

**Post-Secondary Instructors' Approaches to the Assessment of Online Discussions:
Influential Factors, Obstacles, and Solutions to the Challenges**

by

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Abstract

This study examines the factors, challenges, and solutions to the challenges to assessing online discussions. Online learning continues to become more and more prevalent. Entire degrees are now being offered online. One perceived drawback to online learning is lack of interaction. Online discussions are utilized to provide interaction between students and students and instructors. The researcher-developed survey instrument was administered to post-secondary instructors via Qualtrics. The study consisted of 108 respondents from two universities, Auburn University and Arkansas Tech University. Participants were surveyed on their purposes for requiring online discussions, challenges that they face in assessing online discussions, and solutions they can provide that could make assessing online discussions an easier process. The factors and challenges in assessing online discussions were analyzed using multinomial logistic regressions to see if they predict how instructors assess online discussions. Analysis of the data revealed one statistically significant multinomial logistic regression, specifically, the degree to which instructors hold higher-order thinking to be a main purpose of why they require students to participate in online discussions, as a predictor of how instructors assess online discussions. However, other factors as well as challenges to assessing online discussions were not predictive of how instructors assess online discussions. Solutions were provided by instructors to make assessing online discussions an easier process. The results of the study provide insight into how online discussions are assessed, the factors and challenges involved, and how to make assessing online discussions an easier process.

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Table of Contents

Abstract	ii
Acknowledgments.....	iii
List of Tables	vii
List of Figures	ix
Chapter I. Introduction	1
Statement of the Problem	3
Significance of the Study	4
Limitations	5
Purpose of the Study	5
Research Questions	6
Definitions of Terms	8
Chapter II. Literature Review	9
Theoretical Perspectives of Online Discussion-Based Learning and Assessment	10
Social Constructivism	10
Social Presence Theory	10
Motivation	11
Purpose of Grading	11
Utility of Online Discussions	12
Effects of Online Discussions on Learning Outcomes	15

Online Discussions and Class Size	17
Assessing Online Discussions	18
Participation in Online Discussions	20
Assessment Criteria and Online Discussions	20
Discussion Grade Strategies	23
Structure of Online Discussions and Student Learning	25
Challenges to Assessing Online Discussions	26
Research Questions	27
Summary and Conclusions	27
Chapter III. Methods	30
Purpose of the Study	31
Research Questions	31
Participants	32
Selection and Recruitment	33
Instrumentation	33
Survey Items	35
Background Information	35
Ways of Assessing Online Discussions	35
Value of Online Discussions	35
Purpose for Requiring Online Discussions	36
Challenges in Assessing Online Discussions	36
Online Discussions and Class/Group Size	36
Solutions to the Challenges of Assessing Online Discussions	37

Analysis of Data	37
Conclusion	39
Chapter IV. Findings	40
Research Question 1	40
Research Question 2	48
Research Question 3	54
Research Question 4	63
Research Question 5	65
Summary	65
Chapter V. Discussion	67
Research Questions	67
Summary of Findings	68
Conclusions	70
Theoretical Connections	72
Recommendations for Practice	72
Recommendations for Future Studies	73
References	75
Appendix 1. Permission to Use VREP	81
Appendix 2. Survey/Interview Validation Rubric for Expert Panel (VREP)	82
Appendix 3. Survey	87

List of Tables

Table 1	Observed and Predicted Frequencies: Online Discussions are a Very Important Part of My Course and Typical Way Assessing Online Discussions	43
Table 2	Observed and Predicted Frequencies: Online Discussions are Very Important in Helping Students Learn the Course Content and Typical Way Assessing Online Discussions	44
Table 3	Observed and Predicted Frequencies: Online Discussions are Very Effective in Helping Students Interact with Fellow Students and Typical Way Assessing Online Discussions	45
Table 4	Observed and Predicted Frequencies: Online Discussions are Very Effective in Helping Students Interact with Instructor and Typical Way Assessing Online Discussions	46
Table 5	Observed and Predicted Frequencies: Online Discussions Allow Students to Engage in Higher-Order Thinking and Typical Way Assessing Online Discussions.....	47
Table 6	Observed and Predicted Frequencies: Main Purpose of Online Discussions is to Engage Students and Typical Way Assessing Online Discussions	51
Table 7	Observed and Predicted Frequencies: Main Purpose of Online Discussions is to Build a Learning Community and Typical Way Assessing Online Discussions	52
Table 8	Observed and Predicted Frequencies: Main Purpose of Online Discussions is to Facilitate Higher-Order Thinking and Typical Way Assessing Online Discussions..	53
Table 9	Parameter Estimates: Main Purpose of Online Discussions is to Facilitate Higher-Order Thinking and Typical Way Assessing Online Discussions	54
Table 10	Observed and Predicted Frequencies: Determining How to Handle Late Postings is a Challenge in Assessing Online Discussions and Typical Way Assessing Online Discussions	58
Table 11	Observed and Predicted Frequencies: Malfunctioning Technology is a Challenge in Assessing Online Discussions and Typical Way Assessing Online Discussions	59
Table 12	Observed and Predicted Frequencies: Amount of Time Needed to Provide Quality Feedback is a Challenge in Assessing Online Discussions and Typical Way Assessing Online Discussions.....	60

Table 13 Observed and Predicted Frequencies: Free Flowing Nature of Online Discussions is a Challenge in Assessing Online Discussions and Typical Way Assessing Online Discussions	61
Table 14 Observed and Predicted Frequencies: Determining Whether Quality or Quantity is More Important is a Challenge in Assessing Online Discussions and Typical Way Assessing Online Discussions.....	62
Table 15 Observed and Predicted Frequencies: Typical Online Discussion Groups in My Classes Consist of How Many Students and Typical Way Assessing Online Discussions	64

List of Figures

Figure 1. Solutions offered by instructors to ease process of assessing online discussions 65

Chapter I: Introduction

During the last twenty years, higher education has been undergoing an e-learning transformation (Miller et al., 2014). Online learning tools have revolutionized the ways students learn and interact in their courses. Students now have opportunities to watch class lectures online, complete and submit assignments online, and can communicate with their peers and instructors online. Students are also able to conduct research online for class projects, as they have access to digital libraries of information. Many of the on-campus components associated with attaining an education are now accessible through online environments.

The number of students enrolled in at least one online course at degree granting post-secondary institutions continues to grow every year (Allen & Seaman, 2014). According to the Sloan Consortium's survey tracking online education in the United States, the number of students taking at least one online course grew by over five and a half million students from Fall 2002 to Fall 2012, representing 33.5% of the total enrollment of students in degree granting post-secondary institutions in the United States in 2012 (Allen & Seaman, 2014). Also, the number of online degree programs at universities grew from 34.5% of colleges and universities offering online degree programs in 2002 to 62.4% of colleges and universities offering online degree programs in 2012 (Allen & Seaman, 2013).

The rise in online learning programs and courses can be attributed to many factors including: economics, student demand, and the availability of new technologies (Bartley & Golek, 2004; Miller, 2014). Economic factors driving the increase in online learning involve the

cost- effectiveness advantages that online instruction provides such as increasing enrollment by allowing students to enroll from different geographic regions and students who work during the day that typically would not be able to enroll in courses, and also reducing costs by not having to utilize on-campus classroom spaces (Bartley & Golek, 2004; Lloyd-Smith, 2010). The student demand for online learning opportunities results from the convenience that online learning provides, as it allows learners to complete the coursework away from campus at times when they are most available (Miller, 2014). The availability of new technologies allows for much more educational capabilities than before (Miller, 2014).

Despite the many benefits of online education, a major criticism of online learning is the lack of social interaction between students and instructors (Muilenburg & Berge, 2001). Students can feel very isolated in online learning environments (Muilenburg & Berge, 2001). Lack of interaction is one of the main reasons for students not completing online courses (Ivankova & Stick, 2007). It is essential for students to feel like they are part of a learning community in order to reduce the loneliness that can occur in online learning (Palloff & Pratt, 1999).

Online discussions allow for the creation of a social presence among students and instructors to take place (Caulfield, 2011). Online discussions allow students to interact with their peers, instructors, and the course content (Caulfield, 2011). The social presence established by online discussions is correlated with the student feeling a part of an online learning community (Picciano, 2002). In addition to being a pivotal part in the building of a learning community, online discussions also provide opportunities for students to exercise higher-order thinking skills when formulating responses to questions from their instructors and/or peers (Caulfield, 2011). The interactive benefits of online discussions often lead to online discussions being a significant part of the online learning activities, and in turn, often count for a significant

portion of the student's overall course grade. However, the interactive nature makes the discussions very challenging for instructors to assess (Liu, 2007). Instructors have expressed displeasure with grading online discussions, and have admitted that they may not be grading online discussions effectively (Liu, 2007). The ways online discussions are assessed significantly impact the quality of students' participation, and affect students' views on the value and purposes of online discussions (Murphy & Coleman, 2004; Oliver & Shaw, 2003; Swan, Schenker, Arnold, & Kuo, 2007). This researcher investigated how instructors assess online discussions, examined the challenges that occur when assessing online discussions, and discovered solutions offered by instructors to make grading online discussions an easier process.

Statement of the Problem

Online discussions are the "life blood and center of energy" for online courses (Bender, 2012, p. 55). Online discussions allow students to be part of a collaborative online learning community, and also provide opportunities for students to interact with the course content by using higher-level cognitive skills including application, analysis, synthesis, and evaluation (Caulfield, 2011). Due to the interactive benefits, online discussions are the second most commonly used online teaching and learning tool after e-mail (Kearsley, 2000). Further evidence of the beneficial aspects of online discussions is seen by the use of many instructors to supplement traditional face-to-face instruction with online discussions (Chen & Looi, 2007).

In order to get students to participate effectively in online discussions, the discussions must be graded (Harasim, Hiltz, Teles, & Turoff, 1995; Jiang & Ting, 2000; Swan et al., 2007). Therefore, online discussions often account for a substantial portion of the grade in online courses (Liu, 2007). However, instructors have reported that assessing online discussions effectively is a very difficult task (Liu, 2007). Thus, students may not be provided with a proper

assessment of their participation and contribution to the discussion. The ways instructors assess online discussions influence how students participate, and what they perceive the educational value of taking part in the discussions to be (Murphy & Coleman, 2004; Oliver & Shaw, 2003; Swan et al., 2007). Also, students may not receive valuable feedback which would indicate to them areas for improvement when participating in the discussions. In essence, if not graded effectively, the grades students receive on the discussions are meaningless and do not have any value for the students and the instructor. In order to begin to address this issue, we need to investigate factors that may influence the ways instructors grade online discussions, and examine what makes grading online discussions such a challenging process.

As online courses continue to become more prevalent, discussion boards will continually be relied upon to provide the student-student, student-instructor, and student-content interaction. The purpose of the study was to investigate factors that may play a role in how instructors assess online discussions, examine the degree of the challenges that occur in assessing online discussions, and find out what would make assessing online discussions an easier process.

Significance of the Study

As the number of hybrid and online courses continues to increase rapidly, so will the use of online discussions to provide the necessary interaction critical to the development of online learning communities. In order to motivate students to participate effectively, online discussions must be graded and count for a significant portion of the course grade (Harasim, et al., 1995; Jiang & Ting, 2000; Swan et al., 2007). Also, students achieve learning outcomes at a much higher rate when online discussions are assessed as compared to when the discussions are not assessed (Klisc, McGill, & Hobbs, 2009). However, grading online discussions in a way that is effective, fair, and efficient is very challenging for instructors (Liu, 2007).

If instructors experience difficulties grading online discussions, then students may not be provided with proper evaluations of the quality of their participation and contribution. As online discussions often count for a significant portion of a student's grade in the course, the grades received on their participation often greatly impact the final grade they receive in the course.

This researcher explored factors that may play a role in how instructors assess online discussions, and discovered which challenges are the greatest barriers in assessing online discussions. Also, the researcher found out what can make assessing online discussions an easier process for instructors.

Limitations

The data collection was limited because it focused on instructors from only two universities, a large research university with around 26,000 students, and a smaller teaching university with around 12,000 students. The participants were not randomly selected, as they had to agree to participate in the online survey. The participants may not have accurately or honestly answered the survey items. The independent variables were not manipulated.

Purpose of the Study

Online discussions are utilized by instructors to provide students' opportunities to interact with their fellow students, the instructor, and the course content. Online discussions also provide students with opportunities to exercise higher-order thinking skills, as they generate and respond to questions from their instructor and peers (Caulfield, 2011).

In order to get students to participate at a quality level (Harasim et al., 1995; Jiang & Ting, 2000; Swan et al., 2007). Also, students achieve learning outcomes at a much higher rate when online discussions are assessed than when they are not assessed (Klisc et al., 2009). However, instructors have expressed a great amount of frustration with assessing online

discussions, and have admitted that they may not be assessing them correctly (Liu, 2007). The importance of effectively assessing online discussions can be found by research indicating that the ways in which online discussions are assessed greatly influences the value and purpose that students assign to online discussions, as well as the quality of students' participation (Murphy & Coleman, 2004; Oliver & Shaw, 2003; Swan et al., 2007). Essentially, assessing online discussions ineffectively can negate the collaborative learning benefits of online discussions.

More research is needed to examine the factors that influence how instructors assess online discussions, the challenges that instructors face when assessing online discussions, and how assessing online discussions could become an easier process. This researcher hoped to find out if the instructor's perceived level of importance of online discussions, perceived purpose of online discussions, and the size of the class participating in the online discussions shapes the way they assess the discussions. The researcher also sought to expand upon the assessment challenges found by Liu (2007) and Kearns (2012) to determine the degree of the challenges that instructors face when assessing online discussions, as well as solutions to making assessing online discussions an easier process.

The results of this study will help improve online discussion-based learning, which will in turn improve learning from online education overall, as online discussions are often a significant part of distance learning courses. The research provides information that is up-to-date with the changes in learning technologies.

Online education has grown immensely and will continue to grow. One out of three post-secondary students enrolls in an online course (Allen & Seaman, 2014). It is essential that quality learning experiences are provided to students online. A quality higher education system is the ticket to the United States remaining a global economic power.

In the next chapter, the review of the literature is discussed. The literature review contains the following main sections: Theoretical Perspectives of Online Discussion-Based Learning and Assessment, Purpose of Grading, Utility of Online Discussions, and Assessing Online Discussions.

Research Questions

1. Does the value that instructors place on having online discussions in their courses predict the ways in which instructors assess online discussions? (multinomial logistic regression)
2. Do the instructor's purposes of engaging students, building a learning community, and facilitating higher-order thinking as the main reasons for requiring online discussions predict the way the instructor assesses them? (multinomial logistic regression)
3. When grading online discussions, do the degrees of being challenged by determining how to handle late postings, the malfunctioning or user/operator error of technology, the amount of time it takes to provide students with quality feedback, the free-flowing nature of online discussion, and trying to determine whether quality or quantity of the responses is more important in online discussions predict the way instructors assess them? (multinomial logistic regression)
4. Does the size of the class in which online discussions take place predict the way the instructor assesses the discussions? (multinomial logistic regression)
5. What are some methods identified by instructors that ease the process of assessing online discussions? (qualitative question: content analysis)

Definition of Terms

Hybrid course: Also, known as a blended course. Combines online and face-to-face instructional components in an intended educationally beneficial manner (Niemiec & Otte, 2006).

Online discussions: Discussions that take place over online mediums between students and instructors. The discussions can occur asynchronously when participants respond at different times, or synchronously when participants are online at the same time (Al-Shalchi, 2009).

E-learning: Teaching and learning online through using virtual technologies (Hrastinski, 2008).

Learning community: A group of students who take part in knowledge seeking activities on a common topic (Fulton & Riel, 1999).

Learning management system (LMS): An online learning platform used for the creation and delivery of educational resources (Paulsen, 2003).

Chapter II: Literature Review

Online learning is defined as “a learner’s interaction with content and/or people via the internet for the purpose of learning” (Means, Bakia, & Murphy, 2014, p. 312). A fully online course provides all, or nearly all of its material through an online medium (Crawley, 2012). A blended or hybrid course delivers content online, but also requires in-person meetings (Crawley, 2012).

Online courses are typically delivered via learning management systems (LMS) (Crawley, 2012). A learning management system is a software tool that serves as the hub for an online course’s materials, and offers interactive elements that facilitate student-content, student-student, and student-instructor interaction (Crawley, 2012). Learning management systems consist of several essential course elements including: the syllabus; weekly teaching guides; discussions; rubrics and the course site. Online courses can be taught asynchronously, referring to the instructor and student not being required to be online at the same time, or synchronously, referring to the instructor and student being required to be present online at the same time (Boettcher & Conrad, 2010).

Online courses and programs have grown rapidly throughout the past decade. There are many factors involved in this widespread growth. One reason is that colleges and universities have found that online learning programs can be more cost-effective, as they are able to attract more students at a lower cost (Bartley & Golek, 2004). Student demand is also a major factor, as many students find online courses to be more convenient than traditional face-to-face courses (Crawley, 2012).

Theoretical Perspectives of Online Discussion-Based Learning and Assessment

Social Constructivism

Vygotsky (1978) emphasized the importance of interacting with others to facilitate the development of higher-order thinking processes. According to Vygotsky, individuals' mental processes originate from their social interactions with others. Vygotsky stressed that learning stimulates internal developmental processes that function when the individual interacts with others in his/her social environment. Learners internalize their experiences of working with their peers to accomplish tasks, and gain cultural knowledge through these activities (Palincsar, 1998).

Social Presence Theory

According to Short, Williams, and Christie (1976), social presence theory is “the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships” (Short et al., 1976, p.65). Short, et al. (1976) describe how social presence is a feature of a communications medium, and that communication mediums differ in the levels of social presence they facilitate.

Gunawardena (1995) adjusted the definition of social presence theory for the computer mediated communications era by defining social presence as “the degree to which a person is perceived as a real person in mediated communication” (Gunawardena, 1995, p.151).

Gunawardena and Zittle's research (1997) investigated the use of computer-mediated communication in distance education courses, and found that effective social presence was a very strong predictor of student satisfaction in the courses (Gunawardena & Zittle, 1997).

Garrison, Anderson, and Archer (2000) believed that the most effective online learning environments facilitate a community of inquiry (COI). According to the COI model, three elements must exist in online learning in order to facilitate the development of learning

communities. The three elements include: social presence, cognitive presence, and teaching presence. Social presence refers to the degree to which individuals' personal characteristics are felt in online learning environments. Cognitive presence refers to opportunities that allow individuals to construct meaning from the content. Teaching presence refers to the social and cognitive instructional activities that support learning (Garrison et al.,2000).

Motivation

Lepper, Greene, and Nisbett (1973) proposed that when an individual is offered an incentive to complete a task, the expected incentive decreases the individual's intrinsic motivation to complete the task. When the incentives to complete the task are taken away, the individual's intrinsic motivation does not return, and the individual loses interest in completing the task (Lepper et al., 1973).

Self-determination theory proposes that individuals have three needs that must be satisfied in order for individuals to be optimally motivated to participate in activities. The three needs to ensure the highest quality motivation include: need for autonomy, need for competence, and need for relatedness. Each of these needs must be supported in order for individuals to reach optimal engagement in a task. The need for autonomy refers to the individual having will over their behavioral choices. The need for competence refers to the need for an individual to master his/her own environment, and acquire satisfactory outcomes as a result. The need for relatedness refers to the individual feeling connected to others (Deci & Ryan, 1985).

Purpose of Grading

Grading is defined as the “process by which a teacher assesses student learning through classroom tests and assignments, the context in which good teachers establish that process, and

the dialogue that surrounds grades and defines their meaning to various audiences” (Walvoord & Anderson, 2011, p. 17).

Walvoord and Anderson (2011) suggest that grading serves many important purposes including: evaluation, communication, motivation, faculty and student reflection, and feedback to students. The evaluation component refers to grades providing a valid, trustworthy, and fair assessment of the quality of a student’s work. The communication purpose refers to grades being a way to communicate not only between the instructor and the student, but also with colleagues and employers. Grades are also used as a marker to separate different content units, and to allow for transitions to take place to other content.

Grades also serve as motivators to increase student involvement with the course and to increase student study time with the course. Grades also provide information pertaining to what students are learning as a group, and thus can assist with organized assessment efforts of the overall program. Grades provide students valuable feedback about where they can improve with regards to their understanding of the course content (Walvoord & Anderson, 2011).

Dochy and McDowell (1997) contend that the information obtained from the results of assessments tells instructors whether students have met the learning objectives. Instructors can use the insight gained from student performance on assessments to revise and modify student learning activities. Overall, the assessment process is vital to student learning (Dochy & McDowell, 1997).

Utility of Online Discussions

Lack of interaction in online courses has been found to be one of the main causes of students dropping out of online courses (Ivankova & Stick, 2007). Students must feel as part of a learning community in order to prevent the isolation that can occur in online learning (Palloff &

Pratt, 1999). Online discussions provide the social interaction critical in the building of an online learning community (Picciano, 2002). Online discussions also allow students to develop higher-order thinking skills such as application, analysis, synthesis, and evaluation when responding to questions from their instructors and/or peers (Caulfield, 2011).

There are two different types of online discussions: synchronous discussions and asynchronous discussions. Synchronous discussions refer to the students and instructor being online at the same time engaging in real-time chat (Bender, 2012). In contrast, asynchronous discussions refer to discourse that takes place between the students and instructor that does not occur in real-time (Hew & Cheung, 2012).

The benefits of synchronous discussions include: providing interaction that is much more like a real conversation; motivating students and instructors to respond quickly to messages as the recipients are waiting for quick responses; and fostering the development of learning communities as students are participating at the same time and are not isolated from each other (Hrastinski, 2008).

The benefits of asynchronous discussion boards include: allowing students time to reflect and potentially make more thoughtful contributions on complex issues because the instructor or other student does not expect an instant answer; allowing flexibility with the time in which students post as students may not be able to meet at the same time with other students and/or their instructor; and decreasing participation apprehension for students who are shy (Baglione & Nastanski, 2007; Hrastinski, 2008).

Parisio (2011) conducted a phenomenological study to investigate the purpose of college instructors including online discussions in their courses. Specifically, the researcher asked college instructors to concentrate on the question, “What does learning through online discussion

mean to you?” The purposes for having online discussions include: providing access and time; engaging learners; building a learning community; and facilitating higher-order thinking and cognition (Parisio, 2011).

Dengler (2008) conducted a case study to investigate the use of online discussions in a college geography class to complement active learning activities facilitated by the instructor in a face-to-face class. The main active learning strategies utilized in the classroom component of the course consisted of role playing exercises. The course instructor supplemented the active learning activities with online discussion forums. The researcher found that the students who were the most passive during face-to-face components of the course were much more engaged in the online discussion forums. Also, the online discussions allowed students opportunities to practically apply the information that they acquired from the face-to-face component of the course (Dengler, 2008).

Baglione and Nastanski (2007) investigated whether or not faculty perceive online discussions to be more effective than classroom discussions, and the benefits (if any) of online discussions. The researchers emailed a survey consisting of items comparing online discussions to classroom discussions. The researchers found that the majority of the faculty members believed online discussions to be more substantive than classroom discussions. The benefits of online discussions indicated by faculty included: allowing a fairer distribution of student participation than in the traditional classroom, and propelling students to be more likely to debate than in the regular classroom (Baglione & Nastanski, 2007).

Yang, Newby, and Bill (2008) examined the impact of participating in online discussions on the critical thinking skills of students, and the attitudes of students in regards to online discussions being a beneficial learning tool. The researchers utilized the California Critical

Thinking Skills Test (CCTST) and the Interaction Analysis Model to examine learners' patterns of discourse during structured and unstructured online discussions. The researchers found that the critical thinking skills of students who participated in structured online discussions significantly improved, and that the students in the structured online discussions indicated much more positive attitudes towards the use of online discussion boards in helping them learn than the students in the unstructured online discussions (Yang et al., 2008).

Effects of Online Discussions on Learning Outcomes

Wu and Hiltz (2004) examined whether or not students perceived learning to occur from taking part in online discussions. The researchers surveyed post-secondary students from two undergraduate hybrid courses and one graduate hybrid course on their perceptions of the benefits of online discussions as supplemental to the traditional face-to-face lecture component of the classes. They found that a majority of the students perceived the online discussions to increase their learning in the course. Also, more than 75% of the students indicated that the online discussions were excellent opportunities to provide their opinions among their instructor and fellow students (Wu & Hiltz, 2004).

Klisc, McGill, and Hobbs (2009) examined instructor perceptions of the effects of assessing asynchronous discussions on the achievement of learning outcomes by students. The desired learning outcomes included: communication abilities; amount of thought about the topic being discussed; recognition of alternative perspectives; level of critical thinking and reflection; and learning through the shared construction of knowledge. They administered a survey to instructors of online courses, and found that instructors assessing students' asynchronous discussion posts perceived students to be achieving the desired discussion outcomes at a much higher rate than instructors not assessing students' discussions indicated (Klisc et al., 2009).

Duncan, Kenworthy, and McNamara (2012) studied the effects of participating in asynchronous and synchronous online discussions on students' overall grades in the course. They examined the online discussion transcripts from a graduate course. The researchers found that both asynchronous and synchronous online engagement positively impacted students' overall grades in the course. However, engagement in synchronous online discussions had a greater positive impact on student performance in the course than engagement in asynchronous online discussions (Duncan et al., 2012).

Palmer, Holt, and Bray (2008) also examined the effects of participating in online discussions on student performance in the course. They focused only on asynchronous online discussions and investigated different factors including if the number of new posts by students in the online discussion forums in a unit in an undergraduate course was related to the students' final unit grades. They examined the course online discussion transcripts and found that the number of new posts by students was significantly positively correlated with students' final unit grades in the course (Palmer et al., 2008).

Nandi, Hamilton, Harland, & Warburton (2011) further examined the level of activity of students in online asynchronous discussions and whether or not their amount of activity in the discussions was associated with achievement on the unit exam in the course. The researchers studied the online discussion data from two large undergraduate online courses, and were able to find out how many times each student posted in the discussion forums. The researchers found that the students who posted more in the discussion forums for the unit achieved higher grades on the unit exam than students who did not post as much (Nandi et al., 2011).

Xia, Fielder, and Siragusa (2013) investigated whether or not there is a relationship between the amount of participation by students in online discussions and their academic

performance in the course, and whether or not there is a relationship between the quality of participation by students in online discussions and their academic performance in the course. The amount of students' participation was measured by the frequency of their posts, and the quality of students' participation was identified by the roles students played in the online discussions. The different student roles included: starters, responders, and facilitators. The starters developed questions and brought issues to the discussions. The responders formulated answers to the questions, and also came up with new questions. The facilitators helped administer the discussions, and also presented new learning sources to the discussions. The researchers analyzed the discussion forums in a course. They found a positive correlation between the amount of students' participation and their academic performance in the course, and a positive correlation between the quality of students' participation and their academic performance in the course (Xia et al., 2013).

Online Discussions and Class Size

Hewitt and Brett (2007) examined the relationship between class size and online discussions. Specifically, the researchers investigated the relationship between class size and student note-writing in online classes. They collected data by examining the transcripts of online discussions from 28 graduate courses.

The researchers found a statistically significant positive correlation between class size and the mean number of notes written by students. The researchers also found a statistically significant negative correlation between class size and the mean size of the discussion posts, suggesting that more students in the class resulted in students writing shorter discussion posts (Hewitt & Brett, 2007).

Qiu, Hewitt, and Brett (2012) examined the impact of class size on the performance of graduate students in online courses. The researchers investigated the relationships among online class size, note reading, note-writing, and collaborative discourse by analyzing logs and transcripts, as well as conducting interviews with instructors and graduate students. They found a positive correlation between the size of the class and the amount of notes written and read by students and instructors, and a negative correlation between the percentage of notes read by students, the length of the notes, and the grade scores received on the notes. The researchers also found that students were overloaded with the amount of information exchanged during large group discussions, and concluded that 13-15 students is the optimal class size for beneficial online collaborative discussions (Qiu et al., 2012).

Orellana (2006) investigated instructors' perceptions of ideal class sizes for online courses, and perceptions of ideal class sizes for high levels of interaction in online courses. The researcher surveyed instructors by having them complete Roblyer and Weincke's (2004) Rubric for Assessing Interactive Qualities in Distance Courses (RAIQ) (Roblyer & Weincke, 2004). The researcher found that the optimal online class size in general is 18.9, and the optimal online class size for the highest levels of interaction is 15.9 students. The researcher also discovered that optimal online class size and optimal online class size for the highest levels of interaction correlated strongly and positively (Orellana, 2006).

Assessing Online Discussions

Harasim et al. (1995) assert that students will not participate in online discussions if they are not graded, as they will view the discussions as not being important. Thus, in order to attain student participation, online discussions must be graded activities. Swan et al. (2007) add further

that the grades for online discussions must amount to a significant portion of the course grade in order to attain quality online discussions.

Online discussions are typically assessed three different ways: based on the quality of the student's contribution to the discussion; based on the level of participation by the student in the discussion; and based on a combination of the quality of the student's contribution and the level of participation by the student in the discussion (Palmer et al., 2008).

Assessing in accordance with the level of participation, emphasizing the quantity of discussion posts over the quality of discussion posts, refers to providing students a grade on the discussion based on how many times they post (Dennen, 2005). It can also refer to the instructor requiring a minimum number of posts by the student in order to complete the assignment.

Assessing based on the quantity or level of participation typically involves the instructor not placing much weight on the quality of the posts (Dennen, 2005; Swan et al., 2007).

Assessing online discussions based on the quality of the student's contribution refers to providing a student a grade based on the quality of their postings in the discussions. When assessing based on the quality of students' posts, instructors typically do not place much weight on how often or how many times students post. Rubrics are typically used to score the student's performance on criteria pre-established by the instructor (Solan & Linardopolous, 2011).

Assessing online discussions based on both the quality of the student's contribution and the level or quantity of participation involves a holistic approach to grading online discussions. Instructors take into consideration how many times a student has posted as well as the quality of the posts (Nisbet, 2004). When assessing both the quality and quantity of the student's posts, instructors typically use a rubric to score the student's performance on criteria pre-established by the instructor (Solan & Linardopolous, 2011).

Participation in Online Discussions

McKenzie and Murphy (2000) investigated the use of a non-graded online discussion forum. The researchers wanted to examine the level of participation by students in an online discussion which was not graded. The researchers analyzed the forum transcripts and found that 80% of the posts to the forum were contributed by only 11 out of the 30 students in the course, suggesting that online discussions must be graded in order to attain participation from most students (McKenzie & Murphy, 2000).

Oliver and Shaw (2003) conducted a qualitative study to examine factors that encouraged and inhibited student participation in asynchronous discussions to support learning in a face-to-face post-secondary medical education course. The researchers utilized content analysis to analyze students' postings to the discussion forum. They found that students seemed to post just to receive credit for posting, as the posts often did not contribute to quality discourse. The researchers concluded that the criteria used to assess online discussions impacts the quality of students' participation in the discussions, as students' base their efforts on meeting the pre-established criteria (Oliver & Shaw, 2003).

Assessment Criteria and Online Discussions

An, Shin, and Lim (2009) examined the effects of different assessment requirements on students' interactions and satisfaction with asynchronous online discussions. The participants were enrolled in three different sections of the same course, and the instructor utilized different grading criteria for assessing the discussions. In sections one and three, students were required to respond to at least two of their peers' postings in the discussions. In section two, it was voluntary for students to respond to their peers' postings.

The researchers analyzed the discussion data both qualitatively and quantitatively using content analysis, social networking analysis (SNA) and ANOVAs. They found that students in sections one and three interacted much more frequently than students in section two. Students in section two seldom interacted, as interacting with their peers was voluntary and not a part of their grades on the discussions (An et al., 2009).

Swan et al. (2007) examined the effects different ways of grading online discussions have on the quality of discourse. Two instructors, each teaching four sections of the same undergraduate course, were provided criteria for quality discussion participation. Each instructor implemented the quality criteria for two out of their four sections. In the criteria sections, students were graded on participation, as well as the quality of their posts. In the no criteria sections, students were only graded on participation. The researchers found that students in the sections which had criteria posted more and responded much more frequently and at a longer length to their peers' posts than students in the sections in which there was no assessment criteria. Also, the overall discussions in the sections with the criteria exhibited more depth than the discussions in the sections that did not have criteria (Swan et al., 2007).

Lai (2012) investigated the assessment of student participation in online discussions by an instructor. The instructor posed online discussion board questions to students which required them to contribute to the discussions, justify their responses, and defend against criticism. The assignment measured the ability of students to think critically during an online discussion with their peers.

The assignment was worth 15% of the total course grade and required students to discuss an assigned article online in small groups, and then individually write an analysis of the article. The instructor assessed the small group discussion component of the assignment by designing a

rubric to rate both the student's contribution to the discussion and the quality of the responses of the student to their classmates. The rubric included the marking criteria and a listing of nine critical thinking skills that students were supposed to exhibit in the online discussions. These included: made relevant comments, presented ideas clearly, articulated well-structured arguments, asked questions to the group, generated discussion and remarks from others, responded to criticisms as well as compliments, demonstrated consideration and respect for others, built on the ideas and contributions of others, and contributed to the learning experiences of others.

The researcher found that many of the responses did not fulfill the critical thinking skills listed on the rubric. However, the researcher noted that the rubric did not contain specific examples of the critical thinking abilities, and suggested that the reason students did not exhibit many of the critical thinking skills was due to a lack of understanding as to demonstration of what each critical thinking criterion entailed (Lai, 2012).

Wyss, Freedman, and Siebert (2014) investigated the use of a rubric to assess online discussions in graduate level education courses, and the effects of the rubric on students' comfort with the class expectations and quality of the discussions. The instructors created the rubric to outline expectations for students and to provide a uniform grading criteria for students in the course. The researchers compared the student scores on the instructor course evaluations and the student scores on the discussions for the class which had a rubric for discussions, to the scores on the instructor course evaluation from the previous semester in which a rubric was not used. The researchers focused on three items from the course evaluations: The instructor provides clear course objectives; the course has clear goals; and the grading system is fair. The researchers found that the students in the class which had a rubric rated the instructor and course higher on

average on the three items than the students without a rubric. Also, the students in the class with the rubric had significantly higher discussion scores on average than students in the class without the rubric (Wyss et al., 2014).

Christensen and Park (2013) examined the use of two different evaluators using a rubric in assessing the quality of online discussions. The researchers designed a rubric and had two separate evaluators score the rubric for online discussions in the same two courses. One of the evaluators was an expert in regards to the content of the course, and the other evaluator was not familiar with the course content. The researchers wanted to determine if the two evaluators scored the online discussion rubric differently for the same students. They found that the two evaluators scored the rubrics equivalently for both classes. The researchers did not find a significant difference between the scores given by the content-expert and the non-content expert (Christensen & Park, 2013).

Discussion Grade Strategies

Rovai (2003) investigated the effects of different discussion grade strategies on online discussions and online classroom community. The discussion grade strategies consisted of assigning the grade for discussions in four sections to count for 0% of the students' overall course grade, 10-20% of the students' overall course grade in seven sections, and 25-35% of the students' overall course grade in seven sections. The Classroom Community Scale (CCS) was used to measure students' discussion learning and feelings of connectedness to others in the class. The researcher found a significant increase in the number of student posts each week and sense of belongingness to a classroom community in the sections in which discussions accounted for 10-20% of the course grade compared to sections in which discussions accounted for 0% of the course grade. However, no further benefits were discovered when the percentage of the

course grade for discussions was increased to 25%-35% of the course grade (Rovai, 2003).

Jiang and Ting (2000) investigated the effects of different factors including the percent of course grade assigned to online discussions, and having grading requirements for online discussions on students' perceived learning in online courses. The percent of the course grade from online discussions ranged from 0 to 50. Grading requirements for the discussions included specifications for students' quality of posts and quantity of posts. The researchers utilized an online survey, participant observations, and digital documents to collect data (Jiang & Ting, 2000).

The researchers found that the percent of course grade assigned to the online discussions was significantly correlated with students' perceived learning in the courses. Also, having grading requirements for discussions was significantly correlated with students' perceived learning. Thus, grading the online discussions was essential to student perceptions of learning in the courses (Jiang & Ting, 2000).

Murphy and Coleman (2004) qualitatively examined graduate students' experiences of difficulties they encountered taking part in asynchronous online discussions in a web-based graduate program. The researchers found that the grade requirements for the discussions affected students' views on the value and purpose of the discussions. Students indicated that the requirement to post in order to meet a specified quota for number of posts caused them to view the discussions as having little educational value, and led them to question why they were even having to take part in the discussions. The researcher concluded that assessment approaches impact students' experiences and benefits from participating in online discussions (Murphy & Coleman, 2004).

Structure of Online Discussions and Student Learning

Vonderwell, Liang, & Alderman (2007) conducted a case study involving graduate students taking multiple online courses to examine their experiences taking part in online asynchronous discussions. The researchers found that the way in which an online discussion is structured is key to quality learning and assessment. The students preferred the threaded discussions over the non-threaded discussions, as the threaded discussions allowed students to respond to multiple questions, whereas the non-threaded discussions required students to respond to one question which resulted in redundant responses. The students also felt that most of what they learned from the online courses came from participating in the asynchronous discussions. They learned through sharing viewpoints with their peers in the discussions, and also from feedback provided from their instructor regarding their discussion posts (Vonderwell et al., 2007).

Gilbert and Dabbagh (2005) investigated the impact of the structure of online discussions on the quality of responses by the participants. As part of the structure, the researchers developed facilitator guidelines, and posted protocols and evaluation criteria. The researchers wanted to determine if adding facilitator guidelines, discussion protocols, and evaluation criteria affects the quality of discourse in online discussions. The quality of discourse was represented by the ability of students to relate new information to previously learned information; by the ability of students to interpret content by analyzing, synthesizing, and evaluating others' responses; and by the ability of students to form inferences.

The researchers conducted a multiple case study design in which they examined online discussion transcripts from the same course over a period of three years. They created a coding system to qualitatively investigate the quality of the online discourse. They found that presenting

facilitator guidelines and evaluation rubrics increased the quality of online discussions. However, some protocol items negatively impacted the quality of discourse. Specifically, a posting protocol involving limiting the length of posts and providing citations was found to negatively impact the quality of discourse (Gilbert & Dabbagh, 2005).

Challenges to Assessing Online Discussions

In a qualitative study, Liu (2007) investigated how instructors assess asynchronous discussions in online courses. He examined 50 different online courses from five different master's programs at a university. He wanted to find out how instructors determined students' grades on online discussion assignments.

He examined syllabi, observed archived online discussions, and interviewed instructors to determine how instructors grade online discussion boards. He found that the asynchronous discussion tasks varied among the courses but almost all of the instructors felt that grading online discussions was very challenging. Instructors identified assessing the quality of students' posts as the most difficult part in grading online discussions. Common concerns included the time-consuming nature of grading online discussions, and that students' may feel their discussion grades were based on whether or not the instructor agreed with their posts (Liu, 2007).

Kearns (2012) examined the challenges to assessing students in online environments. She collected syllabi from 24 online graduate courses, and identified the five most common types of online assessment measures, including asynchronous discussions. After identifying the most common measures, the researcher interviewed instructors to discuss challenges that occur in online assessment. She found that determining how to handle late postings, the malfunctioning of technology, and the amount of time it takes to give quality feedback to students were the most common challenges experienced by instructors when grading online discussions (Kearns, 2012).

Research Questions

1. Does the value that instructors place on having online discussions in their courses predict the ways in which instructors assess online discussions? (multinomial logistic regression)
2. Do the instructor's purposes of engaging students, building a learning community, and facilitating higher-order thinking as the main reasons for requiring online discussions predict the way the instructor assesses them? (multinomial logistic regression)
3. When grading online discussions, do the degrees of being challenged by determining how to handle late postings, the malfunctioning or user/operator error of technology, the amount of time it takes to provide students with quality feedback, the free-flowing nature of online discussion, and trying to determine whether quality or quantity of the responses is more important in online discussions predict the way instructors assess them? (multinomial logistic regression)
4. Does the size of the class in which online discussions take place predict the way the instructor assesses the discussions? (multinomial logistic regression)
5. What are some methods identified by instructors that ease the process of assessing online discussions? (qualitative question: content analysis)

Summary and Conclusion

As online learning continues to grow, online discussions will continue to be relied upon to provide the integral student-student, student-instructor, and student-content interaction. The discussions must be graded in order to get students to participate (Harasim et al., 1995; Jiang & Ting, 2000; Swan et al., 2007). Also, grading online discussions leads to students achieving learning outcomes at a much higher percentage than when the discussions are not graded (Klisc

et al., 2009). However, Liu (2007) and Kearns (2012) found that instructors encounter challenges when trying to assess the online discussions. No research to the author's knowledge has been conducted on solutions to the challenges.

Murphy and Coleman (2004) found that the ways online discussions are assessed impacts the value and purpose that students assign to the discussions. However, it is unknown how the instructor's perception of the level of importance for online discussions, and perceived purpose for requiring online discussions influences how they assess online discussions. It is important that the factors that may influence how instructors assess online discussions be investigated, as the benefits of having students participate in online discussions may be negated if the discussions are not assessed effectively.

Gibbs (2006) suggests that the size of the class impacts course-level assessment in traditional face-to-face classes. However, the influence of class size on how instructors assess online discussions is not known. The impact of class size on the ways that instructors assess online discussions needs to be examined, as the ways online discussions are assessed also affect the quality of the discussions.

This researcher examined factors that may influence how instructors assess online discussions, investigated the challenges involved, and sought to find solutions in order to make assessing online discussions a much easier process. The results of this study will be used to improve the quality of online learning. It is essential that the quality of online learning is continually monitored and improved, as learning technologies are constantly changing, and one out of three post-secondary students enrolls in an online course.

In the next chapter, the research methodology utilized to complete the study is discussed. The following methodology sections are presented: Participants, Selection and Recruitment, Instrumentation, Survey Items, and Analysis of Data.

Chapter III: Methods

Online learning has become a prevalent part of the American higher education system. One out of every three post-secondary students enrolls in at least one online course (Allen & Seaman, 2014). Nearly two out of three colleges and universities offer online degree programs (Allen & Seaman, 2013). There are many benefits in regards to online learning programs and courses including cost-effectiveness, convenience for students and instructors, and innovative capabilities of new technologies (Bartley & Golek, 2004; Miller, 2014).

Social presence among students and instructors is essential for a successful online course (Ivankova & Stick, 2007). Online discussions help facilitate the necessary interaction, as they provide opportunities for students to feel a part of a learning community (Caulfield, 2011; Palloff & Pratt, 1999). In addition to the beneficial interactive aspects, online discussions also provide opportunities for students to exercise higher-order thinking skills, as students answer questions from their instructors and peers (Caulfield, 2011). The valuable aspects of online discussions often lead to the discussions counting for a substantial percentage of the student's overall course grade. However, the interactive nature makes the discussions very difficult for instructors to grade. Instructors have expressed great displeasure with grading online discussions, and have admitted to having concerns about whether or not they are grading the discussions correctly (Liu, 2007).

This researcher examined how instructors assess online discussions, factors that may influence how they are assessed, and methods that could make assessing online discussions an easier process. A survey approach was used to collect information regarding how

instructors assess online discussions, the challenges that occur, and solutions to make assessing online discussions an easier process.

Purpose of the Study

Online discussions are very beneficial to students, as they allow students to interact with their coursework, fellow students, and instructor. In order to get students to participate, the discussions must be graded (Harasim et al., 1995; Jiang & Ting, 2000; Swan et al., 2007). Liu (2007) and Kearns (2012) found that assessing online discussions is very challenging for instructors, as instructors expressed concerns that they may not be assessing online discussions effectively. This study expanded upon the findings of Liu (2007) and Kearns (2012) to investigate the degree of the challenges experienced by instructors when assessing online discussions.

To the author's knowledge, no research has been conducted on the factors that influence how instructors assess online discussions. The ways instructors assess online discussions impacts the quality of the discussions, as well as the value and purpose that students assign to online discussions (Murphy & Coleman, 2004; Oliver & Shaw, 2003; Swan et al., 2007). This researcher examined how the value the instructor places upon online discussions, the instructor's purpose for requiring online discussions, and how the size of the class influences how instructors assess online discussions.

The findings will be used to help improve online discussions which in turn will improve online learning. Online learning is an integral part of the American higher education system, and it is essential that the quality of online education is continually monitored and improved.

Research Questions

1. Does the value that instructors place on having online discussions in their courses

- predict the ways in which instructors assess online discussions? (multinomial logistic regression)
2. Do the instructor's purposes of engaging students, building a learning community, and facilitating higher-order thinking as the main reasons for requiring online discussions predict the way the instructor assesses them? (multinomial logistic regression)
 3. When grading online discussions, do the degrees of being challenged by determining how to handle late postings, the malfunctioning or user/operator error of technology, the amount of time it takes to provide students with quality feedback, the free-flowing nature of online discussion, and trying to determine whether quality or quantity of the responses is more important in online discussions predict the way instructors assess them? (multinomial logistic regression)
 4. Does the size of the class in which online discussions take place predict the way the instructor assesses the discussions? (multinomial logistic regression)
 5. What are some methods identified by instructors that ease the process of assessing online discussions? (qualitative question: content analysis)

Participants

The participants were 108 post-secondary instructors from two higher education institutions, Auburn University and Arkansas Tech University, who utilize online discussions in their classes. The research utilized a single stage sampling procedure through e-mail. Each participant was provided with a link to the survey on Qualtrics. The participants were assigned a code which protected their identity.

Selection and Recruitment

The researcher first obtained permission from the Institutional Review Boards at Auburn University and Arkansas Tech University to recruit instructors to participate in the study. The researcher emailed all instructors at both universities in order to attain responses not only from instructors who teach online and include online discussions but also instructors who teach face- to-face and include online discussions in their courses.

Upon opening the survey, instructors were presented with a question that asked whether or not they included or have included online discussions in at least one course. The instructor had to answer “Yes” to the item in order to proceed to the survey. Instructors who answered “No” to the item received a thank you message for their consideration but were signed off from the survey.

Instrumentation

The researcher sought to determine if the instructor’s purpose for requiring online discussions, the value the instructor places on online discussions, and the size of the class predicted how the instructor assessed the discussions. The instructor’s purpose for requiring online discussions was determined based on the instructor’s self-reported purpose from a list of four purposes found in the literature. The purposes included using online learning as: a way to engage learners; to build a learning community; and to facilitate higher-order thinking.

The value the instructor places on online discussions was determined by Likert-type items which indicated the instructor’s self-reported level of importance that he/she places on online discussions. The size of the instructor’s typical class in which he/she utilizes online discussions was self-reported by the instructor from a list of online class size ranges. The researcher also sought to find solutions for what could make assessing online discussions an

easier process. The solutions were identified from instructors' responses to a write-in question regarding how to ease the process.

The items on the researcher-developed survey were based on the literature on online discussions and assessment. The items represented the following: background information; purpose for requiring online discussions; instructor's value (level of importance) for online discussions; the number of students in online discussions and interactions (class size); challenges in assessing online discussions; and solutions to assessing online discussions.

The survey was reviewed by an expert panel of five instructors who have experience requiring online discussions in their courses to assess the validity of the survey items. The researcher obtained permission to use the Survey/Interview Validation Rubric for Expert Panel (VREP) for the validity check (See Appendix 1). The VREP evaluates face, content, and construct validity (Simon & White, n.d.). Based on the validity check, the wording was changed on some of the survey items in order to improve clarity. Also, the following items were deleted as they did not relate to the research questions: online discussions typically count for how much percent of the grade in my course; and my ideal class size for online discussions.

After the validity check, the updated survey was pilot tested by twenty instructors who require online discussions in their courses in order to evaluate the reliability of the instrument. After receiving the results from the pilot study participants, internal consistency instrument reliability was calculated. Any items that decreased the reliability of the survey were deleted. The following three items would not reduce the alpha if deleted and were therefore deleted from the survey: online discussions are very effective in providing the instructor with opportunities to

engage in higher-order thinking; online courses should be required to have activities in which students interact with their fellow students; and online courses should be required to have activities in which students interact with their instructor.

Survey Items

Background Information

- I require or have required online discussions in at least one class that I am currently teaching or have taught. a) Yes b) No
- The online discussions take place or have taken place in the following type of course (Check all that apply): a) online course b) hybrid (blended) course c) face-to-face course.

Ways of Assessing Online Discussions (Involves Research Questions #1, 2, 3, 4)

- My typical way of assessing online discussions is by placing most significance on the: a) quality of the student's contribution to the discussion; b) the amount of participation by the student in the discussion; c) a combination of the quality of the student's contribution and the amount of participation by the student in the discussion

Value (Level of Importance) of Online Discussions (Research Question #1)

- Online discussions are a very important part of my course: 1-5 Likert Scale item
- Online discussions are very important in helping students learn the course content: 1-5 Likert Scale item
- Online discussions are very effective in helping students to interact with their fellow students: 1-5 Likert Scale item
- Online discussions are very effective in helping students to interact with their instructor: 1-5 Likert Scale item

- Online discussions are very effective in providing students with opportunities to engage in higher-order thinking: 1-5 Likert Scale item

Purpose for Requiring Online Discussions (Research Question #2)

- For the following purposes of requiring online discussions in your course, please indicate the degree to which each listed purpose serves as the main purpose for including online discussions on a scale of 1-5 with 1 indicating that you strongly disagree with the listed purpose as being the main reason why you have required online discussions in a course, and 5 indicating that you strongly agree that the listed purpose is the main reason why you have required online discussions in a course: engaging students; building a learning community; and facilitating higher-order thinking.

Challenges in Assessing Online Discussions (Research Question #3)

- For each of the challenges in assessing online discussions, please indicate the degree on a scale of 1-5 to which you experience each listed challenge with 1 indicating that you never experience the listed challenge when assessing online discussions, and 5 indicating that you experience the listed challenge very often when assessing online discussions: malfunctioning of technology; determining whether quality or quantity is more important; amount of time needed to provide quality feedback; free-flowing nature of online discussions; and determining how to handle late postings.

Online Discussions and Class/Group Size (Research Question #4)

- In my class, the typical (average) online discussion group consists of how many students?
a) 1-10 b) 11-20 c) 21-30 d) 31-40 e) 41-50 f) above 50

Solutions to the Challenges of Assessing Online Discussions (Research Question #5)

- What are some methods identified by instructors that ease the process of

assessing online discussions? (Write-in)

Analysis of Data

The researcher imported the survey data from Qualtrics into SPSS version 22. The data was then analyzed by utilizing logistic regression, ordinal regression, and content analysis. Logistic regression is used to examine the impact of a nominal or continuous independent variable on the outcome of a dependent categorical variable (Morgan & Teachman, 1988).

Different types of logistic regression include: binary logistic regression, multinomial logistic regression, and ordinal regression. Binary logistic regression is used to investigate the effects of a nominal or continuous independent when the dependent variable consists of two categories (Mertler & Vannatta, 2002). Multinomial logistic regression is utilized to examine the effects of a nominal or continuous independent variable when the dependent variable is composed of several non-ordinal categories (Kwak & Clayton-Matthews, 2002). Content analysis is used to identify themes from qualitative write-in responses (Hsieh & Shannon, 2005).

A multinomial logistic regression was used to determine the relationship between the value instructors place on online discussions and the ways (based on quality, quantity, or combination of both) in which instructors assess online discussions (Research Question #1). Participants completed Likert-type closed-ended items that examined how important he or she felt that online discussions were to their course. Each participant's scores on the value comprised an average value score. The statistical analysis determined the relationship between the level of importance (value) and the ways the instructor assesses online discussions.

A multinomial logistic regression was used to determine the relationship between the degree to which the listed purpose served as a main purpose for including online discussions,

and the way (based on quality, quantity, or combination of both) the instructor assesses them (Research Question #2). Participants answered multiple choice items that investigated why they require students to participate in online discussions. The statistical analysis determined the relationship between the extent to which the listed purpose served as a main purpose for having students take part in online discussions, and the ways instructors assess online discussions.

A multinomial logistic regression was used to determine the relationship between the degree to which the instructor experiences the listed challenge when assessing online discussions, and the way (based on quality, quantity, or combination of both) the instructor assesses the discussions (Research Question #3). Participants answered multiple choice items that investigated the degree to which instructors experience the listed challenges when assessing online discussions. The statistical analysis determined the relationship between the extent to which instructors experience the listed challenges when assessing online discussions, and the ways instructors assess online discussions.

A multinomial logistic regression was run to determine the relationship between the number of students' in the class and how instructors assess the online discussions (based on quality, quantity, or combination of both) (Research Question #4). The number of students' in the class was indicated by instructors' responses on a Likert-type closed-ended item that presented different ranges of class sizes. The statistical analysis determined the relationship between the size of the class participating in online discussions, and the ways instructors assess them.

Content analysis was utilized to identify methods designated by instructors that would ease the process of assessing online discussions (Research Question #5). Themes were identified from the instructors' responses in regards to solutions for making assessing online

discussions an easier process.

Conclusion

This researcher used a quantitative approach to investigate factors that impact how instructors assess online discussions, examined the degree of the challenges that take place when assessing online discussions, and determined what would make assessing online discussions an easier process. Post-secondary instructors at Auburn University and Arkansas Tech University teaching courses that include online discussions were asked to complete an online survey. The survey gathered information pertaining to how they assess online discussions, the challenges that occur, and how assessing online discussions could perhaps be an easier process. After completing the survey, the quantitative data was exported to SPSS and was analyzed using logistic regressions and ordinal regression. The qualitative item was analyzed utilizing content analysis to identify themes.

In the next chapter, findings are presented according to each research question. In the final chapter, the educational implications and applications of the findings are discussed.

Chapter IV: Findings

The purpose of this research was to examine factors that influence how instructors assess online discussions, the challenges that instructors face when assessing online discussions, and how assessing online discussions could become an easier process. Results of the research may be used by post-secondary instructors and administrators to help improve online discussions and online learning overall. The purpose of the survey was to allow instructors to report anonymously how they are assessing online discussions and provide them with an opportunity to give suggestions on how to make it a less challenging process. One hundred-eight post-secondary instructors at Auburn University and Arkansas Tech University completed the survey.

A multinomial logistic regression was conducted to investigate research questions 1-4. Each item consisted of Likert-type responses. Logistic regression is used to investigate the effects of a nominal or continuous independent variable on the outcome of a dependent categorical variable (Morgan & Teachman, 1988). Multinomial logistic regression is utilized to examine the effects of a nominal or continuous independent variable on a dependent variable that is composed of more than two non-ordinal categories (Kwak & Clayton-Matthews, 2002). Content analysis was utilized to examine the open-ended responses pertaining to research question 5. Content analysis helps identify recurring themes from qualitative data (Hsieh & Shannon, 2005).

Research Question 1

Does the value that instructors place on having online discussions in their courses

predict the ways in which instructors assess online discussions? Items 3 and 5-9 pertain to the instructor's self-reported level of importance for having online discussions in their courses, and the ways in which instructors assess online discussion. Items 5-9 consisted of a five point Likert scale.

Item 3: My typical way of assessing online discussions is by placing most significance on the: quality of the student's contribution to the discussion, the amount of participation by the student in the discussion, a combination of quality of the student's contribution and the amount of participation by the student in the discussion.

Item 5: Online discussions are a very important part of my course. The mean score for online discussions being a very important part of instructors' course was 3.94. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 1).

Item 6: Online discussion are very important in helping students learn the course content: The mean score for online discussions being very important in helping students learn the course content was 3.8. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 2).

Item 7: Online discussion are very effective in helping students to interact with their fellow students. The mean scores for the online discussions being very effective in helping students interact with their fellow students was 4.10. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 3).

Item 8: Online discussion are very effective in helping students to interact with their instructor. The mean score for online discussions being very effective in helping students interact with their instructor was 3.58. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 4).

Item 9: Online discussions are very effective in providing students with opportunities to engage in higher-order thinking. The mean score for online discussions being very effective in providing students with opportunities to engage in higher-order thinking was 3.93. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 5).

The average score for each instructor's responses on items 5-9 was calculated to determine the value that instructors hold for online discussions. Each item consisted of a five point Likert scale. A multinomial logistic regression was conducted to determine if the value that instructors hold for online discussions predicts how they assess the discussions. Results indicated that no statistically significant predictive relationship existed between instructor's perceived value of online discussions and how they assess online discussions ($p = .215$).

Table 1

Observed and Predicted Frequencies: Online discussions are a very important part of my course and typical way assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Online discussions are very important part of my course	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	0	.163	-.442	0.0%	16.3%
	Amount of participation by the student	0	.166	-.446	0.0%	16.6%
	Combination of quality and quantity	1	.671	.700	100%	67.1%
Disagree	Quality of student's contribution	1	1.372	-.349	12.5%	17.2%
	Amount of participation by the student	1	1.091	-.094	12.5%	13.6%
	Combination of quality and quantity	6	5.537	.355	75%	69.2%
Neither Agree nor Disagree	Quality of student's contribution	2	2.326	-.236	15.4%	17.9%
	Amount of participation by the student	1	1.449	-.396	7.7%	11.1%
	Combination of quality and quantity	10	9.225	.473	76.9%	71.0%
Agree	Quality of student's contribution	13	10.579	.825	22.8%	18.6%
	Amount of participation by the student	7	5.166	.846	12.3%	9.1%
	Combination of quality and quantity	37	41.254	-1.260	64.9%	72.4%
Strongly Agree	Quality of student's contribution	4	5.560	-.736	13.8%	19.2%
	Amount of participation by the student	1	2.128	-.803	3.4%	7.3%
	Combination of quality and quantity	24	21.312	1.131	82.8%	73.5%

Table 2

Observed and Predicted Frequencies: Online discussions are very important in helping students learn course content. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Online discussions are very important in helping students learn course content	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	1	.656	.519	50.0%	32.8%
	Amount of participation by the student	0	.277	-.567	0.0%	13.9%
	Combination of quality and quantity	1	1.067	.095	50.0%	53.3%
Disagree	Quality of student's contribution	1	1.371	-.327	20.0%	27.4%
	Amount of participation by the student	0	.616	-.838	0.0%	12.3%
	Combination of quality and quantity	4	3.013	.902	80.0%	60.3%
Neither Agree nor Disagree	Quality of student's contribution	3	3.600	-.359	18.8%	22.5%
	Amount of participation by the student	2	1.718	.228	12.5%	10.7%
	Combination of quality and quantity	11	10.682	.169	68.8%	66.8%
Agree	Quality of student's contribution	12	11.063	.311	19.7%	18.1%
	Amount of participation by the student	8	5.607	1.060	13.1%	9.2%
	Combination of quality and quantity	41	44.330	-.957	67.2%	72.7%
Strongly Agree	Quality of student's contribution	3	3.310	-.184	13.0%	14.4%
	Amount of participation by the student	0	1.782	-1.390	0.0%	7.7%
	Combination of quality and quantity	20	17.909	1.050	87%	77.9%

Table 3

Observed and Predicted Frequencies: Online discussions help students interact with fellow students. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Online discussions help students interact with fellow students	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	2	1.262	.863	66.7%	42.1%
	Amount of participation by the student	0	.566	-.836	0.0%	18.9%
	Combination of quality and quantity	1	1.172	-.203	33.3%	39.1%
Disagree	Quality of student's contribution	2	2.026	-.023	33.3%	33.8%
	Amount of participation by the student	1	.945	.061	16.7%	15.8%
	Combination of quality and quantity	3	3.029	-.023	50.0%	50.5%
Neither Agree nor Disagree	Quality of student's contribution	2	2.569	-.412	20.0%	25.7%
	Amount of participation by the student	2	1.246	.722	20.0%	12.5%
	Combination of quality and quantity	6	6.184	-.120	60.0%	61.8%
Agree	Quality of student's contribution	7	8.735	-.651	14.9%	18.6%
	Amount of participation by the student	5	4.406	.297	10.6%	9.4%
	Combination of quality and quantity	35	33.859	.371	74.5%	72.0%
Strongly Agree	Quality of student's contribution	7	5.408	.734	16.7%	12.9%
	Amount of participation by the student	2	2.836	-5.14	4.8%	6.8%
	Combination of quality and quantity	33	33.756	-.294	78.6%	80.4%

Table 4

Observed and Predicted Frequencies: Online discussions help students interact with instructor. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Online discussions help students interact with instructor	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	0	.197	-.495	0.0%	19.7%
	Amount of participation by the student	0	.249	-.575	0.0%	24.9%
	Combination of quality and quantity	1	.555	.896	100.0%	55.5%
Disagree	Quality of student's contribution	3	3.171	-.107	18.8%	19.8%
	Amount of participation by the student	4	2.725	.848	25.0%	17.0%
	Combination of quality and quantity	9	10.105	-.572	56.3%	63.2%
Neither Agree nor Disagree	Quality of student's contribution	7	4.823	1.103	28.0%	19.3%
	Amount of participation by the student	1	2.817	-1.149	4.0%	11.3%
	Combination of quality and quantity	17	17.360	-1.56	68%	69.4%
Agree	Quality of student's contribution	5	8.056	-1.191	11.4%	18.3%
	Amount of participation by the student	4	3.197	.466	9.1%	7.3%
	Combination of quality and quantity	35	32.747	.779	79.5%	74.4%
Strongly Agree	Quality of student's contribution	5	3.754	.706	22.7%	17.1%
	Amount of participation by the student	1	1.012	-.013	4.5%	4.6%
	Combination of quality and quantity	16	17.234	-.638	72.7%	78.3%

Table 5

Observed and Predicted Frequencies: Online discussions allow students to engage in higher-order thinking. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Online discussions allow students to engage in higher-order thinking	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	0	.230	-.509	0.0%	11.5%
	Amount of participation by the student	1	.817	.263	50.0%	40.9%
	Combination of quality and quantity	1	.953	.066	50.0%	47.7%
Disagree	Quality of student's contribution	1	.588	.582	25.0%	14.7%
	Amount of participation by the student	1	1.021	-.024	25.0%	25.5%
	Combination of quality and quantity	2	2.391	-.399	50.0%	59.8%
Neither Agree nor Disagree	Quality of student's contribution	3	2.917	.053	17.6%	17.2%
	Amount of participation by the student	1	2.467	-1.010	5.9%	14.5%
	Combination of quality and quantity	13	11.616	.722	76.5%	68.3%
Agree	Quality of student's contribution	11	11.484	-.159	18.0%	18.8%
	Amount of participation by the student	7	4.734	1.084	11.5%	7.8%
	Combination of quality and quantity	43	44.782	-.516	70.5%	73.4%
Strongly Agree	Quality of student's contribution	5	4.781	.112	20.8%	19.9%
	Amount of participation by the student	0	.961	-1.000	0.0%	4.0%
	Combination of quality and quantity	19	18.258	.355	79.2%	76.1%

Research Question 2

Do the instructor's purposes of engaging students, building a learning community, and facilitating higher-order thinking as the main reasons for requiring online discussions predict the way the instructor assesses them?

Item 3 and 10-12 pertain to the ways in which instructors assess online discussions and the purposes for requiring online discussions.

Item 3: My typical way of assessing online discussions is by placing most significance on the: a) quality of the student's contribution to the discussion, b) the amount of participation by the student in the discussion; or c) a combination of the quality of the student's contribution and the amount of participation by the student in the discussion.

Items 10-12: For the following purposes of requiring online discussions in your course, please indicate the degree to which each listed purpose serves as the main purpose for including online discussions on a scale of 1-5 with 1 indicating that you strongly disagree with the listed purpose as being the main reason why you have required online discussions in a course, and 5 indicating that you strongly agree that the listed purpose is the main reason why you have required online discussions in a course.

Engage students: a multinomial logistic regression was conducted to determine the instructor's main purpose for requiring online discussions to engage students predicts how instructors assess the discussions. The mean score for instructors on engaging students being a main purpose for requiring online discussions was 4.16. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 6). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between instructor's main purpose for online discussions being to engage students and how

they assess online discussion ($p = .269$).

Build a learning community: a multinomial logistic regression was conducted to determine the degree to which the instructor's main purpose for requiring online discussion is to build a learning community predicts how instructors assess the discussions. The mean score for building a learning community being a main purpose why instructors require online discussions in their courses was 4.09. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 7). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between instructor's main purpose for online discussions being a build a learning community and how they assess online discussions ($p = .382$).

Facilitating higher-order thinking: a multinomial logistic regression was conducted to determine the degree to which the instructor's main purpose for requiring online discussions in order to facilitate higher-order thinking predicts how instructors assess the discussions. The mean score for facilitating higher-order thinking as a main purpose for instructors requiring online discussions was 3.93. Descriptive statistics indicated that the most frequently selected response was Agree (see Table 8). Results of the multinomial logistic regression indicated that a statistically significant predictive relationship existed between the instructor's main purpose for online discussions being to facilitate higher-order thinking and how they assess online discussions ($p = .005$). Model fitting criteria ($-2 \text{ Log Likelihood} = 28.735$, $df = 2$) indicate fairly good fit. However, the Cox and Snell Pseudo R-Squared test (.093) and Nagelkerke Pseudo R-Squared test (.118) indicate that the model explains a small proportion of the variance. The model was moderately accurate in classifying cases, as it correctly classified 72.9% of the cases. The Wald criterion indicates that only the coefficient on assessing based on the amount

of participation by the student ($p = .004$) made a significant contribution to the model (see Table 9). The odds ratios (ExpB) for assessing based on quality of students' contributions (1.302) and assessing based on amount of participation by the student (.341) indicate little chance of the prediction improving when increased by one unit (see Table 9).

Table 6

Observed and Predicted Frequencies: Main purpose of online discussions is to engage students. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Main purpose of online discussions is to engage students	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	1	.318	1.466	100.0%	31.8%
	Amount of participation by the student	0	.290	-.639	0.0%	29.0%
	Combination of quality and quantity	0	.392	-.803	0.0%	39.2%
Disagree	Quality of student's contribution	1	.569	.676	50.0%	28.4%
	Amount of participation by the student	0	.424	-.734	0.0%	21.2%
	Combination of quality and quantity	1	1.007	-.010	50.0%	50.3%
Neither Agree nor Disagree	Quality of student's contribution	1	2.653	-1.165	9.1%	24.1%
	Amount of participation by the student	2	1.617	.326	18.2%	14.7%
	Combination of quality and quantity	8	6.730	.786	72.7%	61.2%
Agree	Quality of student's contribution	10	10.716	-.244	18.2%	19.5%
	Amount of participation by the student	7	5.334	.759	12.7%	9.7%
	Combination of quality and quantity	38	38.950	-.282	69.1%	70.8%
Strongly Agree	Quality of student's contribution	7	5.744	.569	18.4%	15.1%
	Amount of participation by the student	1	2.335	-.902	2.6%	6.1%
	Combination of quality and quantity	30	29.921	.032	78.9%	78.7%

Table 7

Observed and Predicted Frequencies: Main purpose of online discussion is to build a learning community. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Main purpose of online discussion is to build a learning community	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Disagree	Quality of student's contribution	1	-.771	.291	25.0%	19.3%
	Amount of participation by the student	1	.930	.083	25.0%	23.3%
	Combination of quality and quantity	2	2.299	-.303	50.0%	57.5%
Neither Agree nor Disagree	Quality of student's contribution	3	2.729	.183	21.4%	19.5%
	Amount of participation by the student	2	2.098	-.074	14.3%	15.0%
	Combination of quality and quantity	9	9.173	-.097	64.3%	35.5%
Agree	Quality of student's contribution	9	10.230	-.427	16.7%	18.9%
	Amount of participation by the student	5	5.013	-.006	9.3%	9.3%
	Combination of quality and quantity	40	38.757	.376	74.1%	71.8%
Strongly Agree	Quality of student's contribution	7	6.270	.322	20.0%	17.9%
	Amount of participation by the student	2	1.958	.031	5.7%	5.6%
	Combination of quality and quantity	26	26.771	-.307	74.3%	76.5%

Table 8

Observed and Predicted Frequencies: Main purpose of online discussions purpose is to facilitate higher-order thinking. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Main purpose of online discussions purpose is to facilitate higher- order thinking	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Strongly Disagree	Quality of student's contribution	0	.035	-.191	0.0%	3.5%
	Amount of participation by the student	1	.659	.719	100.0%	65.9%
	Combination of quality and quantity	0	.306	-.664	0.0%	30.6%
Disagree	Quality of student's contribution	2	.557	2.016	28.6%	8.0%
	Amount of participation by the student	1	2.729	-1.340	14.3%	39.0%
	Combination of quality and quantity	4	3.714	.216	57.1%	53.1%
Neither Agree nor Disagree	Quality of student's contribution	1	1.620	-.524	8.3%	13.5%
	Amount of participation by the student	4	2.080	1.465	33.3%	17.3%
	Combination of quality and quantity	7	8.301	-.813	58.3%	69.2%
Agree	Quality of student's contribution	9	11.950	-.948	14.3%	19.0%
	Amount of participation by the student	4	4.018	-.009	6.3%	6.4%
	Combination of quality and quantity	50	47.032	.860	79.4%	74.7%
Strongly Agree	Quality of student's contribution	8	5.839	1.028	33.3%	24.3%
	Amount of participation by the student	0	.514	-.725	0.0%	2.1%
	Combination of quality and quantity	16	17.647	-.762	66.7	73.5%

Table 9

Parameter Estimates: Main purpose of online discussions is to facilitate higher-order thinking and typical way assessing online discussion

Typical way assessing online discussions ^a		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Quality of student's contribution	Intercept	-2.426	1.505	2.598	1	.107			
	Main purpose of online discussions is to facilitate higher-order thinking	.264	.360	.539	1	.463	1.302	.643	2.636
Amount of participation by the student	Intercept	1.843	1.290	2.042	1	.153			
	Main purpose of online discussions is to facilitate higher-order thinking	-1.076	.370	8.460	1	.004	.341	.165	.704

a. The reference category is: combination quality and quantity.

Research Question 3

When grading online discussions, do the degrees of being challenged by determining how to handle late postings, the malfunctioning or user/operator error of technology, the amount of time it takes to provide students with quality feedback, the free-flowing nature of online discussion, and trying to determine whether quality or quantity of the responses is more important in online discussions predict the way instructors assess them?

Items 3 and 15-19 pertain to the ways in which instructors assess online discussions and the challenges that instructor's face when assessing online discussions.

Items 3: My typical way of assessing online discussions is by placing most significance

on the quality of the student's contribution to the discussion, the amount of participation by the student's contribution, and the amount of participation by the student in the discussion.

Items 15-19: For each of the challenges in assessing online discussions, please indicate the degree on a scale of 1-5 to which you experience each listed challenge with 1 indicating that you never experience the listed challenge when assessing online discussions, and 5 indicating that you experience the listed challenge very often when assessing online discussions.

Determining how to handle late postings: a multinomial logistic regression was conducted to determine if the degree to which the instructor experiences the challenge of determining how to handle late postings when assessing online discussion and how they assess online discussions. The mean score for determining how to handle late postings being a challenge that instructors face when assessing online discussions was 3.06. Descriptive statistics indicated that the most frequently selected response was Sometimes Experience (see Table 10). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the extent to which instructor's face the challenge of how to handle late postings when grading online discussions and how they assess online discussions ($p = .705$).

Malfunctioning or user/operator error of technology: A multinomial logistic regression was conducted to determine if the degree to which the instructor experiences the challenge of malfunctioning user or operator error of technology when assessing online discussions predicts how they assess online discussions. The mean score for malfunctioning or user/operator error being a challenge that instructors face when assessing online discussions was 2.64. Descriptive statistics indicated that the most frequently selected response was Rarely Experience (see Table

11). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the extent to which instructors face the challenge of user or operator error of technology when grading online discussions and how they assess online discussions ($p = .472$).

Amount of time needed to provide quality feedback: A multinomial logistic regression was conducted to determine if the degree to which the instructor experiences the challenge of the amount of time needed when assessing online discussions predicts how they assess online discussions. The mean score for the amount of time needed to provide quality feedback being a challenge that instructors face when assessing online discussions was 3.54. Descriptive statistics indicated that the most frequently selected response was Often Experience (see Table 12). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the extent to which instructors face the challenge of the amount of time needed to provide quality feedback when grading online discussions, and how they assess online discussions ($p = .223$).

Free flowing nature of online discussions: A multinomial logistic regression was conducted to determine if the degree to which the instructor experiences the challenge of the free-flowing nature of online discussions when assessing online discussions and how they assess online discussions. The mean score for the free-flowing nature of online discussions being a challenge that instructors face when assessing online discussions was 3.30. Descriptive statistics indicated that the most frequently selected response was Sometimes Experience (see Table 13). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the extent to which instructors face the challenge of the free-flowing nature of online discussions when grading online discussions, and

how they assess online discussions ($p = .234$).

Determining whether quality or quantity is more important: A multinomial logistic regression was conducted to determine if the degree to which the instructor experiences the challenge of trying to determine whether quality or quantity is more important when assessing online discussions and how they assess online discussions. The mean score for determining whether quality or quantity is more important being a challenge that instructors face when assessing online discussions was 2.98. Descriptive statistics indicated that the most frequently selected response was Sometimes Experience (see Table 14). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the extent to which instructors face the challenge of trying to determine whether quality or quantity is more important when grading online discussions, and how they assess online discussions ($p = .629$).

Table 10

Observed and Predicted Frequencies: Determining how to handle late postings is a challenge in assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Determining how to handle late postings is a challenge in assessing online discussions	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Never Experience	Quality of student's contribution	1	1.672	-.576	11.1%	18.6%
	Amount of participation by the student	2	.468	2.301	22.2%	5.2%
	Combination of quality and quantity	6	6.860	-.674	66.7%	76.2%
Rarely Experience	Quality of student's contribution	4	3.167	.519	23.5%	18.6%
	Amount of participation by the student	0	1.157	-1.114	0.0%	6.8%
	Combination of quality and quantity	13	12.676	.180	76.5%	74.6%
Sometimes Experience	Quality of student's contribution	8	8.735	-.276	17.0%	18.6%
	Amount of participation by the student	3	4.166	-.599	6.4%	8.9%
	Combination of quality and quantity	36	34.099	.621	76.6%	72.6%
Often Experience	Quality of student's contribution	7	5.340	.795	24.1%	18.4%
	Amount of participation by the student	3	3.326	-.190	10.3%	11.5%
	Combination of quality and quantity	19	20.334	-.541	65.5%	70.1%
Very Often Experience	Quality of student's contribution	0	1.086	-1.151	0.0%	18.1%
	Amount of participation by the student	2	.883	1.287	33.3%	14.7%
	Combination of quality and quantity	4	4.032	-.027	66.7%	67.2%

Table 11

Observed and Predicted Frequencies: Malfunctioning technology is a challenge in assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Malfunctioning technology is a challenge in assessing online discussions	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Never Experience	Quality of student's contribution	2	1.096	.977	40.0%	21.9%
	Amount of participation by the student	1	.607	.538	20.0%	12.1%
	Combination of quality and quantity	2	3.296	-1.223	40.0%	65.9%
Rarely Experience	Quality of student's contribution	10	10.296	-.103	19.2%	19.8%
	Amount of participation by the student	5	5.332	-.152	9.6%	10.3%
	Combination of quality and quantity	37	36.372	.190	71.2%	69.9%
Sometimes Experience	Quality of student's contribution	4	5.679	-.777	12.5%	17.7%
	Amount of participation by the student	2	2.750	-.473	6.3%	8.6%
	Combination of quality and quantity	26	23.571	.975	81.3%	73.7%
Often Experience	Quality of student's contribution	3	2.370	.446	20.0%	15.8%
	Amount of participation by the student	2	1.073	.928	13.3%	7.2%
	Combination of quality and quantity	10	11.557	-.956	66.7%	77.0%
Very Often Experience	Quality of student's contribution	1	.559	.636	25.0%	14.0%
	Amount of participation by the student	0	.237	-.502	0.0%	5.9%
	Combination of quality and quantity	3	3.204	-.255	75.0%	80.1%

Table 12

Observed and Predicted Frequencies: Amount of time needed to provide quality feedback is a challenge in assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Amount of time needed to provide quality feedback	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Never Experience	Quality of student's contribution	0	.902	-1.135	0.0%	30.1%
	Amount of participation by the student	2	.555	2.150	66.7%	18.5%
	Combination of quality and quantity	1	1.544	-.628	33.3%	51.5%
Rarely Experience	Quality of student's contribution	4	3.545	.280	28.6%	25.3%
	Amount of participation by the student	0	1.989	-1.523	0.0%	14.2%
	Combination of quality and quantity	10	8.466	.839	71.4%	60.5%
Sometimes Experience	Quality of student's contribution	7	6.608	.171	21.9%	20.6%
	Amount of participation by the student	3	3.381	-.219	9.4%	10.6%
	Combination of quality and quantity	22	22.012	-.004	68.8%	68.8%
Often Experience	Quality of student's contribution	8	6.543	.623	20.0%	16.4%
	Amount of participation by the student	4	3.053	.564	10.0%	7.6%
	Combination of quality and quantity	28	30.404	-.890	70.0%	76.0%
Very Often Experience	Quality of student's contribution	1	2.403	-.968	5.3%	12.6%
	Amount of participation by the student	1	1.023	-.023	5.3%	5.4%
	Combination of quality and quantity	17	15.575	.851	89.5%	82.0%

Table 13

Observed and Predicted Frequencies: Free flowing nature of online discussion is a challenge in assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Free flowing nature of online discussion is a challenge in assessing online discussion	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Never Experience	Quality of student's contribution	0	.532	-.783	0.0%	13.3%
	Amount of participation by the student	2	1.002	1.151	50.0%	25.1%
	Combination of quality and quantity	2	2.466	-.479	50.0%	61.6%
Rarely Experience	Quality of student's contribution	5	2.693	1.532	29.4%	15.8%
	Amount of participation by the student	1	2.701	-1.129	5.9%	15.9%
	Combination of quality and quantity	11	11.605	-.315	64.7%	68.3%
Sometimes Experience	Quality of student's contribution	5	7.401	-.975	12.2%	18.1%
	Amount of participation by the student	4	3.951	.026	9.8%	9.6%
	Combination of quality and quantity	32	29.648	.821	78.0%	72.3%
Often Experience	Quality of student's contribution	7	6.989	.005	20.0%	20.0%
	Amount of participation by the student	3	1.985	.742	8.6%	5.7%
	Combination of quality and quantity	25	26.026	-.397	71.4%	74.4%
Very Often Experience	Quality of student's contribution	3	2.384	.450	27.3%	21.7%
	Amount of participation by the student	0	.360	-.610	0.0%	3.3%
	Combination of quality and quantity	8	8.255	-.178	72.7%	75.0%

Table 14

Observed and Predicted Frequencies: Determining whether quality or quantity is more important is a challenge in assessing online discussions. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Determining whether quality or quantity is more important is challenge in assessing online discussions	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
Never Experience	Quality of student's contribution	1	2.658	-1.168	9.1%	
	Amount of participation by the student	2	.700	1.605	18.2%	
	Combination of quality and quantity	8	7.641	.235	72.7%	
Rarely Experience	Quality of student's contribution	9	5.276	1.825	36.0%	
	Amount of participation by the student	0	1.915	-1.440	0.0%	
	Combination of quality and quantity	16	17..809	-.799	64.0%	
Sometimes Experience	Quality of student's contribution	6	6.95	-.401	15.8%	
	Amount of participation by the student	3	3.478	-.269	7.9%	
	Combination of quality and quantity	29	27.567	.521	76.3%	
Often Experience	Quality of student's contribution	1	3.626	-1.503	4.3%	
	Amount of participation by the student	4	2.498	1.006	17.4%	
	Combination of quality and quantity	18	16.876	.530	78.3%	
Very Often Experience	Quality of student's contribution	3	1.484	1.338	27.3%	
	Amount of participation by the student	1	1.408	-.369	9.1%	
	Combination of quality and quantity	7	8.08	-.759	63.6%	

Research Question 4

Does the size of the class in which online discussions take place predict the way the instructor assesses the discussions? Items 3 and 18 pertain to the size of the class in which online discussions take place and the ways in which the instructor assesses the discussions.

Item 3: My typical way of assessing online discussions is by placing most significance on the: a) quality of the student's contribution to the discussion; b) the amount of participation by the student in the discussion, or c) a combination of the quality of the student's contribution and the amount of participation by the student in the discussion.

Item 18: My typical (average) online discussion group consists of how many students: 1-10, 11-20, 21-30, 31-40, or 41-50.

A multinomial logistic regression was conducted to determine the size of the class in which the instructor requires online discussions predicts how they assess the discussions. Descriptive statistics indicated that the most frequently selected class size in which instructors require online discussions was between 21-30 students (see Table 14). Results of the multinomial logistic regression indicated that no statistically significant predictive relationship existed between the size of the class in which instructors require online discussions and how they assess the discussions ($p = .537$).

Table 15

Observed and Predicted Frequencies: Typical online discussion groups in my class consist of how many students. The number of responses is indicated in the observed column and the expected number of responses if the model was correct is indicated in the predicted column.

Typical online discussion groups in my class consist of how many students	Typical way assessing online discussions	Frequency			Percentage	
		Observed	Predicted	Pearson Residual	Observed	Predicted
1-10	Quality of student's contribution	3	2.390	.423	16.7%	13.3%
	Amount of participation by the student	1	1.946	-.718	5.6%	10.8%
	Combination of quality and quantity	14	13.664	.185	77.8%	75.9%
11-20	Quality of student's contribution	6	6.100	-.044	16.2%	16.5%
	Amount of participation by the student	5	3.640	.751	13.5%	9.8%
	Combination of quality and quantity	26	27.260	-.470	70.3%	73.7%
21-30	Quality of student's contribution	7	7.706	-.285	18.4%	20.3%
	Amount of participation by the student	3	3.372	-.212	7.9%	8.9%
	Combination of quality and quantity	28	26.923	.385	73.7%	70.8%
31-40	Quality of student's contribution	1	1.727	-.638	14.3%	24.7%
	Amount of participation by the student	1	.554	.624	14.3%	7.9%
	Combination of quality and quantity	5	4.718	.227	71.4%	67.4%
41-50	Quality of student's contribution	3	2.077	.764	42.9%	29.7%
	Amount of participation by the student	0	.489	-.725	0.0%	7.0%
	Combination of quality and quantity	4	4.435	-.341	57.1%	63.4%

Research Question 5

What are some methods offered by instructors that would ease the process of assessing online discussions?

Item 21 allowed instructors an opportunity to provide ideas on how assessing online discussions could become an easier process. The responses were coded to see themes that emerged. The concept map below provides a visual representation of the responses (see Figure 1). Utilizing rubrics was the most common suggestion by instructors. Providing clear instructions and expectations was the second-most commonly suggested way to ease the process. Having smaller classes, and making use of peer grading were also frequently suggested by instructors as solutions to help make assessing online discussions an easier process. Other suggestions included utilizing the learning management systems analytics capabilities, as well as computer analysis software.

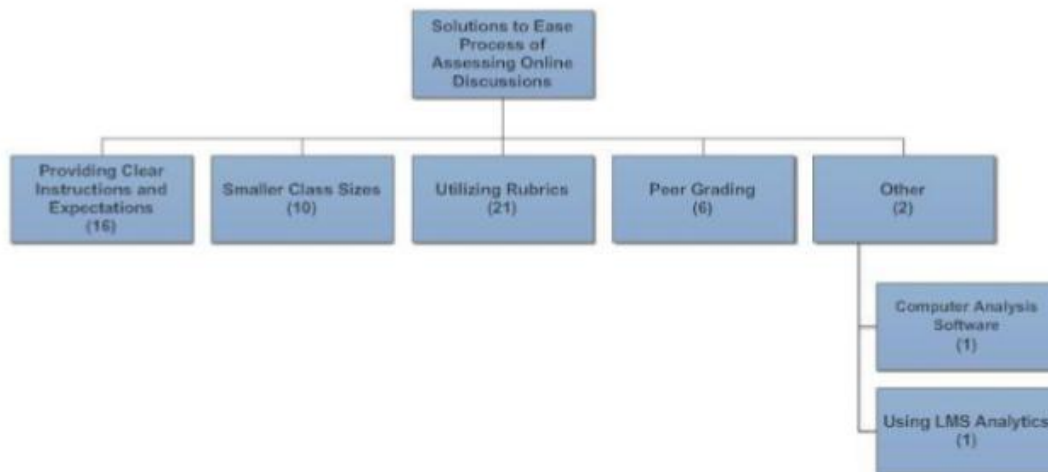


Figure 1. Solutions offered by instructors to ease process of assessing online discussions

Summary

A multinomial logistic regression was conducted to determine if the instructor's perceived value of online discussions, the size of the class, the purposes for requiring online

discussions, and the challenges in assessing online discussions predict how instructors assess online discussions. Facilitating higher-order thinking as a main purpose for requiring online discussions significantly predicted how instructors assess discussions. However, the other purposes for requiring online discussions did not predict how the instructor assesses them. The instructor's perceived value of online discussions, size of the class, and challenges faced when assessing online discussions did not predict how instructors assess the discussions.

Descriptive statistics indicated that engaging students is the main purpose for requiring online discussions. Descriptive statistics also revealed that the amount of time needed to provide quality feedback is the challenge experienced most often by instructors when assessing online discussions. The most frequently selected class size in which online discussions take place was found to be between 21-30 students.

Content analysis was used to analyze the open-ended solutions to assessing online discussions provided by instructors. Instructors most frequently suggested that rubrics can ease the process of assessing online discussions. Instructors also commonly suggested that providing clear instructions and expectations, having smaller class sizes, and utilizing peer grading can help make assessing online discussions a more manageable process.

In the final chapter, the educational implications are discussed. Suggestions for future research on the topic, recommendations for practice, and theoretical connections are also presented.

Chapter V: Discussion

The purpose of the study was to contribute to the knowledge base of the assessment of online discussions by instructors, and to the knowledge base of online learning in general. This research investigated factors that may play a role in how instructors assess online discussions, and examined challenges that instructors face when assessing the discussions. The research also investigated ways that could possibly make the assessment of online discussions an easier process. Online learning continues to become more prevalent, and the interactive element that online discussions provide is essential to the success of online education. Online discussions must be utilized as effectively as possible.

A multinomial logistic regression was used to analyze the data in items with Likert-type responses. These items pertained to the instructor's perceived value of online discussions, the size of the class in which online discussions take place, the purposes that instructors have for requiring online discussions, and the challenges that instructors face when assessing online discussions. Content analysis was utilized to analyze the open-ended solutions provided by instructors to making the assessment of online discussions an easier process.

Research Questions

1. Does the value that instructors place on having online discussions in their courses predict the ways in which instructors assess online discussions?
2. Do the instructor's purposes of engaging students, building a learning community, and facilitating higher-order thinking as the main reasons for requiring online discussions predict the way the instructor assesses them?

3. When grading online discussions, do the degrees of being challenged by determining how to handle late postings, the malfunctioning or user/operator error of technology, the amount of time it takes to provide students with quality feedback, the free-flowing nature of online discussions, and trying to determine whether the quality or the quantity of the responses is more important in online discussions predict the way instructors assess them?
4. Does the size of the class in which online discussions take place predict the way the instructor assesses the discussions?
5. What are some methods offered by instructors that would ease the process of assessing online discussions?

Summary of Findings

The most commonly reported way in which instructors assess online discussions is by considering both the quality and quantity of students' posts. This indicates that instructors are interested in students actively participating to a reasonable extent as well as providing quality responses to the questions. The data for the items pertaining to research questions one, three, and four was not statistically significant. One item pertaining to research question two was statistically significant: the degree to which facilitating higher-order thinking is a main purpose for requiring students to take part in online discussions predicted how instructors assess the discussions. The probability value for the likelihood ratio test for the model was significant ($p = .005$), and the Wald statistic was significant on the coefficient assessing based on the amount of participation by students ($p = .004$). Frequency data revealed that instructors who agreed and strongly agreed with higher-order thinking as a main purpose for online discussions were much more likely to assess the discussions based on a combination of the quality of students'

responses and the amount of participation by the student ($n = 66$) than based on the amount of participation ($n = 4$). The qualitative data for research question five revealed solutions that may make assessing online discussions an easier process. These suggestions included the use of rubrics, providing clear instructions and expectations, having smaller class sizes, and utilizing peer grading.

The instructors' perceived value of online discussions was not found to be a significant predictor of how instructors assess online discussions. This indicates that the way in which instructors assess the discussions does not depend on the level of importance that they hold towards online discussions.

The extent to which instructors face challenges in assessing online discussions was not found to be a significant predictor of how instructors assess online discussions. This indicates that the way in which instructors assess online discussions does not depend on the extent to which they face challenges in assessing online discussions.

The size of the class in which online discussions take place was not found to be a significant predictor of how instructors assess online discussions. This indicates that the way in which online discussions are assessed does not depend on how many students are in the class. Based on descriptive statistics, instructors most strongly indicated that engaging students is the main purpose for requiring online discussions. Building a learning community was the second-most strongly agreed upon purpose for requiring students to participate in online discussions, and facilitating higher-order thinking was the least indicated main purpose. Based on descriptive statistics, the amount of time needed to provide quality feedback was the most often experienced challenge by instructors when assessing online discussions. The free-flowing nature of online discussions was the second-most frequently experienced challenge,

and determining how to handle late postings was the third-most often experienced challenge.

Determining whether quality or quantity is more important, and the malfunctioning of technology were the least often experienced challenges to assessing online discussions indicated by instructors. The most frequently selected average range of students in which online discussions take place was 21-30. The second-most range was 11-20 students, and 1-10 was the third-most. The ranges 31-40 students, and 41-50 students were the least indicated class size ranges in which online discussions are required.

Conclusions

There is not much influence on how instructors assess online discussions by different factors such as the instructor's perceived value of online discussions, purposes for requiring online discussions, size of the class or from the challenges instructors face when assessing online discussions. The degree to which instructors hold the facilitation of higher-order thinking as a main purpose for having students participate in online discussions was the only factor found to significantly predict how instructors assess online discussions. Frequency data indicated that instructors agreeing and strongly agreeing with having opportunities for students' taking part in higher-order thinking activities as a main purpose for requiring online discussions were much more likely to assess based on a combination of quality and quantity of responses than based on either only the quality of the responses or the quantity of responses. There is a positive correlation between both the quality of online discussion posts and the quantity of online discussion posts and students' academic performance in a course (Xia et al., 2013). It is often suggested that instructors assess both the quality and amount of participation in regards to discussion posts (Yuen, Deng, Fox & Tavares, 2009). It can be inferred from the results of this study that the more importance that instructors hold for higher-order thinking as

a main purpose for requiring online discussions, the more likely they are to assess the discussions by evaluating both the quality and quantity of the responses. The other main purposes (engaging students and building a learning community) were not significant predictors.

The results may indicate that other factors not focused on as part of this study may influence the way in which instructors assess online discussions. However, the results may also indicate that instructors assess online discussions based on what they perceive to be best practices, and may not necessarily be heavily influenced by factors.

The finding that the amount of time needed to provide quality feedback is the challenge experienced most often by instructors when assessing online discussions indicates that online class sizes need to be limited. This supports the findings of Liu (2007) and Kearns (2012) that the time-consuming nature of assessing online discussions is a main obstacle for instructors. The higher the enrollment, the more challenging it is for instructors to assess online discussions and provide quality feedback. The finding that engaging students is the most strongly agreed upon main purpose for requiring online discussions indicates that instructors require students to participate in online discussions due to the active learning and interactive benefits of the discussions.

The most commonly provided solution from instructors was the use of rubrics to ease the process of assessing online discussions. This indicates that a rubric needs to be validated which incorporates the research from this study and the overall body of literature in regards to effectively assessing online discussions. Today's learning management system technology will enable the rubric to be uploaded and then can be easily shared among faculty. It is essential that the learning management system support teams at universities make instructors aware of this

capability and provide training.

Theoretical Connections

Social Constructivism, Self-Determination Theory, and Community of Inquiry are theoretical perspectives that involve essential elements of online discussions. Instructors agreeing and strongly agreeing with building a learning community, engaging students, and facilitating higher-order thinking as the main purposes for why they require online discussions overwhelmingly indicated that they assess by the combination of the quality of the responses and the quantity of the responses. This finding indicates that assessing by the quality and quantity of the responses is associated with holding the building of a learning community, engaging students, and facilitating higher-order thinking as the main purposes for why they require online discussions in their courses.

Having interactive learning communities, engaging students, and having opportunities for students to take part in higher-order thinking are elements that help lead to students socially constructing knowledge, and are also associated with the development of communities of inquiry. Interactive learning communities and opportunities to think critically in regards to the content are aspects associated with Self-Determination Theory. The findings of this study indicate that assessing by the combination of the quality and quantity of responses is associated with components of Social Constructivism, Self-Determination Theory, and Community of Inquiry.

Recommendations for Practice

Workshops are offered at university teaching and learning centers that provide training for faculty on different aspects of teaching and learning. It is essential that workshops that specifically focus on online discussions are provided to faculty. The workshops should include

training on the different parts of online discussions that were included in this study such as the purposes for requiring online discussions, the challenges that instructors face, and the solutions that could possibly make assessing online discussions an easier process.

Additionally, it is integral that faculty are provided instruction in educational psychology theories such as Vygotsky's social constructivism and adult learning theory that guide why interaction is necessary for student learning. Training on these topics would help faculty further understand the reasoning behind why online discussions or other interactive elements need to be offered as well as helping to enhance the effectiveness of online discussions. Workshops on social constructivism and adult learning will also help instructors understand the value and importance of providing higher-order thinking opportunities for students as part of the online discussions. The results of this study indicate that the more value that instructors hold for higher-order thinking as a main reason for requiring students to take part in online discussions, the more likely they are to assess the quality and quantity of the responses, both of which are found by research as being related to students' overall success in a course.

The amount of time it takes to provide quality feedback to online discussions was the greatest challenge to assessing online discussions indicated by instructors. It is essential that administrators understand that for higher quality feedback to occur, the enrollment needs to be limited. Effectively assessing online discussions requires much time on the part of instructors and this must be taken into consideration as class enrollment capacities are determined.

Recommendations for Future Studies

This study focused on the perceptions of instructors in regards to the factors and challenges involved with assessing online discussions as well as solutions that could possibly make the assessment of online discussions an easier process. A future study could focus on the

perceptions of students in regards to how they feel the assessment of online discussions could be improved, and to also get the viewpoint of students on whether or not they feel online discussions accomplish the purposes that instructors perceive them to accomplish, such as engaging students, building a learning community, and facilitating higher-order thinking. Many of the elements involving online discussions in which instructors were surveyed for this study could also be used to survey students in a future study. Students' responses could be compared to instructors' responses. After conducting the comparative analysis, the next step would be to create an instrument that incorporates the feedback from instructors and students on how to improve the assessment of online discussions.

Online learning is going to continue to grow. There will always be a need for interactive components of online courses which online discussions provide. It is essential that all aspects of online discussions including the assessment practices are continually improved. The research conducted for this study can provide a foundation for future studies to help maximize the effectiveness of online discussions.

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APPENDIX 1

**PERMISSION TO USE AN EXISTING VALIDATION RUBRIC FOR EXPERT
PANEL (VREP)**

January 19, 2016

To: Kyle Bush

Thank you for your request for permission to use VREP in your research study. I am willing to allow you to reproduce the instrument as outlined in your letter at no charge with the following understanding:

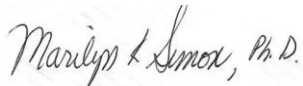
- You will use this survey only for your research study and will not sell or use it with any compensated management/curriculum development activities.
- You will include the copyright statement on all copies of the instrument.
- You will send your research study and one copy of reports, articles, and the like that make use of this survey data promptly to our attention.

If these are acceptable terms and conditions, please indicate so by signing one copy of this letter and returning it to me.

Best wishes with your study.

Sincerely,

Marilyn K. Simon, Ph.D



Signature

I understand these conditions and agree to abide by these terms and conditions.

Signed _____ **Date** _____

Expected date of completion: _____

APPENDIX 2

Survey/Interview Validation Rubric for Expert Panel -

VREP© By Marilyn K. Simon with input from Jacquelyn White

Criteria	Operational Definitions	Score				Questions NOT meeting standard (List page <u>and</u> question number) and need to be revised. <i>Please use the comments and suggestions section to recommend revisions.</i>
		1=Not Acceptable (major modifications needed)	2=Below Expectations (some modifications needed)	3=Meets Expectations (no modifications needed but could be improved with minor changes)	4=Exceeds Expectations	
		1	2	3	4	
Clarity	<ul style="list-style-type: none"> The questions are direct and specific. Only one question is asked at a time. The participants can understand what is being asked. There are no <i>double-barreled</i> questions (two questions in one). 					
Wordiness	<ul style="list-style-type: none"> Questions are concise. There are no unnecessary words. 					

Negative Wording	<ul style="list-style-type: none"> • Questions are asked using the affirmative. (e.g., Instead of asking, “Which methods are not used?”, the researcher asks, “Which methods are used?”) 					
Overlapping Responses	<ul style="list-style-type: none"> • No response covers more than one choice. • All possibilities are considered. • There are no ambiguous questions. 					
Balance	<ul style="list-style-type: none"> • The questions are unbiased and do not lead the participants to a response. The questions are asked using a neutral tone. 					
Use of Jargon	<ul style="list-style-type: none"> • The terms used are understandable by the target population. • There are no clichés or hyperbole in the wording of the questions. 					

Appropriateness of Responses Listed	<ul style="list-style-type: none"> • The choices listed allow participants to respond appropriately. • The responses apply to all situations or offer a way for those to respond with unique situations. 					
Use of Technical Language	<ul style="list-style-type: none"> • The use of technical language is minimal and appropriate. • All acronyms are defined. 					
Application to Praxis	<ul style="list-style-type: none"> • The questions asked relate to the daily practices or expertise of the potential participants. 					

Relationship to Problem	<ul style="list-style-type: none"> • The questions are sufficient to resolve the problem in the study • The questions are sufficient to answer the research questions. • The questions are sufficient to obtain the purpose of the study. 					
Measure of Construct: Instructor's Perceived Value (Level of Importance) of Online Discussions	<ul style="list-style-type: none"> • The survey adequately measures the instructor's perceived value (level of importance) of online discussions. 					
Measure of Construct: Instructor's Purposes for Requiring Online Discussions	<ul style="list-style-type: none"> • The survey adequately measures the main purposes for instructors' requiring online discussions. 					

Measure of Construct: Degree of the Challenges Faced by Instructors when Assessing Online Discussions	<ul style="list-style-type: none"> The survey adequately measures the degree of the challenges faced by instructors when assessing online discussions. 					
Measure of Construct: Measure of Instructor's Class Sizes when Requiring Online Discussions	<ul style="list-style-type: none"> The survey adequately measures instructors' class sizes in which online discussions take place. 					

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Comments and Suggestions

APPENDIX 3

SURVEY

“Post-Secondary Instructors' Approaches to the Assessment of Online Discussions: Influential Factors, Obstacles, and Solutions to the Challenges”

You are invited to participate in a research study to investigate how post-secondary instructors assess online discussions. The study is being conducted by Kyle Bush, doctoral student in Educational Psychology at Auburn University, under the direction of Dr. Paris Strom in the Auburn University Department of Educational Foundations, Leadership, and Technology (EFLT). You are invited to participate because you are an instructor and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete a brief survey. Your total time commitment will be approximately 10 minutes.

Are there any risks or discomforts? There are no risks associated with participating in this study.

Are there any benefits to yourself or others? The data from your participation in this study will help improve online discussions which in turn will help improve online learning overall.

Will you receive compensation for participating? There is no compensation from participating in this study.

Are there any costs? There are no costs to participating in this study.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University or the Department of Educational Foundations, Leadership, and Technology (EFLT).

Any data obtained in connection with this study will remain anonymous. There will be no direct or indirect awareness of who participated in the study. The information collected through your participation will be used to fulfill an educational requirement.

If you have questions about this study, please contact Kyle Bush at krb0024@tigermail.auburn.edu or Dr. Paris Strom at (334) 844-3077.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, PLEASE CLICK ON THE LINK BELOW. YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

Kyle Bush 12-10-2015

The Auburn University Institutional Review Board has approved this document for use from November 27, 2015 to November 26, 2016. Protocol #15-494

[LINK TO SURVEY](#)

Post-Secondary Instructors Approaches to Assessing Online Discussions

Q1 I require or have required online discussions in at least one class that I am currently teaching or have taught

- Yes (1)
- No (2)

Q2 The online discussions take place or have taken place in the following type of course: (Check all that apply)

- Online Course (1)
- Hybrid (Blended Course) (2)
- Face-to-Face Course (3)

Q3 My typical way of assessing online discussions is by placing most significance on the:

- quality of the student's contribution to the discussion (1)
- the amount of participation by the student in the discussion (2)
- a combination of the quality of the student's contribution and the amount of participation by the student in the discussion (3)

Q4 Online discussions are a very important part of my course:

- 1-Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q5 Online discussions are very important in helping students learn the course content:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q6 Online discussions are very effective in helping students to interact with their fellow students:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q7 Online discussions are very effective in helping students to interact with their instructor:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q8 Online discussions are very effective in providing students with opportunities to engage in higher-order thinking:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q9 For the following purposes of requiring online discussions in your course, please indicate the degree to which each listed purpose serves as the main purpose for including online discussions on a scale of 1-5 with 1 indicating that you strongly disagree with the listed purpose as being the main reason why you have required online discussions in a course, and 5 indicating that you strongly agree that the listed purpose is the main reason why you have required online discussions in a course. Engage students:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q10 Build a learning community:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q11 Facilitate higher-order thinking:

- 1- Strongly Disagree (1)
- 2- Disagree (2)
- 3- Neither Agree nor Disagree (3)
- 4- Agree (4)
- 5- Strongly Agree (5)

Q12 For each of the challenges in assessing online discussions, please indicate the degree on a scale of 1-5 to which you experience each listed challenge with 1 indicating that you never experience the listed challenge when assessing online discussions, and 5 indicating that you experience the listed challenge very often when assessing online discussions. Determining how to handle late postings:

- 1- Never Experience (1)
- 2- Rarely Experience (2)
- 3- Sometimes Experience (3)
- 4- Often Experience (4)
- 5- Very Often Experience (5)

Q13 Malfunctioning or user/operator error of technology:

- 1- Never Experience (1)
- 2- Rarely Experience (2)
- 3- Sometimes Experience (3)
- 4- Often Experience (4)
- 5- Very Often Experience (5)

Q14 Amount of time it takes to provide quality feedback:

- 1- Never Experience (1)
- 2- Rarely Experience (2)
- 3- Sometimes Experience (3)
- 4- Often Experience (4)
- 5- Very Often Experience (5)

Q15 Free-flowing nature of online discussions:

- 1- Never Experience (1)
- 2- Rarely Experience (2)
- 3- Sometimes Experience (3)
- 4- Often Experience (4)
- 5- Very Often Experience (5)

Q16 Trying to determine whether quality or quantity is more important:

- 1- Never Experience (1)
- 2- Rarely Experience (2)
- 3- Sometimes Experience (3)
- 4- Often Experience (4)
- 5- Very Often Experience (5)

Q17 My typical (average) online discussion group consists of how many students:

- 1-10 (1)
- 11-20 (2)
- 21-30 (3)
- 31-40 (4)
- 41-50 (5)
- Above 50 (6)

Q18 What are some methods that you feel would ease the process of assessing online discussions?