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**Faculty and Student Perceptions of Effective Online Learning Environments
at a Two-Year College**

By

Kayla L. Westra

**This Dissertation Is Submitted in Partial Fulfillment
of the Requirements for
the Educational Doctorate Degree
in Educational Leadership**

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Mankato, Minnesota

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This dissertation has been examined and approved.

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Abstract

This quantitative and qualitative study was designed to review alignment of student and faculty perceptions of effective online learning environments. The purpose of this study was to review statistical survey data to determine if alignment of perceptions existed. The student research sample included data from three years of archival survey data at Minnesota West Community and Technical College. Over 10,000 survey results were part of this sample. Additionally, Minnesota West Community and Technical College faculty who taught during this timeframe were surveyed. Qualitative data from one year of student responses was analyzed to add depth to the results. The results showed partial alignment of faculty and student perceptions of what constitutes an effective online learning environment.

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Chapter I

Introduction

Background of the Problem

Since the mid-1990s, online education has revolutionized teaching and learning, particularly at the collegiate level. For some colleges and universities, traditional brick and mortar settings have been replaced by server rooms, learning managements systems, and geographically-dispersed faculty and students. Where students previously followed strict schedules set by administration, often meeting three or more times a week in a specific classroom, online education shifted the model to deliver education at any time and any place. This change away from traditional educational structures was led by early adopters of the concept and the technologies. These early online adopters had little research upon which to base their pedagogical decisions. Most followed pedagogical models they had used or viewed from observing their own instructors. As stated by Edwards, Perry, and Janzen (2011), “students remember those teachers who had a positive impact on their learning, and they remember the strategies used by those faculty” (p. 101). These faculty began with using known models and modified their online courses as they progressed through subsequent semesters to improve their teaching and ultimately student learning.

Because online offerings are still fairly new to the educational landscape, some faculty in higher education continue to develop their online teaching methods, albeit slowly, and often in the Socratic tradition. “Faculty’s initial teaching model is typically born from that of their own teachers, and they teach as they were taught. However, few have any online experience as a student or a teacher” (McQuiggan, 2012, p. 27). While this is changing slowly as new faculty

enter academia, where incoming faculty have experience as online students, many already established online faculty had little or no experience as online students, therefore having little or nothing to use as a model for their online teaching (McQuiggan, 2012). “Teachers who once taught in traditional face-to-face classrooms are now challenged to adapt their teaching strategies to use technology and remain effective in this new educational environment” (Edwards, Perry, & Janzen, 2011, p. 102). Faculty who joined the academic ranks in the late 1990s and early 2000s had more experience as online learners themselves, and being an online student offered a unique perspective to those who then became online instructors.

As online course offerings have continued to expand, “deans and department chairs have often turned to their faculty and simply assigned them to online courses without much support or training” (Boettcher & Conrad, 2010, pp. 3-4). These faculty did not have much experience with teaching online, and while face-to-face course development models could be used to develop online courses, there were differences in the focus (Xu & Morris, 2007). While faculty often turned to teaching and learning centers within their colleges for assistance, many of these centers did not have the personnel or expertise to assist faculty, nor did they have extensive experience teaching in the online environment. The types and formats of faculty development programs for online instruction are as varied as the number of institutions that have online faculty (Herman, 2012). These disparate programs and methodologies varied in their ability to prepare teachers for teaching online, resulting in a broad quality spectrum within online offerings, even within the same institution.

How, then, did faculty create pedagogical and technological models for effective online learning environments in their own classes? How did they gain the knowledge and experience to produce online learning environments that were conducive to student learning? What did they

use as a basis for creating their online classrooms? This knowledge gap was problematic since the advent of online learning opportunities. As stated by Shank and Sitze (2004), “By designing online courses that were essentially nothing more than textbooks on a computer screen, early developers failed to use the web’s unique advantages to their fullest” (p. 10). Some online faculty have not moved from this realm of textbooks on a computer screen to more engaging online classrooms, and some may not have changed their online techniques since becoming an early adopter. “Poor online teaching, or online teaching which is conducted no differently from what occurs in a classroom setting, can jeopardize student satisfaction, instructional effectiveness, and perceptions of the university” (Barczyk, Buckenmeyer, Feldman, & Hixon, 2011, p. 5). The design and facilitation of an online course, while dependent upon the same basic principles as a face-to-face course, went beyond this baseline to incorporate technology and meet student expectations in a different type of classroom.

An online classroom is by nature more complicated than a face-to-face classroom, and to stop at the rudimentary basics of a face-to-face course converted to an online environment creates a disconnect with student expectations of an online learning environment. Salman Khan (2012), founder of the Khan Academy stated, “New educational institutions and models emerge at inflection points in history” (p. 6). As the Information Age continued to change people’s access to information and people’s understanding of the world, faculty and students evolved in the way teaching was presented and learning acquired. In some cases, students were more adept at using websites and learning management systems, and faculty needed to understand and utilize the learning management systems (LMS) more effectively. “The potential to present course material in innovative and pedagogical ways is enormous with an LMS but so is the learning curve required [for faculty] to realize such potential” (Christie & Jurado, 2009, p. 278). If faculty

members were engaged in improving their online classrooms, then extensive time and effort was required.

Though the Internet has only been in existence for general use since the mid-1990s, and online teaching for about the same number of years, it is a testament to the speed of technological change that faculty have elaborate course management tools to create expansive online learning environments. Christie and Jurado (2009) argued that “teachers do not have the time or motivation to become experts in how to use an LMS” (p. 276). In most cases, students adapt quickly to these online learning environments, much more so than their college faculty. Prensky (2006) referred to those who were born in the technological age, to whom technology was second nature, as digital natives. Traditional college-age students, all of whom are digital natives, and even non-traditional students returning to college, some digital natives and some digital immigrants, are likely to have technology skills and specific expectations of the online classroom. These technology skills often surpass those of their instructors, which potentially caused issues in the online classroom.

The digital immigrants, those who were born before technology (Prensky 2006), initially made up the majority of current college faculty. The digital natives are slowly entering faculty ranks as well, but for those established faculty who are teaching online, who are primarily digital immigrants, expectations of effective online learning environments are different from those of their students. As stated by Adams and Pente (2011), “This native/immigrant apartheid appeals persuasively to the anxieties of today’s teachers” (p. 248). Subscribing to a theory of why faculty and students engaged differently with technology was somewhat obvious; however, the reality is that both must function in the online classroom, and faculty assumptions about effective online classrooms should be founded in best practices and research. For many faculty, meeting student

expectations was not previously a concern. However, because online courses have removed access barriers, students can take a course from whichever college they want, presuming the college offers the course online. Because of this availability, student expectations are now more important to faculty who are concerned with providing an excellent learning environment for their students. Faculty who choose to ignore student expectations in an online course may find themselves with lower enrollments, as students may have chosen to go elsewhere for a more engaging online experience.

Changing and enhancing courses to better align with best practices and student expectations, whether online or face to face, may be overwhelming for some faculty. Faculty may know their courses need work, but for whatever reason do not take the time to update them. As noted by Fink (2003), “Each year, in the United States alone, more than five hundred thousand college teachers prepare to teach classes” (p. 1), and he challenged faculty to consider how they could change their practices to improve student learning. Successful faculty realize that teaching is a reiterative process of learning, discovery, and adjustment to improve courses over time. As Herman (2012) suggested, approximately one third of all college faculty were teaching in the online environment as this venue continued to grow (p. 87). This is a large percentage of faculty who may or may not have clear ideals of what makes an effective learning environment, and as digital immigrants, they may be slower to adopt new technologies and need additional training to learn these technologies. Prensky (2006) argued that “Teachers needn’t master all the new technologies” (p. 10); however, faculty must understand enough of the technology to be effective and also be confident enough to let students share knowledge on technology within the online classroom. Additionally, faculty must be willing to learn and continually improve their online learning environments. “Effective online learning...is the result of a well-planned

instructional design effort that meets pedagogical needs” (Murray, Perez, Geist, & Hedrick, 2012, p. 127). Good online learning environments do not randomly occur. While there are occasions where the charismatic “absent-minded professor” may still be successful in a face to face classroom, this type of approach to online learning is not likely to be successful in the 21st century.

For some faculty, the gap in preparation to teach online and the lack of understanding of how to create an effective online learning environment did not present itself until the faculty member had taught online for at least one semester. As stated in Watkins and Corry (2005), “I learned that semester, however, that it wasn’t that my activities were inappropriate for online coursework, but rather that the techniques and resources I used to prepare for the course had to change in order for the course to be successful” (p. 132). While many faculty learned from their mistakes and worked toward a more effective online learning environment by incrementally improving their courses each semester, some faculty struggle with making these changes on their own.

To further complicate matters, resources for faculty development have decreased significantly in most states. As an example, in 2011, the Minnesota State Colleges and Universities (MnSCU) system, comprising 31 institutions, eliminated their state-wide programs for teaching and learning (Minnesota State Colleges and Universities, n.d.). While some of the MnSCU colleges and universities continue to provide faculty development opportunities, the impetus for change is heavily dependent upon the motivation of individual faculty members. These financial constraints may have had a negative impact on faculty and their efforts to improve their understanding of an effective online learning environment due to a reduction in professional development opportunities. This lack of training impacts course quality and

ultimately impacts students' learning experiences. At a time when constituents are expecting improved quality, faculty may not have easily available opportunities to engage in training that assists them in preparing high quality online courses. Even so, faculty have a responsibility for their own growth and development, regardless of external resources and support. Whether or not faculty have the tools, time, and expertise to move forward is highly dependent upon the individual faculty member and the institution for which they teach.

Many factors have impacted how successfully faculty have been able to navigate changes in online education. The rapid changes in technology, the newness of the medium, and the exponential growth in online learning opportunities have outpaced the knowledge, training, and research done in this area. In some cases, by the time a research study was published, the technology or pedagogy researched in the study was replaced by something new. It was nearly impossible for relevant research to get ahead of the curve regarding online learning environments. This impeded faculty because many felt they were chasing an uncatchable movement.

With these dynamics in mind, more research was needed to review a specific area of online education, that of student and faculty expectations of an effective online learning environment. In this study, statistical historical data of student ratings of online teaching methods at a specific community and technical college in Minnesota were reviewed and student perceptions of effective online learning environments were extrapolated from that data. Additionally, faculty who taught during that time frame were surveyed using the same instrument to see if their perceptions aligned with those of students.

Problem Statement

The problem addressed in this study was whether or not faculty and student perceptions of an effective online learning environment were aligned. Much had been written on how faculty members have created solid online courses, and national quality initiatives, such as Quality Matters™, have focused on creating quality online courses by offering research-based rubrics for faculty to use in online course creation or redesign. However, little research has examined student perceptions of an online learning environment, and in the current educational climate, the “client’s” opinion matters. If there is a serious disconnect between what faculty and students perceive as an effective online learning environment, then additional research would be needed to address how faculty can create online learning environments that more effectively align with student perceptions to optimize learning.

Purpose of the Research

The purpose of this study was to focus on whether faculty perceptions of an effective online learning environment aligned with student perceptions of an effective online learning environment. An in-depth study of one two-year college’s student online course survey data was conducted. This student data for online learning environments was collected in a consistent format for 11 consecutive years (2005-present). Because of changes in the online environment over the past 11 years, only the past three consecutive years (2012-2015) of this quantitative data was used to review student perceptions of effective online learning environments. Additionally, one year of student commentary from the surveys (qualitative data) was coded and analyzed. A separate data set from a survey of online faculty who taught during this time frame within the same two-year college was also reviewed to determine faculty alignment with what students identified as elements of an effective online learning environments.

Sample

The student research sample was pulled from Minnesota West Community & Technical College (Minnesota West) students who had been given the opportunity to complete the Individual Development and Educational Assessment (IDEA) Student Ratings of Instruction survey. The sample included only those online courses that had 15 or more students. Minnesota West has collected student data using the IDEA survey since 2005. Three years of this data was used for analysis in this study (2012-3, 2013-4, 2014-5 academic years). As an example of the sample size, for Fall 2013 semester, 113 courses were surveyed at Minnesota West. Because each course had at least 15 students, this provided a sizeable sample each semester for the student data. The survey was voluntary; students were not required to complete the survey, and it was anonymous.

The faculty survey was given to adjunct, part-time, and full-time faculty who had or were currently teaching online for Minnesota West. Participants were assured of confidentiality and their responses were voluntary. No personal information, including names or course identifying information, was collected from participants.

Permission to use the data from the student IDEA surveys and to survey faculty was gained from the President's Cabinet at Minnesota West.

Research Question

Were faculty and student perceptions of an effective online learning environment in alignment?

Hypothesis 1. The defined attributes of an effective online learning environment differed between students and faculty.

Hypothesis 2: The defined attributes of an effective online learning environment were the same between students and faculty.

Significance of the Research

Very few two-year colleges have an extensive, longitudinal data set using the same instrument. This data is useful to share with faculty within Minnesota West Community & Technical College, as well as the rest of the schools within the Minnesota State Colleges and Universities (MnSCU) system, which included 24 technical and community colleges. In addition, any disconnects between what faculty defined as effective and what students defined as effective online learning environments is of interest to faculty and administration on a broader scale. Feedback is an integral part of quality improvement, and this data was direct feedback from the constituents (students). By better understanding student perceptions of an effective online learning environment, faculty can enhance their online courses, better aligning their defined attributes with those identified by students. This research also provided data that can be used by faculty, instructional designers, professional development coordinators, and college administration to provide appropriate professional development opportunities for online faculty.

Limitations

This study was limited to freshman and sophomore online students who attended Minnesota West Community & Technical College between 2011-2015, and to online faculty who were currently teaching or who taught at Minnesota West between 2011-2015. The study was also limited in that the surveys were voluntary, which affects the generalizability of the results. For the archival student data, response rates were at least 50% for all of the semesters reviewed in the 2011-2015 academic years. For the faculty survey, the response rate was 33%.

Definition of Key Terms

IDEA. Individual Development and Educational Assessment.

Digital immigrant. Someone who was born before the advent of pervasive technology.

Digital native. Someone who was born after the advent of pervasive technology.

Learning management system (LMS). Software, usually web-based, used to deliver education at a distance.

Minnesota West. Abbreviation for Minnesota West Community and Technical College.

MnSCU. Abbreviation for Minnesota State Colleges and Universities.

Chapter II

Review of the Literature

This chapter aggregates the review of the literature on faculty and student expectations of an effective online learning environment. This chapter is organized into four main areas: online faculty perceptions of an effective online learning environment, student expectations of an effective online learning environment, online faculty development, and online course design and redesign.

Online Faculty Perceptions of an Effective Online Learning Environment

Online education is no longer considered a fad, and most college faculty are aware that this teaching medium is here to stay. The growth of the online market in higher education has steadily increased since learning management systems made teaching and learning online more mainstream (Wolff, Wood-Kustanowitz, & Ashkenazi, 2014; Wyss, Freedman, & Siebert, 2014). As noted by Slimp (2014), since the turn of the millennium, increased enrollment in online courses has been the primary reason for overall expansion at American colleges (p. 1). This increase in enrollment led to more faculty being asked to or being required to teach in online classrooms.

In particular, community colleges, often with missions of access and affordability, have embraced this option for delivering education (Slimp, 2014, p. 2). Slimp (2014) also discussed how community colleges have integrated online education into their academic plans, and for many, this was not a new idea, but rather a continuation of distance learning started in the 1970s (p. 4, 13). “The Integrated Postsecondary Data System (IPEDS) 2012 Report showed that more than a quarter of all two-year students were taking at least one distance class and that about one

in ten students were learning exclusively online” (Sлимп, 2014, pp. 2-3). Online education has disrupted the educational arena, and returning to offering classes only in the traditional sense, in classrooms lined with desks and chairs, at defined times and in defined places, is unlikely, if not impossible. If anything, online learning is the gateway to further changes in higher education, including new ways to increase revenue, if not reduce costs (Marcum, 2014, pp. 6,10). The online classroom is in its infancy, and in many cases, faculty are learning as they teach in this new medium.

Readily accessible Internet access, increased bandwidth, even for rural areas, and increased demands for access to education has prompted widespread growth in online course offerings (Keramidas, 2012, p. 25). More Americans have access to online courses, with growth occurring each year. As noted by Marcum (2014), by 2012, nearly 70 percent of American adults had Internet access (p. 2). This increased availability in Internet access, coupled with the mobile device explosion, makes online learning available to most adults in the United States (Marcum, 2014, pp. 2-3). The availability of online courses is even more appreciated by those in rural areas, who may not have ready access to education (Keramidas, 2012, p. 26). This access, now available to most people, changed higher education in ways that will never be reversed. Keramidas (2012) stated that by 2010, over 4.6 million people, about 25% of college students, were enrolled in a course offered via the Internet (p. 25). These online courses changed how institutions of higher learning offered classes, often reducing their on campus course offerings in the process, as classes were made available in anytime, anywhere formats. This idea, of creating courses and delivering them directly to individual students, wherever they are located and in some instances, at the time the student wanted, forever changed the traditional education landscape (Marcum, 2014, p. 1).

There is little disagreement that the traditional classroom and the online classroom are not the same, nor is there agreement that faculty can always easily transition from one format to the other. Online teaching is often seen as more student-centered, as opposed to the traditional classroom, which generally has a more sage on the stage format, but this was not always the case. This shift in pedagogy was difficult for faculty who, while they may have desired to teach online, had preconceived ideas about their teaching methods and how that would transfer to the online learning environment. Even so, as McQuiggan (2012) stated, “It must be noted that classroom teaching is not always teacher-centered and online teaching is not always student-centered; this is a false dichotomy. In fact, in some cases faculty simply put their lectures online and call it online teaching” (p. 32). Some faculty perceived that shifting a face to face course *en toto* to the online medium was an acceptable way to build an online classroom.

Even experienced classroom-based faculty may not fully understand the requirements of an online classroom. Many faculty members became online faculty because of a need at their institution or a change in the student population at their institution. “The early adopters demonstrated all the best qualities of technology teaching pioneers: curiosity, flexibility, and dedication to innovative learning” (Riedinger & Rosenberg, 2006, p. 33). Even so, some faculty may not have wanted to become online instructors. Prensky (2006) challenged faculty to take the lead on learning to teach in a new medium, not simply do things the same old way (p. 9). While the life of an educator is filled with pressing needs, often exceeding what can be done in a typical 40 hours per week schedule, Prensky challenged educators to focus more on students and what helped them learn, particularly in the online environment. He challenged administrators to be more selective when choosing which faculty should teach online, looking more at interpersonal skills and teaching styles, rather than just their subject-matter knowledge (Prensky, 2006, p. 10),

which was a shift from hiring practices of traditional academia. The movement from sage on the stage to guide on the side is not always fluid or possible for all faculty.

Some faculty perceived teaching online as easier, but as Herman (2012) suggested, the reality was that they often had additional challenges that they did not anticipate (p. 90). Others were intrigued by the idea of teaching anywhere at any time, perhaps considering that this would provide a more flexible schedule, and without thinking about what was involved in teaching in this medium. However, teaching online involves additional skill sets above and beyond those needed for teaching on campus, and utilizing technology and online learning management systems could have been a larger impediment than some faculty realized, which in turn limited their innovation (Heirdsfield, Walker, Tambyah, & Beutel, 2011, p. 2). This resulted in ineffective online classrooms which contained links to PowerPoints and little else from which the student could garner information. Though faculty were familiar with PowerPoint and similar presentation software, Adams and Pente (2011) mentioned that relying too heavily on presentation software such as PowerPoint negated the teaching effectiveness of content presentation (p. 252). Letting the technology drive instruction also inhibited online faculty, restricting how information was shared with students and limiting how students learned from course content. Providing presentation materials distributed by textbook publishers could be even more detrimental to student learning, as students who were given the publisher notes for each chapter seemed to avoid reading the chapter at all, since the notes were provided. Course content and the presentation of the material had direct impact on student learning (Otto, Sanford, & Ross, 2008, p. 357).

Whatever perceptions these faculty have about online learning and the online learning environment colors their approach to course creation in this medium. "Faculty's initial teaching

model is typically born from that of their own teachers, and they teach as they were taught; however, few have any online experience as a student or a teacher” (McQuiggan, 2012, p. 27). For colleges and universities that are trying to strengthen or increase their online programs, these perceptions, positive or negative, have an impact on the success of these programs, and ultimately on the success of the students in these programs. Herman (2012) noted that often, faculty who hadn’t taught online and suddenly found themselves being asked to do so had a negative perception of online courses in general, and especially if the faculty did not feel they had received the appropriate training to teach online. As noted by Delaney-Klinger et al (2014), faculty without a background in online teaching or online learning were at a disadvantage and did not have the tools required to effectively teach in this medium, and this had a negative impact on their students (p. 47). Even though some of these faculty were interested in teaching online, they lacked the skills and background needed to ensure a successful experience. Those faculty with negative perceptions of online learning may have had experiences that reinforced these observations. “Moving to online teaching provides a new way of seeing practice, and often becomes a disorienting dilemma” (McQuiggan, 2012, p. 56). Faculty who had adverse experiences may have become more vocal in their deleterious opinions about online learning, which also hampered an institution’s overall online presence. Conversely, faculty who had affirmative interactions with online teaching and student learning positively impacted an institution’s movement into the world of online education.

The online learning experience has matured in the new millennium, both in pedagogy and technology. Educators share best practices for optimal student learning and institutions strive to provide quality online courses (Bailie, 2014, p. 1; Delaney-Klinger, Vanevenhoven, Wagner, & Chenoweth, 2014, p. 45). Professional organizations and user groups give faculty additional

avenues for sharing what worked for both students and for faculty. “The demands for online learning options at all levels continue to increase the educators’ struggle to find the balance between the growing demand, the changing interface of online delivery, and best practices for optimal learning outcomes” (Wyss, Freedman, & Siebert, 2014, p. 99). For many, trying to stay current is a battle. In some cases, faculty are using online coursework that was a decade or more old, and these courses have not kept up with the possibilities now available in the online learning environment. As noted by Deggs, Grover, and Kacirek (2010), faculty’s perceptions of their effectiveness in an online class are challenged by students, particularly if the faculty does not engage the students in discussion, or if they are slow in providing timely and relevant feedback (p. 698).

Early adopters of online teaching were often faculty who were intrigued and excited to try a new medium. Some of these faculty developed quality online instruction, while others tried to teach a face to face course in a new and different medium with limited success. As Ragan et al (2012) stated, “The transition by instructors from a face-to-face format to the online classroom requires careful adaptation of a wide variety of skills and competencies” (p. 84). In online courses, the “classroom” is continually changing. Even though there are differences in teaching online, faculty should be focused on solid teaching methodology and pedagogy. Fink (2003) reminded faculty to stay attentive to providing “significant learning experiences” (p. 6) when designing courses. Wiggins and McTighe, in *Understanding by Design* (2005), described a process of starting with the end in mind, with a central question of “How do we make it more likely – by our design – that more students really understand what they are asked to learn” (p. 4)?

Palloff and Pratt (2001) recognized early on that it was the faculty and their teaching pedagogy that determined the success of a course. While technology is an important component

of an online course, the faculty and how the course is constructed have more impact on student success. Ko (2010) asserted that many components of online courses were developed in a similar way as they were for face to face courses. Course objectives were determined, syllabi were created, and assessments were developed. “Where the online course differs is in technique and in discovering the new teaching and learning opportunities afforded by the new online environment” (Ko, 2010, p. 12). While the baseline components of an effective classroom are similar, the delivery and interaction in an online course differs from a traditional course and classroom.

Faculty perceptions about communication in the online classroom varied from setting up a course that was essentially a correspondence course, with limited student to student or student to instructor interaction, to a fully integrated series of communications that showcased a faculty’s presence within the course (Deggs, Grover, & Kacirek, 2010, p. 694; Sims, 2003, p. 99).

Mupinga, Nora, and Yaw (2006) suggested that even more so than in a traditional classroom, faculty who taught online needed to not only understand the online learning environment, but also the student learning styles, needs, and expectations (p. 185). “Student characteristics are important variables to consider when analyzing the learning benefits of new teaching approaches or new learning environments” (Pena-Shaff, Altman, & Stephenson, 2005, p. 410).

Understanding student learning styles is important for faculty in any classroom environment, but this may be even more important for online faculty. It may be difficult, if not impossible, for online faculty to see whether or not teaching methods work with students in an online classroom, due to the lack of direct visual contact with the learner. A broad understanding of pedagogy and student learning styles is a must. “No particular learning styles were found to be predominant among the online students; hence, the design of online learning activities should strive to

accommodate multiple learning styles” (Mupinga, Nora, & Yaw, 2006, p. 188). Mupinga et al (2006) also discussed that faculty with an awareness of student needs and learning styles would be more prepared to assist their students in an online classroom.

Faculty feedback, including answering of student questions and assessment, are important components of the online classroom. Faculty may not have had students raising hands within the online classroom, but they had multitudes of emails with student questions or discussion forums with unread messages. These students may have been awaiting immediate responses, regardless of the day or time. Faculty may have considered structuring their course in ways that promoted cooperative and collaborative learning to address this 24 x 7 expectation (Sims, 2003, p. 89). Sims (2003) also stated that faculty who had effectively made the shift to online teaching embraced the idea that student to student interaction was an effective transfer of knowledge and contributed to learning (p. 88).

Student Expectations of an Effective Online Learning Environment

Though online classrooms are relatively new, research is beginning to surface on student expectations and experiences in online courses (Paechter, Maier, & Macher, 2010, p. 222; Bailie, 2014, p. 1). While some question the rigor of online courses and online learning in general, students have high expectations of this learning medium (Keramidas, 2012, p. 26). Students take online courses for many reasons, including flexibility of access. In the early days of online learning, some erroneously considered online courses, the content and assessment, to be easier than the face to face equivalent course, though studies have not found this to be the case (Keramidas, 2012, p. 26). This misconception was generally found in the ranks of academia, not in the minds of students. “Students expected to enroll in the online degree program and to have an experience that was personally rewarding and which also allowed them to apply and test what

they learned in real world settings” (Deggs, Grover, & Kacirek, 2010, p. 697). Students desire flexible learning opportunities for many reasons, as they may have full time jobs or live at a distance from the institution, and online education has opened access to learning in new ways for these individuals.

Today’s traditional college students, who are 18 to 22 years of age, are considered digital natives, and they came of age with technology being available to them since birth. These students have high expectations of technology and beliefs about its use in the classroom. Faculty who ban technology or refuse to use technology to communicate with students run the risk of being seen as Luddites, or even discredited as subject matter experts. Students and faculty do not always communicate in the same medium. Weiss and Hanson-Baldauf (2008) and Prensky (2006) discussed the need for faculty to move into the same communication realm as students. “The single biggest problem facing education today is that our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language” (Weiss & Hanson-Baldauf, 2008, p. 42). While each generation bemoans the changes in the upcoming generation, the fact remains that people change, and technology has tremendously accelerated the pace of change.

Students’ communication styles have also changed in the last generation. Students previously stopped by a faculty office with a question, but this is not the preferred mode of communication in recent years. Millennials live through technology, and in particular, through their smart phones. This was not familiar to faculty, and this new plugged in generation had different ways of connecting (Adams & Pente, 2011, pp. 248-9). Faculty commented that students do not stop by during office hours, and that faculty email boxes are full and they can’t possibly keep up. However, today’s student argues that expecting students to stop by the office

to talk is an unreasonable expectation. These students utilize email and their smart phones daily as their communication tool, and they may not seek in person meetings with their instructors (Weiss & Hanson-Baldauf, 2008, p. 48). Even so, as Deggs, Grover, & Kacirek (2010) suggested, online students are capable of engaging in meaningful relationships with faculty, in some cases more so than those students who saw them in a traditional classroom (p. 694).

Technology is an essential tool for the current generation, and students often consider it as an integral part of their existence. “Only when the Bluetooth connection is lost, or the battery dies in his controller, does he suddenly awaken to the headset or controller as obvious, present-at-hand objects” (Adams & Pente, 2011, p. 250). When technology stops working is when students take notice, and this is not a positive experience for them, but rather a nuisance. Students are immersed in technology, often not realizing they are even using it, until it quits working. Classroom-based faculty generally see technology as a workplace tool, a distraction, or a fun gadget. Even so, faculty must at least be somewhat familiar with current technologies being used by their students (Garces-Ozanne & Sullivan, 2014, p. 97). “Online learning now operates in an environment that a demanding and increasingly sophisticated consumer base is pursuing” (Bailie, 2014, p. 4). Adams and Pente (2011) mentioned that faculty must also factor in this technology mindset as they create materials for today’s digitally savvy and digitally-tethered students (p. 254).

Today’s students are different in other ways as well, and Prensky (2006) challenged faculty and administration to listen to their students more closely and outlined the risks of not doing so (p. 13). Students, whether traditional or nontraditional, are often no longer full-time students, especially those students in online courses at community colleges. “The students respect professors who realize that many online students are citizen-students; that is, full-time

employees, parents, and spouses, with additional student responsibilities” (Mupinga, Nora, & Yaw, 2006, p. 187). Prensky (2006) also challenged educators to listen, as students are now empowered in ways not previously known, and students speak up for themselves, rather than relying on their parents to do so, as generations past have done. In 2014, Bailie stated:

While the metaphor ‘student as consumer’ has been a topic of debate in the higher education community for decades, today’s institutions of higher learning seem to increasingly recognize the value of being responsive to the constituents they serve by exhibiting more of a focus on meeting the expectations of their student clientele (pg. 1).

Sites such as RateMyProfessor.com and social media such as Facebook and Twitter have also changed the playing field in terms of student expression of perceived course quality, and this also applies to online instructors and their courses. Opinions vary on the efficacy of using student evaluations as part of faculty evaluation cycles. “Although student evaluations tend to encompass a significant measure of how faculty effectiveness is viewed, their validity has been nonetheless challenged as a useful method for evaluating teaching excellence” (Bailie, 2014, p. 1). Otto, Sanford, and Ross (2008) noted that student feedback impacted other students and how they chose their courses, and this impacted academic assignment (p. 355).

Student perceptions of faculty and course quality have been the objects of relatively few studies, but baseline quality expectations are beginning to take form (Brinkerhoff & Koroghlanian, 2007, p. 384). According to Mupinga et al (2006), students have specific expectations about their interaction with faculty, timely and relevant feedback, and course rigor (p. 186). Additionally, Mupinga et al (2006) noted that students spoke to wanting specific information on assignments, detailed grading rubrics, and clear instructions (p. 187). “Just over

70 percent of students consider good communication to be the most important lecturer attribute, whereas 21.43 percent think that being organized is the most important attribute” (Garces-Ozanne & Sullivan, 2014, p. 94). Faculty in academia must consider student expectations, though this is a fundamental shift in teaching pedagogy from previous generations. In the recent educational marketplace, student learning and attainment of objectives are measures of effectiveness. Incongruities between what a student expects and the course delivery could affect student achievement (Brinkerhoff & Koroghlanian, 2007, p. 383). While the lecture method may have worked a generation ago, the sage on the stage concept does not transfer well to online learning, especially with an online classroom full of digital-savvy students.

Student expectations and assumptions may be colored by their generational tendencies. Traditional students, known as Millennials or Generation Y, may not have realistic expectations about their abilities and their achievements (Garces-Ozanne & Sullivan, 2014, pp. 79, 96). Student goals and whether or not they met these goals also factored into student satisfaction with the online experience. “Achievement goals proved to be more important than other course characteristics, e.g., the design of the learning material or the user friendliness of the learning platform” (Paechter, Maier, & Macher, 2010, p. 227). Garces-Ozanne and Sullivan (2014) discussed that though student goals, particularly if grade related, impacted student satisfaction, students did not always have realistic expectations regarding their test scores or final grades (p. 88). Additionally, Garces-Ozanne and Sullivan (2014) discussed that sometimes the disconnect in student performance, which resulted in a grade outside of student expectations, could also negatively impact student ratings of faculty and instruction, even though it may have been the student performance, and not the course design or teaching strategies, that resulted in a lower grade (p. 97). As noted by Bailie (2014), colleges and universities understand the competition

for tuition dollars and have become more aware of how student satisfaction impacted enrollments (p. 1). This disconnect has financial implications for the college, as certain sections may not have full enrollments.

Student ideals for an effective online course may not be based in research; however, their perceptions and attitudes still impact their satisfaction. “What students bring to the teaching-learning process affects their participation, interactions, and perceptions about the possible learning outcomes of a course” (Pena-Shaff, Altman, & Stephenson, 2005, p. 412). Though students may not have data-centered concepts in mind when they approach their learning, they still have expectations about what an effective online course entails. These students also have expectations about how they would do in online courses, and sometimes thought their abilities outweighed their actual performance. “Students, like many from Generation Y, often make confident but also false predictions about their ability, but as reality sets in, they modify their behaviour accordingly and set more reasonable, realistic expectations to achieve their desired goals” (Garces-Ozanne & Sullivan, 2014, p. 78). How faculty approached feedback and assessment for these students was a critical component to student’s assessment of their abilities and approach to learning, and rubrics were an important part of this evaluation cycle (Wyss, Freedman, & Siebert, 2014, pp. 100, 105). Otto, Sanford, and Ross (2008) discussed the relevance of student satisfaction to student learning outcomes, and encouraged faculty to focus on learning rather than student satisfaction (p. 356).

Instructor engagement and feedback are critical to student learning and mastery as well as course satisfaction (Paechter, Maier, & Macher, 2010, p. 227). As a student noted in a study done by Deggs et al (2010), “The longer I waited for feedback, I would lose motivation and confidence to proceed with the next assignment. On the flipside, the more immediate the

responses, the more willing and motivated I felt to push ahead with course material” (p. 696).

Timely and relevant feedback is seen as a critical component of effective learning in an online classroom.

Student to student interaction, as well as student to faculty interaction, are expectations in online courses. “When there is an emphasis on interactive writing in this type of course, students are allowed to take their time with written responses, complete their ideas and thoughts in their writing, and have a specific audience to target their responses” (Wyss, Freedman, & Siebert, 2014, p. 99). Students could not be wallflowers and avoid participation in the online discussion, though it was very common for students in traditional classrooms to be present but not active. Online discussion forums engaged students and assisted them with using written communication as a way to come to understand the material (Wyss, Freedman, & Siebert, 2014, p. 99). “Full participation in online discussions, regardless of attitudes or expectations, resulted in more increased activity, lessening of anxieties, increased comfort level, and increased competence” (Pena-Shaff, Altman, & Stephenson, 2005, p. 420). Wyss et al (2014) and Slimp (2014) examined how detailed rubrics for discussions also aided in the student understanding of the topic, the depth of student writing, and the rigor of the discussion (Wyss, Freedman & Siebert, p. 106; Slimp, 2014, p. 8).

Instructor involvement with students, as well as their observed helpfulness and organization of content, contributed to student learning (Otto, Sanford, & Ross, 2008, p. 357). Engagement and involvement were seen as important, regardless of whether these were undergraduate or graduate students. Students in graduate school have specific ideals about online learning. “Those themes included expectations about learning outcomes, expectations of faculty related to teaching, and expectations related to support systems offered by the university”

(Deggs, Grover, & Kacirek, 2010, p. 691). Deggs et al (2010) also noted that the graduate students also expected faculty to have appropriate communication response times and adequate staff support (p. 697).

Student expectations, their achievement, and their overall satisfaction with their online learning experience also affects retention. “If online regionally, nationally, or globally distributed instruction is to meet student expectations while supporting learning goals, an understanding of factors related to student success and retention is necessary” (Brinkerhoff & Koroghlanian, 2007, p. 391). Brinkerhoff and Koroghlanian (2007) also noted that one way to gauge student satisfaction, as well as identify any course design issues that may impact student learning, was to offer student surveys to gather feedback on course layout and effectiveness (p. 391). Fetzner (2013) surveyed students who had dropped out of online courses to gather data on why these students felt they were unsuccessful. One third of these students stated they would not take another online course (p. 16). Some critics of online instruction pointed to lower retention rates for online courses versus on campus retention; however, other institutions did not see this same discrepancy in retention rates (Fetzner, 2013, p. 14). At Monroe Community College, where Fetzner (2013) completed a study, retention rates were five to ten percent lower for online courses (p. 15).

Online Faculty Development

Very few academics would dispute the efficacy of professional development on the quality of courses, particularly if the faculty are engaged and committed to improving their teaching methodologies. The impact of professional development on course quality is positive regardless of the medium. For online faculty, additional factors impact their courses’ effectiveness. Administrators understood that training and support for faculty who were teaching

online was critical (Riedinger & Rosenberg, 2006, p. 33; McQuiggan, 2012, p. 28). “As online instruction becomes exponentially more prolific at colleges and universities nationwide, so does the variety of faculty development programs designed to prepare faculty for this new teaching environment” (Herman, 2012, p. 92). Riedinger and Rosenberg (2006) discussed that new online faculty needed additional resources, support, and feedback to hone their online teaching skills and ensure their courses were effective (p. 32). The sheer volume of time needed to create a quality online course may have influenced some faculty away from teaching in this medium. While development of any college course takes time, online courses are even more time consuming with faculty spending tens if not hundreds of hours of additional work (Delaney-Klinger, Vanevenhoven, Wagner, & Chenoweth, 2014, p. 47).

Online courses are often developed similarly to traditional courses, in that faculty work independently. “In many institutions of higher education, course development has traditionally been the responsibility and privilege of individual faculty members” (Hixon et al, 2012, p. 103). Intellectual property and academic freedom are hallmarks of independent faculty. Koehler et. al. (2004) suggested that the traditional workshops, technical support groups, and keeping content and mechanical production separate by tasks (content by faculty and technical production by IT staff), did not work effectively. Faculty did not learn the technical skills to be self-sufficient, and IT staff did not sufficiently understand pedagogy, which resulted in a disconnect (p. 31). Training faculty in both pedagogy and technical skills should be partnered with assigning mentors and formal feedback cycles (Riedinger & Rosenberg, 2006, p. 35).

Others have argued that for online courses, a more collaborative model is an effective way to assist faculty who are learning how to create a quality online course. Hixon et al (2012) stated that “many institutions are utilizing more collaborative training and support models to aid

faculty in overcoming these challenges to develop high-quality courses” (p. 103). Ragan et al (2012) also stated that the use of collaborative teams (faculty and instructional designers) was commonplace in the early development of online courses, from 1998-2005 (p. 76). “A simplistic (and no doubt less labor-intensive) solution would have been the development of course templates by ‘content experts’ and instructional designers. But neither faculty nor staff was interested in creating cookie-cutter courses” (Riedinger & Rosenberg, 2006, p. 34). Xu and Morris (2007) and Luck (2001) discussed faculty development teams that developed online courses. In this team approach, faculty worked with instructional designers and a project coordinator to develop the online course. These authors reinforced the idea that both content experts and technical experts were needed to create a quality online course.

Whether faculty are developing courses alone or as part of a team may not matter as much as the medium in which they are teaching. Others argue that learning management systems inherently increase the value of an online course by providing a framework that allow faculty to build a quality course. Christie and Jurado (2009) argued that faculty do not fully utilize the learning management tools (p. 273), nor do faculty have the time, resources, or motivation to fully learn how to use these learning management tools (p. 276). As a result, faculty often used the rudimentary tools at a basic level, not integrating the system to its full potential (Christie & Jurado, 2009, p. 277). Brinkerhoff and Koroghlianian (2007) noted that faculty should select online tools for both teaching and learning purposes because students expected to use these tools (p. 387).

Additional expertise was needed in the technical arena for teaching online, and many noted this differentiation. Ragan (2011) stated

The preparation of an online course is intense and complicated. In addition to the usual work of updating and revising course content and syllabi, the technical aspect of modifying course content so it can be read, accessed, and linked to electronic sources is daunting for a novice (p. 93).

Very few established faculty have inherent technical skills that transfer to teaching online (Benton C. , 2011, p. 94). This lack, perceived or real, led to anxiety and frustration for faculty.

However, those faculty who are just entering the faculty ranks may already be technology savvy if they are digital natives, rather than digital immigrants. These younger faculty may have taken online courses and come to online teaching with helpful background knowledge (Hixon et al, 2012, p. 102). While Adams and Pente (2001) listed one of the reasons why online courses needed additional faculty development time was due to learning management systems, which have been many and varied over the past 20 years (p. 251), younger faculty may have more experience using these online management systems. Regardless of faculty age, and just as students must get used to new teaching and learning environments, faculty must also take time to learn this medium and adopt appropriate teaching styles (Pena-Shaff, Altman, & Stephenson, 2005, p. 424; McQuiggan, 2012, p. 29). Koehler (2004) stated that “Quality teaching requires developing a nuanced understanding of the complex relationships between technology, content, and pedagogy and using this understanding to develop appropriate, context specific strategies and representations” (p. 31). Irlbeck (2008) determined that teaching practices should be based on student learning and outcomes, rather than on the technology or learning management system (p. 25). Because learning management systems are changing rapidly, faculty have to be cognizant of how these systems and tools within these systems affected students (Heirdsfield, Walker, Tambyah, & Beutel, 2011, p. 1).

Whether faculty have technical skills at the onset does not solely determine an effective online learning environment. Hixon (2012) reminded faculty that technical skills were only one prerequisite for teaching online (p. 103). Some argued that there were other skills more determinate of online success. “Instructors need a high degree of didactic expertise in the implementation of an online course. Yet, not all instructors are sufficiently skilled in the implementation of e-learning as indicated by students’ assessment” (Paechter, Maier, & Macher, 2010, p. 228). Ragan (2011) agreed that successful online faculty must have multiple characteristics (p. 74-5). Instructors who taught well in the online format did so in a way that made technology invisible to the students (Riedinger & Rosenberg, 2006, p. 34).

To develop the understanding of these related concepts, timely professional development is critical. Vaill (2012) stated, “A quality professional development experience can help faculty enter the online classroom with the skills, experience, and confidence they need to provide students with a valuable learning experience” (p. 111). Vaill (2012) also claimed that colleges and universities have an obligation to provide quality online courses, and that it was critical that these institutions offer professional development to their online faculty in order to create these quality environments (p. 117). Through professional development, faculty gained the skills and knowledge needed to be successful in their online classrooms. Having instructors set specific, targeted goals and deadlines in these professional development opportunities lead to increased productivity and completion (Hixon et al, 2012, p. 104). “Quality must delicately balance the expectations of the academic discipline, students, faculty, and accrediting agencies” (Slimp, 2014, p. 8). While professional development opportunities are more prevalent now than in the early years of online teaching, Ko (2010) asserted that there is still not a coordinated professional development program for online faculty at most institutions (p. 16). As noted by Herman (2012),

accrediting bodies stated that colleges and universities should provide faculty development and support, but there are not specific standards on how this should be achieved (p. 87).

Organizations such as Quality Matters™, which began as a grant project of MarylandOnline and was funded by the Fund for the Improvement of Postsecondary Education (FIPSE), have grown as a way to provide faculty support since the advent of online instruction. Quality Matters™ provides professional development opportunities through a research-based rubric and a certification process. Faculty put their courses through a peer review to obtain Quality Matters™ certification. “Quality Matters™ focuses on course design with the goal of course improvement, and is part of a faculty-driven, peer-review process of existing online courses” (Herman, 2012, p. 95). The Quality Matters™ (QM) initiatives continued to expand across the nation and internationally, with 10 courses being certified in 2006, to 1005 courses being certified in 2013 (Quality Matters, 2014). Some institutions are implementing QM locally and using the process to improve course quality and provide mentoring amongst faculty members. Hixon et al (2012) stated that in the Distance Education Mentoring Program, “faculty members who have been through the QM certification process and have online teaching experience serve as mentors” (p. 103). Obtaining this type of certification helps faculty feel confident in their ability to teach effectively in the online classroom.

Online Course Design and Redesign

As faculty design new online courses or as they redesign current offerings, both faculty expectations and student expectations of an effective online learning environment should be considered. Both sets of expectations are relevant to creating a positive teaching and learning experience. “A superior experience (influenced by faculty) can result in a superior learning outcome (produced by learners)” (Irlbeck, 2008, p. 26). To only consider the faculty

expectations, or to focus solely on student expectations, creates an imbalance in the effectiveness of the online classroom.

As noted previously, designing an online course is not simply transferring materials from a face to face course into a learning management system, though as noted by Benton (2011), it is critical that online programs and on campus programs have a degree of comparison. Rigor and standards should be consistent, even though the medium is different. The difficulty for faculty is in the use of technology as a teaching medium, as a marriage of technology and pedagogy was not simple (Koehler et al, 2004, p. 26). Though difficult to master, Riedinger and Rosenberg (2006) saw this combination of technology and pedagogy as a framework in which faculty could examine their teaching premises and approaches (p. 39).

When redesigning a course for the online environment, faculty often reconsider how they presented materials in the past and rely on personal experiences, peers, and training opportunities to assist them in this revision and redesign process.

With the best practices to provide a framework, an effective faculty member will strive to maintain the faculty-learner relationship, find ways to help the learning process be successful, assess the learning, and continue to build professional expertise for both the faculty and the learner (Irlbeck, 2008, p. 28).

Irlbeck (2008) also encouraged faculty to not “reinvent the wheel” (p. 27) but to review practices and utilize those ideas that worked best with their learners. Creating an effective online learning environment is an intricate balance of coursework, course set up, learning motivation, and learner aptitude, as well as other factors. Seemingly small changes in course design have a positive impact on students and their learning, and understanding student needs and desires made

the experience better for both faculty and students (Garces-Ozanne & Sullivan, 2014, pp. 99-100; Paechter, Maier, & Macher, 2010, p. 223).

In addition to reading about best practices, faculty should pursue professional development opportunities as they design and redesign online courses. Hundreds of courses for faculty exist on how to develop online coursework, and while these courses vary in quality and depth, most faculty found something useful for when they are moving their own courses to an online learning environment. “We saw a marked, sometimes dramatic, improvement in the courses of many of the instructors who successfully completed the course, based on our team course evaluations, which identified better course design, course management, and communications with students” (Riedinger & Rosenberg, 2006, p. 39). Faculty who learned, applied, and then evaluated their work saw an improvement in their online course quality.

Summary

Online learning is not going away, and the medium is likely to continue evolving as technology changes and enables new ways of communicating and interacting with students. Faculty are also evolving and enhancing their skills in this environment. Exceptional online faculty understand the differences inherent in the traditional face to face classroom and the online learning environment, successfully making the shift from sage on the stage to guide on the side. Whether faculty are more experienced digital immigrants or younger digital natives, understanding their students, learning the technologies, and teaching in the online learning environment can be engaging and rewarding. Faculty who embraced this medium, honed their pedagogy, and focused on student learning set the expectations for quality courses. Engaged faculty who are passionate about their work, have a positive outlook, provide timely and relevant feedback, and are focused on student success are the cornerstones of quality online courses.

Current students, many of whom are digital natives, expect to have flexible learning options. Access to education at any time and any place is important to these students, and while they may not always have wanted to be in an online classroom, they still expect a high quality educational experience. Students in the new millennium communicate differently than their parents' generation, and they use technology inherently in their daily lives. Students are part of a consumer culture, and as such, have expectations of education and faculty that were not prevalent in the previous generation. These generational differences play into student expectations and often cause faculty frustration with student self-awareness and abilities. Students expect timely and relevant feedback from instructors, clear directions, rigorous assignments, and rubrics to clarify instructions and assessment. Students also expect that they will be interacting with their instructor and classmates in the online environment.

To support quality online courses, administration understands the need for faculty development. While the development of online courses is similar in scope, sequence, rigor, and breadth, the medium for teaching is often quite different for those who had only taught in a traditional classroom. Online faculty need additional technical skills and support systems, and factors such as whether they are developing courses independently, as part of a cohort, or with an instructional designer, may have an impact on final course quality. Technical skills are not the only prerequisite for successful online course development; often, faculty approach, pedagogy, and level of engagement play an even larger role in development of a quality online course. Nationally-normed development opportunities, such as Quality Matters™, also provide faculty with ways to engage with experts when designing online courses.

Exceptional online learning environments do not just happen. Faculty have to consider many things when designing their online course or moving a face to face course to the online

environment. Student expectations should be considered in course development. Teaching online offers new frontiers to master teachers, who utilize technology to reach more students than they had previously. Continuing professional development is an avenue for pursuing excellence in the online arena.

Very few two-year colleges have an extensive data set using the same instrument, and the extended data set used for this study is unique in that regard. This data from this research could be useful in sharing with faculty across the Minnesota State Colleges and Universities system, particularly any disconnects between what faculty define and what students define as effective online learning environments. Feedback is an integral part of quality improvement, and this data is direct feedback from the constituents (students). By better understanding student expectations of an effective online learning environment, faculty can enhance their online courses, better aligning their defined attributes with those attributes identified by students. This research also provides data that can be used by faculty, instructional designers, professional development coordinators, and college administration to offer appropriate professional development opportunities for online faculty. Little focus has been given to the comparison of student and faculty perceptions of online learning environment, and this research expands the available information in this field.

Chapter III

Methodology

The purpose of this study was to examine whether faculty perceptions aligned with student perceptions of an effective online learning environment. It was hypothesized that a correlation existed between faculty perceptions and student perceptions of an effective online learning environment. It was also hypothesized that faculty and student perceptions of an effective online learning environment were different as measured by survey results. This research adds to the depth of research done in the relatively new field of online instruction.

Subjects

The subjects were freshman and sophomore students who attended Minnesota West Community & Technical College (Minnesota West), which includes five campuses in southwestern Minnesota, from 2012-2015. Archival data was used from the Individual Development and Educational Assessment (IDEA) Student Ratings of Instruction survey from online courses. The IDEA Center, headquartered in Manhattan, Kansas, has been providing surveys and data to higher education since 1975, and “is a nonprofit organization whose mission is to provide assessment and feedback systems to improve learning in higher education” (IDEA, 2014a). One of their survey instruments, which has been used nationally, is the IDEA Student Ratings of Instruction (IDEA, 2014b). The online version of the IDEA Student Ratings of Instruction has been available in its current form since 2002 (Benton, Webster, Gross, & Pallett, 2010). The IDEA Center collects data nationally to provide comparative data from which faculty and administration can draw additional meaning. This instrument has been used in the higher education community for nearly 40 years, and even with its limitations, has provided useful

baseline data for student feedback on instructional methods. The IDEA Student Ratings of Instruction data is reliable, credible, and validated (The IDEA Center, 2014).

Minnesota West had collected student data using the IDEA survey in both technical and liberal arts online courses since 2005. For this study, three years of archival data were used for analysis (2012-2015 academic years). Each course in the data set had at least 15 students, which provided a minimal sample of approximately 10,000. Student names and course names were anonymous.

Faculty were also surveyed and included adjunct, part-time, and full-time technical or liberal arts (n=100) who have taught during this time frame (2012-2015 academic years) or were currently teaching online for Minnesota West. Confidentiality was maintained by eliminating all personal and course-identifying information collected from participants. Permission to analyze the archival data from the student IDEA surveys and to administer a new survey of faculty at Minnesota West was gained from the College/President's Cabinet. Institutional Review Board approval from Minnesota State University, Mankato, was acquired before beginning the study of archival data and faculty survey.

Measures

The research study was a mixed methods study. The primary research method for this study was quantitative. The chosen methods for this quantitative study were as follows: 1) review of compendium of archival online student data (2012-2015) from Minnesota West, and 2) completed a new online survey of the online faculty from the same college and analyze this data. Qualitative data was collected from an open ended question on the IDEA survey which provided an additional "Comments" section. The survey data to be collected and reviewed was listed in Appendix A and focused specifically on teaching methods and styles. The student data was

collected using the IDEA Student Ratings of Instruction, which had been amassed each fall and spring semester at Minnesota West since 2005. This instrument had not changed since the college began using the survey. The data were anonymous and only aggregate data were analyzed (no individual- or course-specific data was included in the study). This information was analyzed to determine what students identified as effective teaching components of an online learning environment. Faculty were surveyed as well, and the results of the two data sets were compared to determine whether the online course components that faculty saw as frequently used were similar or different than those the students perceived as frequently used.

In particular, this study focused on the Section V of the IDEA, titled Teaching Methods and Styles (Appendix A), which reviewed what methods and styles the faculty employed in the online classroom. Ratings were made on a 5-point scale (1 = Hardly ever, 2- Occasionally, 3 – Sometimes, 4 – Frequently, and 5 = Almost Always). In analyzing the data from the twenty items as assessed in the IDEA survey, the data showed which of these teaching methods and styles students saw as used frequently in their online classrooms. The five teaching methods categories, which included 20 sub-items, were as follows: Stimulating Student Interest, Fostering Student Collaboration, Establishing Rapport, Encouraging Student Involvement, and Structuring Classroom Experiences.

In addition to reviewing student archival data, Minnesota West faculty who taught online during this time frame (2012-2015) or who were currently teaching online for the college were surveyed on the same questions in Section V of the IDEA (Appendix A). The same five-point scale that students used was also used in the faculty survey, which included the same questions as the student survey. Comparisons and contrasts were identified when reviewing the faculty and student responses.

The secondary research for this study was qualitative in nature, and this information provided additional depth and scope to the survey findings. Students were afforded the opportunity to provide commentary in one open-ended question on the IDEA, and this archival data was available for review and analysis. One year of this qualitative data (2014-5) was analyzed, as one year of data was more than 100 pages of comments from students. Faculty were provided the same open-ended question as the students as part of their survey. This data was coded for themes and used to provide additional depth to the quantitative data. The student and faculty data was then analyzed for comparisons and differences.

Data Collection Procedures

Student participation in the initial survey was voluntary, and the courses surveyed were liberal arts or technical courses. Because this was archival data and not tied to any individual responses, student consent was not required. The group summary reports of each semester's consolidated data was used for the study, and none of this data could be tracked back to individual student responses or specific courses. Approximately 10,000 surveys have been completed in the 2012-2015 academic years. Student participation was over 50 percent for each of the years to be reviewed in this study (Minnesota West Community & Technical College, 2014). The summary reports were available in hard copy and electronically. The Dean of Distance Learning and Technology (administrator of this research study) had access to the group summary reports and data within these reports.

The faculty survey was given to current adjunct, part-time, and full-time faculty who had taught online classes between 2011 and 2015 or were currently teaching online for Minnesota West in either liberal arts or technical courses. The faculty (n= 100) were surveyed in a voluntary, random, single-state sampling procedure in August 2015. This sample was not

stratified. The faculty were surveyed using the same questions on the IDEA under the Teaching Methods and Styles (Appendix A). The final question on the survey was open ended and provided faculty with the opportunity to offer comments. This qualitative information was coded and analyzed for themes relevant to effective teaching in online learning environments.

Data Analysis

The quantitative data was analyzed in three sections. First, three years of archival student data for online courses at Minnesota West was analyzed using statistical software. Second, the online faculty survey data was analyzed with statistical software. The data was analyzed for trends in regards to the twenty questions under the five categories listed in Section V of the IDEA Student Ratings of Instruction for both student and faculty perceptions. Finally, the student and faculty data was analyzed in order to compare the perceptions of each group and look for correlations and themes.

The qualitative data was coded and analyzed for both the archival student responses to the singular open-ended question as well as the faculty responses to the singular open-ended question. After these responses were coded and analyzed, data was compared to the perceptions of each group by looking for correlations and themes relevant to effective online learning environments. Finally, the quantitative and qualitative data was analyzed for themes that were consistent in both the survey question responses and the open-ended commentary.

Chapter IV

Findings

The purpose of this study was to examine whether faculty and student perceptions aligned with one another regarding effective online learning environments. The data were anonymous; only aggregate data were analyzed. In particular, this study focused on Section V of the IDEA survey, titled Teaching Methods and Styles (Appendix A), which reviews what methods and styles faculty frequently employ in the online classroom. These teaching evaluations used ratings on a 5-point scale (1 = Hardly ever, 2- Occasionally, 3 – Sometimes, 4 – Frequently, and 5 = Almost Always). Faculty were also surveyed using the same scale; faculty were asked to rate the frequency of their use of these methods and styles within their online classrooms.

The secondary research for this study was qualitative in nature, and this information provided additional depth and scope to the survey findings. Students were afforded the opportunity to provide commentary in one open-ended question on the IDEA. The final question on the survey is simply a comment field where students can provide additional information. One year of this qualitative data (Fall 2014 and Spring 2015) was analyzed. Faculty were also provided the same open-ended comment field as part of their survey.

Quantitative Findings

Two quantitative datasets were reviewed: student aggregate data and faculty aggregate data. The findings are listed below.

Student Aggregate Data

Student data included the aggregate results of Section V: Teaching Methods and Styles, IDEA Student Ratings of Instruction, from six consecutive semesters:

- Fall 2012
- Spring 2013
- Fall 2013
- Spring 2014
- Fall 2014
- Spring 2015

In these six semesters, 618 online classes were surveyed, with an average response rate of 55.83 percent. The average class size was 30.8 students. The highest response rate was 63% in the Fall 2012 semester; the lowest response rate was 49% in Fall 2014. Of the 19,266 students available to complete the survey, 10,817 students actually did so.

Table 4.1

Semester Survey Information

Term	Number of Classes	AVG Response Rate in Percentage	Average Class Size	Possible Students Surveyed	Actual Students Surveyed
Spring 2015	89	61	31	2,878	1,729
Fall 2014	91	49	31	2,886	1,451
Spring 2014	92	51	33	3,059	1,581
Fall 2013	114	54	30	3,423	1,837
Spring 2013	119	57	29	3,512	2,076
Fall 2012	113	63	31	3,508	2,143
	618	55.8	30.8	19266	10,817

The average score (1-5) for each question was calculated for all six semesters. Additionally, averages for both the question (far right column) and the semester (bottom row) are listed. Items 3 and 12 had the highest composite scores. The standard deviation for these items was .12, which indicates very little difference between the scores for each question, even with the considerably large sample size (10,000+).

Faculty Aggregate Data

Faculty data were gathered from a one-time survey conducted in August 2015. The survey and initial information to faculty is included in Appendix B. Faculty were asked to rate the frequency with which they used the teaching methods in Section V of the IDEA evaluation. These are the same 20 questions that students were asked to rate in the surveys conducted each semester. Demographics were also collected for faculty.

Ninety-seven (97) faculty taught online during the 2012-2015 time frame. Between 89 and 119 courses were offered each semester (see Table 4.1). Of these 97 online faculty who taught during this time frame, 32 completed the survey for this research study, for a 33 percent response rate. Respondents included 13 males, 17 females, and 2 who preferred not to define gender. Faculty were also asked about the number of years they had been teaching, as well as the number of years they had been teaching online. Table 4.3 shows the number of years that faculty have taught online.

Table 4.3**Faculty Teaching Experience**

Years	Cumulative Teaching Experience	Cumulative Teaching Experience Percentage	Online Teaching Experience	Online Teaching Experience Percentage
0 to 3 years	3	9.4	5	15.6
4 to 7 years	3	9.4	9	28.1
8 to 10 years	5	15.6	10	31.3
10+ years	21	65.6	8	25

Minnesota West faculty who completed the survey have extensive teaching experience; over 65 percent have 10 or more years of teaching experience. Thirty-one percent of the online faculty have 8-10 years of teaching experience. Over 80 percent of the online faculty who responded to the survey have eight or more years of cumulative teaching experience.

Additionally, faculty were asked whether they were Liberal Arts faculty (56 percent), technical program faculty (38 percent), or in another area (6 percent). Of the 32 faculty who completed the survey, 63 percent had taken an online course in the past, while 37 percent had not taken an online course in the past.

Faculty responses to the frequency of use of teaching methods is shown in percentages in the following table. Note that not all of the respondents answered each question.

Table 4.4

Faculty Averages for 20 Questions

	Hardly Ever	Occasionally	Sometimes	Frequently	Almost Always	Total Respondents
1. Displays a personal interest in students	0	0	9.38	43.75	46.88	32
2. Found ways to help students answer their own questions	0	0	15.63	68.75	15.63	32
3 Scheduled course work (class activities, test, projects) in ways which encouraged students to stay up to date in their work	0	0	3.13	25.81	70.97	31
4 Demonstrated the importance and significance of the subject matter	0	0	3.13	46.88	50	32
5 Formed “teams” or “discussion groups” to facilitate learning	34.38	9.38	12.5	15.63	28.13	32
6 Made it clear how each topic fit into the course	0	6.45	22.56	51.61	19.35	31
7 Explained the reasons for criticisms of students’ academic performance	0	6.45	9.68	32.26	51.61	31
8 Stimulated students to intellectual effort beyond that required by most courses	3.23	12.9	25.81	36.71	19.35	31
9 Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding	3.23	6.45	25.81	29.03	35.48	31
10 Explained course material clearly and concisely	0	0	3.23	41.94	54.84	31
11 Related course material to real life situations	3.23	0	12.9	48.39	35.48	31
12 Gave tests, projects, etc. that covered the most important points of the course	0	0	0	35.48	64.52	31
13 Introduced stimulating ideas about the subject	0	0	19.35	64.52	16.13	31
14 Involved students in “hands on” projects such as research, case studies, or “real life” activities	3.23	12.9	9.68	35.48	38.71	31
15 Inspired students to set and achieve goals which really challenged them	3.33	16.67	23.33	36.67	20	30
16 Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own	6.45	16.13	25.81	22.58	29.03	31
17 Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve	0	0	6.45	29.03	64.52	31
18 Asked students to help each other understand ideas or concepts	6.45	6.45	16.13	38.71	32.26	31
19 Gave projects, tests, or assignments that required original or creative thinking	6.45	0	25.81	38.71	29.03	31
20 Encouraged student-faculty interaction outside of class (office visits, phone calls, e-mail, etc.)	0	13.79	17.24	27.59	41.38	29

Items 3 and 12 had the highest rankings in terms of identified frequency of use by faculty.

Additionally, faculty data was converted to a similar scale (1-5) so that the numbers were comparative to the student data.

Table 4.5

Comparison of Student and Faculty Averages

	Student AVG	Faculty AVG
Question 1	4.13	4.38
Question 2	4.03	4.00
Question 3	4.28	4.68
Question 4	4.13	4.47
Question 5	4.13	2.94
Question 6	4.05	3.03
Question 7	3.95	4.29
Question 8	3.95	3.70
Question 9	4.00	3.87
Question 10	4.03	4.50
Question 11	4.07	4.13
Question 12	4.28	4.65
Question 13	3.98	3.97
Question 14	3.92	3.94
Question 15	3.92	3.53
Question 16	3.93	3.52
Question 17	4.10	4.58
Question 18	3.88	3.84
Question 19	4.10	3.84
Question 20	3.88	3.97

The Pearson correlation coefficient, the linear comparison of the student average and the faculty average, is .43. This shows a strong correlation.

Qualitative Data

Two qualitative datasets were reviewed: student aggregate data and faculty survey data. Student comments from two semesters, Fall 2014 and Spring 2015, were reviewed. Faculty comments from the one time survey in September 2015 were also reviewed.

Qualitative Findings: Student Data

For Fall 2014 and Spring 2015, 862 student comments were gathered as part of the IDEA survey process. These comments were analyzed against the items from Section V of the IDEA Student Ratings of Instruction survey. The comments were categorized under one of the five headings (A – E) from the survey and were also assigned to one of the 20 questions from the survey (see Table 4.6 below)

As stated previously, two semesters of student comments were reviewed: Fall 2014 and Spring 2015. There were 383 comments in Fall 2014, and 479 comments in Spring 2015, for a total of 862 comments. Five hundred seventy (570) of these comments were related to one the 20 questions in Section V. Each heading has specific questions assigned to that area. As an example, Section A, Stimulating Student Interest, is the overarching heading for questions 4, 8, 13, and 15. Table 4.6 shows these questions, grouped by heading, and not as they numerically appear on the survey. These comments were analyzed and coded. As an example, on the first line of the table, it is shown that 61 students provided comments that were relative to question 4, (Demonstrated the importance and significance of the subject matter), which was the fourth question on the survey, but the first question under heading A (Stimulating Student Interest). When faculty receive their aggregate data for the survey each semester, it is listed using the order in Table 4.6.

Table 4.6

Student Comments Related to Section V

Number of student comments	Section Heading Title and Question Number (questions grouped by applicable heading and not listed numerically as they are on the survey)
	A. Stimulating Student Interest
61	4. Demonstrated the importance and significance of the subject matter
19	8. Stimulated students to intellectual effort beyond that required by most courses
5	13. Introduced stimulating ideas about the subject
21	15. Inspired students to set and achieve goals which really challenged them
	B. Fostering Student Collaboration
17	5. Formed "teams" or "discussion groups" to facilitate learning
2	16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own
2	18. Asked students to help each other understand ideas or concepts
	C. Establishing Rapport
104	1. Displayed a personal interest in students and their learning
2	2. Found ways to help students answer their own questions
11	7. Explained the reasons for criticisms of students' academic performance
15	20. Encouraged student-faculty interaction outside of class (office visits, phone calls, e-mail, etc.)
	D. Encouraging Student Involvement
55	9. Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding
0	11. Related course material to real life situations
3	14. Involved students in "hands on" projects such as research, case studies, or "real life" activities
2	19. Gave projects, tests, or assignments that required original or creative thinking
	E. Structuring Classroom Experiences
91	3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work
4	6. Made it clear how each topic fit into the course
39	10. Explained course material clearly and concisely
48	12. Gave tests, projects, etc. that covered the most important points of the course
69	17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve
570	Total Comments

Table 4.7 shows the number of comments that were not related to any of the 20 questions but were expressed in negative, neutral, or positive terms. Two hundred ninety-two (292) comments

were marked “none,” as in not applying to the 20 questions, but contained either negative, neutral or positive comments about the course.

Table 4.7

Student Comments Not Related to Section V

Number	Comments
16	Negative
36	Neutral
220	Positive

For this set of comments, 16 were negative, 36 were neutral, and 220 (75%) were positive about the online learning experience, the course, or the instructor.

Qualitative Findings: Faculty Data

Of the 33 faculty to complete the survey, only six provided comments. These comments were limited and only three (50 percent) were related to teaching and learning.

The three comments that pertained to teaching and learning dealt with the following:

- 8. Stimulated students to intellectual effort beyond that required by most courses
- 20. Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)
- 3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work

The faculty survey comments did not provide meaningful qualitative data.

Summary

It was hypothesized that a correlation exists between faculty perceptions and student perceptions of an effective online learning environment. It was also hypothesized that faculty and student perceptions of an effective online learning environment are different as measured by

survey results. Overall, both correlations and differences exist in the perceptions of students and faculty. For the quantitative data, the top two questions, 3 and 12, were ranked highest in frequency of use by both students and faculty. However, remaining items were not as closely aligned, and in some cases, there were vast differences in the perceptions of frequency of use. Student commentary provides some insight as well to student ideas about teaching methods and styles; faculty commentary provided no meaningful additional information due to lack of response.

Chapter V

Summary and Discussion

The purpose of this study was to examine whether faculty and student perceptions aligned regarding effective online learning environments. It was hypothesized that a correlation existed between faculty and student perceptions of an effective online learning environment. It was also hypothesized that faculty and student perceptions of an effective online learning environment were different.

Review of the Methodology

An in-depth study of one two-year college's student online course survey data was conducted. This online student data was collected in a consistent format for over 10 consecutive years (2005-present). Because of changes in the online environment over the past 10 years, only the past three consecutive years (2012-2015) of this quantitative data was reviewed. Additionally, one year of student commentary from the surveys (qualitative data) was analyzed. A separate data set from a survey conducted with online faculty who taught during this time frame was also analyzed to determine whether faculty perceptions were aligned with student perceptions.

This study collected the following quantitative and qualitative data.

- Student quantitative data (three years of archival data for Section V, Teaching and Learning Methods of the IDEA survey)
- Faculty quantitative data (one single state random survey, Section V, Teaching and Learning Methods of the IDEA survey)

- Student qualitative data (one year of archival comments provided as part of the IDEA survey)
- Faculty qualitative data (one single state random survey, comments optional)

The data were anonymous and only aggregate data were analyzed (no individual- or course-specific data was included in the study). The sample included only those online courses that had 15 or more students. This information was analyzed to determine what students identified as effective teaching components of an online learning environment. Faculty were surveyed as well, and the results of the two data sets were compared to determine whether the online course components that faculty saw as critical were similar or different than those the students perceived as critical. The data showed which of these teaching methods and styles students found were used frequently in online classrooms.

Students were also afforded the opportunity to provide commentary in one open-ended question at the end of the IDEA survey. Only one year of this qualitative data (2014-5) was analyzed, because the data consisted of more than 100 pages of comments from students. Faculty answered the same open-ended question as part of their survey.

Summary of the Results

It was hypothesized that a correlation existed between faculty perceptions and student perceptions of an effective online learning environment. It was also hypothesized that faculty and student perceptions of an effective online learning environment were different as measured by survey results. Overall, both correlations and differences exist in the perceptions of students and faculty. For the quantitative data, the top two questions, Question 3, *Scheduled course work in ways which encouraged students to stay up to date in their work*, and Question 12, *Gave tests, projects, etc. that covered the most important points of the course*, were ranked highest in

frequency by both students and faculty. However, remaining questions were not as closely aligned, and in some cases, there were vast differences in the perceptions of frequency of use. Student commentary provided insights regarding teaching methods and styles which students view as frequently used; faculty commentary provided no meaningful additional information due to lack of response.

Summary of Quantitative Data

Student quantitative data was gathered from the aggregate results of Section V: Teaching Methods and Styles, IDEA Student Ratings of Instruction, from six consecutive semesters:

- Fall 2012
- Spring 2013
- Fall 2013
- Spring 2014
- Fall 2014
- Spring 2015

The average response rate for the 618 classes surveyed during this time was 56%, with over 10,000 completed surveys. Respondents were not randomly chosen; all students had the opportunity to take the survey, but not all chose to do so. Students who were taking more than one online course may have completed multiple surveys. Additionally, anecdotally, those students with negative or positive experiences completed surveys. This could have possibly skewed the results. However, with the large volume of data collected over those years, the data was repeated through subsequent semesters.

While surveys were anonymous, some faculty offered bonus points for the entire class if they achieved a certain threshold of participation as a class. This did seem to increase response rates, even though individual students were not identified and did not directly benefit, as faculty

did not know which students responded. The bonus points offered for survey completion were negligible and did not impact the students' grades.

Ninety-seven faculty taught online during the 2012-2015 time frame. Of these 97 faculty, 32 completed the single state, random survey, for a 33 percent response rate. Respondents included 13 males, 17 females, and 2 who preferred not to define gender. Faculty were also asked about the number of years they had been teaching, as well as the number of years they had been teaching online. Over 50 percent of Minnesota West's faculty who responded to the survey have been teaching online for eight or more years, with 25 percent who responded to the survey have been teaching 10 or more years.

The numerical ranking of student responses is shown on the left side of Table 5.1, and the numerical ranking of faculty responses is shown on the right side. For both set of responses, those responses above the average and median scores are shown in bold font. Those responses that are above the average and median scores for both faculty and students are highlighted. The top two questions (3 and 12) that faculty identified as used most frequently are the same two questions that students identified as used most frequently. Of the top nine questions identified by faculty, three of these were not aligned with those questions identified by students as above the average and mean.

Table 5.1

Student and Faculty Quantitative Data (Listed by ranking)

	STUDENT RANKINGS	FACULTY RANKINGS
1	Question 3, Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work	Question 3, Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work
2	Question 12, Gave tests, projects, etc. that covered the most important points of the course	Question 12, Gave tests, projects, etc. that covered the most important points of the course
3	Question 1, Displayed a personal interest in students and their learning	Question 17, Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve
4	Question 4, Demonstrated the importance and significance of the subject matter	Question 10 , Explained course material clearly and concisely
5	Question 5, Formed "teams" or "discussion groups" to facilitate learning	Question 4, Demonstrated the importance and significance of the subject matter
6	Question 17, Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve	Question 1, Displayed a personal interest in students and their learning
7	Question 19, Gave projects, tests, or assignments that required original or creative thinking	Question 7, Explained the reasons for criticisms of students' academic performance
8	Question 11, Related course material to real life	Question 11, Related course material to real life
9	Question 6, Made it clear how each topic fit into the course	Question 2, Found ways to help students answer their own questions
10	Question 2, Found ways to help students answer their own questions	Question 13, Stimulated students to intellectual effort beyond that required by most courses
11	Question 10, Explained course material clearly and concisely	Question 20, Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)
12	Question 9, Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding	Question 14, Involved students in "hands on" projects such as research, case studies, or "real life" activities
13	Question 13, Stimulated students to intellectual effort beyond that required by most courses	Question 9, Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding
14	Question 7, Explained the reasons for criticisms of students' academic performance	Question 19, Gave projects, tests, or assignments that required original or creative thinking
15	Question 8, Stimulated students to intellectual effort beyond that required by most courses	Question 18, Asked students to help each other understand ideas or concepts
16	Question 16, Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own	Question 8, Stimulated students to intellectual effort beyond that required by most courses
17	Question 14, Involved students in "hands on" projects such as research, case studies, or "real life" activities	Question 15, 15. Inspired students to set and achieve goals which really challenged them
18	Question 15, 15. Inspired students to set and achieve goals which really challenged them	Question 16, Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own
19	Question 18, Asked students to help each other understand ideas or concepts	Question 6 , Made it clear how each topic fit into the course
20	Question 20, Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)	Question 5, Formed "teams" or "discussion groups" to facilitate learning

Table 5.2 shows the student responses on the left side, and the faculty responses on the right side,

grouped as the questions are shown on the IDEA reports for instructors (headings are from IDEA report, listed as sections A – E). For both set of responses, those responses above the average and median scores are shown in bold font. The top two questions (3 and 12) that faculty identified as used most frequently are the same two questions that students identified as used most frequently. Additionally, six of the top nine responses (those above the average) are similar for both student and faculty. The alignment of 67 percent of the top questions is significant. However, for the three questions that were not listed in the top nine, there is broader discrepancy in the perception by students and faculty.

- Question 5, *Formed “teams” or “discussion groups” to facilitate learning* was listed as fifth for students, and twentieth (last) for faculty.
- Question 19, *Gave projects, tests, or assignments that required original or creative thinking* was listed seventh for students, and fourteenth for faculty.
- Question 6, *Made it clear how each topic fit into the course* was listed ninth for students, and nineteenth for faculty.

It is interesting to note that two questions that students ranked in the top nine (above the average score) are the last two questions identified by faculty as being frequently used. While faculty did not identify these teaching strategies as being frequently used, students noted that these in fact were frequently used. The discrepancy between student and faculty perceptions in these two questions should be noted as significant.

Table 5.2

Student and Faculty Quantitative Data (Listed by IDEA category)

STUDENT RESPONSES	FACULTY RESPONSES
<p>A. <u>Stimulating Student Interest</u></p> <p>4. Demonstrated the importance and significance of the subject matter (4.13)</p> <p>8. Stimulated students to intellectual effort beyond that required by most courses</p> <p>13. Stimulated students to intellectual effort beyond that required by most courses</p> <p>15. Inspired students to set and achieve goals which really challenged them</p> <p>B. <u>Fostering Student Collaboration</u></p> <p>5. Formed "teams" or "discussion groups" to facilitate learning (4.13)</p> <p>16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own</p> <p>18. Asked students to help each other understand ideas or concepts</p> <p>C. <u>Establishing Rapport</u></p> <p>1. Displayed a personal interest in students and their learning (4.13)</p> <p>2. Found ways to help students answer their own questions</p> <p>7. Explained the reasons for criticisms of students' academic performance</p> <p>20. Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)</p> <p>D. <u>Encouraging Student Involvement</u></p> <p>9. Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding</p> <p>11. Related course material to real life situations (4.07)</p> <p>14. Involved students in "hands on" projects such as research, case studies, or "real life" activities</p> <p>19. Gave projects, tests, or assignments that required original or creative thinking (4.10)</p> <p>E. <u>Structuring Classroom Experiences</u></p> <p>3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work (4.28)</p> <p>6. Made it clear how each topic fit into the course (4.05)</p> <p>10. Explained course material clearly and concisely</p> <p>12. Gave tests, projects, etc. that covered the most important points of the course (4.13)</p> <p>17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve (4.10)</p>	<p>A. <u>Stimulating Student Interest</u></p> <p>4. Demonstrated the importance and significance of the subject matter (4.47)</p> <p>8. Stimulated students to intellectual effort beyond that required by most courses</p> <p>13. Stimulated students to intellectual effort beyond that required by most courses</p> <p>15. Inspired students to set and achieve goals which really challenged them</p> <p>B. <u>Fostering Student Collaboration</u></p> <p>5. Formed "teams" or "discussion groups" to facilitate learning</p> <p>16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own</p> <p>18. Asked students to help each other understand ideas or concepts</p> <p>C. <u>Establishing Rapport</u></p> <p>1. Displayed a personal interest in students and their learning (4.38)</p> <p>2. Found ways to help students answer their own questions (4.00)</p> <p>7. Explained the reasons for criticisms of students' academic performance (4.29)</p> <p>20. Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)</p> <p>D. <u>Encouraging Student Involvement</u></p> <p>9. Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding</p> <p>11. Related course material to real life situations (4.13)</p> <p>14. Involved students in "hands on" projects such as research, case studies, or "real life" activities</p> <p>19. Gave projects, tests, or assignments that required original or creative thinking</p> <p>E. <u>Structuring Classroom Experiences</u></p> <p>3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work (4.68)</p> <p>6. Made it clear how each topic fit into the course</p> <p>10. Explained course material clearly and concisely (4.50)</p> <p>12. Gave tests, projects, etc. that covered the most important points of the course (4.65)</p> <p>17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve (4.58)</p>

When reviewing the most frequently used teaching methods and strategies identified by students in this format, it was recognized that four of the top nine questions (those above the average and mean) are in Section E. Structuring Classroom Experiences. Four of the five questions (80 percent) in this section were listed by students as being used frequently in their online classrooms. Section D. Encouraging Student Involvement had two questions noted with frequent use. Question 1, *Displayed a personal interest in students and their learning*, which is found in Section C. Establishing Rapport, could also be argued as a question that encourages student involvement, as could question 5, *Formed "teams" or "discussion groups" to facilitate learning*, which can be found in Section B. Fostering Student Collaboration.

When reviewing the most frequently used teaching methods and strategies identified by faculty in this format, it is recognized that four of the top nine questions for faculty (those above the average and mean) are in Section E., which was also the top category for students. Four out of five questions (80 percent) in that category are listed by faculty as being used frequently in their online classrooms. Faculty noted three questions in Section C as being frequently used. Section A. and Section D. each have one noted with frequent use. Section B., does not have any questions listed by faculty as being methodologies used frequently in their online classrooms.

Summary of Student Qualitative Data

For Fall 2014 and Spring 2015, 862 student comments were gathered as part of the IDEA survey process. Of these comments, 570 were related to specific teaching methods and styles. The top four questions that students identified in their comments were as follows:

- Question 1. *Displayed a personal interest in students and their learning* (104 comments)

- Question 3. *Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work* (91 comments)
- Question 17. *Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve* (69 comments)
- Question 4. *Demonstrated the importance and significance of the subject matter* (61 comments)

These four questions accounted for 63 percent of the 570 comments. It can be inferred from the number of these comments that these four areas were highly important to students.

Additionally, 292 comments did not relate specifically to a teaching method or style. Of this group of comments, 220 comments were coded as positive. Having 75% of these comments be positive is a strong commentary on the effectiveness of online learning environments at this particular community college and the relationship between faculty and students. Many of these comments were related to the instructor, such as “great instructor,” or “great class.” Minnesota West’s veteran online faculty may have influenced these positive responses.

Summary of Faculty Qualitative Data

Only six faculty of the 33 respondents provided commentary, and only half of those comments related to teaching and learning. This qualitative information did not provide significant data.

Alignment of Student and Faculty Perceptions

The two hypotheses for this study discussed the defined attributes of effective online learning environments, and whether faculty and students agreed on these attributes. The results of this study show that both hypotheses are valid. Some of the attributes identified in an

effective online learning environment were aligned between students and faculty; whereas others were different. Three of the top five attributes for students and faculty were the same. Question 3, *Scheduled course work (class activities, test, projects) in ways which encouraged students to stay up to date in their work*, and Question 12, *Gave tests, projects, etc. that covered the most important points of the course*, were number one and number two for both faculty and students. Question 4, *Demonstrated the importance and significance of the subject matter*, was in the top five for both groups.

Faculty and students agreed on 67 percent of the top five attributes of effective online learning environments, and this suggests that there is commonality in the perceptions of students and faculty on what makes an effective online learning environment. Faculty may not recognize that students are aware of the teaching methods and styles used in online learning situations; however, the results suggest that students are aware of what teaching methods are frequently used within online classrooms.

It was also hypothesized that faculty and student perceptions of effective online learning environments did not align. In the top five for students, Question 1, *Displays a personal interest in students*, and Question 5, *Formed "teams" or "discussion groups" to facilitate learning*, were listed as important. Question 1 for faculty was ranked sixth most important, but Question 5 was ranked least important (#20) for faculty. While listing Question 1 in the sixth position of importance is close to what the students listed, the ranking of Question 5 displays a large disconnect between students and faculty. Additionally, some may argue that online learning is impersonal; however, students ranking of Question 1, *Displays a personal interest in students*, would not support that argument.

For faculty, question 17, *Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve* and question 10, *Explained course material clearly and concisely*, were in the top five. Questions 17 and 10 for students ranked sixth and 11th respectively. With these two questions there appears to be a slight disconnect, especially with question 10, between student and faculty perceptions of the online classroom.

These disconnects are important for two reasons. First, for Question 5, students have an expectation that faculty will use discussion within their online courses to foster learning. This question was in the top five for students; however, it was the lowest ranked question by faculty. Faculty should consider this difference when creating courses. Quality Matters™ standards also addresses student to student interaction and the use of discussions within online courses as being important as a tool in providing learner to learner interaction. Secondly, for Question 10, faculty should recognize that for their course materials to be understood, these materials must be explained concisely. Relevance to other subject matter, as well as the relationships between topics, can assist learners in achieving mastery.

Student qualitative data comments reinforced the quantitative data results, particularly in the frequency of questions 3 and 17, which describe scheduling course work and providing timely and frequent feedback on student work. Both of these questions fall under the heading of Structuring Classroom Experiences. Students also had a high percentage (75%) of positive comments in the general category. Because students are not prompted in this area to provide positive or negative feedback, it is relevant that so many students stated that their online course was a positive experience or that they felt their instructor was effective.

Implications for Faculty and Course Design

All twenty of the questions in Section V., Teaching Methods and Styles, are important areas for faculty to review when designing a course. Depending on factors such as discipline area (Math, English, Science, technical program) and learner maturity (freshman or upper classman), different areas of course design may have more or less relevance for individual faculty. Even so, students have become more focused consumers of online course environments, and while they may not understand the pedagogy behind teaching decisions, they often have an understanding of their own learning styles and preferences, as well as recognition of the learning environments which foster their learning. Increased faculty development in the pedagogy of online teaching, as well as an understanding of student expectations of online classrooms, may help faculty reach their teaching and learning goals. There also may be a correlation between the Quality Matters™ training a faculty has received and the student identification of the elements of an effective online classroom. Further research is needed in this area to determine if any relationships exist.

Implications of these findings are relevant for faculty who teach in online classrooms. In the quantitative data, both faculty and students stated that structured classroom experiences were frequently used. Structure, such as scheduling course work, explaining how information fits together (alignment), explanation of course material, assessment of course material, and timely and relevant feedback were identified as frequently used elements of effective online classrooms. Utilizing the 20 Questions within Section V. of the IDEA survey, Teaching Methods and Styles, or prescribing to a process such as Quality Matters™ or a similar quality rubric can help faculty better align their online learning environments with both research-based teaching pedagogy and student expectations of effective online classrooms. The qualitative data (student commentary) in

this study reinforces the concept that course design and structure are critical components to student learning, as is timely and relevant feedback on student assignments.

These findings also have implications for students who are taking online courses. Though students may not have formal training in teaching pedagogy for online instruction, it appears from the results that students have clear expectations in the online classroom, and these expectations may be related to learning styles, preferred learning situations, or personal preference. The qualitative findings support the quantitative data regarding which teaching methods and styles students find effective, as well as the idea that students find online environments effective environments in which to learn.

Suggestions for Additional Research

Though a large quantitative and qualitative data set (10,000 responses and 852 qualitative comments) were available, this study was limited to one community and technical college in southwestern Minnesota. Research with additional institutions is needed to determine if these findings can be repeated in other colleges and universities. Research could also be expanded to include all of the data (11 years) from this college to determine if any major differences existed in student perceptions during the longer time frame. The faculty findings could also be strengthened by a larger data set, as well as more information on faculty professional development related to online teaching and learning. Additionally, qualitative data from student and faculty focus groups and individual interviews may also provide details on personal preferences, including those influenced by age, gender, and geographical location. Reviewing the high positive response by students in terms of qualitative feedback against other community college survey data may also be an interesting study.

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Appendix A

Section V: Teaching Methods and Styles, IDEA Student Ratings of Instruction (IDEA Center, 2012, p. 7)

	1 - Hardly Ever	2 - Occasionally	3 - Sometimes	4 - Frequently	5 - Almost Always
1. Displayed a personal interest in students and their learning					
2. Found ways to help students answer their own questions					
3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work					
4. Demonstrated the importance and significance of the subject matter					
5. Formed "teams" or "discussion groups" to facilitate learning					
6. Made it clear how each topic fit into the course					
7. Explained the reasons for criticisms of students' academic performance					
8. Stimulated students to intellectual effort beyond that required by most courses					
9. Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding					
10. Explained course material clearly and concisely					
11. Related course material to real life situations					
12. Gave tests, projects, etc. that covered the most important points of the course					
13. Introduced stimulating ideas about the subject					
14. Involved students in "hands on" projects such as research, case studies, or "real life" activities					

15. Inspired students to set and achieve goals which really challenged them					
16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own					
17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve					
18. Asked students to help each other understand ideas or concepts					
19. Gave projects, tests, or assignments that required original or creative thinking					
20. Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)					

Appendix B

Survey Consent, Faculty Survey

Survey Consent Email

IRBNet ID Number: 754804

You are requested to participate in research supervised by Dr. Scott Wurdinger on faculty and student perceptions regarding online learning environments. This survey should take about 10 to 15 minutes to complete. The goal of this survey is to understand what faculty and students perceive to be effective teaching methods in an online course, and you will be asked to answer questions about that topic. If you have any questions about the research, please contact Dr. Wurdinger at Scott.Wurdinger@mnsu.edu.

Participation is voluntary. You have the option not to respond to any of the questions. You may stop taking the survey at any time by closing your web browser. Participation or nonparticipation will not impact your relationship with Minnesota State University, Mankato. If you have questions about the treatment of human participants and Minnesota State University, Mankato, contact the IRB Administrator, Dr. Barry Ries, at 507-389-2321 or barry.ries@mnsu.edu.

Responses will be anonymous. However, whenever one works with online technology there is always the risk of compromising privacy, confidentiality, and/or anonymity. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

The risks of participating are no more than are experienced in daily life.

There are no direct benefits for participating. Society might benefit by the increased understanding of perceptions of faculty and students regarding online teaching and learning.

Submitting the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age.

Please print a copy of this page for your future reference.

MNSU IRBNet ID# 754804

Date of MNSU IRB approval: May 28, 2015

Survey for Minnesota West Faculty

Section V: Teaching Methods and Styles, IDEA Student Ratings of Instruction (IDEA Center, 2012, p. 7)

Directions: Please respond to the following questions regarding teaching methods and styles, and rate the frequency of using these teaching methods in your classes using the following 5-point scale (1 = Hardly ever, 2- Occasionally, 3 – Sometimes, 4 – Frequently, and 5 = Almost Always).

	1 - Hardly Ever	2 - Occasionally	3 - Sometimes	4 - Frequently	5 - Almost Always
1. Displayed a personal interest in students and their learning					
2. Found ways to help students answer their own questions					
3. Scheduled course work (class activities, tests, projects) in ways which encouraged students to stay up to date in their work					
4. Demonstrated the importance and significance of the subject matter					
5. Formed "teams" or "discussion groups" to facilitate learning					
6. Made it clear how each topic fit into the course					
7. Explained the reasons for criticisms of students' academic performance					
8. Stimulated students to intellectual effort beyond that required by most courses					
9. Encouraged students to use multiple resources (e.g. data banks, library holdings, outside experts) to improve understanding					
10. Explained course material clearly and concisely					

11. Related course material to real life situations					
12. Gave tests, projects, etc. that covered the most important points of the course					
13. Introduced stimulating ideas about the subject					
14. Involved students in "hands on" projects such as research, case studies, or "real life" activities					
15. Inspired students to set and achieve goals which really challenged them					
16. Asked students to share ideas and experiences with others whose backgrounds and viewpoints differ from their own					
17. Provided timely and frequent feedback on tests, reports, projects, etc. to help students improve					
18. Asked students to help each other understand ideas or concepts					
19. Gave projects, tests, or assignments that required original or creative thinking					
20. Encouraged student–faculty interaction outside of class (office visits, phone calls, e–mail, etc.)					