends construct validity to this survey, since this survey measured the perceived presence and usefulness of elements of General Standard 1. Additional surveys using elements of the additional design standards could be conducted using the same format as the survey in this study. The gender of participants could be a possible issue of validity, with the majority of the respondents being women; however, survey results indicated only minor differences between genders on a limited number of elements in perceived presence and usefulness.

Chapter Four: Presentation of Findings

The purpose of this study was to determine both the presence and usefulness of course elements that are associated with Standard 1 of the *Standards for Course Design* rubric. Additionally, this survey also included an open-ended question asking respondents to provide suggestions for a course element that would be useful, but is not currently present in distance education courses. Individual course elements were grouped together by theme to create categories, according to the specific review standards, and are as follows: clarity, purpose and structure, communication expectations, policy awareness, technology requirements, learner technology skills, and pre-requisite knowledge and skills. The description of the results, and the data are provided in this section for both the attributes and each category. The final section provides a chapter summary.

Data Collection

The survey was sent in an email to all students who were classified as ecampus during the Spring 2021 term. Two groups of students received the email: students who are not employed by Marshall University and are coded as ecampus, and students who are employed by Marshall University and are coded as Huntington campus, but are enrolled in an online degree program. Marshall staff often take advantage of tuition waivers, which cannot be used if the Marshall employee is classified as ecampus. The first survey was sent to ecampus students in online degree programs on April 6, 2021, and included 928 students, with one returned, leaving 927 eligible participants. After determining that students employed by Marshall University are coded separately in the student management system (Banner), an additional email was sent to 45 students on April 19, 2021. Six reminders were sent to ecampus students, and four reminders

were sent to the employee list. Combined, there were 972 students eligible to participate in the survey. Of those 972 students, 218 students began the survey, resulting in 174 usable responses.

Characteristics of Respondents

The survey asked students to answer demographic questions, such as: gender, age, race, and ethnicity. The description of the respondent characteristics is based on the useable responses (*N* = 174). One hundred fifty-three students (70.1%) identified as female, and 52 (29.9%) identified as male. For purpose of analysis, the 42 – 56 age range was combined with the 57+ group. Once combined, there were 76 (43.7%) students over the age of 42 who responded, 28 (16.1%) were 18 – 26, 38 (21.8%) were 27 – 35, and 32 (18.4%) were 36 – 41. The majority of students identified as white (n = 160; 92.0%), and non-Hispanic (n = 162; 95.9%). There was one (.6%) student who identified as American Indian, three (1.7%) who identified as Asian, four (2.3%) who identified as Black, one (.6%) identified as Hawaiian, and five students (2.9%) who identified as "other."

Table 1

Respondent Demographic Characteristics

Characteristic		Total Response		Usable Response	
		n	%	*n*	%
Gender	Male	65	29.8	52	29.9
	Female	153	70.2	122	70.1
Age	18 – 26	41	18.8	28	16.1
	27 – 35	42	19.3	38	21.8
	36 – 41	39	19.9	32	18.4
	42 – 56	80	36.7	61	35.1
	57+	16	7.3	15	8.6
Race	Am. In./Alas.	1	0.5	1	.6
	Asian	4	1.8	3	1.7
	Black/A.A.	4	1.8	4	2.3
	Hawaiian/P.I.	1	0.5	1	0.6
	White	202	92.7	160	92.0
	Other	6	2.8	5	2.9
Ethnicity	Hispanic	8	3.8	7	4.1
	Non-Hispanic	204	96.2	162	95.9

Note. Total response $N = 218$. Usable response $N = 174$.

Students were also asked to answer questions about their academic attributes, such as the degree type they are seeking, the number of distance education courses they have completed, and their overall grade point average (GPA). Almost half (n = 78; 44.85%) of respondents are enrolled in a bachelor's program, 90 (51.7%) students have taken more than 11 distance education courses, and 133 (76.9%) students reported an overall GPA of at least a 3.5. No student reported an overall GPA below a 2.5.

Table 2

Respondent Academic Attributes

Attribute		Total Response		Useable Response	
		n	%	*n*	%
Degree Type	Certificate	0	0	0	0
	Associate	53	24.3	44	25.3
	Bachelor	104	47.7	78	44.8
	Graduate	45	20.6	38	21.8
	Doctorate	16	7.3	14	8
No. of DE Courses Completed	1-5	49	22.5	39	22.4
	6-10	61	28.0	45	25.9
	11+	108	49.5	90	51.7
GPA	3.5 – 4.0	167	79.3	133	76.9
	3.0 – 3.4	42	19.4	34	19.7
	2.5 – 2.9	7	3.2	6	3.5
	2.0 – 2.4	0	0	0	0
	Below 2	0	0	0	0

Note. Total response $N = 219$. Useable response $N = 174$.

Survey Findings

The *Standards for Course Design* rubric contains 8 higher education general standards, and each standard has several specific review standards that support the general standard. A set of course elements was identified from each review standard from examples and annotations provided by the rubric. A 5-point scale was created for both presence and usefulness. Starting with the left of the scale, 1 represents mostly not present/mostly not useful, 3 represents sometimes present/sometimes useful, and 5 represents mostly present/mostly useful.

Each of the course elements identified were placed into a category based on the type of course element it addressed, resulting in the following categories: Clarity, Purpose and Structure, Communication Expectations, Policy Awareness, Technology Requirements, Learner

Technology Skills, and Pre-requisite Knowledge and Skills. The presentation of the major study findings is organized around these categories.

Clarity

The Clarity category consists of seven questions. These questions related to the inclusion of a clear statement about how to get started and navigate various course components. Data for the Clarity category are provided in Tables 3 and 4.

The first question related to the inclusion of a clear statement on how to get started in the course. One hundred twenty (69%) students perceived the element as mostly present, and 112 (64.7%) responded it was mostly useful. Combining the sometimes to mostly present categories, 169 (97.2%) students saw this element as sometimes to mostly present, and 165 (95.3%) perceived this as sometimes to mostly useful. One-sample t-test was conducted to compare perceived presence ($M = 4.53$; $SD = .82$) and usefulness ($M = 4.47$; $SD = .88$) of having a clear statement about how to get started in the course, and results were significant at $p < .001$.

When asked about a course tour, 142 (81.7%) students answered the course tour was present in some to mostly all courses they encountered, and 137 (80.2%) felt a course tour was somewhat to mostly useful. For this element, 87 (32.8%) students perceive the course tour to be sometimes present. However, the majority of responses on the usefulness for this category were sometimes useful (n = 48; 28.1%) and mostly useful (n = 54; 31.6%). One-sample t-test was conducted to compare perceived presence ($M = 3.51$; $SD = 1.27$) and usefulness ($M = 3.54$; $SD = 1.29$) of a course tour, and results were significant at $p < .001$.

More than eight out of 10 (n = 147; 84.5%) students reported their courses as sometimes to mostly including a statement encouraging them to explore the course, and 143 (83.2%) reported this statement to be somewhat to mostly useful. Sixty-two (35.6%) students perceived

this element to be mostly present. An independent-samples t-test was conducted to compare perceived presence (M = 3.68; SD = 1.27) and usefulness (M = 3.57; SD = 1.28) of a statement encouraging students to explore the course, and results were significant at $p < .001$.

The easy to find syllabus element was the most highly ranked individual question, with all students responding this element was sometimes to mostly present, and sometimes to mostly useful, in courses. An independent-samples t-test was conducted to compare perceived presence (M = 4.81; SD = 0.45) and usefulness (M = 4.83; SD = 0.49) of having an easy to find Syllabus, and results were significant at $p < .001$.

One hundred sixty-four (94.8%) students reported some to mostly all courses contained instructions on how to navigate the course and its elements, and 165 (95.9%) ranked this element as sometimes useful to mostly useful. Seventy-eight (45.1%) students indicated this element was mostly present in courses. Ninety-six (55.8%) students perceived this element as being mostly useful. An independent-samples t-test was conducted to compare perceived presence (M = 4.12; SD = .99) and usefulness (M = 4.31; SD = .92) of having instructions on how to navigate the course and its elements, and results were significant at $p < .001$.

The “Start Here” module is a designer-created course homepage incorporating several elements of Standard 1, and is required for distance education courses at Marshall. One hundred sixty-eight (96.5%) students perceived the Start Here module to be sometimes to mostly present in courses, and 167 (96.6%) students felt this element was sometimes to mostly useful. An independent-samples t-test was conducted to compare perceived presence (M = 4.56; SD = .83) and usefulness (M = 4.54; SD = .86) of a Start Here modules in the course, and results were significant at $p < .001$.

With the last element in the Clarity category, directions on what to do or where to go first in the course, 161 (93.1%) students reported this element was sometimes to mostly present in courses, and 162 (95.3%) students felt this element was sometimes to mostly useful. An independent-samples t-test was conducted to compare perceived presence (M = 4.23; SD = 1.00) and usefulness (M = 4.43; SD = .94) of having directions on how to get started in the course, and results were significant at $p < .001$.

The results from a one-sample t-test show the results of every element in the Clarity category, in both presence and usefulness, are significant at $p < .001$. The biggest discrepancy (M Diff = .20) in mean scores between presence and usefulness was the directions on what to do or where to go first in the course element, with more students responding this element more useful than present. The next largest discrepancy between presence and usefulness (M Diff = .19) mean scores was the instructions on course navigation element. Students found this element to be more useful than present. Data for the Clarity category are provided in Tables 3 and 4.

Table 3

Presence and Usefulness of Elements Related to Clarity

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Clear statement about how to get started	P	2	1.1	3	1.7	16	9.2	35	19.0	120	69.0
	U	3	1.7	5	2.9	12	6.9	41	23.9	112	64.7
2. Course tour	P	17	9.8	15	8.6	57	32.8	33	19.0	52	29.9
	U	16	9.4	18	10.5	48	28.1	35	20.5	54	31.6
3. Statement encouraging course exploration	P	16	9.2	11	6.5	48	27.6	37	21.3	62	35.6
	U	17	9.9	12	7.0	55	32.0	32	18.6	56	32.6
4. Syllabus	P	-	-	-	-	4	2.3	25	14.4	145	83.5
	U	-	-	-	-	8	4.6	14	8.0	150	85.7
5. Instructions on course navigation	P	4	2.3	5	2.9	36	20.8	50	28.9	78	45.1
	U	2	1.2	5	2.9	27	15.7	42	24.4	96	55.8
6. Start Here on course menu	P	2	1.1	4	2.3	14	8.0	25	14.4	129	74.1
	U	3	1.7	3	1.7	15	8.7	28	16.2	124	71.7
7. Directions on what to do/where to go first	P	4	2.3	8	4.6	23	13.3	47	27.2	91	52.6
	U	4	2.4	4	2.4	18	10.6	33	19.4	111	65.3

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 4

Presence and Usefulness Mean Scores for Elements Related to Clarity

Element		m	SD	t-value
1. Clear statement about how to get started	Presence	4.53	.82	24.48*
	Usefulness	4.47	.88	21.96*
2. Course tour	Presence	3.51	1.27	5.23*
	Usefulness	3.54	1.29	5.52*
3. Statement encouraging course exploration	Presence	3.68	1.27	7.09*
	Usefulness	3.57	1.28	5.84*
4. Syllabus	Presence	4.81	0.45	53.29*
	Usefulness	4.83	0.49	49.04*
5. Instructions on course navigation	Presence	4.12	0.99	14.86*
	Usefulness	4.31	0.92	18.65*
6. Start Here on course menu	Presence	4.56	0.83	25.20*
	Usefulness	4.54	0.86	23.65*
7. Directions on what to do/where to go first.	Presence	4.23	1.00	16.16*
	Usefulness	4.43	0.94	19.81*

Note. N = 175. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. P = Presence. U = Usefulness. *One-sample t-test results $p < .001$

All sub elements of the Clarity category were analyzed to determine if there were significant differences in presence and usefulness based on respondent gender, age, degree level, number of online courses completed, and grade point average (GPA). Independent-samples t-tests and ANOVA were used to conduct these analyses. Five of the seven mean scores for presence elements were greater for men than women, however the only means significantly different were for "Start Here on course menu." Independent-samples t-tests results indicated

significant difference in scores for males (M = 4.75; SD = .52) and females (M = 4.51; SD = .92; t (172) = 1.78; p = .03). There were no significant differences in male and female mean scores for any of the seven "usefulness" elements.

For purposes of analysis, age categories were consolidated into four categories (18 – 26, 27 – 35, 36 – 41, 42+). There were no significant differences in the seven elements in terms of presence. Although not significant, the lowest mean scores were reported for the 18 – 26-year-old group for all seven elements. A similar trend was reflected in the mean scores for usefulness, as six of the seven items had their lowest mean scores for the youngest age group. ANOVA results (F (3, 169) = 3.80, p = .011) indicated the only statistically significant differences at $p < .05$ were for the usefulness of the Start Here element in the course menu. Post-hoc comparisons using Tukey's HSD test revealed students over the age of 42 (M = 4.72; SD = .704 found the Start Here more useful than students 18 – 26 (M = 4.11; SD = 1.26).

For purposes of analysis, respondent degree levels were collapsed into associate, bachelors, and graduate degree categories. There were no statistically significant differences in mean scores for presence for any of the seven categories of the Clarity standard. ANOVA results (F (2, 169) = 4.42, p = .013) indicated scores for the presence of a statement encouraging course exploration were significantly different based on degree levels. Tukey's HSD test showed a significant difference between all degree groups: associate degree (M = 3.45; SD = 1.28), bachelor's degree (M = 3.87; SD = 1.21), and graduate degree (M = 3.22; SD = 1.30).

ANOVA results indicated no statistically significant differences in presence or usefulness for any of the seven elements of the Clarity standard based on the number of online courses taken. There were no discernable patterns in the mean scores by group for presence. Five of the

seven elements reflected the lowest mean scores for usefulness for students who have taken 1 – 5 distance education courses.

Independent-samples t-test results indicated no statistically significant differences based on GPA in the presence or usefulness of the seven elements of the Clarity category. Although not statistically significant, mean presence scores for the 3.0 – 3.4 GPA group were lower than those for the 3.5 – 4.0 GPA group. Similar results were noted for the usefulness mean scores for six of the seven elements.

Learner Technology Skills Category

The Learner Technology Skills category incorporates elements that are related to technology skills the instructor expects students to be able to perform while completing the course, with instructions. The elements of this category are directions for locating tutorials or guides for using course tools, preference of file type for submissions of graded activity, types of presentation tools the students should use for this activity, type of citation style to follow, and a link to any library service or resources students are afforded. Data for the Learner Technology Skills category are presented in Tables 5 and 6.

Of the Learner Technology Skills category, 150 (86.7%) students perceived directions for locating guides and tutorials as somewhat to mostly present in courses, and 155 (90%) students said this element was somewhat to mostly useful. An independent-samples t-test was conducted to compare perceived presence ($M = 4.02$; $SD = 1.18$) and usefulness ($M = 3.95$; $SD = 1.14$) of having directions for locating guides or tutorials, and results were significant at $p < .001$.

When asked about instructions for the preference of file type students should use for graded submissions, 88 (50.9%) students indicated this element was mostly present in courses. One hundred eight (62.4%) students perceived this element to be mostly useful, one of the most

highly useful ranked elements of this category. An independent-samples t-test was conducted to compare perceived presence (M = 4.02; SD = 1.21) and usefulness (M = 4.30; SD = 1.06) of having instructions on the file type to be used for graded submissions, and results were significant at $p < .001$.

One hundred forty-nine (85.6%) students responded guidance on what type of presentation software or tools students should use was somewhat to mostly present in courses. One hundred fifty-seven (90.8%) students indicated guidance on presentation tools is somewhat to mostly useful. An independent-samples t-test was conducted to compare perceived presence (M = 4.03; SD = 1.24) and usefulness (M = 4.25; SD = 1.16) of guidance on presentation tools, and results were significant at $p < .001$.

Eighty-eight (50.6%) students indicated guidance on what type of citation style to use was mostly present, and 116 (67.4%) students perceived this to be mostly useful. Citation style was the most highly ranked element of the category. An independent-samples t-test was conducted to compare perceived presence (M = 4.04; SD = 1.18) and usefulness (M = 4.45; SD = .96) of having guidance on citation style, and results were significant at $p < .001$.

The last element of the Learner Technology category asked students to indicate the presence and usefulness of having a link to any library service in the course. Seventy-three (42.2%) students responded this element was mostly present in courses, and 94 (54.7%) indicated this element was mostly useful. An independent-samples t-test was conducted to compare perceived presence (M = 3.78; SD = 1.27) and usefulness (M = 4.10; SD = 1.16) of having a link to library services, and results were significant at $p < .001$.

The results from a one-sample t-test showed the results of every element of the Learner Technology category, in both presence and usefulness, were significant at $p < .001$. The largest

discrepancy (M Diff = .41) in mean scores between the presence and usefulness was guidance on what citation style to follow, with more students finding this element useful than present. The next largest discrepancy (M Diff = .32) in mean scores was the link to any library service, with more students also finding this element to be more useful than present. Data for the Learner Technology Skills category are presented in Tables 5 and 6.

Table 5

Presence and Usefulness of Elements Related to Learner Technology Skills

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Directions for locating tutorials/guides for course tools	P	11	6.4	12	6.9	44	25.4	47	27.2	59	34.1
	U	6	3.5	11	6.4	47	27.3	30	17.4	78	45.3
2. Preference of file type for submissions	P	8	4.6	15	8.7	30	17.3	32	18.5	88	50.9
	U	5	2.9	8	4.6	25	14.5	27	15.6	108	62.4
3. Types of presentation tools to use	P	10	5.7	15	8.6	25	14.4	34	19.5	90	51.7
	U	9	5.2	7	4.0	24	13.9	25	14.5	108	62.4
4. Citation style	P	7	4.0	14	8.0	32	18.4	33	19.0	88	50.6
	U	5	2.9	3	1.7	18	10.5	30	17.4	116	67.4
5. Link to library services	P	12	6.9	15	8.7	45	26.0	58	16.2	73	42.2
	U	6	3.5	13	7.6	33	19.2	26	15.1	94	54.7

Note. $N = 174$. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 6

Presence and Usefulness Mean Scores for Elements Related to Learner Technology Skills

Element		m	SD	t-value
1. Directions for locating tutorials/guides for course tools	Presence	3.76	1.18	8.43*
	Usefulness	3.95	1.14	10.90*
2. Preference of file type for submissions	Presence	4.02	1.21	11.16*
	Usefulness	4.30	1.06	16.09*
3. Types of presentation tools to use	Presence	4.03	1.24	10.97*
	Usefulness	4.25	1.16	14.19*
4. Citation style	Presence	4.04	1.18	11.68*
	Usefulness	4.45	.96	19.84*
5. Link to library services	Presence	3.78	1.27	8.08*
	Usefulness	4.10	1.16	12.39*

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Learner Technology category were analyzed to determine if there were significant differences in presence and usefulness based on students' gender, age, degree level, number of online courses taken, and GPA. Independent samples t-tests and ANOVA were used to conduct these analysis. Independent-samples t-test results indicated significant differences in the perceived presence of the types of presentation styles to use ($t (45.11) = 2.22$; $p = .032$) between the 3.0 – 3.4 GPA range ($M = 3.56$; $SD = 1.42$) and the 3.5 – 4.0 GPA range ($M = 4.14$ $SD = 1.17$). The same results also indicated a significant difference between the 3.0 – 3.4 GPA range ($M = 3.53$; $SD = 1.40$) and 3.5 – 4.0 GPA range ($M = 4.17$; $SD = 1.08$) in the perception of the presence of citation style ($t (43.52) = 2.50$; $p = .016$).

One element, a link to library resources, was statistically significant in both presence ($t(164) = 2.56$; $p = .011$) and usefulness ($t(163) = 2.23$; $p = .023$). The results indicated significance in presence between 3.0 – 3.4 GPA range ($M = 3.29$; $SD = 1.36$) and 3.5 – 4.0 GPA range ($M = 3.91$; $SD = 1.36$), and usefulness between the 3.0 – 3.4 GPA range ($M = 3.71$; $SD = 1.17$) and 3.5 – 4.0 GPA range ($M = 4.21$; $SD = 1.14$). Four of the five mean scores for presence elements were higher for men than women, however the only means significantly different were for the citation style ($t(172) = 1.98$; $p = .05$). Independent-sample t-test results indicated men ($M = 4.31$; $SD = 1.06$) perceived the citation style to be more present than women ($M = 3.93$; $SD = 1.21$).

Of the four consolidated age categories, there were statistically significant differences in presence and usefulness of preference of file type for submissions, the presence of a link to any library service, the usefulness of locating guides or tutorials, and the usefulness of the citation style preference. ANOVA results indicated a significant difference in the perceived presence of a file type preference ($F(14, 235) = 3.66$, $p = .018$). Post-hoc comparisons using the Tukey HSD test indicated the mean score for the 18 – 26 age range ($M = 3.37$; $SD = 1.47$) was significantly different from the 27 -35 age range ($M = 4.18$; $SD = 1.14$). The same results indicated a significant difference between mean scores of the 18-26 age range ($M = 3.37$; $SD = 1.47$) and the 42+ age range ($M = 4.18$; $SD = 1.17$).

ANOVA results of the usefulness of the file type preferences ($F(17, 178) = 5.34$, $p = .002$) indicated a significant difference in mean scores. Post-hoc comparisons using the Tukey HSD test indicated a significant difference in mean scores between the 18 – 26 age range ($M = 3.61$; $SD = 1.40$) and ages 27 – 35 ($M = 4.32$; $SD = .93$), ages 36 – 41 ($M = 4.45$; $SD = .81$), and ages 42+ ($M = 4.49$; $SD = .99$). ANOVA results revealed that there was a statistically significant

difference in the mean scores of two groups for the perceived presence of a link to library services (F (21, 257) = 4.53, p = .004). Tukey's HSD test for multiple comparisons found that the mean score for the 18 – 26 age range (M = 3.11; SD; 1.50) was significantly different than the 42+ age range (M = 4.08; SD = 1.10).

ANOVA results indicated a significant difference in the mean scores for usefulness of directions for locating guides or tutorials (F (10, 212) = 2.70, p = .048). Tukey's HSD for multiple comparisons showed the significant difference between the 18-26 age range (M = 3.43; SD = 1.23) and ages 42+ (M = 4.13; SD = 1.06). In regard to the usefulness of the citation style, ANOVA results (F (8, 148) = 3.11, p = .028) revealed a significant difference in mean scores for the same two groups. Post-hoc Tukey HSD results show the 18 – 26 age group mean scores (M = 4.00; SD = 1.31) were significantly different from the mean scores of the 42+ age group (M = 4.61; SD = .79).

In the Learner Technology Category, ANOVA results indicated a difference between students seeking an associate's degree and those seeking a graduate degree in regard to the usefulness of a link to any library service (F (8, 223) = 3.15, p = .045). Post-hoc comparisons using the Tukey HSD test showed that students seeking an associate's degree (M = 3.75; SD = 1.24) found the usefulness of a link to library resources as less useful than graduate students (M = 4.33; SD = 1.01). ANOVA results on the usefulness of what presentation tool to use (F (8, 222) = 3.01, p = .048) were significant in regard to the number of online courses the student had taken. Tukey's HSD test showed students who have taken more than 11 online courses (M = 4.43; SD = 1.03) indicated that being told what presentation tool to use was more useful than students who have only taken between 1 and 5 online courses (M = 3.90; SD = 1.48).

There were no statistically significant results in the perception of the presence of the learner technology elements. Although not statistically significant, students who have taken 1 – 5 online courses found directions for locating tutorials or guides, and preference of file type for submissions, more useful than students who have taken 6+ online courses. While also not statistically significant, students who have taken more than 11 online courses indicated that preference of citation style and a link to library services to be more useful.

Policy Awareness Category

The Policy Awareness Category pertains to elements related to university policies or student support. The elements of this category include a link to student policies, link to student support and resources, a policy for late work is stated, consequences of academic dishonesty explained, and a link provided to the university calendar. Data for the Policy Awareness category are presented in Tables 7 and 8.

With the link to student policies, 109 (63%) students perceived this element to be mostly present in courses, and 82 (47.7%) indicated this to be mostly useful. Mean scores for presence ($M = 4.35$; $SD = .98$) and usefulness ($M = 3.91$; $SD = 1.28$) were less similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

Inclusion of a link to student support resources and policies for late work elements were scored as the most present in courses in the Policy Awareness Category. Results for the link to student support resources were also similar to the student policies, with 108 (62.1%) students indicating that the element was mostly present in courses, and 85 (49.4%) students responding that the element was mostly useful. Mean scores for presence ($M = 4.33$; $SD = 1.01$) and usefulness ($M = 3.97$; $SD = 1.25$) were less similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. One hundred twenty-three (70.7%)

students indicated that a policy for late work was present in mostly all courses, and 118 (68.2%) perceived this element to be mostly useful. Mean scores for presence (M = 4.53; SD = .84) and usefulness (M = 4.45; SD = .94) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

One hundred thirty (74.7%) of respondents indicated that the explanation of the consequences of academic dishonesty were mostly present in courses. One hundred ten (63.6%) students responded that this element was mostly useful. Mean scores for presence (M = 4.61; SD = .78) and usefulness (M = 4.31; SD = 1.50) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. Fifty-three (30.5%) students indicated a link to the university calendar was mostly present, and eighty-three (48.3%) students perceived this element to be mostly useful. Mean scores for presence (M = 3.20; SD = 1.50) and usefulness (M = 3.81; SD = 1.40) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

The results from one-sample independent t-tests show the results of every element of this category, in both presence and usefulness, are significant at $p < .001$, except for the presence of a link to the university calendar. In this category, students perceived the link to student policies, link to student support resources, policy for late work, and the consequences of academic dishonesty explained were more present than useful. Students indicated the link to the university calendar was more useful than present. The largest discrepancy (M Diff = .61) was between the presence and usefulness of the link to the academic calendar, with most students indicated this element was more useful than present. The next largest discrepancy (M Diff = .44) was between the presence and usefulness of the link to student policies. One category, policy for late work,

had very little discrepancy (M Diff = .08) between presence and usefulness. Data for the Policy Awareness category are presented in Tables 7 and 8.

Table 7

Presence and Usefulness of Elements Related to Policy Awareness

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Link student policies	P	2	1.2	9	5.2	25	14.5	28	16.2	109	63.0
	U	13	7.6	13	7.6	32	18.6	32	18.6	82	47.7
2. Link to student support resources	P	5	2.9	4	2.3	27	15.5	30	17.2	108	62.1
	U	12	7.0	10	5.8	34	19.8	31	18.0	85	49.4
3. Policy for late work	P	1	0.6	6	3.4	15	8.6	29	16.7	123	70.7
	U	4	2.3	3	1.7	22	12.7	26	15.0	118	68.2
4. Consequences of academic dishonesty explained	P	2	1.1	2	1.1	14	8.0	26	14.9	130	74.7
	U	7	4.0	7	4.0	21	12.1	28	16.2	110	63.6
5. Link to university calendar	P	36	20.7	19	10.9	47	27.0	19	10.9	53	30.5
	U	20	11.6	11	6.4	33	19.2	25	14.5	83	48.3

Note. $N = 174$. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 8

Presence and Usefulness Mean Score for Elements Related to Policy Awareness

Element		m	SD	t-value
1. Link to student policies	Presence	4.35	.98	17.97*
	Usefulness	3.91	1.28	9.33*
2. Link to student support resources	Presence	4.33	1.01	17.40*
	Usefulness	3.97	1.25	10.19*
3. Policy for late work	Presence	4.53	.84	24.17*
	Usefulness	4.45	.94	20.25*
4. Consequences of academic dishonesty explained	Presence	4.61	.78	27.19*
	Usefulness	4.31	1.09	10.80*
5. Link to university calendar	Presence	3.20	1.50	1.73
	Usefulness	3.81	1.40	7.64*

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Policy Awareness category were analyzed based on respondent gender, age, degree level, number of online courses taken, and GPA, in order to determine if there were significant differences in presence and usefulness. Independent-samples t-tests and ANOVA were used to conduct these analysis. There were no statistically significant differences between genders, or the number of courses taken, in the Policy Awareness category.

Independent-samples t-test indicated a significant difference in the perceived presence ($t(45.43) = 2.22$; $p = .031$) of a link to student policies between the 3.0 – 4.0 range ($M = 3.97$; $SD = 1.11$) and the 3.5 – 4.0 range ($M = 4.43$; $SD = .93$). There was also a significant difference in GPA groups on the usefulness ($t(163) = 3.0$; $p = .003$) of a link to student policies, with the 3.5 – 4.0 group ($M = 4.05$; SD 1.23) responding that the link was more useful than the 3.0 – 3.4 GPA

group (M = 3.32; SD 1.39) replied. For GPA, students in the 3.5 – 4.0 range (M = 4.11; SD = 1.17) found a link to student support resources (t (163) = 2.87; p = .005) more useful than students in the 3.0 – 3.4 range (M = 3.42; SD = 1.39).

Based on age, there were statistically significant differences in presence and usefulness of a link to student policies and academic dishonesty, and the usefulness of a link to student support and a late work policy. In every statistically significant Policy Awareness element, the 18 – 26-year-old age range provided the lowest mean score in both presence and usefulness of these elements. In the Policy Awareness category for presence of a link to student policies, ANOVA results (*F* (11, 156) = 4.10; p = .008) indicated a statistically significant difference between groups based on age. Tukey's HSD test for multiple comparisons showed that the 18 – 26 age range (M = 3.79; SD; 1.26) mean score was significantly different than the 27 – 35 range (M = 4.45; SD = .92) and the 42+ range (M = 4.51; SD = .87). ANOVA results (*F* (14, 268) = 2.84; p = .04) also showed a difference between two age groups on the usefulness of a link to student policies. Post-hoc comparisons using Tukey's HSD test indicated that the 42+ age group (M = 4.08; SD = 1.15) perceived the link to student policies as more useful than the 18 – 26-year-old (M = 3.29; SD = 1.61) students.

ANOVA results (*F* (5, 100) = 2.80; p = .042) revealed there was a statistically significant difference between two age groups on the perception of the presence of a policy on academic dishonesty. Tukey's HSD test showed 18 – 26-year-old students (M = 4.25; SD = 1.21) perceived this element to be less present than the 27 – 35 age range (M = 4.79; SD = .58). ANOVA results on the usefulness of an academic dishonesty policy (*F* (15, 190) = 4.55; p = .004) revealed a statistically significant difference in mean scores. Tukey's HSD test revealed 18

– 25-year-old students (M = 3.68; SD = 1.54) indicated that this element was less useful than the 27 – 35 age range (M = 4.55; SD = .89) and the 42 + age range (M = 4.46; SD = .92).

ANOVA results (F (14, 163) = 4.88; p = .003) showed a statistically significant difference in mean scores of age groups on the presence of a link to student support. Tukey's HSD test revealed that the 42+ age group (M = 4.54; SD = .76) and the 36 - 41 group (M = 4.38; SD = .83) perceived a higher presence of a link to student support than the 18 – 26 group (M = 3.71; SD = 1.41). ANOVA results (F (7, 146) = 2.84; p = .039) also showed a significant difference between age groups on the usefulness of a late work policy. Post-hoc comparisons using the Tukey HSD test revealed the age group of 42+ (M = 4.64; SD = .67) believed the late work policy was more useful than the 18 – 26 age range (M = 4.07; SD = 1.15).

A one-way ANOVA was performed to compare the presence and usefulness of Policy Awareness elements based on the number of online courses that have been completed. ANOVA results (F (14, 320) = 3.74; p = .026) signified a difference in mean scores on the usefulness of a link to the academic calendar between all groups. Post-hoc comparisons using Tukey's HSD test determined that students who have taken 1-5 courses (M = 3.80; SD = 1.4), 6 – 10 courses (M = 4.09; SD = 1.28), and 11+ courses (M = 3.41; SD = 1.5) all had mean scores that were statistically significant from each other.

Purpose and Structure Category

The Purpose and Structure elements relate to course specifics, such as the availability of a course schedule, meeting times (if required), course purpose, and a course structure or outline. One hundred nineteen (68.8%) students perceived the course schedule to be mostly present, and 137 (79.2%) indicated this element is mostly useful. Mean scores for presence (M = 4.51; SD = .88) and usefulness (M = 4.66; SD = .81) were similar. One-sample t-test results for both

presence and usefulness mean scores were significant at $p < .001$. Data for the Purpose and Structure category are presented in Tables 9 and 10.

Ninety-seven (61.4%) students responded that meeting times, if required, were mostly present, and 109 (69.4%) indicated this element was mostly useful. Mean scores for presence ($M = 4.18$; $SD = 1.22$) and usefulness ($M = 4.39$; $SD = 1.10$) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. One hundred twenty-one (69.5%) students perceived the course purpose to be mostly present in courses, and 100 (57.8%) students indicated that the course purpose was mostly useful. Mean scores for presence ($M = 4.48$; $SD = .92$) and usefulness ($M = 4.24$; $SD = 1.08$) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

The course structure/outline was the highest in mean scores for presence ($M = 4.53$; $SD = .78$) and usefulness ($M = 4.55$; $SD = .82$) in the Purpose and Structure Category. One hundred nineteen (68.4%) students indicated this element was mostly present, and 123 (71.1%) perceived this element to be mostly useful. Mean scores for this category were all significant at $p < .001$. The largest discrepancy in mean scores (M Diff = .24) was in the presence and usefulness of the course purpose, followed closely by stated meeting times (M Diff = .21). The course structure mean discrepancy (M Diff = .02) was the lowest in this category. Data for the Purpose and Structure category are presented in Tables 9 and 10.

Table 9

Presence and Usefulness of Elements Related to Purpose and Structure

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Course schedule	P	4	2.3	3	1.7	12	6.9	35	20.2	119	68.8
	U	4	2.3	2	1.2	7	4.0	23	13.3	137	79.2
2. Meeting times, if required	P	12	7.6	1	0.6	31	19.6	17	10.8	97	61.4
	U	9	5.7	1	0.6	19	12.1	19	12.1	109	69.4
3. Course purpose	P	3	1.7	4	2.3	21	12.1	25	14.4	121	69.5
	U	7	4.0	5	2.9	27	15.6	34	19.7	100	57.8
4. Course structure/outline	P	-	-	5	2.9	16	9.2	34	19.5	119	68.4
	U	3	1.7	1	0.6	16	9.2	30	17.3	123	71.1

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 10

Presence and Usefulness Mean Scores for Elements Related to Purpose and Structure

Element		m	SD	t-value
1. Course schedule	Presence	4.51	.88	22.63*
	Usefulness	4.66	.81	26.94*
2. Meeting times, if required	Presence	4.18	1.22	12.09*
	Usefulness	4.39	1.10	15.79*
3. Course purpose	Presence	4.48	.92	21.25*
	Usefulness	4.24	1.08	15.17*
4. Course structure/outline	Presence	4.53	.78	25.95*
	Usefulness	4.55	.82	24.83*

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Purpose and Structure category were analyzed through independent samples t-test or ANOVA to determine if there were significant differences in

presence and usefulness. There were no statistically significant differences in results between genders or the number of online courses taken.

Independent-samples t-test indicated ($t(149) = 2.11$; $p = .037$) that students with a GPA of 3.0 – 3.4 ($M = 3.77$; $SD = 1.38$) perceived the availability of required meeting times (if necessary) as less present than students with a 3.5 – 4.0 GPA ($M = 4.28$; SD; 1.15). The course purpose element was statistically significant ($t(42) = 3.05$; $p = .004$) in regard to the usefulness of the element. Students with a 3.5 – 4.0 GPA ($M = 4.39$; $SD = .96$) responded that the course purpose was more useful than students with a 3.0 – 3.4 GPA ($M = 3.65$; $SD = 1.35$).

ANOVA results indicated there were several statistically significant differences in the usefulness of the availability of required meeting times, course purpose, and course outline based on the type of degree the student was seeking. For each statistically significant element, the associate's degree students answered that the elements were less useful than those students seeking a bachelor's or graduate degree. ANOVA results for the presence of meeting times ($F(10, 179) = 4.57$; $p = .012$) showed a significant difference in mean scores between degree types. Tukey's HSD test revealed students seeking an associate's degree ($M = 3.95$; $SD = 1.32$) found the presence of meeting times to be less useful than students seeking a bachelor's degree ($M = 4.54$; SD =1.02) or a graduate degree ($M = 4.23$; $SD = .90$). ANOVA results ($F(7, 193) = 3.05$; $p = .05$) also indicated a significant difference in mean scores between types of degrees for the course purpose element. Post-hoc Tukey's HSD test showed students seeking an associate's degree ($M = 3.93$; $SD = 1.27$) found the course purpose to be less useful than students seeking a bachelor's ($M = 4.43$; $SD = .94$) or graduate ($M = 4.55$; $SD = 1.06$) degree.

The element with the largest mean difference ($MD = .584$) between degree groups was the usefulness of the course outline. ANOVA results ($F(10, 107) = 4.59$; $p = .001$) indicated a

statistically significant difference in mean scores. Tukey's HSD test showed students seeking a bachelor's degree (M = 4.77; SD = .51) found this element to be more useful than students in an associate's degree program (M = 4.18; SD = 1.06). Of the statistically significant results based on degree, the course outline was the only element of the associate's degree-seeking group with a mean score above 4.0.

Completing the Purpose and Structure category are results based on age. An ANOVA was performed to determine if there was a significant difference in mean scores between ages, and course purpose was the only element with a significant difference (F (16, 184) = 4.86; p = .003). Post-hoc comparisons using Tukey's HSD test showed 18 – 26-year-old students (M = 3.61; SD = 1.45) found the course purpose to be far less useful (MD = .974) than the 36 – 41 age range (M = 4.58; SD = .72) and the 42+ age range (M = 4.36; SD = .95).

Technology Requirements Category

The Technology Requirements Category includes course elements that students will need to be proficient in, or peripherals they will need in addition to regular internet and computer access. These elements include the minimum technology required to complete coursework, how to submit coursework, and the required peripherals to participate in the course.

Ninety-five (54.6%) students indicated that the guidance on minimum technology required was mostly present in courses, and 82 (47.7%) found this to be mostly useful. Mean scores for presence (M = 4.14; SD = 1.12) and usefulness (M = 3.83; SD = 1.32) were less similar. One-sample t-test results for both presence and usefulness mean scores were significant at p < .001. For guidance on how to submit coursework, 95 (54.6%) students indicated this was mostly present, and 120 (69.4%) perceived this element to be useful. Mean scores for presence

(M = 4.28; SD = .92) and usefulness (M = 4.52; SD = .82) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

Seventy-seven (44.5%) students signified that required peripherals were mostly present in courses, and 92 (53.5%) perceived this to be mostly useful. Mean scores for presence (M = 3.93; SD = 1.16) and usefulness (M = 4.09; SD = 1.17) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. The largest discrepancy (M Diff = .31) in mean scores was the minimum technology required element, with more students indicating this element to be present than useful. The smallest discrepancy (M Diff = .16) was between the mean scores for presence and usefulness of the stated peripherals. In the peripheral element, students perceived this element to be more useful than present. All elements of this category were statistically significant with $p < .001$. Data for the Purpose and Structure category are presented in Tables 11 and 12.

Table 11

Presence and Usefulness of Elements Related to Technology Requirements

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Minimum technology required	P	6	3.4	10	5.7	32	18.4	31	17.8	95	54.6
	U	14	8.1	13	7.5	43	24.9	21	12.1	82	47.4
2. How to submit course work	P	1	0.6	6	3.4	31	17.8	41	23.6	95	54.6
	U	1	0.6	3	1.7	21	12.1	28	16.2	120	69.4
3. Required peripherals	P	8	4.6	10	5.8	45	26.0	33	19.1	77	44.5
	U	9	5.2	7	4.1	36	20.9	28	16.3	92	53.5

Note. $N = 174$. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 12

Presence and Usefulness Mean Scores for Elements Related to Technology Requirements

Element		m	SD	t-value
1. Minimum technology required	Presence	4.14	1.12	13.46*
	Usefulness	3.83	1.32	8.32*
2. How to submit course work	Presence	4.28	.92	18.45*
	Usefulness	4.52	.82	24.44*
3. Required peripherals	Presence	3.93	1.16	10.51*
	Usefulness	4.09	1.17	12.15*

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Technology Requirements category were analyzed to determine if there were significant differences in the presence and usefulness based on GPA, age, number of online courses taken, gender, and type of degree. Independent samples t-tests and ANOVA were used to conduct these analysis. Results showed no significant differences in presence or usefulness based on gender or type of degree.

Independent samples T-test results indicated there was a significant difference in scores for the usefulness of minimum technology required to complete the courses based on GPA. Students with a GPA of 3.5 – 4.0 (M = 3.94; SD = 1.28) found the statement of minimum technology needed to complete the course as more useful than students with a GPA of 3.0 – 3.4 (M = 3.38; SD = 1.44).

Based on age, there were three statistically significant differences found in the Technology Requirements category: the presence and usefulness of a statement of minimum technology needed, and the usefulness of instructions on how to submit graded activities. ANOVA results (F (15, 202) = 4.25; p = .006) indicated a significant difference in mean scores

between age groups on the perceived presence of an element that states the minimum technology that is needed to complete the course. Tukey's HSD test revealed the 18 – 26 age range (M = 3.50; SD = 1.40) perceived the presence of minimum technology requirements to be less present than students in the 27 – 35 age range (M = 4.21; SD = 1.04) and the 42+ age range (M = 4.36; SD = 1.00). ANOVA results (F (15, 283) = 3.08; p = .029) for the usefulness of the minimum technology requirements were significant and similar to the results for presence. Post-hoc comparisons using Tukey's HSD test showed students 18 – 26 (M = 3.29; SD = 1.56) regarded this element to be less useful than students 42 + (M = 4.12; SD = 1.20).

An ANOVA was conducted to determine if there was a significant difference in mean scores based on the age and the usefulness of directions on how to submit graded activity (F (9, 106) = 4.64; p = .004). Tukey's HSD test revealed students over the age of 42 (M = 4.74; SD = .619) perceived directions on how to submit graded activity as more useful than students 18 – 26 (M = 4.11; SD = .956). All age groups responded that this element was useful to mostly useful.

Lastly, for the Technology Requirements category, ANOVA results indicated there were statistically significant results based on the number of online courses taken for the perceived presence (F (8, 209) = 3.36; p = .037) of a statement of minimum technology needed, and the usefulness (F (7, 227) = 3.30; p = .039) of listed peripherals. Tukey's HSD test showed those students who have taken more than 11 online courses (M = 4.29; SD = 1.02) found this element to be more present in courses than students who have taken 6-10 courses (M = 3.78; SD = 1.24). Tukey's HSD also showed those students who have taken more than 11 online courses (M = 4.30; SD = 1.07) found the list of peripherals more useful than students who have taken 6 – 10 online courses (M = 3.80; SD = 1.15).

Communication Expectations Category

The Communication Expectations category elements are related to the way the instructor introduces themselves, and how students should interact with each other. These elements include a netiquette statement, a professional instructor introduction, and a requirement for students to provide a self-introduction to the class. One hundred thirty-two (76.3%) students perceived the netiquette statement to be mostly present, and 90 (52.6%) indicated this to be mostly useful. Mean scores for presence (M = 4.54; SD = .96) and usefulness (M = 3.95; SD = 1.31) were less similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. Data for the Communication Expectations category are presented in Tables 13 and 14.

One hundred eight (65.5%) students answered that a professional professor introduction was mostly present in courses, and 92 (53.2%) indicated this was mostly useful. Mean scores for presence (M = 4.30; SD = 1.02) and usefulness (M = 4.14; SD = 1.09) were less similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$. One hundred fourteen (65.5%) students perceived the requirement to introduce themselves to the class was mostly present in courses, and 86 (49.9%) determined this to be mostly useful. Mean scores for presence (M = 4.41; SD = .97) and usefulness (M = 3.93; SD = 1.33) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

All mean scores in the Communication Category were significant at $p < .001$. The largest discrepancy (M Diff = .59; M Diff = .48) in mean scores were between the presence and usefulness of the netiquette statement and the self-introduction. In both elements, students indicated that these elements are more present than useful in courses. The professional professor

introduction mean score differential (M Diff = .16) was the lowest discrepancy, but students indicated this element was also more present than useful. Data for the Communication Expectations category are presented in Tables 13 and 14.

Table 13

Presence and Usefulness of Elements Related to Communication

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Netiquette statement	P	5	2.9	4	2.3	15	8.7	17	9.8	132	76.3
	U	13	7.6	12	7.0	35	20.5	21	12.3	90	52.6
2. Professional instructor introduction	P	3	1.7	6	3.4	35	20.1	22	12.6	108	62.1
	U	6	3.5	6	3.5	37	21.4	32	18.5	92	53.2
3. Requirement to provide self-intro	P	5	2.9	3	1.7	22	12.6	30	19.2	114	65.5
	U	17	9.8	9	5.2	29	16.8	32	18.5	86	49.9

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 14

Presence and Usefulness Mean Scores for Elements Related to Communication

Element		m	SD	t-value
1. Netiquette statement	Presence	4.54	.96	21.25*
	Usefulness	3.95	1.31	9.55*
2. Professional instructor introduction	Presence	4.30	1.02	16.87*
	Usefulness	4.14	1.09	13.84*
3. Requirement to provide self-intro	Presence	4.41	.97	19.08*
	Usefulness	3.93	1.33	9.22*

Note. N = 174. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Communication category were analyzed using independent samples t-tests or ANOVA to determine if there were significant differences in the presence and usefulness of communication elements based on gender, type of degree, number of online courses taken, GPA, and age. There were no statistically significant differences in this category based on gender, degree type, or number of online courses taken.

Independent samples t-tests showed a significant difference, based on GPA, for the presence and usefulness of an instructor biography and student self-introduction, and in results for the usefulness of a Netiquette statement. Independent-sample t-test ($t(42.20) = 2.93$; $p = .006$) revealed students with GPA averages between 3.5 – 4.0 ($M = 4.44$; $SD = .907$) perceived an instructor biography to be more present in online courses than students with a GPA between 3.0 – 3.4 ($M = 3.76$; $SD = 1.26$). Students with higher GPA ($M = 4.24$; $SD = .857$) also scored the instructor biography to be more useful ($t(164) = 2.44$; $p = .016$) than students with a GPA between 3.0 – 3.4 ($M = 3.74$; $SD = 1.08$).

Independent-samples t-test ($t(42) = 3.10$; $p = .003$) showed students with a GPA between 3.5 – 4.0 ($M = 4.55$; $SD = .857$) also scored the presence of a student self-introduction as more present in courses than students with a GPA between 3.0 – 3.4 ($M = 3.85$; $SD = 1.23$). Independent-sample t-test results ($t(45) = 2.79$; $p = .008$) for the usefulness of a student self-introduction were similar, with students with a GPA of 3.5 – 4.0 ($M = 4.11$; $SD = 1.23$) indicating this element to be more useful than students with a GPA between 3.0 – 3.4 ($M = 3.32$; $SD = 1.51$). Independent-samples t-test results showed students with a GPA range of 3.5 – 4.0 ($M = 4.12$; $SD = 1.24$) also indicated that the netiquette statement in the course was more useful ($t(162) = 3.24$; $p = .001$) than students with a GPA between 3.0 – 3.4 ($M = 3.32$; $SD = 1.43$).

ANOVA results (F (10, 169) = 3.25; p = .023) indicated that there was a statistically significant difference in results for the presence of the instructor biography. Tukey's HSD test revealed students over the age of 42 (M = 4.50; SD = .86) found the instructor biography more present than students 18 – 26 years of age (M = 3.82; SD = 1.31). ANOVA results (F (8, 156) = 2.93; p = .035) also indicated a significant difference in mean scores for the perceived presence of a student self-introduction. Tukey's HSD results showed the 42+ group (M = 4.51; SD = .90) perceived this element as more present in courses than students in the 18 – 26 age range (M = 3.93; SD = 1.41).

An ANOVA was performed to compare perceived usefulness of the student introduction between age groups, and results were significant (F (24, 279) = 4.89; p = .003). Post-hoc comparisons using Tukey's HSD test indicated that the two youngest age groups differed in their perceived usefulness of the self-introduction, compared to the oldest age group. Students 18 – 26 (M = 3.46; SD = 1.55) and 27 – 35 (M = 3.45; SD = 1.39) found the self-introduction to be less useful than students over the age of 42 (M = 4.22; SD = 1.84).

Prerequisite Knowledge Category

The Prerequisite Knowledge Category contained two elements: course prerequisites were listed, and discipline-specific knowledge to know prior to taking the course was given, if applicable. One hundred thirty-six (78.6%) students found the course prerequisites to be somewhat to mostly present. One hundred forty-one (82%) students indicated this element was mostly useful. Mean scores for presence (M = 3.66; SD = 1.40) and usefulness (M = 3.77; SD = 1.38) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at p < .001. Data for the Prerequisite Knowledge category are presented in Tables 15 and 16.

One hundred four (72.9%) students indicated that a statement of discipline-specific knowledge students should have gained prior to taking the course was somewhat to mostly present in courses. One hundred forty-two (85%) students perceived this element to be somewhat to mostly useful. Mean scores for presence (M = 3.36; SD = 1.50) and usefulness (M = 3.71; SD = 1.34) were similar. One-sample t-test results for both presence and usefulness mean scores were significant at $p < .001$.

Both elements in this category had a significant mean score of $p < .001$. The largest discrepancy (M Diff = .35) in mean scores was between the presence and usefulness of discipline-specific knowledge, with students finding this element to be more useful than present. The mean discrepancy (M Diff = .11) in stated prerequisites indicated that students found this element to be more useful than present as well. Data for the Prerequisite Knowledge category are presented in Tables 15 and 16.

Table 15

Presence and Usefulness of Elements Related to Prerequisite Knowledge

Element		1		2		3		4		5	
	P/U	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1. Course prerequisites	P	19	11.0	18	10.4	39	22.5	24	13.9	73	42.2
	U	19	11.0	12	7.0	38	22.1	24	14.0	79	45.9
2. Discipline-specific knowledge to know prior to taking the course	P	33	19.4	13	7.6	43	25.3	22	12.9	59	34.7
	U	19	11.4	6	3.6	48	28.7	26	15.6	68	40.7

Note. $N = 174$. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful.

Table 16

Presence and Usefulness Mean Scores for Elements Related to Prerequisite Knowledge

Element		m	SD	t-value
1. Course prerequisites	Presence	3.66	1.40	6.21*
	Usefulness	3.77	1.38	7.28*
2. Discipline-specific knowledge to know prior to taking the course	Presence	3.36	1.50	3.11*
	Usefulness	3.71	1.34	6.83*

Note. $N = 174$. Scale: 1 = Mostly Not Present/Useful; 3 = Sometimes Present/Useful; 5 = Mostly Present/Useful. *One-sample t-test results $p < .001$ (cm = 3).

All sub elements of the Prerequisite category were analyzed based on respondent gender, age, degree level, number of online courses taken, and GPA, in order to determine if there were significant differences in presence and usefulness. Independent samples t-tests and ANOVA were used to conduct these analysis. There were no statistically significant results based on gender, age, and number of online courses.

Both statistically significant results pertained to the usefulness of an element that states what discipline-specific knowledge should be gained prior to taking a course. Independent samples t-test results ($t(158) = 2.33$; $p = .021$) concluded students with a GPA between 3.5 – 4.0 ($M = 3.80$; $SD = 1.32$) found discipline-specific knowledge to be more useful than students with a GPA of 3.0 – 3.4 ($M = 3.21$; $SD = 1.34$). ANOVA results indicate ($F(12, 284) = 3.52$; $p = .032$) a significant difference in mean scores for the usefulness of discipline-specific knowledge based on the number of online courses taken. Tukey's HSD test showed students who have taken 6 – 10 online courses ($M = 3.23$; $SD = 1.41$) find the statement of discipline-specific knowledge to be less useful than students who have taken more than 11 online courses ($M = 3.87$; $SD = 1.26$).

Open-ended Question

The last survey item was an open-ended question used to gather and analyze students' suggestions of the following question, "What additional course elements, other than those listed in Part 2, would be helpful in navigating distance education courses?" The student responses were analyzed, divided into themes, and then coded into four major categories: course elements, course organization/content, instructor responsibility, and technical issues. One major category, course elements, contains the students' suggestions that were directly related to the question asked. Themes and categories that arose from the data this question are presented in Tables 16 and 17.

The course elements category includes course elements that would aid in the navigation of the course, and directly address the question presented. There were multiple examples of course elements that are already included in the development of courses and were listed on the survey. Two suggestions were extrapolated from the findings. The first suggestion, tutorials for software or tools that will be utilized, but are not related to Blackboard. The decision to include this theme in course elements, instead of the technical issues category, was based on current course development expectations and the need for course elements related to tools or software that will be used by students. The introduction to the course should contain information that is helpful for students to know or use in order to complete the course.

The additional suggestion was to add the due date in the time zone where the student resides. This suggestion would most likely be a feature of the learning management system, and instructors are encouraged to add the time zone to their course Syllabi. Additional suggestions in this category were made to either reiterate the student's perceived usefulness of an element, or to make recommendations of the current elements. For example, one student suggested

standardizing the location of the course syllabus so it would reside in the same place in each course for ease of use. Other suggestions included a course schedule that is separate from the syllabus, explaining citation style, virtual meeting times, and listing the preferred method of communication.

Course organization/content, refers to the elements of the course that are related to the instructor-built content and the organization of the course. This major category's responses were focused on how the content is delivered to the student, the type of course content provided, and how the course is organized for learning. The coded responses that fell into this category include examples of assignments, more visual resources, and "better organized" content. This category reflected the students' desire to have a variety of examples for graded activities and a well-organized course structure. Other examples from this category included more opportunities for learner-to-learner interaction, leveraging educational technology to create a space encouraging peer connection.

The instructor responsibility category describes actions that are solely the responsibility of the course instructor, and tasks that would not include any external technical assistance from content developers or instructional designers. This category included examples, such as more feedback on graded items, more instructor-to-learner interactions, availability of online office hours, and increased proficiency of learning management or educational technology tools and settings. The suggestions for better understanding of the learning management system includes updating out-of-date learning materials and due dates, tasks that are the responsibility of the instructor. The most popular response of this category, and all responses, pertained to the course structure and grading feedback.

Lastly, the technical issues category pertains to the ability to address not only technical issues within the course content, but the availability of instructions that explain how to use software outside of the learning management system students are expected to use. An example of technical instructions requested included how to connect remotely to campus computing to access software needed to complete assignments. Another suggestion for this category was "live I.T. support." Marshall University's Office of Information Technology does provide students with a live "chat" available any time the Service Desk has working hours.

Table 16

Themes that Emerged in the Open-ended Question

Theme	Definition
Standardization of Syllabus location	Uploading the course Syllabus to one location, in all courses
Showing due date time zones	Instructor provides the time zone, or the system provides the due date for the student's current location
Preferred method of communication	Instructor states their preferred way to contact them*
Separate course schedule	Separating the course schedule from the Syllabus in order to be more visually appealing to students and easier to find
Citation style	The instructor provides instructions on which citation style is preferred*
Virtual meeting times	Refers to course meetings, optional class meetings, and virtual office hours
Assignment Examples	Examples of previous student, or instructor, work for graded activities
More visual resources	Use of more types of media (audio/visual) in course content
Better organization of course content	Course content organized into folders in chronological order based on when students should complete the activity
Video overviews	Short videos that would familiarize students with a course element or aspect of course content

Theme	Definition
Updated course content	Course materials are current, due dates are updated, and the course web links are functioning properly
More and better peer connections	Additional ways for students to connect with each other in the course or complete group work*
More grade feedback	Students requested more feedback on graded activities from the instructor
Lack of instructor interaction	Students requesting more learner-to-instructor interaction*
Online office hours	Virtual office hour availability
Instructor knowledge of tools and settings	Instructor's ability to set course tools and settings, such as changing due dates and editing materials
Accessing software remotely	Directions on how to access campus software remotely*
Live IT support	Live IT support via chat (currently available)

Note. *QM element that is already required.

Table 17

Categories that Emerged from the Themes of the Open-Ended Question

Category	Coordinating Themes
Course Elements*	Standardization of Syllabus location Showing due date time zones Preferred method of communication Separate course schedule Citation Style Virtual Meeting times
Course Organization/Content	Assignment examples More visual resources Better organization of course content Video overviews Updated course content More & better peer connections
Instructor Responsibility	More grade feedback Lack of instructor interaction Online office hours Instructor knowledge of tools and settings
Technical Issues	Accessing software remotely Live IT support

Note. *Course elements is the only category that directly applies to General Standard 1.

Summary

The following is a summary of statistically significant findings per category, based on analysis of data using independent-samples t-tests and ANOVAS. Average categorical mean scores were used to determine the perceived presence of course elements for summary. The two categories with the highest mean scores for presence of elements were Purpose and Structure and Communication Expectations. Three additional categories had average mean scores above a 4.0: Clarity, Policy Awareness, and Technology Requirements. Two categories, Learner Technology and Prerequisite Knowledge, had average mean scores below 4.0.

In the Clarity category, results on the perceived presence and usefulness of all elements were significant. A clear statement on how to get started, course tour, easy to find Syllabus, tips on how to navigate the course, and directions on what to do first were more useful than present. A statement encouraging course exploration was more present than useful. While independent-samples t-test showed significance between the presence and usefulness of a Start Here module, with a mean average higher for presence than usefulness, it is worth noting that more than 96% of students perceived this item to be somewhat to mostly present and useful. Men perceived the Start Here module as more present than women. ANOVA results on the usefulness of the Start Here module based on age were significant, but post-hoc comparisons showed no significant differences between age groups. Based on degree-type, results on the presence of a statement encouraging course exploration were significant, with post-hoc tests showing significance between all age groups.

The Learner Technology category was statistically significant in comparisons of mean scores for all elements in presence and usefulness. File type to use for submitting graded activity, types of presentation tools to use, which citation style to use, and a link to any library service

were more useful than present. Directions for locating guides or tutorials was the only element in this category more present than useful. Based on GPA, students with a 3.5 – 4.0 found types of presentation tools and citation style more present than students with a 3.0 – 3.4. Students with a 3.5 – 4.0 also found a link to library services more present and helpful than students with a 3.0 – 3.4. Men perceived the citation style as more present than women.

Based on age, students 18 – 26 perceived file type preference as less present than 27 – 35 and 42+. The same group also perceived a link to any library service as less present than students 42+. The youngest age category found the file type preference less useful than every other age group, and guides and citation style less useful than students 42+. Students pursuing an associate's degree found a link to library services as less useful than graduate students, and students who have taken more than 11 online courses found types of presentation tools to be more useful than students who have taken 1 – 5 online courses.

The results from one-sample independent t-tests showed the results of every element of the Policy Awareness category, in both presence and usefulness, were significant at $p < .001$, except for the presence of a link to the university calendar. In this category, students perceived the link to student policies, link to student support resources, policy for late work, and the consequences of academic dishonesty explained as more present than useful. Students indicated a link to the university calendar was more useful than present. Students with a GPA of 3.5 – 4.0 found a link to student policies more present and useful, and a link to student support as more useful, than students with a GPA of 3.0 – 3.4.

Based on age, there were multiple significant differences between groups on presence and usefulness of elements in the Policy Awareness category. The youngest age group of students, 18 – 26, perceived a link to student policies to be less present than 27 – 35 and 42+, and

indicated this link to be less useful than 42+. Information about academic dishonesty had similar results, with 18 – 26-year-olds finding this element less present than 27 – 35, and less useful than 27 – 35 and 42+. The youngest group of students also found the presence of a link to student support less present than students 36+, and a policy on late work as less useful than 42+. Based on number of online courses taken, students who had taken 6 – 10 courses found this element to be more useful than 1 – 5 or 11+ courses.

In the Purpose and Structure category, independent-samples t-tests found students perceived a course purpose as more present than useful. A course schedule, meeting times, and course structure elements were also significant, but students found these elements to be more useful than present. Students with a GPA of 3.0 – 3.4 perceived meeting times as less present, and a course purpose less useful. Based on degree program, students in a graduate or bachelor's program found meeting times more present and a course purpose more useful than students seeking an associate's degree. Associate-degree-seeking students found a course outline less useful than students in a bachelor's program. According to age, the 18 – 26 group found a course purpose less useful than students 36+.

According to the analysis of the Technology Requirement category, students found minimum technology requirements to be more present than useful overall. Guidance on how to submit work and required peripherals were found to be more useful than present. Students with a GPA of 3.5 – 4.0 found a statement of minimum technology requirements as more useful than 3.0 – 3.4. Based on age, 18 – 26-year-old students found the minimum technology requirements as less present than 27 – 35 and 42+, and less useful than 42+. The 42+ age group determined guidance on how to submit graded activity to be more useful than 18 – 26-year-old students. Students who had taken more than 11 online courses perceived minimum technology

requirements as more present, and a list of peripherals as more useful, than students who have taken 6 – 10 online courses.

In the Communication Expectations category, students found a netiquette statement, a professional professor introduction, and self-introduction to be more present than useful. Comparisons among GPA groups showed that students with a 3.5 – 4.0 found the instructor and self-introduction to be more present and useful, and the netiquette statement more useful, than students with a GPA of 3.0 – 3.4. In terms of presence of the instructor and self-introduction, students in the 42+ range found these elements to be more present than 18 – 26-year-old students. Students over 42 also found the self-introduction more useful than 18 – 26 and 27 – 35-year age groups.

The last category of elements was the Prerequisites category. Students indicated that prerequisite course information was more present than useful, but discipline-specific knowledge was more useful than present. Students with a 3.5 – 3.0 GPA responded that discipline-specific knowledge was more useful than students with a 3.0 – 3.4. Students who have taken 6 – 10 online courses also indicated that this element was more useful to them than students who have taken 1 -5 or 11+ courses.

Lastly, to complete the survey, students were asked to complete an open-ended question asking their suggestions for a course element that would be useful but is not currently included. The answers resulted in four categories, which emerged from themes: course elements, course organization/content, instructor responsibility, and technical issues. Only course elements pertain to General Standard 1. The course element category contained 6 coordinating themes, but none of the suggestions were for elements that are not currently expected to be present to meet General Standard 1 in course development.

Chapter Five: Conclusions and Discussion

Chapter five includes conclusions and recommendations based on the study findings. Chapter sections include the problem statement, research questions, respondent characteristics, a summary of the findings, conclusions, discussion, and recommendations for further research.

Problem Statement

The *Standards for Course Design* General Standard 1 covers the course overview and introduction, stating "the overall design of the course is made clear to the learner at the beginning of the course (QM, p. 10). As course developers, what we often fail to gather is the students' perspectives on the presence and usefulness of the elements of the course overview and introduction that have been deemed important; therefore, the student perspective is needed in order to find out whether students view the elements of the course overview and introduction are useful aspects and contribute to their successful completion of a distance education course. In this study, we examined the students' perceptions on the presence and usefulness of navigational aids, which include the specific review standards of *Standards for Course Design* General Standard 1.

Research Questions

The following specific questions guided this study:

1. To what extent are elements of QM General Standard 1 present in distance education courses?

2. To what extent do students perceive the elements of QM General Standard 1 to be useful in the successful completion of distance education courses?

3. What are the differences, if any, based on selected demographic/attribute variables in the student perceptions of the usefulness of the QM General Standard 1 for successful completion of distance education courses?

3. Are there elements in the course overview and introduction area that are currently not included, but would be beneficial to their success in the course?

Study Participants

The study participants were Marshall University students who were enrolled in an online degree program during the Spring 2021 term. There were 174 subjects. One hundred twenty-two (70.1%) survey respondents were female, 160 (92%) identified as white, and 162 (95.9%) identified as non-Hispanic. For purposes of analysis, the 42 – 56 age range was combined into the 42+ age range. Eighty-five (43.7%) respondents were over the age of 42, and the remaining age groups were fairly evenly distributed. There were no responses from students in a certificate program. Of the respondents, 44 (25.3%) were enrolled in an associate degree program, and 78 (44.8%) were in a baccalaureate degree program. For the purposes of analysis, the doctoral students were combined with graduate degree students, for 23.2% (52) of total responses. More respondents (49.5%) had taken 11+ distance education courses than those who had taken 1-5 courses (22.5%), or 6 – 10 courses (28%). Most students, 133 (76.9%), reported they had a current GPA between 3.5 – 4.0, and 34 (19.7%) responded with a GPA of 3.0 – 3.4. For purpose of analysis, the 6 (3.5%) students who had a 2.5 – 2.9 GPA were omitted.

Method

This research design utilized a mixed-methods approach. All students enrolled in online degree programs during the Spring 2021 term were sent a link to complete the survey on Qualtrics. The Quality Matters *Standards for Course Design* rubric, specifically General

Standard 1 elements, served as the basis for the quantitative element of the study. Survey questions in the quantitative portion asked students to rate the presence and usefulness of course elements that were listed in General Standard 1.

The qualitative element of the study consisted of an open-ended question at the end of the survey. This question was designed to gather suggestions from students pertaining to possible additional course elements that would aid in course navigation. The open-ended question provided respondents with the opportunity to add insight into the course development process by providing personal suggestions for useful course elements that are currently not required. To address the validity of the sequential design, students were introduced to all of the course elements prior to addressing the qualitative element in order to have sufficient details prior to soliciting recommendations (McMillan, p. 380).

Summary of Findings

Students determined all elements of every category to be both somewhat to mostly present and useful in online courses. In the Clarity category, a clear statement on how to get started, course tour, easy to find syllabus, tips on how to navigate the course, and directions on what to do first were rated more useful than present. A statement encouraging course exploration was more present than useful. Men perceived the Start Here module as more present than women.

In the Learner Technology category, file type to use for submitting graded activity, types of presentation tools to use, which citation style to use, and a link to any library service were more useful than present. Directions for locating guides or tutorials was the only element in this category more present than useful. In the Purpose and Structure category, students perceived a course purpose as more present than useful. Students also found course schedule, meeting times,

and course structure elements to be more useful than present. According to the analysis of the Technology Requirement category, students found minimum technology requirements to be more present than useful overall. Guidance on how to submit work and required peripherals were found to be more useful than present.

In the Communication Expectations category, students found a netiquette statement, a professional professor introduction, and student self-introduction to be more present than useful. In the Prerequisites category, students indicated prerequisite course information was more present than useful, but discipline-specific knowledge was more useful than present.

Students with a GPA higher than 3.5 reported types of presentation tools to use, citation style, library resources, a link to student policies, meeting times, instructor introduction, and a self-introduction were more present than students with a lower GPA. The youngest group of students perceived the preference of file type, link to library resources, student policies, academic dishonesty, student support, minimum technology, instructor introduction, and self-introduction as less present than their older peers. Males perceived the Start Here module as more present than females. Students seeking an associate's degree perceived course exploration and meeting times as less present than other degree types, and students who have taken more than 11 online courses perceived minimum technology requirements as more present than students who have taken fewer than 11 online courses.

Student responses based on the usefulness of the elements according to GPA were similar to presence; students with 3.5 – 4.0 GPA found a library link, link to student policies, student support, and course purpose, minimum technology requirements, instructor introduction, self-introduction, netiquette, and discipline-specific knowledge as more useful than students with lower GPA. There were no differences in usefulness based on gender. The 18 – 26 age group

found a file type preference, locating guides, citation style, student policies, academic dishonesty, late work policy, course purpose, minimum technology requirements, how to submit course work, and a self-introduction as less useful than their older peers. Associate degree-seeking students found a link to library resources, course purpose, and the course outline to be less useful than students in all other degree programs. Students who have taken more than 11 online courses found types of presentation tools to use, list of peripherals, and discipline-specific knowledge to be more useful than those students who have taken fewer online courses. Students who have taken between 6-10 online courses found the link to academic calendar to be more useful than other students.

Lastly, to complete the survey, students were asked to complete an open-ended question seeking their suggestions for course elements that would be useful but are not currently included. The responses were organized into four categories: course elements, course organization/content, instructor responsibility, and technical issues. Only course elements pertain to General Standard 1. The course element category contained six coordinating themes, but none of the suggestions were for elements that are not currently expected to be present to meet General Standard 1 in course development criteria.

Conclusions

For the purpose of analysis, research question three has been combined with questions one and two. The data collected from this survey were sufficient to support the following conclusions:

To what extent are elements of Quality Matters General Standard 1 present in distance education courses?

Students perceived every element in every category to be somewhat to mostly present in online courses. Students with a 3.5 – 4.0 GPA perceived the types of presentation tools to use, citation style, links to library resources and student policies, meeting times, instructor introduction, and a student self-introduction as more present than students with a lower GPA. Males reported a Start Here module and citation style were more present in courses than females. The youngest (18 – 26) group of students perceived the preference of file type, links to library services, student policies, student support, and academic dishonesty policies, minimum technology required, instructor introduction and a self-introduction as less present than their older peers. There were differences between all degree types on the presence of a statement encouraging course exploration, but the 18 – 26-year-old group perceived this element to be less present than all other age groups. Students seeking an associate's degree found meeting times to be less present than students in other degree program types. Students who have taken more than 11 online courses found the minimum technology requirements to be more present than students who have taken less than 11 courses.

To what extent do students perceive the elements of Quality Matters General Standard 1 to be useful in the successful completion of distance education courses?

Overall, every element in every category was determined by students to be somewhat to mostly useful in online courses. Students with a GPA above a 3.5 indicated links to library services, student policies, and student support, course purpose, minimum technology required, instructor introduction, student self-introduction, netiquette, and discipline-specific knowledge were more useful to them than students with a lower GPA. There were no differences for usefulness based on gender for any element. The youngest (18 – 26) group of students felt that file type preference, guides or tutorials, citation style, student policies, academic dishonesty, late

work policy, course purpose, minimum technology requirements, how to submit coursework, and a self-introduction were less useful than their older peers. Students in associate degree programs determined a link to library resources, course purpose, and course outline were less useful to them than other degree types. Students who have taken more than 11 online courses found presentation tools, a list of peripherals, and discipline-specific knowledge to be more useful than peers who have taken less online courses. Students who have taken 6 – 10 online courses found the academic calendar link to be more useful than their peers.

Are there elements in the course overview and introduction area that are currently not included, but would be beneficial to their success in the course?

The majority of responses to this question were suggestions for elements that were already expected to be present in the course, were related to instructor duties, or the organization of the course content. One student suggested that links to instructions on how to use course tools be located in the same area in every course, such as the Start Here module. One student requested that the location of the course Syllabus be standardized for all courses. While it is highly suggested to faculty that the link to the syllabus be located in the Start Here module, there is currently no requirement for where the exact location of the syllabus is located. One student suggested due dates for the time zone in which the student is currently located in be available, not just due dates and times for time zones where the institution is located. This element is considered to be the responsibility of the student in a time zone that is different than the location of the institution.

Discussion and Implications

Quality Matters General Standard 1 contains course elements that are meant to help students navigate and learn about the structure of the course. Students who participated in this

study found General Standard 1 elements to be useful in their successful completion of an online course. In a study by Sung and Mayer (2012), students who were provided navigational aids in their distance education courses produced significantly higher mean ratings on all eight of their usability scales, including ease of use, satisfaction of use, awareness of lesson structure, awareness of lesson length, awareness of location, ease of navigation, lesson comprehension, and lesson learning. According to Sung and Mayer (2012), "when the navigational demands of an e-learning system prevent the learner from concentrating on learning the material, the result is a cognitive overload situation caused by extraneous cognitive processing" (p. 473). Course elements that are navigational aids improve student ratings of usability on courses that are conducted on learning management systems (Sung & Mayer, 2012).

Previous studies have indicated students who were born after 1980 have more exposure to, and use of, technology than students born prior to 1980 (Oblinger, 2003). Prensky (2001) and Tapscott (2009) argued the exposure to digital technology led to changes in the structure and function of the brains of students born after 1980, but Prensky (2009) acknowledged that students born prior to 1980 have the ability to aspire to achieve "digital wisdom," which would inspire those students to use this technology to gain this wisdom, thereby also changing their brains' organization and structure. In a 2010 study by Jones et al., there were age-related differences found in technology use and in attitudes towards technology; however, the study respondents were students in both face-to-face courses and distance education courses, with no delineation between the two, except to note nearly all of the older students were taking distance education courses.

In a 2013 study by Jelfs and Richardson, researchers provided student respondents with a list of 13 tasks related to computer use, or skills they might use in courses. Some examples of

those skills are word processing, email, web searching tools, wikis, and blogs. The percentage of respondents who stated they had never worked with each of the 13 tasks increased steadily by age, with older students being more likely to have never worked on any of the 13 tasks (Jelf & Richardson, p. 345). The only statistically significant result in attitudes towards technology in that study was students over the age of 50 who had answered the survey electronically had more positive attitudes toward technology than those who had mailed in paper responses (Jelf & Richardson, p. 347).

There were several statistically significant results that showed differences between age groups of respondents in this study. All differences between age groups were differences between the 18 – 26-year-old students and older students. Students over the age of 42 responded that a Start Here module on the course menu, a preference of file type, a link to tutorials or guides, citation style preference, a link to student policies, a late work policy, minimum technology requirements, and directions on how to submit graded activity as more useful than students 18 – 26. These elements of General Standard 1 relate directly to technology use in the course or the learning management system, and may be attributed to older students' perception of their technology skills.

Studying the relationship between library usage and student success is one of six areas the ACRL recommends for future research, however, an increasing number of library service impact studies have been conducted (Anderson & Vega Garcia, pp. 459 – 460). A study of more than 8,500 students at a university in Hong Kong compared the GPA at the time of graduation with the number of times the students had interacted with library materials, and researchers found 65% of each of the academic disciplines showed a positive correlation between use of library materials and GPA (Wong & Webb, 2010). According to Anderson and Vega Garcia

(2020), many of the largest studies conducted on the correlation between library usage and GPA have been done by analyzing students by major or college, noting different majors and/or colleges have varying relationships with their academic libraries.

Though minimal, "cumulative GPA was higher on average for students who used library resources" (Anderson & Vega Garcia, p. 472). These results are similar to results from studies conducted by Soria, Fransen, and Nackerud (2013). The strongest correlation between library usage and GPA was between disciplines, rather than degree level. However, Anderson and Vega Garcia (2020) concluded undergraduate students who believed use of library services contributed "very much" to their success had higher GPAs than other students, and graduate students did not agree use of library services contributed to their success. It is worth noting that Anderson and Vega Garcia considered using library services in the building itself as one aspect included as "library resource usage," an option many distance education students do not use. Anderson and Vega Garcia concluded undergraduate students' beliefs about their own use of library services were more positively linked to a higher GPA than actual use of library services itself.

In this study, students with a GPA of 3.5 – 4.0 found a link to library services in the Learner Technology category to be more useful than students with a GPA of 3.0 – 3.4 GPA. While a conclusion cannot be made from limited observation, it is worth noting even though students with a 3.0 – 3.4 GPA found a link to the library services less useful than respondents with a higher GPA, these students still found a link to library services as somewhat useful (M = 3.14).

One of the guiding theories of Connectivism and Quality Matters' development and ongoing review of the *Standards for Higher Education* rubric is to include students in the course development process. In Watson et al.'s study on the Top Ten Instructional Strategies for

developing online courses, providing expectations, learning guidance, and a well-organized course are three strategies that Watson declared as vital to proper online course development. These three strategies are comparative to elements of QM's General Standard 1. Providing expectations can include clear instructions for how to complete coursework, the criteria of course assessments, and how overall performance will be evaluated (Watson, et.al., p. 414). Organizing a course can include organizing course materials and activities "that facilitate a clear structure or path for students to follow instructor's lead and complete course requirements (Watson, et.al., p. 414). Watson et al. paired these student-suggested elements with QM General Standards 4, 5, 6, and 7), but course expectations fall directly within General Standard 1. How a course is organized is addressed in several QM General Standards, but the start of the course begins with General Standard 1, and how that part of the course was organized has been found to be useful to students in this research.

In the Clarity category, a clear statement about how to get started in the course received a mean score of 4.47 out of 5 on the usefulness scale. Instructions on course navigation (M = 4.31), a Start Here module on the course menu (M = 4.54), and directions on what to do/where to go first (M = 4.43) also had high usefulness scores in the Clarity category. In the Learner Technology Skills category, a stated preference of file type for submissions (M = 4.30), types of presentation tools to use (M = 4.25), and preference of citation style (M = 4.45) had high scores for usefulness. In the Policy Awareness category, a late work policy scored a 4.45 out of 5 for usefulness. All elements in the Purpose and Structure category scored high on the usefulness scale, including course schedule (M = 4.66), meeting times (M = 4.39), course purpose (M = 4.24), and course structure/outline (M = 4.55). In the Technology Requirements category, instructions on how to submit course work (M = 4.52) scored high on usefulness and can be

considered a part of how to complete coursework. These results support Watson et al.'s assertion that clear instructions on how to complete coursework is a top instructional strategy for developing online courses, even if Watson et al. was more focused on QM General Standards 4 – 7.

Administrative Applications

This study supports the practical expectations of administrators to implement distance education quality control initiatives at their institutions. Survey respondents were enrolled in courses that have been developed using the Quality Matters rubric, and results for presence and usefulness indicate students perceive these elements to be useful in the successful completion of their online courses. The average usefulness scores of each category of elements highlights the need for these elements to be present in distance education courses.

The switch to emergency remote learning, caused by the COVID-19 pandemic, exposed weaknesses and highlighted positive aspects of higher education institutions. Administrators and instructors put their online teaching and technology experience to practice in a massive emergency transition to online learning for continuity of instruction. This massive scale experience of online learning has created opportunities for growth, and a chance to review policies regarding course development and faculty professional development.

When online learning became the only option for continuity of instruction, faculty had to re-assess their priorities when preparing courses. Fox et al (2020) concluded faculty spent more time before the Fall 2019 term planning to increase student engagement, providing timely feedback, ensuring accessibility with course content, redesigning courses for online delivery modes, increasing student collaboration, and better assessing student learning accurately and securely.

It is past time to still be considering whether or not online learning is as effective as being in a classroom; the virtual classroom options and learning management systems provide a way for us to reach and assess learners across the globe. For institutions with administrators who see value in online learning, but place more value on the monetary contributions to the university instead of prioritizing educational technology support and faculty development, ensuring all faculty understand the importance of quality course development should be a top priority. Faculty cannot receive proper training and development without the proper support personnel, and without support from administration, online learning can seem to be a partial answer to growing enrollments and revenue even though courses may lack in quality.

In order to change the campus culture and attitudes toward online learning, administrators should commit to forging new relationships with units whose purpose is to train faculty on the use of online learning elements and pedagogy, as well as commit to quality assurance and information technology support. Some institutions may need to adjust their strategic missions to include, or reiterate, the delivery of quality online instruction. In one study, 78% of faculty stated they had received aid from an instructional staff member, such as an instructional designer or a teaching and learning center (Lederman, 2020). As a current instructional designer at an institution of higher education, our unit was able to forge new relationships with faculty who were unaware of what resources we can provide or had never considered online learning as a crucial element of student learning. Administrators should build on the current momentum with online learning in higher education so that we can ensure all faculty are ready and able to continue with instruction, or supplementally use the learning management system, even before a global pandemic forces learners to continue their education online.

Recommendations for Future Research

In order to more fully understand the importance of quality control and reviews of distance education courses, further research should be conducted to examine the presence and usefulness of course elements per institution, regardless of what type of course development rubric is used. If no course development and quality control initiatives have been implemented, results from studies such as this indicate students find these elements as necessary and useful for successful completion of online courses.

Further research should also be conducted on a wider scale to investigate the relationship between faculty confidence in developing and teaching distance education courses and the amount and type of institutional support they received for doing so. Broader studies should be conducted on administrative attitudes and approaches toward distance education to determine what effect, and to what extent, administrative policies that support personnel roles and quality review control expectations play in the number of online degree programs that are available at their institution. Student satisfaction with the quality of those courses should also be investigated. Studies asking faculty to rate their confidence in the use of educational technology and the amount of instruction received on online course development and pedagogy could provide insight into administrative weaknesses in the planning and implementing of distance education courses.

The current study was limited to students enrolled in online degree programs. Future research should include all students who are enrolled in at least one online course because all courses at the institution are required to be developed and approved according to the Quality Matters rubric. It is important to know how online courses not included in an online degree program's course rotation compare to those which regularly undergo review and revision as part of online program reviews.

The current study only included student perceptions of presence and usefulness of elements in General Standard 1, and in order to study the complete efficacy of design standards, further research should be conducted on more QM General Standards, or all QM General Standards. This study included one qualitative, open-ended, question asking students to suggest a course element they may find useful, but not currently included. Student responses indicated more research should be focused on faculty's skills in using the learning management system, and on the expectations of feedback from faculty. Further qualitative studies using interview or focus group methods could allow for more information on student experiences in online courses. Additionally, research focused on faculty experience teaching online could expose weaknesses in the proper channeling of support and development.

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Appendix A. Permission to Conduct Research on Distance Education Students

Permission to Conduct Research

March 22, 2021

Christopher Sochor
117 9th Ave W
Huntington, WV 25701

Dear Christopher,

I have reviewed your request to conduct a study as part of partial fulfilment of your doctoral program involving distance education students at Marshall University and the survey that will be used. I feel that this study would be beneficial to Marshall University students and faculty. You have my permission to distribute a survey to distance education students for this study.

Sincerely,

Dr. Monica G. Brooks
Assistant V.P. for Online Learning & Dean of Libraries
Marshall University

Marshall University
Libraries and Online Learning
One John Marshall Drive
Huntington, WV 25755-2090
marshall.edu

Appendix B. Marshall IRB Approval

Date: 04/01/2021 03:25 PM
To: "Ron Childress" <rchildress@marshall.edu>, "Christopher Sochor" <chris.sochor@marshall.edu>
From: "Anna Robinson" <no-reply@irbnet.org>
Reply To: "Anna Robinson" <robinsonn1@marshall.edu>
Subject: IRBNet message from Anna Robinson

Message from Anna Robinson:

Re: [1737203-1] Student Perspectives on the Presence and Usefulness of Navigational Course Components in Distance Education Courses

In accordance with 45CFR46.104(d)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study unless there is an amendment to the study. All amendments must be submitted and approved by the IRB Chair/Designee.

Regards,
Anna Robinson

Appendix C. Email Distribution Message to Sample

April 6, 2021

Subject: Marshall University Ecampus Student Survey

Anonymous Survey Consent

You are invited to participate in a research project entitled "Student Perspectives on the Presence and Usefulness of Navigational Aids in the Course Overview and Introduction of a Distance Education Course," designed to analyze the presence of navigational course elements and the usefulness of those elements. The study is being conducted by Dr. Ron Childress from Marshall University and has been approved by the Marshall University Institutional Review Board (IRB). This research is being conducted as part of the dissertation requirements for Christopher Sochor.

This survey is comprised of a short section of demographic questions and likert scale responses about the presence and usefulness of stated course components. The estimated time to complete the survey is 6-8 minutes. Your replies will be anonymous, so do not type your name anywhere on the form. There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or to withdraw. If you choose not to participate you can leave the survey site. You may choose to not answer any question by simply leaving it blank. Once you complete the survey you can delete your browsing history for added security. Completing the on-line survey indicates your consent for use of the answers you supply. If you have any questions about the study you may contact Dr. Ron Childress at 304-746-1904, or Christopher Sochor at 304-654-3411.

If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

By completing this survey you are also confirming that you are **18** years of age or older.

You may print this page for your records.

Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Appendix D. Anonymous Survey Consent

You are invited to participate in a research project entitled "Student Perspectives on the Presence and Usefulness of Navigational Aids in the Course Overview and Introduction of a Distance Education Course," designed to analyze the presence of navigational course elements and the usefulness of those elements. The study is being conducted by Dr. Ron Childress from Marshall University and has been approved by the Marshall University Institutional Review Board (IRB). This research is being conducted as part of the dissertation requirements for Christopher Sochor.

This survey is comprised of a short section of demographic questions and likert scale responses about the presence and usefulness of stated course components. The estimated time to complete the survey is 6 minutes. Your replies will be anonymous, so do not type your name anywhere on the form. There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or to withdraw. If you choose not to participate you can leave the survey site. You may choose to not answer any question by simply leaving it blank. Once you complete the survey you can delete your browsing history for added security. Completing the on-line survey indicates your consent for use of the answers you supply. If you have any questions about the study you may contact Dr. Ron Childress at 304-746-1904, or Christopher Sochor at 304-654-3411.

If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

By completing this survey you are also confirming that you are **18** years of age or older.

You may print this page for your records.

If you choose to participate in the study you will find the survey at www.xxxxxxx.com

Appendix E. Ecampus Student Survey Questions

Part 1. Please answer the following questions about yourself. All of your answer responses throughout the survey will remain anonymous.

Q2 Gender

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

Q3 Age

- ○ 18 - 26
- ○ 27 - 35
- ○ 36 - 41
- ○ 42 - 56
- ○ 57+

Q4 Race

- ○ American Indian or Alaska Native
- ○ Asian
- ○ Black or African American
- ○ Native Hawaiian or Pacific Islander
- ○ White
- ○ Other

Q5 Ethnicity

- ○ Hispanic
- ○ Non-Hispanic

Q6 Type of Degree Program you are enrolled in:

- ○ Certificate Program
- ○ Associate's Degree
- ○ Bachelor's Degree
- ○ Graduate Degree
- ○ Doctorate

Q7 Number of distance education courses you have taken:

- ○ 1 - 5
- ○ 6 - 10
- ○ 11+

Q13 What is your current overall grade point average (GPA)?

- ○ 3.5 - 4.0
- ○ 3.0 - 3.4
- ○ 2.5 - 2.9
- ○ 2.0 - 2.4
- ○ Below 2.0

Part 2. Consider all distance education courses that you have taken so far in your academic career. Using the scale provided for Column A: Presence, indicate the presence of each course element in the Start Here module. Using the scale provided for Column B: Usefulness, rate the usefulness of each course element according to how useful the element was to helping you successfully navigate the course.

Scale: Presence

1	2	3	4	5
Mostly not present		Somewhat present		Mostly present

Scale: Usefulness

1	2	3	4	5
Mostly not useful		Somewhat useful		Mostly useful

1. A clear statement about how to get started in the course	○	○	○	○	○	○	○	○	○	○
2. Course tour	○	○	○	○	○	○	○	○	○	○
3. Statement encouraging course exploration	○	○	○	○	○	○	○	○	○	○
4. Easy to find Syllabus	○	○	○	○	○	○	○	○	○	○
5. Instructions on how to navigate the course and its components	○	○	○	○	○	○	○	○	○	○
6. Start Here module on the course menu	○	○	○	○	○	○	○	○	○	○
7. Directions on what to do or where to go first	○	○	○	○	○	○	○	○	○	○
8. Course Schedule	○	○	○	○	○	○	○	○	○	○
9. If required, meeting times provided at the start of the term	○	○	○	○	○	○	○	○	○	○
10. Course purpose stated	○	○	○	○	○	○	○	○	○	○
11. Course structure/outline stated	○	○	○	○	○	○	○	○	○	○
12. "Netiquette" statement	○	○	○	○	○	○	○	○	○	○

13. Link to student policies	○	○	○	○	○	○	○	○	○	○
14. Link to Student Support & Resources	○	○	○	○	○	○	○	○	○	○
15. Policy for late work	○	○	○	○	○	○	○	○	○	○
16. Consequences of academic dishonesty are explained	○	○	○	○	○	○	○	○	○	○

17. Link to the university academic calendar	○	○	○	○	○	○	○	○	○	○
18. Statement of minimum technology required	○	○	○	○	○	○	○	○	○	○
19. Guidance as to how course work should be submitted	○	○	○	○	○	○	○	○	○	○
20. Required peripherals are identified (webcam, mic, etc.)	○	○	○	○	○	○	○	○	○	○
21. Directions for locating tutorials or guides for course tools	○	○	○	○	○	○	○	○	○	○
22. Preference of file type for submitting graded activity	○	○	○	○	○	○	○	○	○	○
23. Types of presentation tools to use when submitting a presentation	○	○	○	○	○	○	○	○	○	○

24. Guidelines for properly citing sources, or type of citation style to use	○	○	○	○	○	○	○	○	○	○
25. Links to any library service	○	○	○	○	○	○	○	○	○	○
26. Statement of course prerequisites, if any	○	○	○	○	○	○	○	○	○	○
27. If applicable, a statement of discipline-specific knowledge that should have been learned prior to taking the course	○	○	○	○	○	○	○	○	○	○
28. Professional instructor introduction through a bio or discussion post	○	○	○	○	○	○	○	○	○	○
30. Requirement to provide self-introduction to the class on discussion board or other course tool	○	○	○	○	○	○	○	○	○	○

End of Block: Part 2. Course Elements

Start of Block: Part. 3

Q13 What additional course elements, other than those listed in Part 2, would be helpful in navigating distance education courses?

_____

_____

_____

_____

_____

End of Block: Part. 3

Appendix F. Chris Sochor CV

Christopher Sochor

117 9th Ave West
Huntington, WV 25701

Phone: 304-654-3411
Email: cj.sochor@gmail.com
Web: https://www.marshall.edu/design-center/

Proactive educator with demonstrated leadership and project management abilities. Areas of expertise in distance education, content & curriculum development, assessment, Blackboard LMS, and Leadership theory.

Ed.D. *Marshall University* *April 2022*
Dissertation: "Student Perceptions on the Presence and Usefulness of Navigational Aids in Distance Education Courses"
Committee: Dr. Ron Childress, Dr. Bobbi Nicholson, Dr. Monica Brooks

MA *Marshall University* *December 2008*
Master of Art's in History

BA *Marshall University* *May 2006*
Bachelor of Arts in History

Higher Education Professional Experience

2012 - present **Manager of Online Learning, Instructional Designer**
Marshall University
The Office of Online Learning provides support for faculty & students for educational technology & Blackboard LMS. Responsibilities include project management, supervising employees, creating professional development for faculty, course design, development, and implementation, tracking course and online program development, technical support, and the creation of documentation on tools and peripherals.

- **Serves on** the Students with Disabilities Committee, the University Technology Advisory Committee, and the University Assessment Committee
- **Participates and is a member** of Quality Matters, Online Learning Consortium, WVNET, NC-SARA, SAN, WCET, and several Blackboard Community Programs.
- Responsible for the tracking and development of all online degree programs and course developments on the university-level.

2006 - 2012 **Instructional Designer**
Marshall University
Assisted faculty with the development of courses and course content, provided technical support, created educational technology documentation, staff member of the Design Center, provided professional development sessions, presented at university functions & events, represented Online Learning as the instructional

designer liaison on the cross-trained educational technology group, and supported virtual & technology-enhanced classrooms.

2006 - present **Adjunct Faculty**
Marshall University
American History, Freshman Seminar, graduate Leadership Studies courses

Professional Activities

Publications:

Sochor, C.J. (2021, September 27). *Instructional designers are a faculty member's best friends.* eLearning Industry. Retrieved from https://elearningindustry.com/instructional-designers-are-faculty-members-best-friends.

Roles, E. & Sochor, C. (2010) Marshall Librarians use iPads, *Western Pennsylvania/West Virginia ACRL Chapter Newsletter*, 2:1, 2.

Selected Conference Presentations

Sochor, C.J. (2021, July 13). *Student Perceptions on the Usefulness of Navigational Aids in Distance Education Courses* [Conference session]. West Virginia Statewide Technology Conference, Virtual.

Sochor, C.J., & Kaplan, P. (2018, July). *What It Really Takes: Using Outcomes & Analytics to Drive Student Success* [Conference session]. Blackboard World, New Orleans, LA, United States.

Sochor, C.J. (2012, November). *Building Relationships for Professional Development with Human Resources and Information Technology* [Conference session]. West Virginia Higher Education Technology Conference, Morgantown, WV, United States.

Sochor, C.J., & Johnson, K. (2012, July 11). *Same Song, Different Key: Marshall's Gone Outside the Lecture Capture Box* [Conference session]. Blackboard World, New Orleans, LA, United States.

Sochor, C.J. (2011, August 16). *"Click…Click…BAM!" Student Engagement with Instant Feedback* [Conference session]. iPED: Inquiring Pedagogies, The 3rd Annual Conference on Teaching and Learning, Marshall University, Huntington, WV, United States.