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Impact of collaborative online formative evaluation of the learning environment in a higher education course

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Impact of Collaborative Online Formative Evaluation of the Learning Environment in a Higher Education Course

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Dedication

I dedicate this thesis to my grandparents: Leo and Henoria Jarrels, and Wallace and Sally Clark. Much of my achievement in education, including this research endeavor, has been made possible through their sacrifice and support.

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Abstract

Several works in the academic literature address the benefits of discussion-based formative evaluation for improving the learning environment in higher education courses. However, even one of the most widely used methods for such formative evaluation, the small group instructional diagnosis, has a few challenges and is still utilized far less than student ratings questionnaires. The present study focused on one undergraduate course in the James Madison University College of Education that promotes formative evaluation as an integral part of instructional design. The purpose of this study was to examine participants' perception about the worth and usability of an online feedback system intended to address some of the disadvantages of small group instructional diagnosis. A prototype of the feedback system was designed using Nicenet, an open-source learning management system, and the feedback system was piloted with one instructor and twenty students from a human resource development course. The researcher used quantitative and qualitative methods to collect data through an online survey, an online discussion board, and post-pilot interviews. The research results suggest that participants found the feedback system to be valuable in theory, but inconvenient in its current design. Participants offered suggestions for improving the feedback system including integration with Blackboard. Results indicate that systems promoting continuous collaborative feedback should be efficient and user-friendly if they are to be successfully utilized.

Keywords: formative evaluation, higher education, learning environment, social development theory, socially shared regulation of learning, stakeholders, student feedback, small group instructional diagnosis (SGID), student voice, teaching analysis poll (TAP).

Chapter 1 – Introduction

The majority of higher education institutions in the country use summative student ratings to evaluate courses and/or instructors (Kember, Leung, & Kwan, 2002; Kulik, 2001). Several major United States academic institutions have used these types of quantitative student evaluation processes since the 1920s (Steward, Mickelson, & Brumm, 2005; Wachtel, 1998), and according to Seldin (1993), the percentage of these institutions rose from 29% in 1973, to 68% in 1983, to 86% in 1993. Many studies have highlighted the benefits of such ratings for course quality and teaching effectiveness (Cohen, 1980; Kulik, 2001; McKeachie, 1979; Richardson, 2005; Seldin, 1993; Seldin, 1997; Wachtel, 1998).

However, many students prefer collaborative methods of formative feedback that incorporate discussion, such as mid-semester interviews, due to the richness of the exchange and the possibility for timely adjustment that will promote meaningful learning (Abbott, Wulff, Nyquist, Ropp, & Hess, 1990; Wulff, Staton-Spicer, Hess, & Nyquist, 1985). This qualitative approach has also been shown to benefit instructors more than the widely used course evaluation rating forms (Cohen, 1980; Finelli, 2008; Hampton & Reiser, 2004; Kember, Leung, & Kwan, 2002; McGowan & Osguthorpe, 2011). Unfortunately, these formative qualitative methods have been given little attention in the overall body of literature pertaining to student feedback (Wachtel, 1998), and most instructors continue to gauge their own performance and students' course satisfaction through end-of-term summative quantitative evaluations (Austin & Austin, 2002; Cohen, 1980; Seldin, 1997; Wachtel, 1998).

The small group instructional diagnosis, however, is a technique that gives hope for the future of collaborative feedback and formative evaluation in higher education. Although it is neither a new process, nor a common practice at all universities, the small group instructional diagnosis is one of the methods most widely utilized for discussion-based formative evaluation (Finelli, Ott, Gottfried, Hershock, O'Neal, & Kaplan, 2008). The principles of the small group instructional diagnosis are closely aligned with principles of this study, but the method has both advantages and disadvantages. One of the most significant challenges that the method faces is the amount of time required of a consultant in order to facilitate the process.

There is need for a method of formative evaluation that can provide features to address the disadvantages of the small group instructional diagnosis (Black, 1998; Cook-Sather, 2009b). The alternate method presented in this study is meant to be available as a complementary process with the small group instructional diagnosis. If used in conjunction with each other, both techniques can overcome their respective disadvantages and promote their respective advantages to create a comprehensive feedback solution higher education.

Problem Statement

Formative evaluation and student feedback methods that include discourse and collaboration between student and instructors have a positive impact on course learning environments (Abbott, Wulff, Nyquist, Ropp, & Hess, 1990; Wulff, Staton-Spicer, Hess, & Nyquist, 1985). However, these methods can be cumbersome and time-consuming (Black, 1998; Cook-Sather, 2009b), so as a result, they are not utilized or studied as much as student ratings feedback (Seldin, 1997). Research needs to be conducted to identify

potential alternatives to current formative evaluation and student feedback methods to continue to promote discourse and collaboration between instructors and students.

Purpose of the Study

The purpose of the present study is to identify the impact of a collaborative online formative evaluation of the learning environment in a higher education course. The feedback system used in this study was designed as a means to encourage discourse among participants that would promote the continuous improvement of the learning environment. The researcher attempted to discover if participants would use such a program and what, if any, impact would result from their involvement. The findings of the study could assist educators in determining if such a method is worth using in some form or another, and to what degree the method should be developed.

Research Questions and Objectives

Two questions are addressed in this research study. Both questions were given equal weight in the process of conducting the study. The research questions for the present study are as follows:

1. What is the perceived impact of the researcher-designed feedback system on the learning environment?
2. How functional do participants perceive the features of the researcher-designed feedback system to be?

The objectives in answering the first question were to learn if the feedback system has value in the perception of the participants and what significant effects were perceived. The objectives in answering the second question were to learn if participants perceived

the feedback system to be usable, and to learn what features of the method were perceived to require modification.

Nature of the Study

The present study included a feedback system designed by the researcher to facilitate online discussion between the instructor and students regarding the course's learning environment. The system was implemented using an online course management tool entitled Nicenet, and this research was conducted in the first half of a semester-long course being held in the 2011 spring semester at James Madison University. The researcher trained the course instructor and students on use of the system, and data were gathered through the online course management tool via surveys and a discussion board. After the system had been implemented, participant perspectives were gathered via face-to-face interviews.

Assumptions

The researcher assumed that participants acted genuinely in their involvement with two aspects of the study. The researcher assumed that participants were truthful in their responses to discussion board and interview questions. The researcher also assumed that participants represented themselves authentically in regard to their age and study enrollment, neither of which was verified by personal identification during the research.

Limitations and Scope

A limitation of the present study is that the research was conducted in only one course, so the results cannot be generalized. Another limitation is that the researcher was not able to spend much time with the student participants in interviews, decreasing the

amount of depth in responses. Despite these limitations, the study does provide useful qualitative data on the perceptions of the feedback system value and usability.

The scope of the present study is very small. Only 18 student participants and one instructor participant were interviewed. Also, almost no data were collected through the discussion board and survey components of the study. As a result, the data do not provide as wide a range of perspectives as would be desirable.

Significance of the Study

The use of formative evaluation and collaborative feedback in higher education courses is more the exception than the rule (Austin & Austin, 2002; Cohen, 1980; Seldin, 1997; Wachtel, 1998). Collaboration between instructors and students for the improvement of higher education is generally lacking (Fielding, 1999, 2001a, 2004a; Lodge, 2005; Bueschel, 2008; Seale, 2010). Methods of feedback, even in the most progressive forms that encourage discourse, have some significant limitation pertaining to time and personnel requirements, and do not always incorporate a broad range of best practices (Brinko, 1993, Cook-Sather, 2009b). The feedback system designed for this study is a potential solution to the current issues that limit collaboration between instructors and students for continuous improvement.

Definitions of Terms

Specific terms are used throughout the present study in reference to concepts that may not be familiar to all readers. However, any terminology used is intentionally chosen by the researcher to maintain a consistent and meaningful vernacular when addressing the topics at hand. A list of term definitions is included to enhance readability and understanding of the present study (see Table 1.1).

Table 1.1. Definition of Terms

Key Term	Definition	Citation(s)
Formative Evaluation	Evaluation conducted during a process for the purpose of immediate improvement	Caulfield (2007)
Learning Environment	For the purpose of this study, learning environment includes anything that helps or hinders learning in a course	This definition is unique to this study, but is based on the scope of small group instructional diagnosis (Cook-Sather, 2009)
Social Development Theory	A learning theory founded on the understanding that social interaction precedes development. Internalization of external social activity results in a thinking process that is then communicated through speech and behavior, which in turn impacts the social environment. Based on context and experience, an individual must derive the meaning of new information by relating it to what that individual already knows.	Vygotsky (1962, 1978)
Socially Shared Regulation of Learning	"Interdependent or collectively shared regulatory processes orchestrated in the service of a shared outcome"	Hadwin, Järvelä and Miller (2011, p. 67)
	A "process by which multiple others regulate their collective activity"	Hadwin and Oshige (2011, p. 258)
Stakeholders	"A person or group with an interest in seeing an endeavor succeed and without whose support the endeavor would fail"	Nickols (2005, p. 127)
	The instructor(s) and student(s) directly involved in a higher education course	This definition is unique to this study, but is based on the works of Tam (2001) and Chapleo and Simms (2010)

Student Feedback	Information provided by a student to an instructor to inform of the student's learning experience, often with the intention of promoting the improvement or the enhancement of that experience	This definition is unique to this study, but is based on the works of Seldin (1993, 1997)
Small Group Instructional Diagnosis (SGID)	A discussion-based mid-semester course evaluation method in which an instructional consultant meets with an instructor to determine course climate, facilitates a student-group feedback session in class, and compiles and presents a overview of student feedback to the instructor in addition to offering support for addressing that feedback	Clark and Redmond (1982)
Student Voice	The student contribution to discourse within education about learning and teaching	Cook-Sather (2002a)
	The new wave of a movement for education reform the emphasizes the following: "…listening to and valuing the views that students express regarding their learning experiences; communicating student views to people who are in a position to influence change; and treating students as equal partners in the evaluation of teaching and learning, thus empowering them to take a more active role in shaping or changing their education"	Seale (2010, p. 995)
Teaching Analysis Poll (TAP)	The term used by the Center for Faculty Innovation at James Madison University to identify their discussion-based mid-semester feedback method based on the small group instructional diagnosis	(JMU Center for Faculty Innovation, n.d.)

Chapter Summary and Transition

In this chapter, the state of formative evaluation and student feedback was introduced. The present study addresses a new feedback system that could potentially bring instructors and students together to involve them in a collaborative course improvement endeavor. In Chapter 2, the researcher will provide a review of relevant literature including the foundational learning theory of this study. Chapter 3 will cover research methodology and data collection, Chapter 4 will address the analyzing of data, and Chapter 5 will present the results if the as well as the implications for future research.

Chapter 2 – Literature Review

This literature review will address the theoretical and conceptual frameworks of the present study. The theoretical framework is based on Social Development Theory (Vygotsky, 1962, 1978) and the concept of learning regulation that is associated with that theory. In addition to learning theories, the conceptual framework includes the concepts of mid-term course evaluation (specifically small group instructional diagnosis), student feedback, student voice, and stakeholder evaluation. The conceptual framework of the present study is depicted in Figure 2.1.

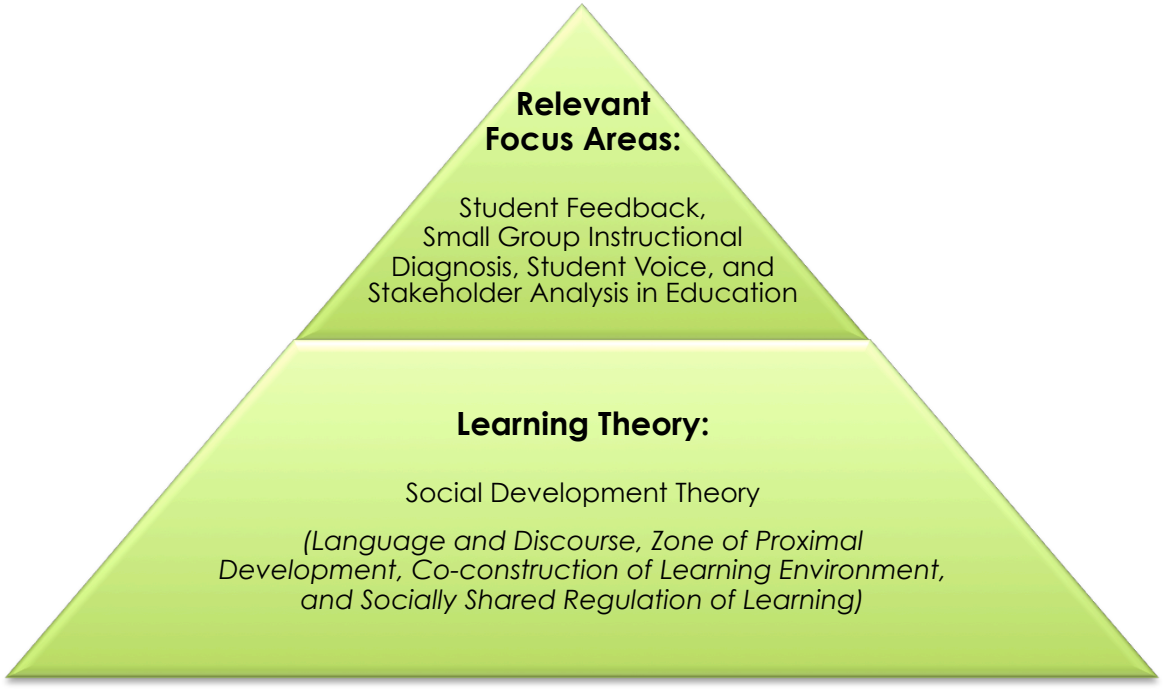

Figure 2.1. Conceptual Framework

The conceptual framework shown above is displayed in the form of a pyramid. As indicated in the bottom portion of the image, the study is based on Social Development Theory as the foundational learning theory, including an emphasis on particular concepts related to that theory, which are shown as italicized. Several relevant focus areas were also investigated to inform further development, although the small

group instructional diagnosis was analyzed as the method that was most related to and influential on the researcher's approach to the research problem. These focus areas appear in the top portion of the pyramid to indicate that they are supported by the learning theory and its related concepts.

Learning Theory

While Social Development Theory (Vygotsky, 1962, 1978) is the basis of the theoretical framework described above, there are particular elements of the theory that are of importance to the present study. Social Development Theory influenced modern perspectives, such as learner construction of knowledge and regulation of learning (McCaslin & Hickey, 2001). The theory's influence was due in part to its emphasis on the impact of language in learning and its introduction of a concept known as the Zone of Proximal Development (Vygotsky, 1978). The present study relies heavily on a recently proposed sociocultural model of Social Development Theory, hereafter referred to as socially shared regulation of learning (Hadwin & Oshige, 2011; Hadwin, Järvelä, & Miller, 2011), which suggests that discourse is used to socially regulate learning and construct the learning environment. The theoretical framework of the present study is depicted in Figure 2.2.

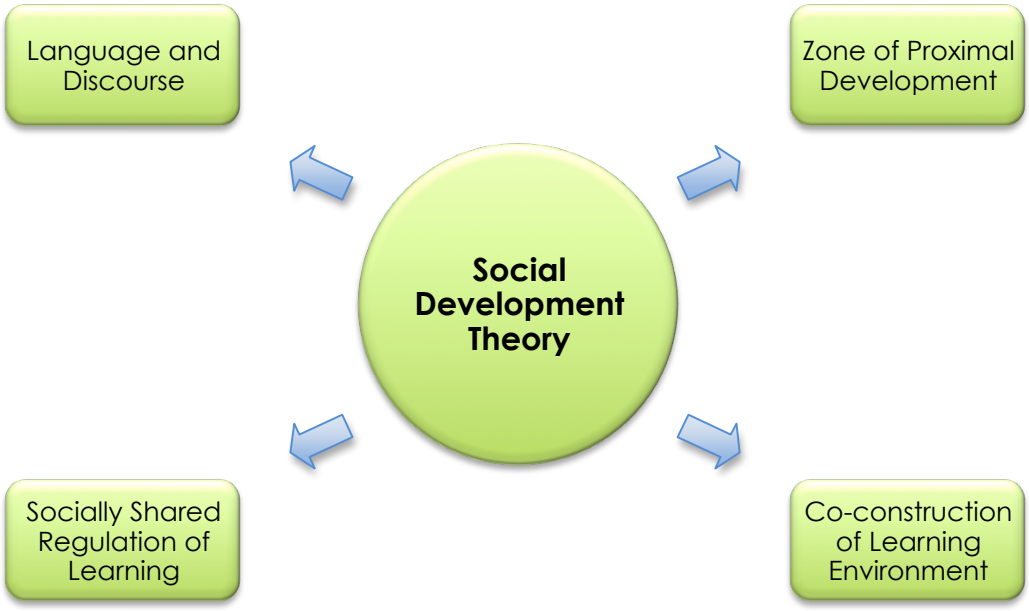

Figure 2.2. Theoretical Framework

The theoretical framework show above is displayed in the form of one central circle leading to four surrounding smaller rectangles. The large central circle indicates the learning theory in its entirety as its originator, Lev Vygotsky, conceived it. From the central circle emerge four smaller rectangles indicating the concepts derived from Vygotsky's theory that are of importance to the development of the methodology for the present study.

The top two concepts are more directly related to Social Development Theory, as indicated by Vygotsky (1962, 1978) in his writings. The bottom two concepts are associated with Social Development Theory by later theorists who base their work on Vygotskian principles (Hadwin, Järvelä, & Miller, 2011; Hadwin & Oshige, 2011). The following sections will describe these concepts as they relate to Social Development Theory and explain their relevance to the present study in greater detail.

Vygotsky's sociocultual perspective. Vygotsky (1962, 1978) proposed that social interaction precedes development. The internalization of external social activity

results in a thinking process that is then communicated through speech and behavior, which in turn impacts the social environment. Based on context and experience, an individual must derive the meaning of new information by relating it to what that individual already knows.

In terms of formal learning, Vygotsky (1962, 1978) postulates that teachers and students should share a collaborative learning experience. His theory promotes learning environments in which students actively participate in the learning process. Teachers and students should work together to help students construct meaning from new information. As a result, learning becomes a reciprocal experience for students and teachers as they connect with each other and gain new insights from their interactions.

The view of Vygotsky (1962, 1978), referred to as Social Development Theory for the present study, has great implications for the use of collaborative feedback and formative evaluation of higher education learning environments. Vygotsky suggests that instructors and students would mutually benefit from a kind of partnership for learning. In this partnership, both parties could find more effective ways to perform their respective roles through the collaborative pursuit of student learning. Collaborative feedback and formative evaluation of the learning environment in a higher education course could facilitate the connections between students and instructors that are needed to achieve such partnerships and mutually beneficial learning outcomes.

Language and discourse. Vygotsky (1962) explains that language is the key to the social interaction and collaboration that is necessary for learning to occur. Through the processes of internal speech (turning words into thought) and external speech (turning thought into words), people are able to create their own understanding of new

information and communicate that understanding within their social environment, thus impacting the social environment. The emphasis on language in Social Development Theory supports the idea that discourse can be used for the purpose of feedback and formative evaluation to facilitate a collaborative and reciprocal relationship between an individual and others within the social environment of a higher education course.

Zone of proximal development. Vygotsky (1978) describes the zone of proximal development as the distance between an individual's actual developmental level (problems that can be solved independently) and the level of potential development (problems that must be solved with the guidance of an instructor or more capable peer). Within the Zone of Proximal Development, instructors work together with students to build up, or scaffold, to higher understandings using techniques such as student repetition of instructor demonstrations, student completion of an instructor initiated solution, or student cognitive connection with an instructor's leading question. Genuine education engages students in learning tasks that are beyond their immediate capability but within their grasp if they are being assisted by a more mature or intelligent other person, sometimes referred to as a more knowledgeable other (Schunk, 2008).

The concept of learning within the Zone of Proximal Development with a more knowledgeable other (Vygotsky, 1978) is especially relevant in the context of collaborative feedback and formative evaluation of higher education learning environments. When instructors and students bring their personal preferences and experiences to their interaction with one another, each individual can be a more knowledgeable other as they collectively try to process what works and does not work for learning, which is consistent with Social Development Theory. Instructors and students

can collaborate as equal partners to mutually regulate the Zone of Proximal Development in the pursuit of effective learning environments that facilitate meaningful student learning (McCaslin & Hickey, 2001).

Co-construction of learning environment. Vygotsky (1962, 1978) wrote extensively about the impact of an individual's interaction with the social environment in regard to content specific learning and the development of personal strategies for learning that content. However, he did not directly address the implications of his perspective on the social construction of formal learning environments. He did, though, imply that students are able to teach themselves and should be actively involved in the creation of their learning experience. Social Development Theory assumes that instructors design (at least initially) the formal learning environment, but the theory also emphasizes the responsibility of the student in achieving meaningful learning, suggesting that students and instructors can co-construct the learning environment if such a collaborative approach is beneficial for learning.

McCaslin and Hickey (2001) consider Vygotsky's theory to be about achieving change through the interaction of the individual and the social-instructional environment. Both the individual and the social-instructional environment are empowered to have an impact on each other. Everyone involved in a formal learning arrangement (student and instructor alike) should be engaged in the construction of the social-instructional environment as mutually responsible participants. Schunk (2008) also describes Vygotsy's perspective as a constructivist theory and, in reference to that theory, he points out that constructivist principles encourage the structuring of learning environments to promote the effective development of knowledge and skills among students. However,

that learning environment should be based on the perspectives of both the instructor and the students if meaningful learning is to be achieved. Therefore, a collaborative approach to construction of a higher education learning environment is supported by current understandings of Social Development Theory.

Social aspects in regulation of learning. The concept of learning regulation is not new, having been inspired by Social Development Theory (Vygotsky, 1962, 1978), but the understanding of learning regulation, particularly from a social perspective, continues to evolve. Historically, learning regulation has been viewed as an individual perspective, but there is increasing interest in understanding the social influences on the process (Hadwin & Järvelä, 2011). Recent meta-analyses of the literature pertaining to learning regulation has lead to the definition of three aspects of learning regulation from a social perspective: self-regulated, co-regulated, and socially shared regulation of learning (Hadwin, Järvelä, & Miller, 2011; Hadwin & Oshige, 2011). Although these aspects are defined in this section as to their varying degrees of individual self-directedness and social collaboration in learning in general, this study focuses primarily on the applications of socially shared regulation of learning in collaborative feedback and formative evaluation of higher education learning environments. Hadwin, Järvelä, and Miller (2011) contrasted self-regulated, co-regulated, and socially shared regulation of learning, and a recreation of the table that the authors used to summarized their findings can seen in Table 2.1.

Self-regulated learning refers to the organization and management of one's capacities (thought, emotions, behaviors) in order to attain a desired goal (Schunk & Zimmerman, 2008). The degree of self-regulated learning typically designates the amount

of responsibility that an individual takes in regard to what and how to learn (Schunk, 2008). According to Zimmerman (1990), students self-regulate their learning by engaging in self-regulated learning strategies, such as taking initiative to seek out needed information, and by responding to self- and external feedback about the effectiveness of their learning in order to control their learning process. The very words *self-regulated learning* imply that learners are, in some way, able to teach themselves, as Vygotsky (1978) suggested. Although Social Development Theory may have been a catalyst for development of self-regulated learning theory, the concept of self-regulated learning has only been seen in the literature about education since the mid-1980's (Schunk, 2008). Self-regulated learning in a social context has been explored ever since the idea of self-regulation was conceived, but now the social-contextual element of learning regulation is beginning to take an even more pronounced shape (Hadwin & Järvelä, 2011).

Co-regulated learning refers to the "transitional processes in a learner's acquisition of SRL [self-regulated learning], during which members of a community share a common problem-solving plane, and SRL [self-regulated learning] is gradually appropriated in response to and directed toward social and cultural contexts" (Hadwin & Oshige, 2011, p. 258). According to Hadwin, Järvelä and Miller (2011), co-regulated learning is a temporary coordination of regulatory processes between self and others in the pursuit of self-regulated learning. Students can co-regulate as individuals or in a collaborative context, but co-regulated learning always involves a more capable other person to assist with scaffolding (a feature based Vygotsky's (1978) Zone of Proximal Development) and the goal is to transition from a more dependent state toward self-regulated learning (Hadwin, 2008; McCaslin & Hickey, 2001; Montalvo & Torres, 2004).

However, if there is a disconnect between the learner and more capable other, possibly resulting from miscommunication or misperception, then co-regulated learning is less effective (Salonen, Vauras, & Efklides, 2005).

Socially shared regulation of learning refers to "interdependent or collectively shared regulatory processes orchestrated in the service of a shared outcome" (Hadwin, Järvelä & Miller, 2011, p. 67). According to Hadwin and Oshige (2011), socially shared regulation of learning is a "process by which multiple others regulate their collective activity" (p. 258). From that perspective, the "multiple others" co-construct goals and standards in pursuit of a commonly desired product – socially shared cognition. Although a relatively new concept, the many interrelating aspects of socially shared regulation of learning are being studied through research on shared regulation; research which often examines roles, contributions, evolution of ideas, and the ways that groups collectively set goals, monitor, regulate, and evaluate socially shared space (Hadwin, 2008).

Table 2.1. Contrast of Self-Regulated, Co-regulated, and Shared Regulation of Learning (Hadwin, Järvelä & Miller, 2011, p. 67)

	Self-Regulated Learning SRL	*Co-Regulated Learning CoRL*	*Shared Regulation of Learning SSRL*
Definition	Strategically planning, monitoring, and regulating cognition, behavior, and motivation	Emergent interaction mediating regulatory work. Regulatory expertise is distributed amongst people and activity systems	Interdependent or collectively shared regulatory processes orchestrated in the service of a shared outcome
Task contexts*	Solo or collaborative	Solo or collaborative	Collaborative
Goal	Personal adaptation or independence in regulatory activity	Mediation of individual adaptation and regulatory competence (instrumental for SRL)	Collective adaptation and regulation of collaborative processes. May not enhance SRL
Pedagogical mechanisms	Requires a more capable other to provide modeling, feedback and instrumental	Requires distribution of expertise used to influence SRL (including	Requires equity and emergent co-construction among

	support	situational affordances & constraints)	team members Teams share monitoring, evaluation, and adaptation processes
Research techniques	Data about individuals and contexts Self-report, observation, and trace data	Data about interaction and mediation processes Microanalytic discourse analysis techniques Analysis of activity systems and socio-cultural influences	Group level data Microanalytic discourse analysis contextualized by macro level regulatory episodes Calibration of individual goals, perceptions, and evaluations

*Solo tasks refer to those where an individual product or outcome is the primary goal. Students can work together on solo tasks. In collaborative tasks, a joint product or outcome is required.

The present study is based on the theory of socially shared regulation of learning, as opposed to self-regulated learning or co-regulated learning, but like self-regulated learning, co-regulated learning and socially shared regulation of learning are consistent with the Vygotsky's sociocultural perspective. Each of these three types of learning regulation have elements of learner controlled engagement within the social context of learning, but they differ by varying degrees of individual self-directedness and social collaboration in learning. The focus of self-regulated learning is toward the individual's role in learning, while co-regulated learning is usually used in an attempt to achieve self-regulated learning. On the other hand, socially shared regulation of learning emphasizes collaborative engagement and reciprocal impact between group members for the enrichment of group learning, as does the collaborative feedback and formative evaluation of a course learning environment in this study. Although a course participant may simultaneously display characteristics of self-regulated learning and co-regulated learning as well as socially shared regulation of learning, the collective involvement of

those participants is the primary focus of the study, making socially shared regulation of learning the most appropriate theoretical foundation.

Volet, Summers and Thurman (2009) and Hadwin, Järvelä and Miller (2011) agree that self-regulated learning, co-regulated learning and socially shared regulation of learning are not mutually exclusive and that it is possible for these three dynamics of learning regulation to occur and to be researched when students learn in a collaborative setting. The authors point out that it is naïve to think that learning is entirely individual or collaborative, since there are aspects of individual and social in each of the types of learning regulation described in this section. However, socially shared regulation of learning is most pertinent to the present study because it emphasizes group collaboration based on discourse, and the evolution of ideas and regulatory activity through that dynamic exchange (Hadwin & Oshige, 2011). The principles of socially shared regulation of learning are an exceptional fit for the present study due to the nature of methods used in the study to promote collaborative feedback and formative evaluation of higher education learning environments.

In their meta-analysis of the literature regarding socially shared regulation of learning, Hadwin and Oshige (2011) found that computer-supported collaborative learning environments and analytical techniques such as discourse analysis and network analysis were common tools with which researchers studied the topic. These findings serve as the basis for the online discussion board used in the present study to promote collaborative feedback. The alignment of socially shared regulation of learning with the spirit of the present study supports the use of such methods as the online collection of

discourse data and the analysis of that discourse for the identification of group dynamics and regulatory processes including meaningful feedback.

Järvelä, Järvenoja, and Veermans (2008) found that self-reports and video data were also useful in determining motivational and emotional dynamics in face-to-face group learning activities. Since feedback should be voluntary for all participants (Brinko, 1993), and students should always be anonymous (Wachtel, 1998), self-reporting and video recording would not be appropriate methods for gathering feedback data about a course's learning environment. Group discourse analysis using online discussion board data may not identify some of the complexities of face-to-face group interaction, but given the constraints associated with providing feedback anonymously, this method may be the best option. It could still theoretically contribute to a better understanding of socially shared regulation of learning in the context of collaborative feedback and formative evaluation in higher education courses.

According to Boekaerts (2011), there is a lack of information about the impact of social factors on the collaboration of students for learning. While socially shared regulation often relies on discourse and dynamic exchange to produce collaborative learning, currently most group interactions being studied revolve around structured course topics and projects, not reflection on the context of learning (Hadwin, Järvelä, & Miller, 2011; Hadwin & Oshige, 2011). Much research regarding the social aspects of learning regulation focus on content-centered learning, as evidenced in studies conducted by Järvelä, Järvenoja, and Veermans (2008), Salonen, Vauras, and Efklides (2005), and Volet, Summers and Thurman (2009). These studies examine group work as it pertains to domain-specific knowledge acquisition, and they do not include the instructor as a

collaborator, unlike the method used in the present study. These studies focus on collaboration only among students for course projects, as opposed to collective analysis by all stakeholders of a course's learning environment for the purpose of co-constructing that learning environment, as does the present study. Despite this minor incongruence between socially shared regulation of learning and the present study, the principles of socially shared regulation of learning are still relevant for collaborative feedback and formative evaluation of a higher education course learning environment.

Summary. The section pertaining to learning theory has covered Social Development Theory (Vygotsky, 1962, 1978), which is the basis of the present study's theoretical framework due to its themes of learner construction of knowledge and learning regulation. In particular, the learning-related concepts found in or inspired by Social Development Theory such as language and discourse (Vygotsky, 1962), Zone of Proximal Development (Vygotsky, 1978), as well as co-construction of learning environment and socially shared regulation of learning (Hadwin, Järvelä, & Miller, 2011; Hadwin & Oshige, 2011) were addressed due to their relative importance to the present study. The theoretical framework of the present study was depicted in Figure 2.2 and explained in detail.

Relevant Focus Areas

Some established trends and relatively new philosophical movements in the discipline of education have heavily influenced the present study. Student feedback and formative course evaluation literature, particularly that addressing small group instructional diagnosis, informs the methodology of the present study. The student voice movement, and analysis of stakeholders in education also provides insight into the

direction of collaborative engagement and accountability in education, which leads to a deeper understanding of the purpose for this research.

Student feedback and formative evaluation. The literature pertaining to feedback and formative evaluation in higher education takes a variety of forms, so it is important to understand the focus of the present study as it relates to this literature. Some literature describes student feedback as feedback that the instructor provides to students (Fluckiger, Vigil, Pasco, & Danielson, 2010; Hatziapostolou & Paraskakis, 2010), some describes student feedback as feedback that students provide to the instructor (Seldin, 1993; Cook-Sather, 2009b), while others describe student feedback as feedback that students provide to fellow students (Chickering & Gamson, 1987; Dippold, 2009). Formative evaluation in higher education has been referred to in a number of ways, from an instructor-led interim analysis of student learning (Anderson, Anderson, VanDeGrift, Wolfman, and Yasuhara, 2003; Fluckiger, Vigil, Pasco, & Danielson, 2010; Hatziapostolou & Paraskakis, 2010; Wise, Perera, Hsiao, Speer, & Marbouti, 2011), to a student-focused evaluation of teaching and the learning environment (Austin & Austin, 2002; Bullock, 2003; Caulfield, 2007; Cohen, 1980; Finelli, 2008; Friedlander, 1978; Hampton & Reiser, 2004; Hazari & Schnorr, 1999; Kember, Leung, & Kwan, 2002; McKeachie, 1979; Overall & Marsh, 1979; Seldin, 1993; Seldin, 1997; Zubizarreta, 2008.) For the purposes of this study, the literature review will focus on student feedback and formative evaluation as both instructors and students may use it to become more informed about the state of the learning environment in the course and to promote the continuous improvement of that learning environment.

The most common type of student feedback and course evaluation in higher

education is often referred to as student evaluation of teaching, and is usually collected in some type of rating form that includes Likert scale questions and occasionally open response questions (Austin & Austin, 2002; Cohen, 1980; Seldin, 1993; Seldin, 1997). Student evaluations of teaching are typically administered at the end of the semester as a summative evaluation (Caulfield, 2007; Kember, Leung, & Kwan, 2002; Kulik, 2001), but this is not the type of endeavor addressed in the present study. Instead, the present study focuses on student feedback methods that are specifically designed and administered to gather formative feedback at some point(s) around the middle portion of a course, which is regularly referred to as midterm student feedback (Finelli, 2008; Keutzer, 1993). While summative student rating results are frequently used as part of an instructor's professional performance evaluation, formative feedback is primarily collected for the purpose of gauging teaching effectiveness and so that adjustments can be made to the course if necessary (Caulfield, 2007; Hazari & Schnorr, 1999).

This review focuses on formative evaluation, as opposed to summative evaluation, but the frequency of formative evaluation during a course does vary. Some authors (Finelli, 2008; Snooks, Neeley, & Revere, 2007) describe formative evaluation as a method that is used once at a time near the midpoint of the course. Other authors (Steward, Mickelson, & Brumm, 2005; Hazari & Schnorr, 1999) describe formative evaluation as an ongoing process because "teachers must have continuous feedback on the progress of student learning to ascertain if their teaching methods are effective" (p. 277). Anderson, Anderson, VanDeGrift, Wolfman, and Yasuhara (2003) go so far as to propose a method used by students to provide real-time feedback throughout each lecture using a computer based system that was shown to increase interaction and understanding.

The positive effects of student feedback and formative evaluation have been presented by many studies. In a seminal work by Centra (1973), the author found that feedback has a much greater potential for impacting a course when there is more time (at least half the term) to use that feedback for making adjustments. Formative feedback gives instructors the opportunity to improve the learning environment of their courses while students still can still benefit from the change (Austin & Austin, 2002; Caulfield, 2007; Hazari & Schnorr, 1999). Midterm semester feedback has been shown to improve instruction during a course, which has subsequently had a positive impact on student learning as well as summative student ratings of their teacher and course experience (Finelli, 2008; Hampton & Reiser, 2004; Kulik, 2001; Overall & Marsh, 1979). Student feedback can also prevent (or at least decrease) the inclusion of course instructional factors that hinder learning and contribute to student demotivation (Gorham & Millette, 1997). Research has shown that students are most motivated to provide this kind of valuable feedback about their perspectives on the course when they believe that the results of their input will improve teaching and/or the overall course experience (Chen & Hoshower, 2003).

Not all literature on student evaluation of the learning environment presents a positive perspective on such student feedback. Lindahl and Unger (2010) focus on the sometimes cruel comments made in open response sections that are found on many of the forms students use to rate their professor and their class. The authors suggest that when a student has the opportunity to choose the words that are used to provide feedback in an anonymous format, the student may “morally disengage” (p. 73) because that student does not have to face the consequences of inaccurate or inappropriate statements.

However, such statements can still have a negative impact on an instructor, especially if this type of student feedback is shared among students. McNatt (2010) found that the students' preconceived notions regarding their instructor could impact their ratings of that instructor; particularly, an instructor with a negative reputation will be rated lower regardless of student learning or actual instructor performance. Pritchard and Potter (2011) found that the pursuit of higher student ratings could even have a negative impact on instructor behavior, which they summed up in relation to their study by stating "faculty members may have bartered their high educational standards for better student evaluations" (p. 5).

The methods that utilize rating forms are the simplest approaches to gathering student feedback, and while questionnaires can vary from course to course (Seldin, 1997), these evaluations can be conducted in class through a traditional paper-and-pencil method or conducted online through an electronic method. However, even formative rating forms do not always provide useful feedback. Friedlander (1978) states,

> It may be that providing instructors with feedback of student ratings in the form of means, standard deviations, and even comparative data for standard objective items may be too global and too far removed from the context of the learning process to be of much use either as a diagnostic aid for helping faculty to identify particular strengths and weaknesses of their course or as a remedial aid for providing faculty with specific suggestions on how the course could be improved (p. 140).

So, although the most common way to gather student feedback during a course is through some type of instructor-administered questionnaire (Kember, Leung, & Kwan, 2002),

many other qualitative methods have been developed to obtain student perspectives. The range of student feedback methods includes weekly student journals (Steward, Mickelson, & Brumm, 2005), student conferencing (Fluckiger, Vigil, Pasco, & Danielson, 2010), student focus group interviews (Seldin, 1997; Steward, Mickelson, & Brumm, 2005), consultant-facilitated student group diagnosis (Finelli, 2008; Snooks, Neeley, & Revere, 2007), and online student discussion boards (Wise, Perera, Hsiao, Speer, & Marbouti, 2011; Fluckiger, Vigil, Pasco, & Danielson, 2010). According to Steward, Mickelson, and Brumm (2005), using a variety of feedback methods provides a more thorough understanding of student perspectives.

Several researchers have advocated for the collection of feedback online (Austin & Austin, 2002; Bullock, 2003; Fluckiger, Vigil, Pasco, & Danielson, 2010; Hatziapostolou & Paraskakis, 2010; Hazari & Schnorr, 1999; Wise, Perera, Hsiao, Speer, & Marbouti, 2011). Hatziapostolou and Paraskakis (2010) provide many useful insights into the design of online discussion environments, and they suggest that online feedback systems need to be integrated with accessible learning management systems. Fluckiger, Vigil, Pasco, and Danielson (2010) suggest collaborative blogs will improve instruction and enhance learning. Using online discussion boards to engage in collaborative feedback has been found to be beneficial to all students, because all comments are accessible to all students; so even if some students have not contributed to the conversation, they can still learn from the words of others (Picciano, 2002). Hazari and Schnorr (1999) also point out that engaging in feedback activity online does not require the use of valuable class time.

Collaborative feedback through discourse has been shown to have many positive effects on the course's learning environment (Caulfield, 2007; Fluckiger, Vigil, Pasco, &

Danielson, 2010; Keutzer, 1993). Fluckiger, Vigil, Pasco, and Danielson (2010) emphasize that students should collaborate with each other and instructors in feedback activity if that feedback is to be most effective. The authors suggest collaborative blogs will improve instruction and enhance learning. In reference to engagement in feedback between students and instructors, Keutzer (1993) states that this creates an environment in which "students see that their input is important in the collaborative venture of teaching and learning. They feel respected and recognize that they can participate in their own educational process" (p. 240). Caulfield (2007) writes that the discussion of feedback between instructors and students does five things; it shows that the instructor is serious about using feedback to improve teaching and learning, it gives the instructor an opportunity to seek clarification on feedback received, it provides the instructor and students the opportunity to determine the level of consensus on all feedback topics, it allows the instructor to identify potential adjustments that may address feedback received and permits students to react to these potential changes immediately, and finally it gives the instructor an opportunity to provide rationale for why some feedback may not result in any change.

Qualitative social methods seem to provide both instructors and students with the necessary means with which to communicate about teaching and learning most effectively. Many authors have highlighted the benefits of discussion-based feedback for course improvement (Abbott, Wulff, Nyquist, Ropp, & Hess, 1990; Fluckiger, Vigil, Pasco, & Danielson, 2010; Wulff, Staton-Spicer, Hess, & Nyquist, 1985; Zubizarreta, 2008). Other studies promote consultation with the instructor regarding student feedback (Brinko, 1993; Finelli, 2008; Hampton & Reiser, 2004; Seldin, 1997). Overall and Marsh

(1979), Cohen (1980), and Kember, Leung, and Kwan, (2002) conducted reviews of relevant literature, which showed that student feedback led to more improvement in teaching and learning when coupled with instructional consultation. Of all the methods of feedback presented in the literature, one stands out as being a formative feedback technique that incorporates both student discourse and instructional consultation; the small group instructional diagnosis.

Small group instructional diagnosis. In the early 1980's, Joseph Clark and Mark Redmond from the University of Washington used a $90,000 grant from the Fund for the Improvement of Postsecondary Education to develop and test a new student feedback method (Clark & Redmond, 1982). The technique was designed as an alternative to traditional end-of-term course evaluations as well as other more costly, complicated and time-intensive faculty consultation methods (Redmond & Clark, 1982). This method was intended to provide students with a means for thoroughly expressing their perspectives on a course via group discourse, and to provide instructors with that meaningful feedback from students in such a way that would maximize course improvement. The method was originally called *small group instructional diagnosis* and is often referred to as SGID (Clark, 1982).

The principles of the small group instructional diagnosis are consistent with the tenets of Social Development Theory (Vygotsky, 1962, 1978), which stress student responsibility in the learning process and the necessity of interacting with others to make meaning. The small group instructional diagnosis put tremendous emphasis on feedback, the clarification of ideas through discourse, and the group process of consensus building. In addition to highlighting the importance of language in a group setting, the small group

instructional diagnosis directly involves students in the improvement of education. White (1995) states, "the SGID process emphasizes that students have a role in shaping their own instruction and learning" (p. 22), and according to Bennett (1987), "accustomed as they are to being recipients of instruction rather than contributors, their appreciation is profound when the dialogue places them in an active role. The SGID opens a channel for mature discussion of teaching and learning that enriches teacher as well as student" (p. 103).

Throughout the literature, small group instructional diagnosis has been referred to by a number of terms. Some of the terms related to small group instructional diagnosis include student group instructional diagnosis (Redmond & Clark, 1982), small group instructional feedback (Robinson, 1995a; Robinson, 1995b), small group instructional evaluation (Coffman, 1998), bare bones questions (Snooks, Neeley, & Revere, 2007; Snooks, Neeley, & Williamson, 2004), teaching analysis poll (JMU Center for Faculty Innovation, n.d.), and students as learners and teachers (Cook-Sather, 2010a). These terms all refer to the technique that was originally called small group instructional diagnosis or to a similar, slightly modified version of that technique. Some feedback methods have been so drastically modified from the original technique, such as the group instructional feedback technique (Angelo & Cross, 1993) and the University of Virginia's electronic teaching analysis poll (University of Virginia Teaching Resource Center, 2011), that they are not considered to be a small group instructional diagnosis for the purpose of this study.

The small group instructional diagnosis is an open-ended discussion-based mid-semester course evaluation method that involves students and instructor in a feedback

process, indirectly through a consultant, with the implicit or explicit assurance of confidentiality (Pomerantz, Santanello, & Kirn, 2006). The process for the technique should be comprised of five stages, which can be described as follows: a consultant meets with an instructor to determine course climate; the consultant facilitates a student-group feedback session in class without the instructor present; the consultant compiles and presents a overview of student feedback to the instructor, in addition to offering support for addressing that feedback; the instructor addresses the student comments in the following class; and the consultant follows up with the instructor to reinforce commitment to planned changes (Lenze, 1997; Redmond, 1982; Robinson, 1995a; Tiberius, 1997). The technique is appropriate for most different types of traditional synchronous courses (Black, 1998; Volden & Melland, 1999). The instructional consultant should be impartial and should have received training on how to conduct the technique (Kyger, 1984), although consultants may come from a variety of backgrounds including volunteer faculty from within the academic unit of the course (Bowden, 2004; Clark & Redmond, 1982), volunteer faculty from outside the academic unit of the course (Bennett, 1987; Kyger, 1984), staff of learning and teaching centers (Black, 1998; Coffman, 1991; Diamond, 2002; Diamond, 2004; Finelli, Ott, Gottfried, Hershock, O'Neal, & Kaplan, 2008), and students (Cook-Sather, 2009b; Cook-Sather, 2010a; Weimer, 1990).

The small group instructional diagnosis is usually scheduled very near to the midpoint of an academic term, and the first stage is a conversation between instructor and consultant. The initial meeting with the instructor is used to build some rapport between the instructor and consultant, and to determine if there are any areas that the instructor

would like the consultant to address in the classroom feedback session. These areas can pertain to any topic that could be better understood through student perspectives. Although the instructor can suggest topics to address in the classroom session, the students are still able to comment on any issue they wish to discuss (Dawson & Caulley, 1981; Snooks, Neeley, & Revere, 2007).

The classroom session is the second stage of the small group instructional diagnosis, and it typically takes about 30 minutes. As soon as the instructor leaves the room, the consultant begins by introducing himself or herself and explaining the process, which is voluntary. Students are then asked to form small groups of four to six people, and they are instructed to spend 10 minutes discussing and answering some variation of the following three open-ended questions in their small groups: what helps your learning in this course; what hinders your learning in this course; what suggestions do you have for the improvement of this course. Occasionally additional questions are included to address the students' contribution to their own course experience (Cook-Sather, 2009a; Smuts, 2005). After questions are provided to students, they are asked to spend a near-equal amount of time discussing each one. The questions are intentionally broad and are meant to guide student conversations, of which the emerging themes will serve as the basis for the feedback summary presented to the course instructor (Newby, Sherman, & Coffman, 1991).

The answers to small group instructional diagnosis questions are recorded and displayed in the question categories in a way that can be viewed by all students, such as on a white board or on flipcharts, for the sake of conversation. The consultant clarifies the comments through discourse, groups similar items into theme categories with the help

of students, and tries to gauge the level of agreement on the issues by show of hands. Finally, the students are thanked for their time and the session is concluded, after which the consultant makes a copy of the written feedback and erases all other displays of student comments to protect student anonymity.

In the third stage, the consultant analyses comments from the classroom session and summarizes them to eliminate identifiable data and extreme outlier perspectives that would be counterproductive to the feedback process. The follow-up meeting is a time for the consultant and instructor to review summarized feedback results. This review is often followed by discussion of a potential plan of action for the remainder of the academic term.

The fourth stage should involve a revisiting of feedback with students by the instructor, although this does not always occur. The instructor is encouraged to close the feedback loop by acknowledging the feedback provided by students in the classroom setting, and by responding to that feedback by implementing changes or explaining why changes will not be made. Completing this process can improve the students' relationship with the instructor due to the student perception that their perspectives are valued (Coffman, 1998; Tiberius, 1997).

Finally, the consultant and instructor have a follow-up meeting to carry out the fifth stage of the small group instructional diagnosis. The two discuss the reaction of students when the summary of student feedback was revisited in class, and to revise (if necessary) and recommit to the plan of action moving forward. This stage is often left out of the process due to lack of time or because an experienced instructor may find it

offensive (Bennett, 1987), although it is still recommended for inexperienced instructors (Robinson, 1995a; Robinson, 1995b).

Overall, small group instructional diagnosis is well received by both students and instructors (Sherry, Fulford, & Zhang, 1998; Smuts, 2005; Snooks, Neeley, & Revere, 2007), and the technique leads to a number of positive outcomes. Students have been shown to achieve a greater sense of accountability and ownership in education through implementation of the technique (Cook-Sather, 2010a; Tiberius, 1997). Students also have the advantage of being anonymous to the instructor, but may engage in open discourse with fellow students and a consultant, which leads to broader perspectives on teaching and learning (Craig, 2007). Instructors see greater gains in student ratings and report more detailed teaching changes than instructors that use other consulting or formative evaluation methods (Finelli, Ott, Gottfried, Hershock, O'Neal, & Kaplan, 2008). Additionally, instructors achieve more awareness of their students' perspectives toward the course environment, and instructors have been shown to become more confident in their teaching approach after using the feedback gathered from this midterm evaluation technique (Diamond, 2004).

The small group instructional diagnosis also has some common benefits for instructors and students. Both parties benefit from the midterm timing of the technique, which allows for appropriate adjustments to be made while the course is still happening (Coffman, 1991; Diamond, 2002). The technique also opens the lines of communication between instructor and student, particularly if the instructor directly acknowledges student feedback (Bennett, 1987; Sherry & Burke, 1995; Weimer, 1990).

The use of discourse is one of the greatest advantages of the small group instructional diagnosis, and there are many opportunities for two-way communication in this formative evaluation method. Discussion among the small student groups allows students to clarify and filter feedback so that it is highly significant and well articulated by the time it is reported back to the consultant (Clark & Bekey, 1979; Tiberius, 1997), and as Dawson and Caulley (1981) mention, this discussion "allows students to simulate one another's thoughts and encourages debate on points about which they disagree" (p. 64). The whole-group conversation with the consultant about the feedback creates the opportunity to correct errors of misinterpretation and further clarify perspectives. The instructor even has the chance to discuss feedback with students during the class following the small group instructional diagnosis. According to Tiberius (1997), "the discussion, both among students and between students and the facilitator [or instructor], allows for misinterpretations to be corrected and provides the kind of contextual statements and qualifications that aid understanding" (p. 60). In addition, "the dialogue between instructor and students may continue through unspecifiable further stages during the term as the instructor introduces adjustments and as the students assess the impact the adjustments make on their learning" (Bennett, 1987, p. 103).

The use of a consultant is a feature of small group instructional diagnosis that has advantages and disadvantages. Some advantages include the face-to-face facilitation of discussion with students, which would be impossible without a third party, and the additional perspective of the consultant on student feedback (Coffman, 1998), as long as it is accurate and presented effectively. Some disadvantages include the reliance upon a consultant's availability (Weimer, 1990) and the potential for dilution or

misinterpretation of student feedback (Sherry, Fulford, & Zhang, 1998), as it must pass through the consultant before reaching the instructor who may find it challenging to gain clarification from the source of the feedback. In regard to the latter issues, small group instructional diagnosis has even been described as a type of formative evaluation that emphasizes improvement of teaching through input from colleagues (Smith, 2001) or peer consultation (Millis, 1999), more than through discussion of student perspectives. However, the most significant drawback to the process at James Madison University pertains to the number of consultants required, and the time required of those consultants, to adequately accommodate the vast number of course sections that could benefit from the process.

The Center for Faculty Innovation at James Madison University conducts the small group instructional diagnosis, or *teaching analysis poll* as they call it, between the fifth and ninth weeks of each fall and spring semester (JMU Center for Faculty Innovation, n.d.). In the fall and spring semesters of the 2007-2008, 2008-2009, and 2009-2010 academic years at James Madison University, there was an average of over 1,200 courses scheduled each semester, of which an average of approximately 4,350 total sections were held each semester (JMU Office of Institutional Research, 2011a). Of these sections, some may not have been eligible for the teaching analysis poll, such as sections that were held only online, sections that were scheduled for less than a full semester, sections with only one student enrolled, or sections that were designed for continuance credit and did not have any completion requirements. Kurt Johnson, Associate Registrar at James Madison University, estimated that at least 75% of the university's total sections were eligible for the teaching analysis poll during the academic years in question

(personal communication, June 8, 2012), meaning that an average of approximately 3,250 sections per semester could have benefited from that process.

According to Executive Director Dr. Carol Hurney, the Center for Faculty Innovation reported having completed an average of approximately 70 teaching analysis polls in each fall semester and each spring semester of the 2007-2008, 2008-2009, and 2009-2010 academic years (personal communication, October 19, 2010). These numbers show that, during the years indicated, the Center for Faculty Innovation was only able to accommodate an average of approximately 2.2% of eligible course sections per semester at James Madison University, despite a higher demand from instructors for the teaching analysis poll. As a result, the students and instructors in an average of approximately 97.8% of eligible sections per semester at James Madison University had no organized and efficient way to engage in timely discussion-based feedback that meets students' need for anonymity.

Approximately 20 trained volunteer consultants from the faculty at James Madison University conduct three to four teaching analysis polls each semester for the Center for Faculty Innovation (Dr. Carol Hurney, personal communication, October 19, 2010). As a result, the teaching analysis poll registration, which happens between the second and third weeks of each Fall and Spring semester, must be capped at around 70 or 80 due to limited personnel resources (JMU Center for Faculty Innovation, n.d.). Dr. Hurney estimated that it takes a consultant about two to two-and-one-half hours to complete each teaching analysis poll process, although she indicated that it could take longer depending on conversations with the instructor (personal communication, October 19, 2010). Other estimates of the time required to complete the teaching analysis poll

process include averages of up to four hours or more (Black, 1998; Dawson & Caulley, 1981; Snooks, Neeley, & Williamson, 2004).

It is important to consider some mathematical projections in order to understand the enormity of the commitment if the Center for Faculty Innovation were to accommodate all eligible sections at James Madison University. For the sake of example, imagine that each complete teaching analysis poll process at James Madison University actually takes an average of three hours. Based on three to four teaching analysis polls per consultant and a total of 70 teaching analysis polls being conducted each semester, this would require an average of approximately 10.5 hours of each consultant per semester and an average total of 210 man-hours (about 26 8-hour work days) per semester. At this rate, based on the average number of 3,250 eligible course sections per semester at James Madison University, the Center for Faculty Innovation would need between 800 and 1100 consultants conducting three to four teaching analysis polls per semester to accommodate the eligible sections. As noted previously, this would still require an average of approximately 10.5 hours of each consultant per semester, but the average total number of man-hours would rise from the current number of 210 hours to approximately 9,750 hours (about 1,200 8-hour work days) per semester.

The teaching analysis poll cannot realistically accommodate all eligible sections at James Madison University each semester. Assuming that the average amount of time required to complete a teaching analysis poll process remains at approximately three hours, and that the average number of eligible course sections per semester at James Madison University remains at approximately 3,250, there will continue to be an average total of approximately 9,750 man-hours (about 1,200 8-hour work days) required per

semester for all eligible sections to be accommodated. The chance of volunteer consultants providing the average number of man-hours required per semester is unrealistic in itself. However, the requirements for hours per consultant and the total number of consultants mentioned above are equally as unrealistic, and any adjustments that seem to elevate the immense demand in one area only exacerbate the insufficiencies in another area. For example, if the number of teaching analysis polls conducted by each consultant was raised to 10 per semester, the required number of consultants would be reduced to 325 per semester, but the number of hours required of each consultant would be increased to 30 per semester. If the number of teaching analysis polls conducted by each consultant was reduced to 2 per semester, the number of hours required of each consultant would be decreased to 6 per semester, but the required number of consultants would be increased to 1,625 per semester, which incidentally is about 300 more than the total number of full-time and part-time instructional faculty currently employed by the university (JMU Office of Institutional Research, 2011b).

The small group instructional diagnosis has been shown to have a great impact on the courses in which it is utilized, but this process alone is not enough. As indicated previously, the process is well received by instructors and students alike (Sherry, Fulford, & Zhang, 1998; Smuts, 2005; Snooks, Neeley, & Revere, 2007). The James Madison University teaching analysis poll consistently receives overwhelmingly positive feedback from students and instructors in surveys about the process (personal communication, October 19, 2010). However, if the teaching analysis poll continues to be the only option at James Madison University for efficient and timely discussion-based feedback that

meets students' need for anonymity, then a vast number of classes will go without the benefits of this type of endeavor.

Student voice. The term *student voice*, as it is used in the present study, has two distinct meanings: first, it refers to student contribution to discourse within education about learning and teaching; second, it is used to indicate the new wave of a movement for education reform that has roots in the theoretical perspective of educators as far back as John Dewey (Cook-Sather, 2002a). These perspectives are about formal education that is centered on learners and their voices as equal if not greater forces for the achievement of meaningful learning than the contributions of instructors and academic institutions (Cook-Sather 2002a, 2002b). The student voice movement operates on a few assumptions: students have important things to say about teaching, learning, and formal education; student perspective deserve the acknowledgement and response of the educational establishment; and students should be given the opportunity to shape their own education (Cook-Sather, 2006). Seale (2010) writes that the student voice is powerful, and that student voice work has the potential to harness that power.

The principles of the student voice movement are consistent with Social Development Theory. Both Vygotsky's (1962, 1978) perspective and the student voice advocates suggest that learners can be active participants in their own learning, and they can do so by engaging in discourse with others, including teachers and students. Through such discourse, learners and instructors can collaborate to better understand and improve the learning environment and, as a result, both Social Development Theory and student voice can be realized.

Seale (2010) points out that many of the research projects and perspectives regarding student voice come from outside the United States (Fielding, 2001b; Lodge, 2005; Seale, 2010) and/or are focused on what is described in the American system as elementary, high school, or community college education (Bueschel, 2008; Fielding, 2001b; Lodge, 2005). According to the results from Seale's (2010) meta-analysis of student voice in European higher education, most research projects are descriptive, rather than evaluative and are reported in the form of conference papers or institutional and project reports. These works are closely tied to higher education policy or practice agendas such feedback and evaluation, reflective practice, and student engagement. Common purposes of projects regarding student voice in higher education include quality enhancement / assurance and professional development of staff, which contrasts with student voice projects conducted at lower levels of education, which emphasize governance, representation and rights (Fielding, 2001b, 2004a, 2004b).

The descriptions of student voice in higher education are underdeveloped because they usually fail to adequately address understanding of or commitment to the principles of transformation, participation or empowerment (Seale, 2010). Feedback, evaluation and reflective practice agendas usually imply the assumption that change is an inevitable reaction to these activities, but that is not necessarily the case unless expectations are explicitly articulated for transformation as a response to student voice. The student engagement agenda usually implies that students will be more engaged if they can be involved in the important decisions about the context and content of their learning, however, Seale (2010) and Cook-Sather (2006) agree that higher education agendas could ultimately be used to "hijack" student voice agendas. On the subject of empowerment,

Cook-Sather points out that the literature pertaining to student voice in higher education is relatively lacking, and that it seemingly refuses to acknowledge the unequal power relationship between students and teachers.

While there is a lack of student voice research from higher education, including American institutions, the principles of the movement, as they are conceptualized at lower levels of education in other countries, can still apply to formal learning at traditional bachelor-level colleges and universities in the United States. For example, studies about student voice have shown that involving students and instructors in discourse about their perspectives on learning and teaching can have several benefits; improved understanding of learning and instructional strategies, strengthened feelings of support that lead to trusting relationships, enhanced sense of meaning and purpose allocated to respective educational roles, and increased overall satisfaction with the academic experience for both instructors and students (Bueschel, 2008). Studies using a student voice perspective have yielded insight into what does work, what does not work, and what could work in areas including, but not limited to, student motivation and participation (Aboudan, 2011), course reading and graded assignments (Bueschel, 2008), elements of effective tutoring and workload management (Seale, 2010), student controlled research (Fielding, 2001b), classroom activities and teacher interaction (Bueschel, 2008), e-learning technology and support (Seale, 2010), and collaborative development of language for and understanding of learning (Lodge, 2005; Cook-Sather, 2008).

Student voice has been pursued using written communication (Lodge, 2005; Seale, 2010) and spoken communication (Bueschel, 2008; Lodge, 2005) to obtain mostly

qualitative data, but some quantitative data has been collected with surveys (Seale, 2010). According to Lodge (2005), authentic student voice initiatives must promote some type of discourse, which is an effective way for learners to be actively involved in the learning process, but a difficult activity to measure. The author explains that discourse goes beyond conversation or debate, in that it is not merely an exchange of words or a confrontation. Discourse is inclusive and collaborative, building a shared narrative between participants and a deeper understanding that would not have been possible to achieve as individuals. Discourse is an engaging process that can be described as dynamic and generative, open and tolerant, as well as honest and trustingly experimental. The value of discourse is that it "prompts reflection, critical investigation, analysis, interpretation and reorganization of knowledge" (p.135). Fielding (2001a, 2001b, 2004a) presents a set of nine question clusters that can serve as a measure of the authenticity of practices that seek to create a "dialogic democracy" (2001b, p. 133) in education, the topics of which relate to areas of importance in student voice research; speaking, listening, skills, attitudes, systems, culture, spaces, action, and future (see Table 2.2).

Table 2.2. Evaluating the conditions for student voice (Fielding, 2004a, p. 204)

Speaking	• *Who* is allowed to speak? • *To whom* are they allowed to speak? • *What* are they allowed to speak about? • What *language* is encouraged/allowed?
Listening	• *Who* is listening? • *Why* are they listening? • *How* are they listening?
Skills	• Are the skills of dialogue *encouraged and supported* through training or other appropriate means? • Are those skills understood, developed and practiced within the *context of democratic values and dispositions*? • Are those skills themselves *transformed* by those values and dispositions?

Attitudes and dispositions	• How do those involved *regard each other*? • To what degree are the *principle of equal value* and the *dispositions of care* felt reciprocally and demonstrated through the reality of daily encounter?
Systems	• *How often* does dialogue and encounter in which student voice is centrally important occur? • Who *decides*? • How do the systems enshrining the value and necessity of student voice mesh with or *relate to other organizational arrangements* (particularly those involving adults)?
Organizational culture	• Do the *cultural norms and values* of the school proclaim the centrality of student voice within the context of education as a shared responsibility and shared achievement? • Do the practices, *traditions and routine daily encounters* demonstrate values supportive of student voice?
Spaces and the making of meaning	• *Where* are the public spaces (physical and metaphorical) in which these encounters might take place? • Who *controls* them? • What *values* shape their being and their use?
Action	• What *action* is taken? • Who feels *responsible*? • *What happens* if aspirations and good intentions are not realized?
The future	• Do we need *new structures*? • Do we need *new ways of relating to each other*?

Fielding (2001a, 2004a), Lodge (2005), Bueschel (2008) and Seale (2010) agree that a dialogic approach could benefit schools as a tool for developing a genuine learning community where student voice is an integral element. Fielding writes that formative assessment using discourse has the potential to build the types of relationships and environments in education that are promoted by the student voice movement. The author adds, though, that participants may need to be educated in the various forms of effective dialog if the approach is to be as successful as desired.

Cook-Sather (2006) explains that student voice, as a reform movement, strives to

create an inclusive environment for students in formal education. Therefore, implicit in student voice perspectives is the assumption that the current educational system generally does not respect or value the student as an integral part of the learning and teaching experience, and that current approaches influenced by that attitude must change. According to Fielding (2001a), "teaching and learning remain largely forbidden areas of enquiry and if either are allowed into the circle of discussion, the questions and concerns that are raised are invariably identified and framed by teachers for teachers: students…are primarily treated as sources of data rather than agents of transformation" (p.101).

Fielding (2001b, 2004a) introduces a typology of student voice engagement that includes four categories; student as data source, student as active respondent, student as co-researcher, and student as researcher. If engaged as data sources, students' past performance and attitudes are evaluated to inform through tests and surveys to inform instructional practices. If engaged as active respondents, a deeper understanding of students' perspectives is pursued through discussion to enhance the meaning of the learning experience. If engaged as co-researchers, teacher-led dialogue with students is used to explore more creative approaches to their collective experience. If engaged as researchers, dialogue is student-led and the student initiates (instead of just responding to) learning experiences, in which case the instructor must listen in order to learn. When the two latter types are realized, the relationship between instructor and student becomes such that the parties could be described as, equal partners (Bueschel, 2008; Fielding, 2001b, 2004a, 2004b; Seale, 2010), colleagues, teammates, co-researchers (Fielding, 2001b, 2004a, 2004b; Lodge, 2005; Partridge & Sandover, 2010), mutual stakeholders, or

both teachers and learners together (Cook-Sather, 2006, 2008, 2009a, 2009b, 2010a, 2010b).

According to Seale (2010), the definitions of student voice in these studies revolve around the activity of teachers in student voice work (as opposed to that of students) such as asking about student experience, reflecting on practical implications on teaching, seeing or understanding student perspectives, and hearing or listening to voices that have previously been ignored or inaudible. However, even though these definitions all support the acknowledgement and valuing of student views, there is a significant difference between listening to and hearing those views: a difference that is often associated with the quality of the response. The author states, "the relative silence regarding student empowerment in these definitions is significant in terms of thinking about whether higher education is only interested in a particular kind or dimension of student voice: a voice that expresses views but doesn't necessarily demand equality or empowerment, in other words a voice that does not impel action" (p 997).

Some prolific academicians who consider themselves members of the student voice movement have suggested a conceptual model of education in which learners and teachers are both responsible for learning and teaching (Cook-Sather, 2006, 2008, 2009a, 2009b, 2010a, 2010b; Fielding, 1999, 2001a, 2001b, 2004a). This approach would admittedly blur the more rigid lines of authority in traditional formal education, but it would also create an atmosphere of equal collaboration, somewhat like a partnership, between students and instructors. In Fielding's (1999) description of his proposal for a particular type of reform in education that he calls "radical collegiality", the author most eloquently states;

> …[T]here is the view that teaching is primarily a personal and not a technical activity and that at the heart of an educative encounter there is a mutuality of learning between the teacher and the student. On this view, students enter the collegium, not as objects of professional endeavor, but as partners in the learning process, and, on occasions, as teachers of teachers, not solely, or merely as perpetual learners. Collegiality on this account is radical and inclusive not just because boundaries become less securely drawn, but also because the agents of the reconfiguration turn out to be those traditionally regarded as the least able and least powerful members of the educational community. (p. 21)

Fielding (1999) suggests four areas of change in the student/teacher relationship that are required for the achievement of authentic learning; reciprocity and openness between students and instructors, a desired and acknowledge awareness of the possibility and need for mutual learning, the replacement of curriculum delivery methodology with a more natural interpersonal learning experience, and an equality the embraces differences between students and staff to further learning opportunities.

Fielding (1999, 2001a) does not recommend that students become the new and only authority on what should be done and how it could be best achieved; rather that the responsibility for learning and teaching be shared, and that both teachers and learners view education as a mutually beneficial undertaking. According to Bueschel (2008), students are not sufficiently aware of what is happening and what could be happening in learning and teaching. The author argues that students can and should become more savvy consumers of formal education by partnering with staff to improve teaching and learning. Students should also be more aware of themselves as learners, their beliefs and

assumptions about education, and their particular learning preferences. Instructors can assist in this process by "involving students explicitly and deliberately in classroom innovation and [ongoing] inquiry" (p.13). When attempting to build a learning environment were student voice is valued, one size will not necessarily fit all, so teachers and learners should consider each learning situation in context (Bueschel, 2008; Cook-Sather, 2006).

While the student voice movement is intended to empower learners to become more responsible for the improvement of their education and take their seemingly rightful place in the discourse about education, it should be made clear that students are not the only group that stands to benefit from such reform. As the research presented above indicates, this approach also has the potential to greatly enhance instructors' performance of their professional responsibilities (Cook-Sather, 2008, 2009a, 2009b, 2010a, 2010b). Considering the reciprocal nature of a collaborative approach supported by the student voice, teachers' growing understanding of learning in general, and in the context of specific students and environments, can impact their ability to enable and support the students they serve (Lodge, 2005).

According to Bueschel (2008), listening to student views on teaching and learning is critical for successfully achieving such a change, but this type of innovation in higher education is difficult because it upsets widely supported and long-held expectations for the interaction between learners, instructors and subject matter. School administrations, faculty and students have all been known to hold these expectations, so true reform that values student voice must be achieved with cultural change at all levels in formal education environments. There are few well-known studies on the subject of student

voice because such research requires approaches so vastly different from those currently used in traditional education, and resistance to such research could potentially be great from all sides within the formal education realm (Cook-Sather, 2002a).

Student voice re-conception of the learner/instructor relationship is highly contested and not universally accepted or uniformly embraced. Lodge (2005) identifies three contentious questions associated with the student voice movement: who is asked to speak, about what, and how. Some believe that instructors should promote the student voice and speak with students (Fielding, 2004a), while other see the instructor's role as speaking about or for students. Some institutions and instructors seek the student voice regarding learning and teaching for enrichment of the learning community (Bueschel, 2008; Lodge, 2005), while others use tokenistic acquisition of student perspectives (sometimes regarding issues unrelated to meaningful learning) to increase the appearance of meeting the criteria by which they are judged.

Lodge (2005) states that learners can "co-construct with their teachers their understanding of learning" (p.136), developing a deeper understanding of learning for both parties. Engagement between instructors and students is particularly rich and powerful when using discourse focused on learning. That discourse provides students and teachers with a model for learning through co-construction and collaboration. The shared understandings that they create together informs development of teaching practice, learning process, and the learning environment: the discourse contributes to the professional development of instructors, helps students become better learners, and provides a basis for improvement of the conditions for that teaching and learning. Seale (2010) agrees with this perspective, and the author proposes an evidence-based

participatory approach to student voice work that involves instructors and students in collaborative research on learning, which could have the potential to empower students and increase the likelihood that instructors will respond to student voices.

Stakeholder analysis. In order to define students and instructors as stakeholders in education, their roles must first be analyzed. According to Tam (2001), students are the focus of academic instruction and, considering the amount of time spent in school, the outcome of their education will significantly impact their life. Instructors conduct academic instruction, and the outcome of their work will, if nothing else, significantly impact their students who are the focus of their role as professional educators (Chapleo & Simms, 2010). If stakeholders are defined for the purposes of this study as "a person or group with an interest in seeing an endeavor succeed and without whose support the endeavor would fail" (Nickols, 2005), then students and instructors could both be appropriately defined as stakeholders in education for the present study.

A view of students and instructors as stakeholders in education is consistent with Social Development Theory and the student voice movement. Vygotsky (1962, 1978) and proponents of student voice (Cook-Sather, 2006, 2008, 2009a, 2009b, 2010a, 2010b; Fielding, 1999, 2001a, 2001b, 2004a) agree that students and instructors are collectively responsible for actively pursuing meaningful learning through collaborative discourse that leads to mutually beneficial outcomes. By engaging in such discourse, learners and instructors can attain deeper understandings and improve the learning environment. As is consistent with an approach aligned with Social Development Theory and student voice, instructors and students are most effective when realizing and acting upon the knowledge that they somehow stand to lose or gain something based on the quality of involvement in

their educational endeavors (Zion, 2009). According to Chickering and Gamson (1987), "Teachers and students hold the main responsibility for improving undergraduate education" (p. 6).

Several works have identified students as key stakeholders in the educational system, both academically and culturally (Aboudan, 2011; Chapleo & Simms, 2010; Conway, Stephen & Yorke, 1994; Griffin, Green, & Jefcoat, 2010; Seale, 2010; Tam, 2001; Zion, 2009). That may not seem surprising, but what seems unusual is the lack of student influence in the learning process; much of students' direct academic experience, which is arguably the most important part of their formal education, is often outside their locus of control. As stated by Aboudan (2011), "oddly, students are mostly outside the learning loop and the process of its improvement" (p. 128). However, Zion (2009) found that "students are primary stakeholders in the education system, and…can mobilize change and produce the intended outcomes if included in the change process." (p. 140).

The present study refers to each teacher and student as a stakeholder when the roles of teacher and student are indistinguishable in the methodology section of this paper. The term *stakeholder* is used because, unlike some of the other terms used to describe the nature of roles in the teacher/student relationship (e.g. partners, colleagues, etc.) it situates instructor and learner in the same group without assuming that there is a personal connection between them. Also unlike other terms, the term *stakeholder* would be difficult to refute, even by those that see the learner/instructor relationship as one rigidly defined by authoritative and submissive roles. This makes the term at once functional and paradigm-changing; the concept of the relationship, as suggested by the

term, differs from many current rigid perspectives but is also more presently realistic and believable than some more optimistic descriptions.

The term *stakeholder* is also used to discourage a disjointed view of responsibilities in a formal learning arrangement as instructors only teaching and students only learning, as if the roles of instructor and student are separated by a gap of process and intention. Such shallow views suggest that students and teachers are not engaged in the same activity with a common purpose. According to Fielding (1999), meaningful learning is achieved most successfully when both instructors and students see their domain as one of both teaching and learning. Using the term *stakeholder* perpetuates an understanding of teaching and learning as being inextricably interrelated, since the role and responsibilities of each stakeholder are indistinguishable when the term is used.

Summary. The section pertaining to relevant focus areas has addressed some trends and philosophical movements in the discipline of education that have heavily influenced the present study. The literature reviewed in this section included the topics of student feedback and formative course evaluation, small group instructional diagnosis, the student voice movement, and the analysis of stakeholders in education. These areas provide insight into the direction of collaborative engagement and accountability in education, and serve as the foundation for this research.

Chapter Summary and Transition

In this chapter, the researcher reviewed literature pertinent to formative evaluation of learning environments in higher education courses. Vygotsky's (1962, 1978) Social Development Theory and its relevance to the present study were explained. In addition, other relevant focus areas in the literature were reviewed, including student feedback and

formative course evaluation, small group instructional diagnosis, the student voice movement, and the analysis of stakeholders in education. The following chapter will cover the research methodology of the present study, such as study design and data collection processes.

Chapter 3 – Research Methodology

The purpose of this study was to determine the impact of a collaborative online formative evaluation of the learning environment in a higher education course. The researcher designed a feedback system specifically for the purposes of this study, and a prototype was developed in order to test the following research questions. First, what is the perceived impact of the present feedback system on the learning environment? Second, how functional do participants perceive the features of the feedback system to be? To address these research questions, a paradigm of practical action research was used because of the nature of the project: the research was intended to contribute to the improved success of the participants' course experience in the short term, as well as to inform the larger issues of collaborative feedback and formative evaluation in higher education.

This applied project was conducted with a mixed methods approach, which was originally designed to include elements of pilot testing, observation, survey research and group discussion, although only follow-up group discussion turned out to be a significant source of data due to the lack of participation with the feedback system. Very little quantitative data were collected through an online survey, and some qualitative data were collected through an online discussion board and face-to-face group interviews, with the latter being the most robust and meaningful source. Discussion-based interviews and online forums were used in order to be consistent with literature highlighting the benefits of language and discourse for learning (Bueschel, 2008; Cook-Sather, 2006, 2008, 2010a; Fielding, 2001a, 2004a; Hadwin & Oshige, 2011; Lodge, 2005; Seale, 2010; Vygotsky, 1962, 1978).

Research Formulation

The present study was formulated through a literature review, input from thesis committee members and colleagues, and the experiences of the researcher. The researcher's passion for and commitment to continuous improvement in education fueled this endeavor. However, this project, specifically the design and development of the feedback system employed, relied heavily on input provided by committee members and colleagues during informal best-practices research. Relevant peer-reviewed literature is the foundation for the present study, as it provides a basis for the significance of the study and research problem that is addressed in this project.

Obtaining research and participant approval. The research protocol was completed as required by the James Madison University Institutional Review Board. The researcher submitted the research protocol to the Institutional Review Board on January 3, 2011, and obtained approval on January 14, 2011. Once research approval was obtained, the researcher met with potential participants to gain their agreement to participate in the study. Potential participants were asked to sign a consent form if they were willing and able to participate, and only individuals who signed consent forms were enrolled as participants in the study. Data collection was then carried out between January 20, 2011 and April 5, 2011.

Research Design

A prototype of the feedback system was piloted in a semester-long course during the first half of the 2011 spring semester at James Madison University in Harrisonburg, Virginia. The study was conducted through a practical action research approach that included three phases. In phase one, the orientation phase, participants were educated

prior to data collection about the nature of the research and how to utilize the feedback system. In phase two, the implementation phase, a prototype of the feedback system was piloted using the open-source Nicenet Internet Classroom Assistant course management tool for its online discussion board and survey hosting features. In phase three, the evaluation phase, face-to-face discussion-based group interviews were conducted with participants.

Description of sample. In order to enroll participants in this study, the researcher identified and targeted a convenience sample. Bulk email was not used to recruit participants because the researcher's past experience indicated that he could have some difficulty receiving responses to a general invitation to participate in a study, particularly when that study could be perceived as very time-intensive. Since the researcher expected the study to be very time consuming, a convenience sample was also used to accommodate the researcher's own personal time constraints.

A course instructor known by the researcher was first offered the opportunity to participate in the study because the instructor taught in an education program where formative evaluation and student feedback is welcomed as part of the normal course development and education process. The instructor was relatively inexperienced at academic teaching and wanted feedback from her students on her performance. The instructor taught an undergraduate human resource development course and, after consenting to participate, the instructor allowed the researcher to contact the students to request their participation in the study. All participants were expected to meet certain requirements as outlined in their respective consent forms.

Although the researcher-designed feedback system is intended to be useable by all courses and instructors at James Madison University, for the purposes of this study a course and an instructor with particular attributes was considered most conducive to effective utilization of the feedback system and generation of meaningful data. The single primary instructor of an undergraduate human resource development course was targeted specifically for three reasons, which were agreed upon by the researcher's thesis committee members. A course with only one primary instructor was chosen because it was understood that working directly with a single primary instructor would reduce complications in research participation, as well as conflicts of responsibility that could arise between two or more co-instructors. An undergraduate course was chosen because it was understood that, at least in the James Madison University culture, an undergraduate course would be more likely to benefit from the study since undergraduate courses are not typically as engaging, in terms of discourse, as graduate courses. A human resource development course was chosen because that particular field of study encourages facilitators to conduct continuous formative evaluation when designing training activities and materials in order to ensure that the needs of the audience are met. In addition, it was understood that students are more likely to be motivated to participate in a course that they have chosen to take based on their personal learning goals, as opposed to a general education course that is required of all students.

Time frame of study. Research began in the beginning of 2011 with the contacting of a potential participant instructor for a spring semester course. After the instructor consented to participate in the study, the researcher rolled out the phases of the study: the first phase of the pilot program commenced with instructor orientation, and the

second phase began at the end of the second week of classes with learner consent and orientation. The online discussion board and surveys were made available immediately thereafter, and were active from the third week through the sixth week of the semester-long course. The third and final phase of the pilot program was conducted with the post-pilot interviews in the weeks following the end of the pilot program, after which data analysis was conducted. Phase one was conducted between January 10, 2011 and January 20, 2011, phase two was conducted between January 20, 2011 and February 17, 2011, and phase three was conducted between February 24, 2011 and April 5, 2011. A depiction of this schedule including specific events can be seen in Figure 3.1.

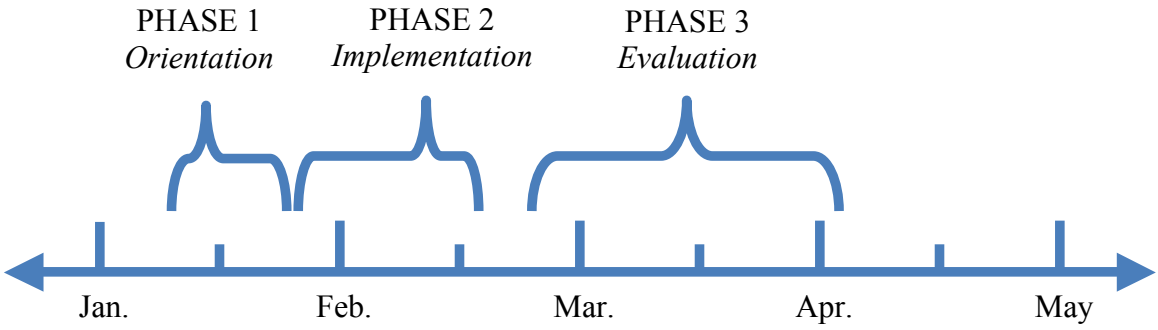

Figure 3.1. Research Phase Schedule

Phase 1 - Orientation. After the instructor accepted the conditions in the consent form for the pilot program (see Appendix A), the researcher scheduled a meeting for instructor orientation. The meeting was held on January 10, 2011, and took approximately 30 minutes, as expected. The researcher provided the instructor with a verbal presentation and corresponding handouts that were intended to make the instructor aware of her responsibilities, as they related to her role in the pilot program. The instructor was shown how to maintain the program during the four weeks of implementation, which included using the Internet Classroom Assistant online discussion

board tool and survey posting features. In addition, the instructor was taught how to conduct the learner orientation, although in the case of this study, the researcher conducted learner orientation by request of the instructor.

The first meeting with all enrolled students came at the end of the second week of classes and was held at the time and location of the regularly schedule class gathering. The meeting contained approximately 15 minutes of student orientation, a question and answer period, as well as the review and signing of learner consent forms (see Appendix A). Student orientation consisted of education about the purpose of the research, nature of the pilot program (e.g. requirements of participation, steps in the process, ensuring anonymity and confidentiality when applicable, etc.), guidelines for effectively providing and receiving feedback, and safeguards against revealing identity. Instructional handouts addressing these topics were provided during the orientation to supplement the demonstration and verbal presentation. The supplemental handouts, as well as a video tutorial for the Internet Classroom Assistant, were also made available via Blackboard, the James Madison University leaning management system, which was accessible to all students in the course and which all students were expected to utilize for the course. For examples of material distributed to students during their orientation, see Appendix B.

Phase 2 - Implementation. The feedback system developed for the study utilized an existing internet-based course management tool known as the Internet Classroom Assistant by Nicenet (Nicenet, 2003), and a screen-capture of the website's home page can be seen in Figure 3.2. The discussion board or "conferencing" feature of the Internet Classroom Assistant (Figure 3.5) allowed all participants to engage in discourse with each other asynchronously and allowed student participants to post anonymously with the

use of anonymous user IDs (Figure 3.6). The survey or "link sharing" feature of the Internet Classroom Assistant (Figure 3.7) allowed the survey handler to post links to electronic surveys for student participants to access. A screen-capture of a sample student account home page displaying navigation to the "conferencing" and 'link sharing" pages can be seen in Figure 3.4) While the Internet Classroom Assistant had other features useful for course management, the discussion board and survey features were the only two used for the purpose of this study, and they are the two components of phase two that will be thoroughly described in this section.

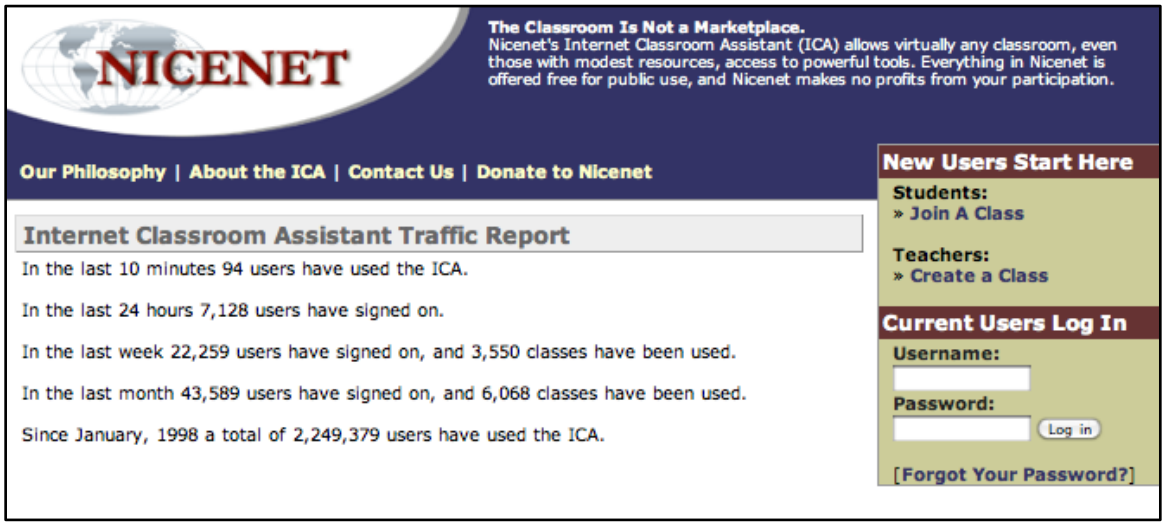

Figure 3.2. Nicenet Home Page

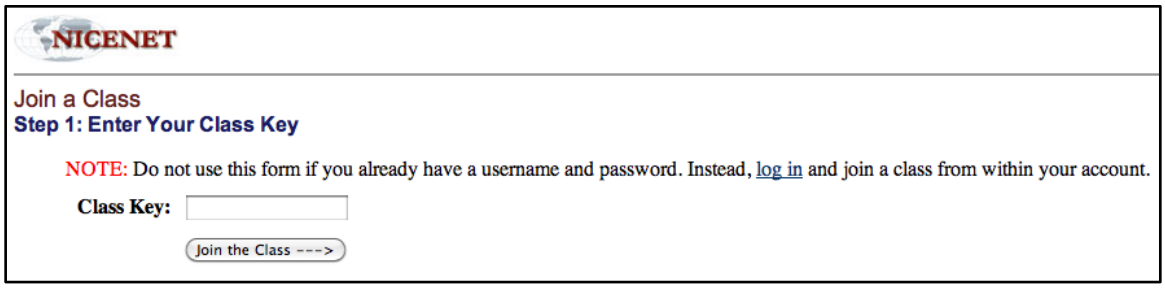

Figure 3.3. Internet Classroom Assistant, Class Key Form

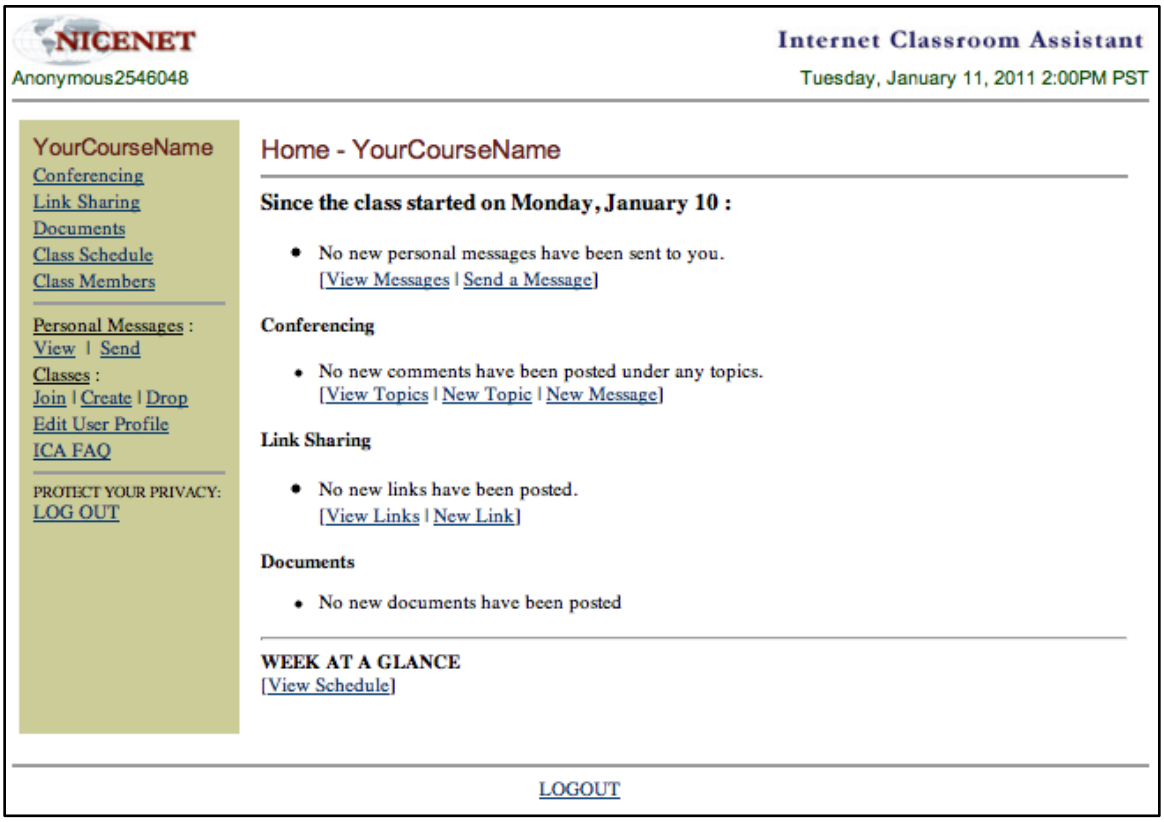

Figure 3.4. Internet Classroom Assistant, Sample Student Account Home Page

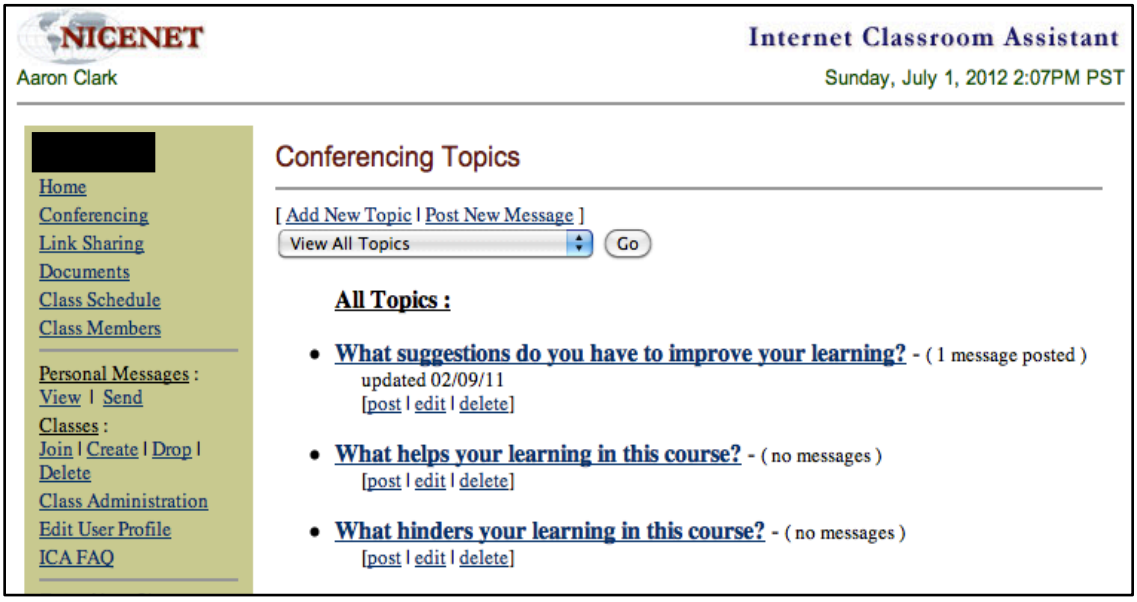

Figure 3.5. Internet Classroom Assistant, Administrator Conferencing Topics Page

Figure 3.6. Internet Classroom Assistant, Administrator Conferencing Posts Page

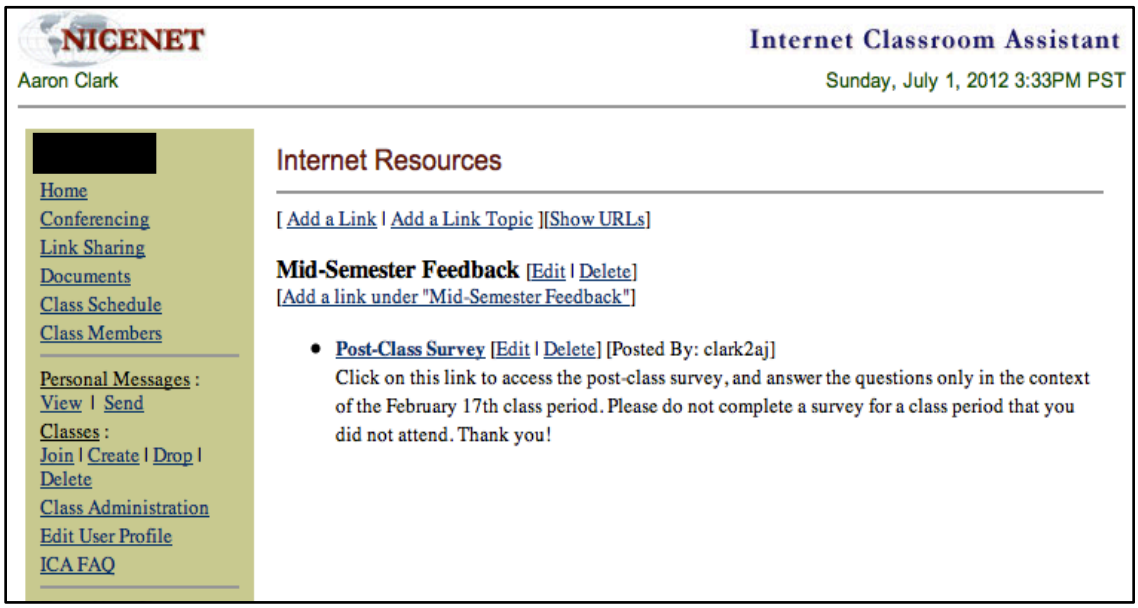

Figure 3.7. Internet Classroom Assistant, Administrator Link Sharing Page

The online discussion board was structured in such a way that only the instructor and enrolled students had the access to post comments. Students could choose to be anonymous in the Internet Classroom Assistant, however the Internet Classroom Assistant designed the instructor user ID to be identified as an administrator. Therefore, unlike students, instructor participation in the online discussion board was not anonymous in this study. The researcher and thesis committee members agreed that, even if instructor anonymity were possible in the online discussion board, it would not be reasonably attainable or particularly beneficial in that environment. There was an understanding that it would be more effective for instructors to be able to discuss topics from their own perspective, which would necessarily give away their identity. The instructor and students were made aware of the anonymity considerations in this study prior to participating.

The instructor and researcher agreed on initial discussion threads (Figure 3.5) to prompt dialog on topics that are standard to course evaluation. The questions in these threads were based on James Madison University's teaching analysis poll questions (JMU Center for Faculty Innovation, n.d.), and included the following:

1. What suggestions do you have to improve your learning?
2. What helps your learning in this course?
3. What hinders your learning in this course?

These questions were intentionally chosen as discussion threads because they are broad enough to ensure that anything of importance in the learning experience could be addressed. Participation in the online discussion board was possible at any time and was optional for all participants.

The pilot program also included an electronic survey that student participants were able to access through the Internet Classroom Assistant (Figure 3.7). The survey was a slightly modified reproduction of the Students' Evaluation of Educational Quality survey (Marsh, 1982). The modified survey was included in the Institutional Review Board protocol (see Appendix A), and it contains the following adjustments: the rating was changed from a five-point Likert scale of *very poor, poor, moderate, good, very good* to a five-point Likert scale of *strongly disagree, disagree, neutral, agree, strongly agree*; the survey questions were reformatted as "I" statements rather than "You" statements; only the first 29 questions were used because they are the only questions suited to formative evaluation; and a 30th open response question was added to give respondents a chance to freely provide any other comments they wanted to share. The Students' Evaluation of Educational Quality survey has been found both reliable and valid (Marsh, 1982; Richardson, 2005)

The survey was provided to students via the Internet Classroom Assistant so that they would have an alternative to strictly written feedback required in the discussion board. Only students participating in this research completed the survey, the survey was anonymous, and each student was only able to complete each survey one time. Although the instructor agreed to post the survey through the Internet Classroom Assistant, the researcher posted surveys for this study because it was convenient to do so and did not interfere with integrity of data. The researcher posted a new link to a copy of an electronic survey after every class period for students to complete before the next class if they chose to do so (Figure 3.7). The questions on each survey were the same, although

the link posted after each class led to a different copy of the survey so that the data collected after a class could be differentiated with other classes.

The mixed-methods design of this study was expected to inform the researcher of the feedback method preferred by students and on the validity of feedback provided. Although the online discussion board was the primary focus of this pilot program, the electronic survey was considered by the researcher to be a beneficial option for the following reasons. The survey provided a quick way for the instructor to gather data that could be easily compared to comments in the online discussion board. The survey gave students an alternative to the online discussion board for providing feedback, should they prefer to use it. The levels of participation in the survey compared to the online discussion board could also provide insight into preferred methods for engaging with others and giving feedback.

Phase 3 - Evaluation. The post-pilot interview sessions required face-to-face interactions with the participating instructor and students. These interviews were discussion-based, and were conducted in a semi-structured format. The conversations were intended to inform the researcher about participant perceptions regarding the effectiveness of the feedback system and ways that it might be improved. The instructor interview was held in the instructor's office and took approximately one hour, although thirty minutes of the discussion were unrelated to the present study. Both student group interviews were held without the instructor present in the regularly scheduled classroom for 15 minutes at the end of a class period.

The sessions were audio recorded with the permission of all participants. While recording audio electronically, the researcher was able to spend less time taking notes and

more time facilitating discussion. Anonymity was not possible in these sessions, but consent forms communicating that fact were completed before the interviews took place. The researcher observed strict confidentiality so that no individual outside the sessions had access to any information presented in such a way that it could be traced to an individual in the sessions. Participants were able to withdraw from the study at any time without any consequences.

Some eligible students chose to not participate in the study. The researcher never investigated the reasoning behind this decision; however, students who did not consent were not given the code, otherwise known as a "class key" (Figure 3.3), to access the online discussion board and surveys. Participants were asked to not share their access code with those that did not consent to the research. However, the researcher could not identify which students created accounts on the Internet Classroom Assistant, since their users IDs were anonymous, and users were not asked to identify themselves in the post-pilot interview sessions. Therefore, the researcher made the assumption that data collected from students was collected from consenting participants of the study.

Table 3.1. Research Design Plan

Event	Timeframe	Location	Items Needed	Parties Involved
Phase 1 – Orientation (Instructor)	Time – 3:30 PM Date – 01/10/11 (30 minutes)	Instructor's office	- Instructor consent form - Class schedule - Computer with internet - ICA* account info. - Copy of Survey	- Researcher - Instructor
Phase 1 – Orientation (Student)	Time – 4:30 PM Date – 01/20/11 (15 minutes)	Regularly scheduled classroom	- Student orientation PowerPoint - Student orientation handouts - Student consent forms	- Researcher - Instructor - All students enrolled in applicable course section
Phase 2 – Implementation (CREATES Feedback Method and surveys)	Time – 4:45 PM Dates – 01/20/11 to 02/17/11 (Time used**)	Location flexible due to Internet-based methods	- Computer with internet - ICA* - ICA* course code - Copies of weekly survey	- Instructor - Consenting students
Phase 3 – Evaluation (Post-pilot student group interview)	Time – 5:30 PM Dates – 02/24/11 & 04/05/11 (15 minutes)	Regularly scheduled classroom	- Interview questions - Interview comments - Audio recorder	- Researcher - Consenting students
Phase 3 – Evaluation (Post-pilot instructor individual interview)	Time – 3:00 PM Date – 03/04/11 (30 minutes)	Instructor's office	- Interview questions - Interview comments - Audio recorder	- Researcher - Instructor

* Internet Classroom Assistant by Nicenet

** Implementation phase is four weeks, but participant time commitment will vary. Instructor will use approximately five minutes after classes to post the survey. Otherwise, participants are encouraged to engage in the survey and discussion board as needed.

Participant Consent and Care

In order to participate in the study, participants signed a consent form, which outlined the requirements and benefits pertaining to each specific role in the study. A consent form was customized for the instructor role and presented only to the instructor for review and signature. A consent form was also customized for the student role and presented only to the students for review and signature. The requirements, benefits and risks specific to this study and each particular role are described in this section.

Participant requirements. The course instructor signed the instructor consent form, by which the instructor acknowledged an understanding of certain time requirements and logistical requirements of the program orientation, implementation and evaluation phases. The instructor agreed to participate in a 30-minute instructor orientation with the researcher prior to data collection, to allow 15 minutes of in-class time for learner orientation, to leave the classroom while learners signed consent forms, to allow 15 minutes of in-class time for a post-pilot interview with learners at the end of a class period, and to leave the classroom while learners participated in the post-pilot interview. The instructor gave consent to schedule five minutes per week for posting a copy of the provided feedback survey after every class, and to participate in a minimum of 30 minutes of post-pilot interview with the researcher. The instructor was expected to monitor the online discussion board on a weekly basis, including the observation and posting of comments if applicable. The instructor was expected to allow the researcher to make records of all online discussion board and survey data collected for the program as it was generated so that data analysis could be conducted appropriately.

The course students signed the student consent form, by which the signing student acknowledged an understanding of certain time requirements and logistical requirements of the program orientation, implementation and evaluation phases. Any student who was 18 years of age or older and enrolled in the class in which the research was to be conducted was eligible to participate in the study. Consenting students agreed to participate in a 15-minute learner orientation with the instructor and researcher during the regularly scheduled class prior to data collection, to complete surveys and observe/post comments in the online discussion board if applicable, and to participate in a 15-minute post-pilot interview with the researcher during the regularly scheduled class.

In addition to the previously mentioned requirements, one other stipulation was required of both the instructor and the students. All participants were required to refrain from having usernames or using language (online or face-to-face) that might identify any individual with their comments on the discussion board. This requirement was intended to ensure anonymity among participants.

The only cost of conducting this research was considered by the researcher to be the time invested by those participating. The required total time commitment for the instructor was estimated to be approximately two hours. The required total time commitment for the participating students was estimated to be approximately 30 minutes. However, these total time estimates were presented as the minimum time commitment.

Participant benefit. There were also several potential benefits communicated to pilot program participants in the respective participant consent forms. A potential benefit to all participants was the opportunity of using the feedback system to achieve an improved learning experience through collaborative contribution to the development of

an effective learning environment. That may have been accomplished by giving and receiving continuous collaborative feedback that could have be used to enhance or improve instruction during the course while the participants were still able to benefit from course adjustments.

Potential benefits of the program for all participants also included; collaborative discourse about teaching and learning in which students could be anonymous, improved understanding of how the learning environment is or is not effective, shared ideas for creating an effective learning environment in the present and future, and records of participant interactions and reactions to feedback over time. This could result in improved relationships between participants. If a perceived partnership between instructor and students exists, the student may feel increased motivation to continue to learn and to apply learned knowledge or skills in the future. Learners could also develop a greater sense of responsibility for learning if they feel able to impact the quality of instruction through individual contribution and through collective efforts that demonstrate consensus.

Participant risk. The greatest risk in this study seemed to be the possibility of unfair treatment of a learner by the instructor if comments were associated with that individual learner. Since neither the online discussion board nor the electronic surveys described above were linked to any individual's identity in any way, the researcher did not anticipate serious risk to any participant. There was a possibility that learners could divulge their own identity, but that issue was addressed proactively during student orientation. Considering the length of the study and the potential of personal relationships among students or between students and their instructor, it may be easier for a student to

give away his or her identity, which could lead to embarrassment, awkward interactions, or unfair treatment. However, the researcher did everything in his power to emphasize the potential risks of self-identification and to educate learners about how to avoid that situation.

There could also have been some risks for the instructor participating in this study. It was possible for the instructor to be unduly influenced by learner feedback, but the researcher addressed how to appropriately give feedback to and receive feedback from students during the instructor orientation. Since the particular online discussion board used in this study required a unique user ID for each student, there was little risk that the instructor would react to an issue disproportionately due to misconceptions about consensus. Students were intended to give feedback anonymously in this study, so conversations in the online discussion board could have been brutally honest, which could have lead to the emotional discomfort of the instructor such as disappointment, embarrassment or anger. The researcher taught the students during orientation about constructive criticism, including the importance of responsible commenting on the discussion board, in an effort to reduce counterproductive statements that could have lead the instructor to react inappropriately.

Other considerations for consent. Since participation in this study was voluntary, all potential participants were instructed that they could choose not to consent. However, the researcher acknowledged that once the instructor consented to participation in the study, it was possible that students could feel pressure (whether intentional or unintentional) from the instructor to participate. In order to avoid feelings of coercion, the instructor was required to step out of the room during the signing of learner consent

forms. After those choosing to participate had signed consent forms, the researcher collected the forms and kept them with the researchers belongings, which were inaccessible to the instructor, until they could be stored in another secure location. After that point in time, the instructor only knew a student's participation status if the student chooses to reveal it.

The researcher was not aware of any students in the class under the age of 18, but if minors had been present and had come to the attention of the researcher, those individuals would not have been allowed to participate in any part of the pilot study. The minor(s) would have been allowed to stay in the classroom for student orientation, since no data were to be collected in that phase. However, all minors would have been required to excuse themselves from the classroom during the post-pilot interview session. Also, since a code is required to access the online discussion board and surveys, the researcher would have only given the code to students who were 18 years of age or older, which would have excluded minors from participation in all pilot program activities outside of class throughout the duration of the study.

Data Collection Summary

The researcher used a mixed-methods research design to study the usability and perceived worth of a feedback system specifically designed for use in a higher education course. The study included three phases, although data were collected in only the second and third: phase one consisted of pilot program orientation for participants; phase two consisted of pilot program implementation and collection of quantitative survey data as well as qualitative discussion board data; phase three consisted of pilot program evaluation and collection of qualitative interview data. Quantitative data were solicited by

Qualtrics™ survey after each of the eight classes throughout the four-week duration of the study. Qualitative data were collected by continuous online discussion board posting in the Nicenet Internet Classroom Assistant and by electronic audio recording of three discussion-based interviews.

Chapter Summary and Transition

This chapter addressed the research methodology, including formulation of the study, research design, as well as participant consent and care. The researcher described the sample and data collection process in detail. The following chapter will focus on data analysis and research findings.

Chapter 4 – Data Analysis

The researcher used a mixed-methods research design to study the usability and perceived worth of a feedback system designed for use in a higher education course. The study included three phases, with data being collected in only the second and third: phase one included orientation of the program for participants; phase two included implementation of the program and collection of quantitative survey data as well as qualitative discussion board data; phase three included evaluation of the program and collection of qualitative interview data. Quantitative data were solicited by Qualtrics™ survey after each of the eight classes throughout the four-week duration of the study. Qualitative data were collected by continuous online discussion board posting in the Nicenet Internet Classroom Assistant and by electronic audio recording of three discussion-based interviews. In the remainder of this chapter, date analysis procedures will be described, and the analysis results will be presented as well as explained.

Data Storage

Electronic survey data were stored in the researcher's Qualtrics™ online database account accessible only by password, and the researcher was the only individual who knew the password for the account, making the survey data inaccessible to anyone other than the researcher. Online discussion board postings were only accessible through the Internet Classroom Assistant, which was secured by password access only available to participants in the study, making the discussion board data inaccessible to anyone other than the study participants. Interview recordings and transcriptions were kept with the researcher's belongings, which were always either on his person or locked in his residence where he lived alone, making the interview data inaccessible to anyone other

than the researcher. The researcher's thesis committee chair was the only individual given special access to the view the data collected for the present study.

Participant Demographics

The present study involved 21 participants. One instructor, as well as 20 of the 25 students enrolled in the course, consented to participate in the research. Of the 20 student participants, there were a total of 15 females and 5 males. This male-to-female ratio is reasonably consistent with the overall male-to-female ratio of the university's population, which was approximately 2:3 in the fall semester of 2010 (JMU Office of Institutional Research, 2011b), and with the male-to-female ratio of those enrolled in degree programs of the College of Education where this study was conducted, which was approximately 1:6 in the fall semester of 2010 (JMU Office of Institutional Research, 2011c, 2011d).

The course instructor was a first-year academic teacher, but had extensive instructional experience as a professional trainer. Every student was part of the human resource development minor, and 17 out of 20 students were considered to be senior status based on credit hour totals. No participants formally dropped out of the study and, although that may have happened without the researchers knowledge, a mortality rate was never directly calculated. Although the interviews in the evaluation phase were open to all participants, 16 students and one instructor participated in the follow-up interviews. This resulted in a student participation rate of 60% for the study itself and a 75% student participation rate for the interview component of the research protocol.

The sample was considered to be adequate for the following reasons. The population for the present study encompassed every enrolled student and instructional faculty member at James Madison University, which in the fall of 2010 had 19,434

students enrolled and 1,266 full-time and part-time instructional faculty (JMU Office of Institutional Research, 2011b). With only 20 students and one instructor participating in the study, the ratio of participants to population was very low in the both cases. However, since the research methodology was qualitative (interviews), required complex testing of a new system, and could have potentially included time-consuming group discussions, the sample size was considered acceptable.

Interview Procedure Review

To better understand the usability and perceived worth of the feedback system, the researcher engaged interview participants in a conversation about three aspects of their perspectives on the system. The researcher and participants discussed how the pilot program was effective, how the program was ineffective, and what improvements could increase the effectiveness of the program. The semi-structured nature of the interviews led to natural discourse about the areas in question, so although each aspect was not addressed directly by each participant, the researcher attempted to keep the discussions focused on these topics when possible. All interviews were recorded electronically and transcribed after these meetings with participants.

Data Analysis Procedures

The researcher analyzed the qualitative interview data by identifying common themes and perceptions that were presented in the participants' responses. No quantitative survey data or qualitative discussion board data were useable because there was so little collected due to the failure of those data collection methods. However, the results of all data collection methods will be addressed in detail.

Phase Two Data Results

During phase two of the study, the researcher attempted to acquire quantitative survey data through Qualtrics™ as well as qualitative discussion board data through the Internet Classroom Assistant. Neither method yielded an adequate amount of data to provide meaningful information for the purposes of this study. The results of that data will be presented in this section, but the description of the data collected in phase two is not intended to indicate any significant findings.

Quantitative survey data results. Only two surveys were attempted, and only one was completed. On February 3, 2011, two weeks after the study began, one participant opened the Qualtrics™ survey and answered some of the questions, but the participant abandoned the attempt about half-way through the survey. On February 8, 2011, one participant completed the Qualtrics™ survey. All of the 20 student participants had the opportunity to complete the survey, and each of these students could have responded to the survey after each of the eight class periods held during the study. Therefore, the researcher and his thesis committee members determined that a total response rate of 1/160 was not sufficient to provide meaningful quantitative data for the purpose of this study.

Qualitative discussion board data results. Participants had continuous access to the Internet Classroom Assistant discussion board from the time they were given their class code on the first day of the study until the last day of the study. So, all participants were able to post comments at any time during the research period once they used the provided class code to create their personal Internet Classroom Assistant account. Only six personal accounts were ever created over the duration of the study; these accounts

included the two administrator accounts of the researcher and instructor, as well as four student participant accounts.

Only one comment was posted on the discussion board over the four-week duration of the study. On February 09, 2011, which was over half-way through the study and over four weeks into the spring semester, an anonymous student participant wrote a comment in the discussion board section titled *What suggestions do you have to improve you learning?* The comment did not have a subject heading, but the participant wrote, "Don't put people in the same classroom when meeting with clients. It was way too hard to focus on my client speaking when another group was next to me speaking just as loud." No further comments were contributed on this topic, and as a result this post was the only record of participant activity on the Internet Classroom Assistant discussion board. Although it is impossible to project the maximum volume of collaborative feedback activity on the discussion board, a total of one comment was determined to be insufficient discussion board participation for use as a significant indicator of the usability or value of the feedback system through observation.

Phase Three Data Results

During phase three of the study, the researcher attempted to acquire qualitative data through discussion-based interviews. The individual interview with the instructor was held separately from the group interviews with student participants. While the instructor interview on March 4, 2011 went as planned, the first group interview with students on February 24, 2011 only included seven out of the twenty enrolled participants. Due to insufficient participation in the first interview with students, another

student group interview was arranged for April 5, 2011 in which 15 out of 20 students participated.

Instructor interview data results. The instructor interview was conducted in the instructor's office, and those present included the researcher and the instructor. The instructor interview meeting was scheduled for one hour. While the meeting lasted about one hour, only 30 minutes of the discussion were pertinent to this study. The instructor had only a few pieces of feedback about the usability and perceived worth of the feedback system, although the instructor did provide much perspective on professional workload and professional confidence, as these issues made it difficult for the instructor to be deeply engaged in the research. The instructor also provided some suggestions for improvement.

In regard to the perceived worth of the program, the instructor immediately stated, "…initially, I thought it was this awesome idea. I would've loved the feedback and all that kind of stuff" (p. 3). This was reiterated twice later in the discussion when the instructor mentioned, "it did sound like a really good thing to do for somebody who's brand new to teaching" (p. 7). "I would've wanted to…have them explore what was working and what wasn't working. Everything was new to me. The whole thing, I could've used feedback on" (p. 14).

However, in reference to the instructor role in encouraging student participation, the instructor added, "I kept forgetting to mention anything about it. I literally just kept forgetting" (p. 3). Although it was not the instructor's responsibility to make student participants provide feedback, the instructor shared genuine feelings of disappointment that so little data were collected during the implementation phase of the study. "It

disappoints me that you had 20 people participate and only 4 people actually go through the process of setting up an account" (p. 4). "I mean that's just disappointing altogether" (p. 5).

While the instructor indicated an initial feeling of optimism about the program, the instructor seemed concerned about the instructor's own lack of participation due to a heavy workload.

> I didn't understand how much time, not that this [research] would take, but that teaching in general would take. So, I think that I went into that thing being, 'oh, of course I've got plenty of time for that' you know, and I looked at the syllabus and, you know, there's an hour and fifteen minutes to work with…that's what I was looking at in terms of time. But it ended up being something different, which I just didn't know going in. (p. 13-14)

The instructor seemed to be under a great deal of stress, so the researcher attempted to identify the origin of the instructor's uneasiness.

As the conversation continued, the instructor alluded to the overwhelming nature of the teaching profession as seen by a first-year instructor.

> You know, I was teaching class by class. I had a syllabus that was provided to me, but that was provided to me in December. So, I didn't have much time. I mean, I was still working and all that kind of stuff to prepare everything ahead of time. So, I did what I could but…I was still teaching and that was just part of how it shook out. So, I forgot to mention anything to them. (p. 3)

The manner in which the instructor conveyed that situation seemed somewhat frustrated, as if the instructor were struggling to manage the requirements and pressure of the job.

The instructor admitted, “being so new…I found myself struggling to just be prepared for that day” (p. 3).

Although the instructor was adjunct faculty and not a fulltime academic teacher, the instructor believed that the instructor’s overall workload was comparable to that of fulltime academic teachers, and that it would be potentially difficult for anyone with that much work to manage it all and use the feedback system.

> My fulltime job is doing this…[other] work. What it seems like to me is, teaching is a full time job on top of a fulltime job I already have. Do you know what I mean? I have no idea how these faculty teach four and five sections…do you know what I mean? No idea how they do that. And that could just be me not being familiar with teaching but, it has been, it feels like that much extra work. (p. 7-8)

The instructor’s perspective implied that the overall usability of the program was diminished because of the time requirement involved, and that it could be challenging to use for other instructors with a similar volume of professional obligations. The researcher indicated that, in his experience with fulltime academic teachers, they have often conveyed a feeling of being overworked, and that perspective did not seem inconsistent with the instructor’s experience. The instructor replied, “I'm sure it doesn't, because it's their job. Now they have to do research, and now they have to be on all these committees” (p. 8).

The instructor also confided feelings of insecurity and confidence issues stemming from a lack of academic teaching experience.

> Part of what happened was, I was getting nervous, because I wasn't prepared, and being a new faculty person, to even want the feedback, cause I ended up making

> more changes than I thought I would. Things weren't working out, you know. We had brought stuff back…that just wasn't working, so I kept making changes, and I kept getting more and more self-conscious and nervous, and I almost didn't want the feedback then. (p. 3)

These statements and the uneasy manner in which they were communicated gave the researcher a sense that the instructor was experiencing some level of burnout combined with a feeling of inadequacy. Later in the conversation, the instructor pointed out "I wonder what they're going to say, you know, all that kind of stuff" (p. 4). "And you know, I'll tell you that that desire to not want to know what they felt came more out of my being uncomfortable with how I thought things were going" (p. 18).

The instructor did provide some thoughts on what worked well with the program and on how to make the program more effective. The instructor indicated that the early introduction of the program in the course was effective, stating "I think your approach at getting them early was good" (p. 9). The instructor also suggested that providing reminders to engage in feedback throughout the program would be useful, particularly if reminders coincided with specific topics on which the instructor could have been informed by student perspectives. "I think they would've been beneficial if they had worked in conjunction with…changes throughout the semester" (p. 9).

This instructor provided some clarity on what could have made the program ineffective. The instructor indicated that the two areas of professional confidence and professional workload were primary reasons for the lack of participation with the feedback system pilot program. As the instructor stated, "so, part of it was forgetting, and part of it was, you know, my own self-consciousness" (p. 3). The instructor commented

on the topic of confidence three different times during the interview. The instructor commented on workload at least four different times, although this topic was the foundation for much of the discussion. Effectiveness of the early introduction of the program was addressed, and the possibility of using reminders to improve the program was suggested.

Student interview data results – February 24, 2011. The first student interview was conducted in the classroom scheduled for the course, and the interview lasted for fifteen minutes at the end of a regular class period. Those present included only the researcher and seven student participants, although another participant provided some feedback before leaving just as the interview was about to officially begin. These students had few pieces of feedback about the usability and perceived worth of the feedback system. However, students provided much insight on education about the system and on convenience of the system, as these issues had a significant impact on the students' experience in the study. The students also provided several suggestions for improvement.

In regard to the perceived worth of the feedback system, students quickly indicated that they found the system to generally be a valuable tool in theory. One student stated, "I think the whole concept is good overall" (p. 3). Another student added, "Yeah, I like the concept; like the concept of being able to go online and do feedback and be anonymous, and stuff like that" (p. 4). When asked to explain further, the student replied, "I just think, like, especially with, like, her being a new professor and, like, adjunct faculty, or whatever her official title is, like, it helps her but it helps us too, because she might not know what's normal in a classroom setting like this, and she may also benefit from, like, you know what I'm saying, it just helps both sides I guess" (p. 4). Yet another

student commented, “It's like teacher evaluations, but it can happen in the beginning so maybe they could fix or maybe, like, be aware of what they're doing” (p. 4).

In addition to suggesting that the overall system was a good concept, students gave many specific reasons for why they believed in that concept. Student addressed five areas of the experience that worked for them. These areas pertained to the valuing of student opinions, a flexible and caring instructor, feedback method options, student anonymity, and feedback system demonstration.

Five of seven students indicated that the instructor’s efforts to seek out student opinions made them feel that they had a valued voice. A student stated, “I think just the fact that we had this setup, it kind of keeps her, like, with an open mind throughout the whole semester, and it kind of lets us know that she was open to changing things if we weren't happy with the way things were going” (p. 3). Another student commented, “It kind of gives us a voice, I feel like” (p. 3).

Some students mentioned that seeking out student opinions made the instructor seem more flexible and caring than if the instructor had not reached out to students in that way. “…It lets us feel that she's willing to change instruction…[she] can be flexible” (p. 3), one student said. Another student stated, “If a professor is willing to do something like this, then they're probably willing to change some of their aspects of their class” (p. 3), on which a different student piggybacked “…and improve their teaching” (p. 3). When asked how this made the students feel, one student said “Comfortable” (p. 3).

Two students commented that they liked having the options of a survey and a discussion board for the purpose of providing feedback. One of these students stated, “I think something else that worked was that you had, like, the discussion board and the

survey…it wasn't like I had anything really that, like, I wanted to say on the discussion board, but I like clicked through the survey" (p. 4). Students were also happy that the feedback options allowed them to be anonymous.

There was total consensus that anonymity was an important feature of the feedback system for protecting students from unfair treatment. After hearing mention of anonymity in the beginning of the interview, the researcher later asked who thought that student anonymity was important and why. All students immediately began speaking at once, louder and louder in an uproarious manner, such that the researcher was unable to isolate many of there individual comments from the interview recording, however some very meaningful statements were audible. One student commented, "It's the only reason I was doing it" (p. 4), and another added, "Yeah, I definitely would not have said anything [otherwise]" (p. 4).

A different dimension of the anonymity conversation dealing with instructor wellbeing arose at another point in the interview. A student asked "I don't know if anyone posted anything that was, like, hurtful or anything, but what would you do in the future for somebody that would post that? Is there a way to look at who, like, where the IP address came from, or is it just completely anonymous" (p. 5)? The researcher reassured the student that anonymous users could be removed form the system for inappropriate or offensive comments but that there was no way to identify students unless they identified themselves, after which another student mumbled, "They'll think of a way" (p. 5). The researcher indicated that it might be possible to design a system that allows for more comment control, to which a student replied, "I honestly don't think that a system needs

to be created so you could track it, but you just don't want it to turn into, like, the Juicy Campus for professors.

All seven students also agreed that the Internet Classroom Assistant demonstration in the student orientation was helpful. “I think the fact that you came in and, like, showed us how to do it…I mean, I personally didn't write anything, but if I had gone and written something [on the discussion board], I wouldn't have had any questions” (p. 2) one student shared. “Just the fact that you came in helped a lot, and I actually did want to go and sign up cause of the visual aspect of it, as opposed to just having an email sent out to us without seeing you” (p. 2).

Some aspects of the study had a negative impact on student participation. The students being interviewed brought up three areas of the experience that did not work for them. These areas pertained to the optional nature of the study, problems with remembering to participate, and inconvenient system features.

Seven of seven students agreed that the optional nature of the process decreased participation. When asked why this was a problem, a student answered, “We didn’t need to do it” (p. 6). In regard to the commitment required for providing feedback, and student commented, “…we all had something to say, it's just taking the time to sit down and do it…” (p. 6).

All students also indicated that the optional nature of the process made it difficult for those that wanted to participate to remember to provide feedback. “When I was on Blackboard, I just wasn't thinking about [it]” (p. 7) one student mentioned. “When I was on Blackboard, I didn't think to go [to Nicenet]” (p. 8). In regard to the difficulty of

remembering, another student stated, "…we're college students, and we have so much going" (p. 1).

Some students alluded to features of the system as inconvenient and cumbersome. One student said in a frustrated manner, "I mean, like, taking the time to make a username and a password and, uh, I was just like, I didn't do it" (p. 6). The student later added, "I just hate making login names and passwords and stuff…they drive me crazy. I wish there was like a program [where] you could just type stuff" (p. 8). Another student commented, "It's [about] convenience. It's just one more thing. I already have like a million other things I have to do when I get home, and that would be one less. It would just be more convenient if it was on a site I already use like Blackboard.

Although students did not provide much data to this study in terms of their participation, they were able to contribute ideas for increasing participation in future studies. In the interview, students suggested several ways to improve the feedback system so that it could be more user-friendly. These suggestions pertained to reminders for providing feedback, making the system more convenient, administering the system more effectively, and addressing feedback in class.

The first suggestion provided by students was to include reminders to participate in the process. This suggestion was made at three different times throughout the interview. Students specifically requested email reminders with direct links to the feedback system. At the beginning of the interview, a student said, "…send out a reminder here and there, like, 'hey, if you wouldn't mind, like, check out the website again'…" (p. 1). Later, a student commented, "I sense that if we got an email like every week or something with the link or something, I would just click it" (p. 7). In regard to

email reminders for the feedback system, a student suggested at the end of the interview, "…even just [provide] a link in an email, cause you're on your email, you can link straight from there to it, or if it sent you an email or something" (p. 9).

Students also asked that the system be made more convenient, specifically that it be integrated with Blackboard, the JMU learning management system. A student proposed, "I'm just saying, picture this, a link on Blackboard. Like, if this were to become something that JMU students regularly use…you wouldn't need the email reminders all the time and all that stuff because it would just be something that's a part of our classes" (p. 8). Another student added, "Create something through Blackboard that's almost like…you click a link…like a Twitter" (p. 9). One student indicated that the integration of these systems was crucial because neither was effective on its own by stating, "…I would never post that [course feedback] on Blackboard, but I wouldn't go to that website [Nicenet] either…not anything against, like, what you're trying to do, I just wouldn't…like, it's just one more thing I have to do" (p. 9).

Another student suggestion was to administer the process in such a way that would make students more likely to participate: make students sign up for the system together at the beginning of the class; give students given extra credit for signing up; and/or give students extra credit for providing feedback. When the researcher explained that an instructor would need to know the identity of the user in order to give extra credit for feedback, a student suggested that the class be given collective extra credit for signing up. "The professor says you have to at least sign up on it, and if we all went together and made a login, they could know that…because they're at least getting people to take that first step" (p. 7). One student went so far as to describe in detail the logistics of the extra

credit requirement. "…ok, so say we have…like 25, 26 people in this class. Like, the professor could potentially say…if all 26 of you, like, signed up, it's like five extra credit points, and then it kind of gives everybody incentive to remind each other" (p. 8).

One student noted that there is not much point in feedback if it is not responded to. The student's idea for ensuring that feedback is acknowledged was to address discussion board comments in class. "If the students are, like, posting comments and then nothing happens, it's just kind of pointless" (p. 5). The student proposed "bringing up the discussion form in class and just anonymously discussing the issues that were brought up to see, like, what people say" (p. 5).

One tangentially related student comment was also contributed in this interview and is worth mentioning for this study. All students felt that this system would be useful for all types of instructors. An exchange with one student demonstrated this sentiment toward the system. The student began by saying, "…the students that come in each year are, like, different, so it helps. Like, I feel like it would work for new faculty, but like faculty that's been here a while, to accommodate their teaching styles" (p. 4). When asked to clarify, the student stated, "Yeah, like, I feel like it would work for any [instructor]. I think it'd be helpful for anyone. I mean, any place where you can write your feedback without, you know, worrying about your grieving them a lot, it's helpful I think" (p. 4).

Student interview data results – April 5, 2011. The second student interview was conducted due to the low participation rate in the first interview. The second interview was held at the end of a regular class period in the classroom scheduled for the course. Although the researcher had planned for the interview to take place during the final 15 minutes of the class, the actual interview duration was approximately 23 minutes,

since students were willing to participate past the end of the scheduled class time. Those present included only the researcher and 15 student participants, although three participants had to leave the interview for unknown reasons while it was in progress. The students in the interview provided little feedback about the usability and perceived worth of the feedback system. Although, students did contributed much insight on the importance of anonymity and convenience of the feedback system, in addition to several suggestions for improvement of the system.

In regard to the perceived worth of the feedback system, students shared the following perspectives. When asked how the students felt about this type of formative evaluation, a student stated, “I like it” (p. 3). Another student commented, “…I think it's a great idea. It's just hard if the professor isn't open to any type of evaluation” (p. 4). One student added, “I thought it was really good what you were trying to do…” (p. 4), and another indicated, “I think it would've been really [good]. I definitely would've done it” (p. 5). However, the students did not elaborate further, and after these contributions they immediately went on to explain what worked, what did not work, and ways to make the system more effective.

In regard to what worked, students offered several comments. Students in the second interview addressed four areas of the experience that worked for them, all of which were consistent with reactions from the first student interview. These areas pertained to the valuing of student opinions, a flexible and caring instructor, student anonymity, and feedback system demonstration.

Twelve of fourteen students believed that the instructor’s efforts to seek out student opinions made them feel that they had a valued voice. Some students even felt

that the instructor showed concern for them as people, as demonstrated by the instructor's willingness to give them an option for providing feedback. One student talked about a professor that used a midterm evaluation in another class by saying, "…I think he really cares" (p. 10), and another agreed, "It does make you feel like the professor cares" (p. 10). As shown later in the conversation, this feeling that the instructor genuinely valued student voices and cared about students was contingent upon the acknowledgment and consideration of feedback if it was provided.

All students agreed that anonymity was an important feature of the feedback system for protecting students from unfair treatment. When asked how important anonymity is to the students when providing feedback, they answered, "very important" (p. 10), "extremely" (p. 10), and "especially if it's negative" (p. 10) because "that's probably what you're going to get" (p. 10). One student said playfully, "Cause, if I'm saying something [positive], I'd be like, alright, you can know who I am (p. 10). Another student felt that it would be a problem for an instructor to know which students made which comments because the instructor could then associate the student with that student's performance and subsequently give more or less weight to that student's perspective. The student remarked, "So if, like, you got an F on the test, then they'll be like, oh that student doesn't know what they're talking about" (p. 10).

Thirteen of thirteen students indicated that the Internet Classroom Assistant demonstration in the student orientation was helpful. The researcher asked if the demonstration had been helpful or if it was overkill. The only student response to the question indicated that, "It was good" (p. 10).

The students also noted two areas of the experience that did not work for them. Each of these areas was consistent with sentiments from the first interview. The areas pertained to problems with remembering to participate, as well as inconvenient system features.

Fifteen of fifteen students agreed that the feedback system was inconvenient to use. When asked what caused this reaction, a student clarified the perspective by saying, “like, maybe the fact that it's a completely separate program” (p. 9). This statement was followed by several student suggestions for integrating the system into students’ other common technological applications, which will be address later in this section.

There was also consensus among all fifteen students that the optional nature of the process made it difficult for those that wanted to participate to remember to provide feedback. “The only thing is, like, I didn't remember to do it” (p. 5), said one student. Another student echoed the perspective by commenting, “…I just didn't think of it” (p. 5). Even in the face of a big problem, one student indicated that she had trouble remembering, and she mentioned, “I mean, I felt pretty strongly…against it…and I still forgot” (p. 5).

Students also had a few suggestions for improving the system, many of which were the same as suggestions from the first interview. One of the suggestions pertained to reminding students to participate. Several other suggestions were made in regard to giving students extra credit points for their participation and making the feedback system more convenient.

The students requested reminders, such as emails that direct students to the feedback system. The researcher had asked what he could have doing to help students

remember. To that question, a student replied "…sending out like occasional emails, like, every once in a while and just being like, oh, remember to give your feedback if you want" (p. 5).

Students also suggested that extra credit be given for providing feedback. "Count it, like, maybe as participation points" (p. 7), one student commented. Some ideas were also provided for how the process could work. One student proposed, "Say you have twenty six people in a class, and then, like, on Blackboard it tells you, like, how many responses you get for something, and it'll come up twenty six out of twenty six. What if there was a way…all twenty-six students got participation? I mean, if all twenty-six students posted, then the whole class gets participation, but if one person doesn't participate, like, no one gets it, and then that's kind of like an incentive for everyone to participate" (p. 7). Another student mentioned, "I just know I wouldn't want the entire class to be pissed off at me because I forgot to write…" (p. 8).

Students indicated that the system needed to be made more convenient, specifically that they would prefer it be integrated with Blackboard, the JMU learning management system. A student stated, "I think that it would be helpful, like, if it was something, like, on Blackboard like you did for our class, cause on Blackboard all the students had access…" (p. 8). Another student added, "If it was just integrated into Blackboard, it would just be so easy for everyone, because you're already on Blackboard everyday, and all you would have to do is just click something" (p. 9). One student mentioned, "I think you could even just have a link to it on Blackboard, or something, like, that would make it really convenient…" (p. 9).

Several tangentially related student comments were also contributed in this interview and are worth mentioning for this study. Some of these comments pertained to the types of classes suitable for the system. Other comments provided perspective on formative versus summative evaluation, and the types of issues that students might be more inclined to address in these course evaluations.

Twelve of twelve students initially agreed that this system would be useful for all types of instructors and all types of classes. One student added that online classes in particular would greatly benefit from utilizing such a system. "Yeah…[this would be good] especially online because [in a synchronous course], like, after class, like, everyone leaves…you can go up to the professor and talk to them…[but] I think online especially because those classes can be kind of confusing" (p. 11). Other students pointed out that major and minor classes might be the best environments for this type of system. A student stated, "I think [the system would be important] especially in like capstone or upper level classes, cause at this point we know what to expect from the minor [or] the major, and it's not like the first year" (p. 12). Another student followed by saying, "It's not your first year, [and] you know what to expect in the class, so it has more effect on me when I'm not receiving what I think I should be getting" (p. 12).

After having some time to ponder the idea of course suitability, some students also suggested that the system might not be appropriate for general education courses. One student mentioned, "I would stay away from, like, gen. ed. classes cause I feel like a lot of kids, when they first get to college, don't know what to expect. Its not like getting babied along like you do in high school" (p. 11). Another student commented, "I remember having lots of gen. ed.'s…that I hated and I would've, like, complained so

much, just [because of] the fact that I didn't like the material I was learning. It's not that the course wasn't going in the right direction. So, maybe if you just did this in like your core major classes and minor classes where the students actually know…what teachers should, like, teach [in] the class or how a class should go. I feel like the feedback wouldn't really be constructive…if you're a freshman and you, you know, just hate it altogether" (p. 11).

Some students thought that the worst courses would receive the most benefit from the feedback system, although they also thought that it would be most difficult for the system to be successful in that context. One student used an example from another class when sharing, "I don't know if you have access to the information, but maybe people who get really bad evaluations, like, maybe you could target those classes to have this kind of system. Because, like, if you have evaluations that are just like 'I love this teacher and everything's going great', it's not going to be useful in that classroom, because apparently they feel like they have communication with the teacher. But, for example, if you were able to see the evaluations that…teacher got, you could be like, 'wow we need to substitute this program into this classroom so that we can try to improve it throughout the school year, instead of waiting until the final days and being like 'oh this teacher sucks'" (p. 6). However, another student said, "…if you're a teacher and you know that you're not getting the best of the best evaluations…[that teacher is] probably not going to want you to come along for the program. Like, I wouldn't want you, because you're gonna find a problem" (p. 7).

Several students felt that, in order for them to believe their perspectives were valued, it was very important for their feedback to at least be acknowledged by an

instructor. Some students pointed out, in regard to another course instructor, “It's not useful for anyone if she doesn't listen” (p. 6), and “I think people realized, like, she didn't care, because she didn't respond even when you did give her feedback. So if they're saying, like, ‘I really want your feedback’, and you can see that they're taking it into consideration, it makes a big difference” (p. 10). Another student added, “Yeah, I think that if the professor actually implements your feedback too, or even like discusses it with the class, then you actually know they're reading it and caring about it rather than, like, you giving it and them not even reading it or taking it into consideration” (p. 10). Yet another student suggested, “Even if they don't implement it, [it would be better if] they at least address it in class and say, ‘I read this, but this is why we can't do it’ or ‘this is why that's not possible’” (p. 11).

There was consensus among all fifteen students that summative evaluation is not helpful for students when they need help. A student commented, “It sounds like the evaluation at the end of the year doesn't help, cause I've heard that everyone has had a lot to say about that other class we were talking about” (p. 6). When asked if the student had personally found summative evaluations to be ineffectual, the student stated, “[Especially] if nothing’s being [done about it]” (p. 6).

Students indicated that they would use the feedback system to comment on problems in a course, and that they would be most likely to remember to use the feedback system if they had big problems that needed to be addressed. When asked what would prompt students to use the online discussion board for providing feedback, one student said, “I think that they would use it if they had concerns, whether it was [for] points or not” (p. 8). A student stated, “I think people would remember if they had a major

problem, so I don't know if you would get, like, ‘this is really going well’ [or] ‘I really liked this’, [but] I think you're going to get ‘I can't believe I got an f on this test’ [or] ‘your notes didn't [make sense]’…so it's just like Rate My Professor, you either get one extreme or the other” (p. 5). Another student added, “Yeah, like in this class, there wasn't really much I had to complain about, so that's probably why I didn’t feel the need to go [provide feedback]” (p. 5). One other continued, “Like, if it was for…[the previously mentioned] class, you probably would have, like, an overload of stuff…[but] like…[this] class…is going well, which is [why] I don't know how many responses you'd end up getting. But maybe, well, like for example the…class that we all had so much to talk about, you would have a ton…I mean, I know I would probably be writing on there every day” (p. 6).

Interviews summary. The instructor was held on March 4, 2011, and was conducted with only the researcher and instructor present. In the interview, the instructor indicated that the feedback system was challenging to manage due to the instructor’s high professional workload. Also the instructor shared that it was difficult to promote the system among students because the instructor had low confidence in the ability to adequately perform in the role of an adjunct professor. These issues made it difficult for the instructor to be deeply engaged in the research, but the instructor mentioned that providing reminders to complete tasks in regard to the feedback system would have helped to make the process more streamlined.

The first group interview with students on February 24, 2011 included seven out of the twenty enrolled participants. Due to insufficient participation in that first interview, another student group interview was conducted on April 5, 2011 in which 15 out of 20

student participants were involved, although three participants had to leave the interview for unknown reasons while it was in progress. During these interviews, students provided comments on the perceived worth and usability of the feedback system in addition to suggestions for system improvement. Occasionally the researcher requested that the students raise their hand to indicate their position on a particular comment in order to quantify the level of agreement. A summary of the most significant student comments can be found in Table 4.1, Table 4.2, Table 4.3, and Table 4.4.

Table 4.1. Student Perspectives On Feedback System Effectiveness

What Did Work	1st Student Interview	2nd Student Interview
In-person demonstration of Internet Classroom Assistant helps students understand the feedback system and study	☑ (7 of 7)	☑ (13 of 13)
Student anonymity is important for protecting students	☑ (7 of 7)	☑ (13 of 13)
Seeking out student opinions gives students a voice	☑ (5 of 7)	☑ (12 of 14)
Seeking out student opinions makes students feel that the instructor is more flexible and caring	☑ (3 of 7)	☑ (no count taken)
The combination of discussion board and surveys gives students options for feedback	☑ (2 of 7)	☒ (not addressed)

Table 4.2. Student Perspectives On Feedback System Ineffectiveness

What Did Not Work	1st Student Interview	2nd Student Interview
The optional nature of the process decreased participation	☑ (7 of 7)	☒ (not addressed)
The optional nature of the process made it difficult to remember to give feedback	☑ (7 of 7)	☑ (15 of 15)

The system is inconvenient and cumbersome to use	☑ (no count taken)	☑ (15 of 15)

Table 4.3. Student Suggestions For Feedback System Improvement

Suggestions For Improvement	1st Student Interview	2nd Student Interview
Remind participants to provide feedback	☑ (no count taken)	☑ (no count taken)
Send reminder emails including links to the system	☑ (no count taken)	☑ (no count taken)
Make system more convenient	☑ (no count taken)	☑ (12 of 12)
Integrate with Blackboard or existing learning management system	☑ (no count taken)	☑ (no count taken)
Administrate process so that students are more likely to participate	☑ (no count taken)	☑ (no count taken)
Get whole group to sign up together at beginning of the class	☑ (no count taken)	☒ (not addressed)
Give extra credit for signing up	☑ (no count taken)	☒ (not addressed)
Give extra credit for providing feedback	☑ (no count taken)	☑ (no count taken)
Address feedback in class	☑ (no count taken)	☑ (no count taken)

Table 4.4. Student Comments Tangentially Related To The Present Study

Other Comments	1st Student Interview	2nd Student Interview
This is a good system for all types of instructors to use	☑ (7 of 7)	☑ (12 of 12)
This is a good system to use in all types of classes	☒ (not addressed)	☑ (12 of 12)
This system could be particularly beneficial for online courses	☒ (not addressed)	☑ (no count taken)

This system could be particularly beneficial for major/minor courses	☒ (not addressed)	☑ (no count taken)
The system might not be appropriate for general education courses	☒ (not addressed)	☑ (no count taken)
Summative evaluations are not helpful when students need help	☒ (not addressed)	☑ (15 of 15)
Students would remember to use system for feedback on big problems in course	☒ (not addressed)	☑ (no count taken)
The worst instructors need this type of system the most	☒ (not addressed)	☑ (no count taken)
The worst instructors would resist this type of system	☒ (not addressed)	☑ (no count taken)
Feedback is useless if it is not considered	☒ (not addressed)	☑ (no count taken)
Student appreciate if feedback is at least acknowledged by instructors	☒ (not addressed)	☑ (no count taken)

Chapter Summary and Transition

The results of this study provided meaningful information about the usability and perceived worth of the feedback system in a higher education course. Although Phase Two did not produce a significant amount of data, the lack of data can still support the perspectives of participants collected in Phase Three. Through Phase Three interviews, participants identified key elements of the pilot program that worked well and did not work well. They also provided some suggestions for how the program, which they found to be beneficial in theory, could be improved to be more user-friendly and consequently more effective. In the following chapter, the researcher will recap the background of the present study, address the potential impact of the findings, as well as provide recommendations for action and further research.

Chapter 5 – Conclusions and Recommendations

This study examined the impact of collaborative online formative evaluation of the learning environment in a higher education course. Research was conducted in an undergraduate course at James Madison University in Harrisonburg, VA to gain insight on the usability and perceived value of a feedback system, which was designed and developed for the present study. The researcher answered the research questions through a mixed-methods study, in which a pilot program was implemented and both quantitative survey data and qualitative interview data were collected. This chapter will address the findings from that data, the limitations of the study, the researcher's recommendations for future research and action, and the researcher's personal reflections from the experience.

Interpretation of Findings

The present study was essentially comprised of two research questions. First, the study was conducted to learn participant perspectives on the usability of the feedback system prototype as a collaborative feedback and formative evaluation tool. Second, the study was conducted to learn about participant perceptions on the direct value of the feedback system in the context of their course and on the potential value of the feedback system. After analyzing the data, the researcher identified several significant themes throughout the research.

Feedback system prototype usability. One common theme conveyed by all participants was the desire for reminders to help them remember to participate in the method. Due to the optional nature of the program, participants felt that it was easy to forget about it, which seemed to give them a sense of disappointment, as if they thought that the researcher expected a certain level of activity. That has led the researcher to the

conclusion that participants did not fully grasp the intent of the program and were more interested in helping the researcher with his study as if it were an assignment, rather than using the method as it was intended. The feedback method was designed to facilitate collaborative feedback and formative evaluation as needed, not to require the inclusion of those processes whether they are necessary or not. If potential users must be constantly reminded to utilize the method, then perhaps they do not have any feedback that they feel is important enough to communicate, in which case there would be no need for them to utilize the method in the first place. It appears that the researcher did not communicate the purpose of the program as effectively as was needed, resulting in this confusion by participants.

The participating instructor indicated that taking advantage of the feedback system was difficult because of the time required to do so, considering the heavy workload that the instructor was already experiencing. The instructor and researcher agreed that other instructors with a heavy workload might also face similar challenges in successfully utilizing the method due to its potentially time-consuming nature. The possibility that instructors might simply be unable to engage in the activity that the method could require poses serious issues. As noted by student participants, in classes where it is most necessary to engage in collaborative feedback activity due to some significant problem(s), it may be unlikely for that activity to occur simply because of instructor resistance, even though such a class could very well be in the most need of this type of feedback. With the additional complication of not having enough time, many instructors would have more than enough reason to not participate in this feedback system, whether they want to or not. Also, if the potentially time-consuming nature of

this method is incompatible with the current system of higher education because instructors do not have the time to engage in collaborative feedback and formative evaluation, then another method must be developed because the need for the information exchanged in this type of feedback system will not go away.

Student participants emphasized the importance of the option for them to remain anonymous in the feedback system. That view is consistent with much of the literature on student feedback and formative course evaluation (Wachtel, 1998). True anonymity is a real concern for students, and even just the perception that their anonymity might be compromised will have a negative impact on their participation in activities that solicit their opinion.

Many student participants noted that the feedback system was somewhat inconvenient. In one sense, students seemed to be referring to a perceived participation level requirement that was difficult for them to remember to accomplish since they did not usually feel the need to share their thoughts via the method provided. As mentioned above, that perception was probably due to a misunderstanding of the intent of the method, which was designed to promote participation in collaborative feedback and formative evaluation on an as-needed basis. In another sense, students seemed to be referring to the limits of the feedback system prototype (i.e. the Internet Classroom Assistant), since the features of the system were neither specifically designed to support the method nor integrated into current school web accounts. The limits of the prototype could have made it more challenging to access the system as well as participate effectively.

Most of the student participants also indicated that the demonstrations during the orientation phase of the study were beneficial in helping students see the system that they would be working with and how to use that system. Although little was said about the handouts and online learning module included in the orientation, students did imply that the educational portion of the study would have helped them participate effectively if they had indeed participated. Therefore, the lack of student participation does not seem to be related to an inability of student participants to perform the actions necessary for successful utilization of the feedback system.

It should be noted that very little valuable data were collected about the technical process required for using the feedback system. The prototype of the method was hardly utilized by participants at all, so they had little experience on which to provide their perspectives. However, the researcher does not consider utilization of the method to be a good measure of its success, since the quality of participation in the method should matter most. Several participants directly stated that they did not use the program because they found it difficult (in terms of signing up and remembering to post), and that would indicate that the method should be modified in order to be successful. On the other hand, it is likely, based on student participant data, that many students actually had very little feedback that they felt was necessary to contribute, in which case it is possible that the method was just as successful for those students as if it would have been perceived to be if frequently utilized. These considerations are necessary but unfortunate parts of the system; they present a challenge for discerning whether a participant either did not use the system because of some design flaw, which would have negative implications for the

system, or because he or she did not need to, which would have no positive or negative implications for the system.

Feedback system perceived value. The direct value of the feedback system in the course appeared to be minimal. The instructor seemed to view the method as one more task that contributed to an excessive workload, and the instructor did not find any of the little feedback provided to be beneficial. However, many student participants agreed that, although the system was hardly utilized, the instructor demonstrated a value of student input by simply making the method available. The different perspectives of the instructor and students indicate very different points of reference for each party, which in turn highlights the need for collaborative discourse about the learning environment in higher education classes.

Perceptions about the potential value of the feedback system were more conclusive. The instructor initially felt that the concept of the system was a good idea, and thought that if a less self-conscious instructor could be more hands-on with soliciting feedback and conducting formative evaluation with the system then it could be successful. Students felt that the system would be effective for all types of instructors and all types of courses (excluding general education courses), and that online and major/minor course would benefit the most. Students also mentioned that formative evaluation of this kind is more beneficial to them than summative evaluation, because summative evaluations are not helpful when students need help during the course, and they said they would use the program particularly to comment on big problems. These views from participants indicate the positive potential of the method if used in the right situation.

Student participants also provided insight in terms of the literature used as the framework for this study. Students indicated that being given the opportunity to share their perspectives and having those perspectives acknowledged was beneficial to the working relationship with an instructor and, when the opposite occurred, the relationship with the instructor deteriorated. This is consistent with the ideas of instructors and students as mutual stakeholders in the process of education, and of student voice being an important part of the educational experience. Students also indicated that they prefer formative to summative evaluation because it is more timely, and they were happy about having options of methods for providing feedback. This is consistent with much research on formative evaluation as well as Vygotsky's work suggesting that learners should actively participate in the shaping of their learning experience.

Limitations of the Study

A significant limitation of the present study is the small sample size. The researcher conducted the study in only one section of one course at one university, so the results cannot be generalized to the entire population of stakeholders in undergraduate non-general-education classes. However, this limitation does necessitate further research on the feedback system, for which suggestions will be outlined later in this chapter.

Another significant limitation of the study is the limited amount of time afforded the researcher for conducting the study. Due to complications in the methodology design process leading to substantial time constraints, the researcher was required to conduct the study in only four weeks of a sixteen-week course. If more time were available, the researcher would have piloted the feedback system in the majority of a sixteen-week course, and then interviewed the participants near the end of that course.

Recommendations for Further Study

The researcher suggests several recommendations for future research due to the findings and limitations of this study. A variety of broader studies should be conducted, including research on multiple courses in different disciplines and at different academic levels, multiple sections of the same course, and one course for multiple semesters with a focus on the instructor's adjustments to the course based on feedback. Also, courses should be researched that may have different structures, such as different course lengths and different methods of administration (e.g. online and hybrid courses), so that the compatibility of the method in different environments can be determined. Researchers should not only continue to study courses at James Madison University, but at other higher education institutions as well, including four-year universities, community colleges, and both public and private institutions. Another suggestion for future research is to examine the educational "orientation" portion of the method to make sure it is complete and based upon effective feedback best-practices literature: the researcher used an informal best-practices model based on his own experiences as well as the perspectives and feedback of colleagues. It is also essential that at some point the method is tested using a system that has been specifically customized for the feedback system instead of the Internet Classroom Assistant.

Recommendations for Action

As advances in Internet technology present new means for collaboration, it will be critical to make the feedback system more accessible and user friendly via the web. Customized software and mobile applications will probably need to be developed and integrated with existing education account portals in order for the system to be the

convenient medium for collaborative feedback and formative evaluation that the researcher intended it to be. Some of the features that should be included for the method to be successful might include:

- Integration with the institution's learning management system
- Integration with the institution's email system
- Use of advanced threading to build consensus efficiently
- Use of comment posting and viewing similar to social media
- Confidentiality measures that provide anonymity and unique online identity

One of the benefits of this system in theory is that, if integrated with Blackboard, it could be made available to all students enrolled in a course at James Madison University relatively easily, but accessibility should not be the only measure of success. Instructors and students who are inundated with work (much like the participants in this study) will probably find it difficult to utilize the system, particularly if faced with complex problems in their courses that may require a significant time commitment to solve properly. James Madison University needs to consider measures to ensure that stakeholders can adequately address issues that hinder meaningful learning, even if it means reevaluating what the university requires of students and instructors to successfully fulfill their roles. If meaningful learning is truly important at James Madison University, the institution must place a high priority on the quality of its courses, which will require the flexibility of all involved to adjust as needed when problems arise.

It would most likely take some time before this type of feedback system could become the norm at any college or university, so the idea of collaborative online formative evaluation may continue to be somewhat of a foreign concept. Until the culture

of an academic institution is open to such a system, course stakeholders will probably need reminders; not reminders to have an opinion, and not reminders to post mindless comments on a discussion board to fulfill an assignment, but reminders that a mutually beneficial feedback system is available that stakeholders can use to engage in collaborative feedback in order to promote continuous improvement in their educational experience. The feedback system is designed to be a resource to any course stakeholder regardless of the resistance by any other stakeholder. However, the buy-in of all course stakeholders will be critical for the success of the system. Particularly, the instructor, as the primary administrator for the course, must communicate and demonstrate his or her commitment to and value of this collaborative feedback system and the discourse that is produced. A culture of collaboration and continuous improvement, visibly and consistently championed by a course instructor, should be pursued in future renditions of the feedback system's application, since this culture seems to have been a missing piece of the present research project.

Reflective Remarks

The researcher was very happy to conduct a study on a topic for which he has a great deal of passion. Due to his interest in the subject matter, the researcher enjoyed the design and development of the method used in this study, although he wished that the method could have been implemented in a more genuine fashion that had more benefit to participants. Ultimately, the researcher wanted to contribute to the development of a culture of continuous improvement in a higher education course, an endeavor that he found to be unsuccessful for the most part. This failure can be attributed partially to the researcher's design and facilitation of the study, and partially to events that were outside

the researcher's control, but this should not discourage future attempts to build upon this research since it still appears (at least in this researcher's eyes) to be a most worthy endeavor.

Conclusion

This study reinforces relevant academic literature on some points pertaining to feedback and formative evaluation. However, the study provides little perspective on utilization of the feedback system in a particular course or its potential future impact. Collaborative feedback and formative evaluation is widely believed to be important, but so far there does not appear to be a solution that is able to accommodate the needs of James Madison University.

Appendices

Appendix A: Institutional Review Board Protocol

Full Board or	James Madison University **HUMAN RESEARCH REVIEW REQUEST**	Expedited

Investigators: This form is required for Full Board or Expedited review for all JMU research involving human subjects. If you are eligible for an exemption request, please use the alternate form at:
http://www.jmu.edu/sponsprog/irb/irbExemptRequest.doc

FOR IRB USE ONLY:
Protocol Number: IRB- 11-0137
Received: _

1st Review: X
2nd Review: ____
3rd Review: ____

Reviewer: ☐ **Approved** Date: ____
Reviewer: ☐ **Disapproved** Date: ____
☐ **Exempt** Date: ____

External Funding: ☐ YES X NO If YES, Sponsor(s):

Project Title: Impact of Collaborative Online Formative Evaluation of Learning Environment in a Higher Education Course

Project Dates: From: 10/01/10 MM/DD/YY To: 04/30/11 MM/DD/YY

Minimum Number of Participants 15
Maximum Number of Participants 45

Responsible Researcher(s):	Aaron Clark	**Department:**	AHRD
E-mail:	clark2aj@jmu.edu	**Address**	MEMH 3310
Telephone:	(540) 578-1967	**(MSC):**	6913

Please select:	Visiting	Adjunct	Research	Administrator/	Undergrad	Graduate
☐ Faculty	☐ Faculty	☐ Faculty	☐ Associate	☐ Staff Member	☐ Student	X Student

(if Applicable):

Research Advisor:	Dr. Diane Wilcox	**Department:**	Education Programs
E-mail:	wilcoxdm@jmu.edu	**Address**	MEMH 3325E
Telephone:	(540) 568-6707	**(MSC):**	6913

Investigator: Please respond to the questions below. The IRB will utilize your responses to evaluate your protocol submission.

1. **X YES** ☐ **NO** Does the James Madison University Institutional Review Board define the project as ***research?***
   The James Madison University IRB defines "research" as a "*systematic* investigation designed to develop or contribute to *generalizable knowledge*." All research involving human participants conducted by James Madison University faculty, staff, and students is subject to IRB review.

2. **X YES** ☐ **NO** Are the human participants in your study ***living*** individuals?
   "Individuals whose physiologic or behavioral characteristics and responses are the object of study in a research project. Under the federal regulations, human subjects are defined as: living individual(s) about whom an investigator conducting research obtains: (1) data through intervention or interaction with the individual; or (2) identifiable private information."

3. **X YES** ☐ **NO** Will you obtain data through ***intervention*** or ***interaction*** with these individuals?
   "Intervention" includes both physical procedures by which data are gathered (*e.g.*, measurement of heart rate or venipuncture) and manipulations of the participant or the participant's environment that are performed for research purposes. "Interaction" includes communication or interpersonal contact between the investigator and participant (*e.g.*, surveying or interviewing).

4. **X YES** ☐ **NO** Will you obtain ***identifiable private information*** about these individuals?
   "Private information" includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, or information provided for specific purposes which the individual can reasonably expect will not be made public (*e.g.*, a medical record or student record). "Identifiable" means that the identity of the participant may be ascertained by the investigator or associated with the information (*e.g.*, by name, code number, pattern of answers, etc.).

5. ☐ **YES X NO** Does the study present ***more than minimal risk*** to the participants?
"Minimal risk" means that the risks of harm or discomfort anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during performance of routine physical or psychological examinations or tests. Note that the concept of risk goes beyond physical risk and includes psychological, emotional, or behavioral risk as well as risks to employability, economic well being, social standing, and risks of civil and criminal liability.

CERTIFICATIONS:

For James Madison University to obtain a Federal Wide Assurance (FWA) with the Office of Human Research Protection (OHRP), U.S. Department of Health & Human Services, **all** research staff working with human participants must sign this form and receive training in ethical guidelines and regulations. "Research staff" is defined as persons who have direct and substantive involvement in proposing, performing, reviewing, or reporting research and includes students fulfilling these roles as well as their faculty advisors. The Office of Sponsored Programs maintains a roster of all researchers who have completed training within the past three years.

Test module **at OSP website http://www.jmu.edu/sponsprog/irb/irbtraining.html**

Name of Researcher(s)	Training Completion Date
Aaron Clark	September, 2009
Dr. Diane Wilcox	10/20/2008

For additional training interests visit the National Institutes of Health Web Tutorial at: *http://cme.nci.nih.gov/*

By signing below, the Responsible Researcher(s), and the Faculty Advisor (if applicable), certifies that he/she is familiar with the ethical guidelines and regulations regarding the protection of human research participants from research risks. In addition, he/she agrees to abide by all sponsor and university policies and procedures in conducting the research. He/she further certifies that he/she has completed training regarding human participant research ethics within the last three years.

_____ _____
Principal Investigator Signature Date

_____ _____
Principal Investigator Signature Date

_____ _____
Principal Investigator Signature Date

_____ _____
Principal Investigator Signature Date

_____ _____
Faculty Advisor Signature Date

Submit an electronic version of your **ENTIRE** protocol to jmu_grants@jmu.edu.
Provide a **SIGNED** hard copy of the Research Review Request Form to:
Office of Sponsored Programs, MSC 5728, James Madison Administrative Complex, Bldg #6, Suite 26

Purpose and Objectives:

The purpose of this research is to determine the effects of a new program designed to foster collaborative online formative evaluation of learning environment in a higher education course. The program will utilize an internet-based discussion board as its primary component. The online discussion board will allow learners to be anonymous in order to provide a safe method of conversation about the course learning environment. The researcher will attempt to discover if instructors and learners, also referred to in this proposal as primary course stakeholders (PCS), would use such a program, and if the dialog produced in such a forum would have an impact on co-regulated learning and the engagement between instructors and learners.

This research will study the potential of an online discussion board to be used as a forum for recording meaningful feedback generated by PCS dialog in a continuous and cost effective environment. If such a method were developed and found to be beneficial to both instructors and learners, the concept of learning partnerships between instructors and learners in adult education could come closer to reality. On a very basic level, the researcher hopes to achieve a better understanding of accountability and honest communication between PCS.

The researcher is a full-time second year graduate student in the Adult Education and Human Resource Development program. The research described here is being conducted as part of a thesis project, which is required for graduation. Students in the AHRD program are encouraged to do original research, and this is an area of study that the researcher sees as having the potential to greatly impact the quality of learning conditions in higher education. Hopefully, the results of the study would at least assist educators in determining if such a program is worth using in some form, and to what degree, if any, the program should be developed.

Procedures/Research Design/Methodology/Timeframe:

Research Design and Sampling

A prototype of a program for online formative evaluation of learning environment will be piloted in a full-semester undergraduate course during the 2011 spring semester at James Madison University. The study will involve an online discussion board, online surveys, and face-to-face interviews. The study will exclude any courses designed as general education requirements from participation in the study to eliminate the associated confounding variables that could impact learner motivation. The researcher has already identified potential participating courses through the convenience of word-of-mouth. Bulk email will not be used due to the difficulty in receiving responses to general invitations to participate in a study that could be perceived as very time-intensive. Potential participants will have to meet certain requirements before being enrolled in the pilot-program.

Requirements include that the instructor must:

- Be the single primary instructor for the course that is to be studied
- Sign the instructor consent form, which will signify an understanding of the following time requirements and logistical requirements of program implementation and evaluation stages:
  - Participate in a minimum of 30 minutes of instructor orientation with the researcher
  - Allow 15 minutes of in-class time for learner orientation
  - Leave the classroom while learners sign consent forms
  - Allow 15 minutes of in-class time for a post-pilot interview with learners at the end of a class period so that learners who are not participating may leave class early
  - Leave the classroom while learners participate in the post-pilot interview
  - Monitor the online discussion board on a weekly basis, including observing and posting comments (if applicable…time requirement will depend on level of desired involvement of instructor and learners)
  - Refrain from having usernames or using language (online or face-to-face) that might identify any individual with their comments on the discussion board
  - Schedule 5 minutes per week for posting a copy of the provided survey after every class
  - Allow the researcher to make records of all online discussion board and survey data collected for the program as it is generated so that data analysis may be conducted
  - Participate in a minimum of 30 minutes of post-pilot interview with the researcher

Requirements include that all learners must:

- Be 18 years of age or older
- Be enrolled in the class in which the program is to be studied
- Sign the learner consent form, which will signify an understanding of the following time requirements and logistical requirements of program implementation and evaluation stages:
  - Participate in 15 minutes of learner orientation to the research study with the instructor and researcher during the regularly scheduled class.
  - Complete surveys, and observe and post comments in the online discussion board (if applicable…time requirement will depend on level of desired involvement.
  - Refrain from having usernames or using language (online or face-to-face) that might identify any individual with their comments on the discussion board
  - Participate in 15 minutes of post-pilot interview with the researcher during the regularly scheduled class.

There are also several potential benefits for pilot program participants. Potential benefits to all primary course stakeholders (PCS) include the means by which PCS can achieve an improved learning experience through collaborative contribution to the development of an effective learning environment. That may be accomplished by giving and receiving continuous collaborative feedback that can be used to enhance or improve instruction and refine learner expectations during the course schedule while the current PCS are still able to benefit from any appropriate changes. Some other important benefits of the program include; anonymity for learners, discussion between PCS (which allows asking for clarification of and responding to PCS feedback), knowledge of how the learning environment is or is not effective, ideas for the creating an effective learning environment now and in the future, and records of PCS interactions and reactions to feedback over time.

Program involvement could result in improved relationships and engagement between PCS as issues are addressed appropriately and new levels of understanding are reached in regards to the course learning environment. Involvement could also foster accountability among PCS as they share immediate meaningful feedback highlighting the responsibility of all PCS to contribute to the individual and collective learning process. If a perceived partnership between PCS exists, they may feel an increased sense of motivation to perform in their individual roles simply due to a more supportive learning environment.

Any full-semester course, which meets the conditions of the pilot program, will be considered for participation upon agreement of the instructor. Then, the researcher will set up a meeting with the instructor for instructor orientation. The meeting will take approximately 30 minutes, and the researcher will provide the instructor with an oral presentation and corresponding handouts that will prepare the instructor to fulfill all responsibilities pertaining to his or her role in the pilot program. The instructor will learn how to maintain the program during the course, which will include using the online discussion board tool to post surveys after class meetings and engage in the online dialog when deemed appropriate by the instructor. In addition, the instructor will learn how to conduct the learner orientation, which will educate all enrolled students about the purpose of the research, nature of the pilot program (requirements of participation, steps in the process, and ensuring anonymity and confidentiality when applicable), guidelines for evaluating effectively, and safeguards against revealing identity.

The first in-class meeting with learners will take place around the beginning of the third week of class. That meeting will consist of approximately 15 minutes of learner orientation (as described above), a question and answer period, and signing of learner consent forms. The researcher does not expect that any learners will be under the age of 18, but if minors are enrolled in the class, those individuals will not be allowed to participate in any part of the pilot study. The minor(s) will be allowed to stay in the classroom for learner orientation, since no data will be collected in that stage, but they will be excused from the classroom during the post-pilot interview session, which is also expected to take approximately 15 minutes at the end of class time during one of the last class periods. Since a code is required to access the online discussion board and surveys, the researcher will only give the code to learners who are 18 years of age or older, which will exclude minors from participation in all pilot study activities outside of class throughout the duration of the study.

It is also possible that adult learners may decide to not participate in the pilot study. If no adult learners in a course consent to participation, that course will not be included in this research. If only a portion of the adult learners consent to participation, those that do not consent will not be given the code to access the online discussion board and surveys. However, in order to ensure that the instructor is not aware of which learners are participating in the study, the research will request that all adult learners remain in the classroom for the post-pilot interview until it is over. In the classroom, adult learners will be divided into groups: those who consented to the research, and those who did not. Those who did not consent to the research will be provided with games

and puzzles to entertain them while the rest of the group participates in the interview. Separating the groups will allow the interview to be conducted with just those learners who are participating in the study. Keeping all adult learners in the classroom for the remainder of the class period while the post-pilot interview is taking place will protect all learners from the instructor ever knowing whether they participated or not, lowering the possibility of unintentional coercion and unequal treatment by the instructor.

After the 15 minutes of learner orientation, the researcher will not have any regular meetings with the PCS, but the researcher will be available to the instructor or learners by request. If they so choose, the instructor and learner could then spend time on a weekly basis adjusting approaches based on feedback and interacting anonymously with PCS to gain a better understanding of the course learning environment. At the final in-class meeting with learners, which will be held around the end of the seventh week of class, the researcher will meet with all participating adult learners in the room where their class is regularly held for 15 minutes without the instructor present. After the final in-class meeting, the instructor and researcher will meet one last time (preferably no more than one week after the pilot-program has ended) for a summative interview, which will have duration of 30 minutes.

The only cost of conducting this research is the time invested by those participating. The required total time commitment for the instructor is approximately two hours: one and one-half hour outside of class, and one-half hour in class. The distribution of the instructor time requirement is as follows: 30 minutes for instructor orientation, 15 minutes for learner orientation, 5 minutes per week for posting surveys, and 30 minutes for the post-pilot interview. In addition, the instructor may find it helpful to spend time reviewing the online discussion board and survey results. The time commitment for the instructor could vary somewhat depending on the amount and quality of participation by learners. The required total time for the participating learners is 30 minutes: 15 minutes for learner orientation and 15 minutes for the post-pilot interview, both of which will be held during the regularly scheduled class so as to provide the most convenience for the everyone involved in the research study, Since participation in the survey and online discussion board is voluntary, learners could spend as little or as much time as they would like on those opportunities, although they will be encouraged to take the time that is necessary to address anything that they feel is important.

Method of Collecting Data

The primary component of the prototype will be an online discussion board made possible by an existing internet-based course management tool known as the Internet Classroom Assistant by Nicenet. The discussion board feature of that online system will allow for anonymous posting by learners with the use of anonymous user IDs. The discussion board will also be structured in such a way that only the instructor and enrolled students have the access to post comments. Instructor participation in the online discussion board will not be anonymous, since instructor anonymity in that environment would not be reasonably attainable or particularly beneficial. Instructors may be more effective if they are not anonymous in the context of this pilot program because they will be able to discuss topics from their own perspective, which would otherwise give away their identity. The instructor will create initial discussion threads to prompt dialog on topics that are standard to course evaluation. Discussion threads will be broad enough to ensure that anything of importance in the learning experience can be addressed. Participation in the online discussion board is possible at any time and it is optional for all participants.

The pilot program will also include an electronic survey that learners will access through the online discussion board. The instructor will post a new electronic survey with the same questions after every class period for learners to complete before the next class if they so choose. Only learners participating in this research will complete the survey, the survey will be anonymous, and each learner will only be able to complete each survey one time. Although the survey is not the primary focus of this pilot program, it will be beneficial for the following reasons: the survey will provide a quick way for the instructor to gather data that can be easily compared to comments in the online discussion board; the survey will give learners another option for providing feedback should they prefer to use it; and the levels of participation in the survey compared to the online discussion board could provide insight into preferred methods for engaging with others and giving feedback.

The greatest risk in a situation where PCS are discussing the learning environment together seems to be the possibility of unfair treatment of a learner by the instructor if comments are associated with that individual learner. Since neither the discussion board nor the electronic surveys described above are linked to any individual's identity in any way, the researcher does not anticipate serious risk to any participant. There is a possibility that learners could divulge their own identity, but that issue will have been addressed proactively at the first class meeting during learner orientation. Considering the length of the study and the potential of

personal relationships among learners or between learners and their instructor, it may be easier for a learner to give away his or her identity, which could lead to embarrassment, awkward interactions, or unfair treatment. However, the researcher will have done everything in his power to emphasize the potential risks of self-identification and to educate learners about how to avoid that situation.

There may also be some risks for the instructor participating in this study. It could be possible for the instructor to be unduly influenced by learner feedback, but the researcher will address how to appropriately give feedback to and receive feedback from students during the instructor orientation. Since the particular online discussion board used in this study requires a unique user ID for each learner, there is little risk that the instructor will react to an issue disproportionately due to misconceptions about consensus. Students will also give feedback anonymously, so conversations in the online discussion board could be brutally honest, which could lead to the emotional discomfort of the instructor such as disappointment, embarrassment or anger. The researcher will teach the learners during orientation about constructive criticism, including the importance of responsible commenting on the discussion board, in an effort to reduce counterproductive statements that could lead the instructor to react inappropriately.

Since participation by adult learners in this study is voluntary, they may choose not to consent. However, if the instructor has already consented to participation in the study, adult learners may feel pressure from the instructor to participate. In order to avoid feelings of coercion, the instructor will be required to step out of the room during the signing of learner consent forms. Learner consent forms will be distributed to and collected from all learners in the classroom, although only signed consent forms indicating that the learner is at least 18 years of age will be used. Consent forms will be kept with the researchers belongings, which will be inaccessible to the instructor, until they can be stored in another secure location. After that point in time, the instructor will only know learner participation status if the learner chooses to reveal it.

The orientation and post-pilot interview sessions will require face-to-face encounters. These sessions will be brief and will hopefully produce a high volume of feedback about the pilot program. Therefore, the sessions will be audio recorded with the permission of all participants. That will require less time for taking notes by the researcher, resulting in more time for facilitating discussion. Anonymity will not be possible in those sessions, but consent forms will be completed before any such meetings take place, and the researcher will observe strict confidentiality so that no individual outside the sessions will have access to any information presented in such a way that it could be traced to an individual in the sessions. Participants will be able to withdraw from the study at any time without any consequences.

Time Frame of Study

Research will begin upon IRB approval and will end at the end of April 2011.

Data Analysis:

Maintaining Anonymity and Confidentiality

Data will be analyzed in three forms; electronic surveys, online discussion board posts, and audio recordings and transcripts from feedback sessions. Only learners will complete the surveys, and participation in surveys will be anonymous.

Online discussion board posting will be anonymous for learners, so there is minimal risk of the identity of learners being disclosed. However, instructor participation in the online discussion board will not be anonymous, since instructor anonymity in that environment would not be reasonably attainable or particularly beneficial. To ensure confidentiality of all participants, the researchers will not use or publish any identifiable data.

It is possible that a learner's online discussion board post may be analyzed according to his or her user ID or patterns of speech and other identifiable language. All learners are required to use impersonal IDs, which cannot be traced to an individual, so anonymity will still be maintained in that regard. Also, the researcher will emphasize the potential risks of self-identification through written communication and will educate learners about how to avoid that situation. The audio recordings of participants will be somewhat identifiable, since voices can be more easily recognized. However, no one but the researcher will be handling the tapes or listening to the recordings, and the researcher will assign codes to participants when creating transcripts so that confidentiality is maintained.

The instructor may wish for details about his class to be kept confidential. If that is the case, the researcher can phrase all findings in terms of the amount of discussion around significant topics without emphasizing comments that may identify that particular section of the course. No individuals will be identified in the research paper or presentation unless they have asked to be.

Data Storage Ensuring Confidentiality

Online discussion board data will be stored electronically in an account to which access is limited to those who signed a consent form to participate in the program. The researcher will keep audio recordings, transcripts and surveys in a secure location separate from the consent forms. Identifiable data will only be accessible to the researcher and the research advisor. Audio recordings will be destroyed when the research project has been completed.

Reporting Procedures:

Audience of the Study

The researcher does not have a specific target audience, although the research is intended to increase the body of knowledge in the fields of instructional design, evaluation and higher education.

Presentation Method(s)

The research is part of a Master's thesis that is a graduation requirement of the AHRD graduate program and will be made publicly available through the JMU library system after publication by The Graduate School at JMU. Other than thesis defense, there is no intended formal presentation of the research report at this time. The researcher retains the right to use and publish non-identifiable data.

Feedback Provided to Subjects

Final aggregate results will be available to participants upon request, or the subjects may review the thesis paper that is published by The Graduate School at JMU.

Experience of the researcher (and advisor, *if student*):

Prior Experience of Researcher and Supervisor

This will be the researcher's first research experience. The research advisor, Dr. Diane Wilcox, has eighteen years of education and psychology research experience and she will be guiding the researcher throughout this study.

Additional Attachments as applicable:

Consent forms
- For Student
- For Instructor

Questions to be asked
- Online discussion board
- Survey
- Interviews

Learner Consent Form (18 years of age or older)

Consent to Participate in Research

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by Aaron Clark from James Madison University. The purpose of this study is to determine the impact of collaborative online formative evaluation of learning environment in a higher education undergraduate course. This study will contribute to the researcher's completion of his Master's thesis.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. The researcher is studying a pilot program designed to foster collaborative feedback regarding the learning environment in your course. This study consists of voluntary online discussion board posting (conducted collectively by all participants including the instructor), voluntary online electronic survey submission (available for completion by individual participating students), learner orientation to assist in your understanding of the two previously mentioned features, and a face-to-face group interview with all participating students. You will be asked to provide answers to a series of questions related to your views on the effectiveness of the course learning environment and the online formative evaluation process. With permission only, participants will be audio-recorded during face-to-face meetings with the researcher.

Time Required

Participation in this study will require a minimum of 30 minutes of your time: 15 minutes for learner orientation an 15 minutes for a face-to-face interview after the pilot program has ended, both of which will be conducted during your regularly scheduled class. However, a truly meaningful experience could take more time distributed evenly throughout the weeks of this pilot program, depending on the amount of feedback that you wish to voluntarily contribute by completing online surveys and engaging in the online discussion board. Although the potential for participation will be continuous and the format for participation will be identical from week to week, the time commitment may vary in terms of your level of desired involvement.

Risks

Although there is a possibility that your instructor or classmates could treat you negatively if your feedback is both identified as yours and viewed as unfavorable, all components of the study have been designed to conceal participant identity. The researcher will also provide you with detailed information about the potential risks of self-identification and will educate you about how to effectively maintain anonymity.

Benefits

Potential benefits from participation in this study include an improved learning experience through collaborative contribution to the development of an effective learning environment that benefits both instructor and learners.

Confidentiality

Participation in class interviews will be confidential. Participation in the online discussion board and surveys will be anonymous. All participants are required to refrain from having usernames or using language (online or face-to-face) that might identify any individual with their comments on the discussion board. The results of this research will be presented at thesis defense and published by The Graduate School at JMU. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher and research advisor. Upon completion of the study, any information that matches up individual respondents with their answers, including audio recordings, will be destroyed.

Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind. Participation or lack thereof in this research will not impact your class grade.

Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Aaron Clark
AHRD Graduate Program
James Madison University
Clark2aj@jmu.edu

Dr. Diane Wilcox
Education Programs
James Madison University
Telephone: (540) 568-6707
Wilcoxdm@jmu.edu

Questions about Your Rights as a Research Subject

Dr. David Cockley
Chair, Institutional Review Board
James Madison University
(540) 568-2834
cocklede@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

☐ I give consent to be audio-recorded during my interview. _____ (initials)

_____
Name of Participant (Printed)

_____ _____
Name of Participant (Signed) Date

_____ _____
Name of Researcher (Signed) Date

Instructor Consent Form

Consent to Participate in Research

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by Aaron Clark from James Madison University. The purpose of this study is to determine the impact of collaborative online formative evaluation of learning environment in a higher education undergraduate course. This study will contribute to the researcher's completion of his Master's thesis.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. The researcher is studying a pilot program designed to foster collaborative feedback regarding the learning environment in your course. This study consists of voluntary online discussion board posting, which will be conducted collectively by the instructor and learners, as well as voluntary online electronic survey submission, which will be available for completion by individual learners only. Participants will be asked to provide answers to a series of questions to obtain their views on the effectiveness of the course learning environment and the online formative evaluation process. With permission only, participants will be audio-recorded during face-to-face meetings with the researcher. The following are requirements of the instructor for this research study:

- Participate in a minimum of 30 minutes of instructor orientation with the researcher
- Allow 15 minutes of in-class time for learner orientation
- Leave classroom while learners sign consent forms
- Allow 15 minutes of in-class time for the post-pilot interview with learners at the end of some class period so that learners who are not participating may leave class early
- Leave the classroom while learners participate in the post-pilot interview
- Monitor online discussion board regularly, including observing and posting comments (if applicable)
- Schedule 5 minutes per week for posting a copy of the provided survey after every class
- Allow the researcher to make records of all online discussion board and survey data collected for the program as it is generated so that data analysis may be conducted
- Participate in a minimum of 30 minutes of post-pilot interview with the researcher

Time Required

Participation in this study will require a minimum of two hours of your time: 30 minutes for instructor orientation with the researcher, 15 minutes for learner orientation in class, 5 minutes per week for posting surveys, and 30 minutes for a post-pilot interview with the researcher. However, a truly meaningful experience could take more time throughout the weeks of this study, depending on the amount and quality of feedback that is generated in online surveys and in the online discussion board by learners. You may also wish to engage in the online discussion board with learners on a regular basis. Although the potential for participation will be continuous and the format for participation will be identical from week to week, the time commitment may vary in terms of your level of desired involvement.

Risks

It could be possible for the instructor to be unduly influenced by learner feedback, but the researcher will address how to appropriately give feedback to and receive feedback from students during the instructor orientation. Since this study requires that each learner have a unique user ID, there is little risk that the instructor will react to an issue disproportionately due to misconceptions about consensus. Students will be able to give feedback anonymously, so conversations in the online discussion board could be brutally honest, which could lead to the emotional discomfort of the instructor such as disappointment, embarrassment or anger. The researcher will teach the learners during orientation about constructive criticism, including the importance of responsible commenting on the discussion board, in an effort to reduce counterproductive statements that could lead the instructor to react inappropriately.

Benefits

Potential benefits from participation in this study include an improved learning experience through collaborative contribution to the development of an effective learning environment that benefits both instructor and learners.

Confidentiality
Participation in the post-pilot interview will be confidential. Instructor participation in the online discussion board will not be anonymous, since instructor anonymity in that environment would not be reasonably attainable or particularly beneficial. However, the researcher will keep all individual online discussion board postings confidential. All participants are required to refrain from having usernames or using language (online or face-to-face) that might identify any individual with their comments on the discussion board. The results of this research will be presented at thesis defense and published by The Graduate School at JMU. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher and research advisor. Upon completion of the study, any information that matches up individual respondents with their answers, including audio recordings, will be destroyed.

Participation & Withdrawal
Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study
If you have questions or concerns during the time of your participation in this study or after its completion, or you would like to receive a copy of the final aggregate results of this study, please contact:

Aaron Clark
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James Madison University
Clark2aj@jmu.edu

Dr. Diane Wilcox
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Giving of Consent
I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

☐ I give consent to be audio-recorded during my interview. _____ (initials)

_____
Name of Participant (Printed)

_____ _____
Name of Participant (Signed) Date

_____ _____
Name of Researcher (Signed) Date

Online Discussion Questions

- What helps your learning in this course?
- What hinders your learning in this course?
- What suggestions do you have to improve your learning in this course?
- *Also, the instructor may include some more specific questions regarding the learning environment, if he or she chooses to do so.*

Weekly Survey Questions

The next 29 statements will be evaluated according to the following 5-point scale: (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree)

Learning:

1. I have found the course intellectually challenging and stimulating.
2. I have learned something which I consider valuable.
3. My interest in the subject has increased as a consequence of this course.
4. I have learned and understood the subject materials of this course.

Enthusiasm:

5. Instructor was enthusiastic about teaching the course.
6. Instructor was dynamic and energetic in conducting the course.
7. Instructor enhanced presentations with the use of humor.
8. Instructor's style of presentation held my interest during class.

Organization:

9. Instructor's explanations were clear.
10. Course materials were well prepared and carefully explained.
11. Proposed objectives agreed with those actually taught so I knew where course was going.
12. Instructor gave lectures that facilitated taking notes.

Group Interaction:

13. Students were encouraged to participate in class discussions.
14. Students were invited to share their ideas and knowledge.
15. Students were encouraged to ask questions and were given meaningful answers.
16. Students were encouraged to express their own ideas and/or question the instructor.

Individual Rapport:

17. Instructor was friendly towards individual students.
18. Instructor made students feel welcome in seeking help/advice in or outside of class.
19. Instructor had a genuine interest in individual students.
20. Instructor was adequately accessible to students during office hours or after class.

Breadth:

21. Instructor contrasted the implications of various theories.

22. Instructor presented the background or origin of ideas/concepts developed in class.
23. Instructor presented points of view other than his/her own when appropriate.
24. Instructor adequately discussed current developments in the field.

Examinations:

25. Feedback on examinations/graded materials was valuable.
26. Methods of evaluating student work were fair and appropriate.
27. Examinations/graded materials tested course content as emphasized by the instructor.

Assignments:

28. Required readings/texts were valuable.
29. Readings, homework, laboratories contributed to appreciation and understanding of subject.

Comments/Feedback:

30. Please provide any additional comments or feedback:

Final Student and Instructor Interview Questions

- Describe how this program was effective for you.
- Describe how this program was ineffective for you.
- Describe improvements that could increase the effectiveness of this program.

Appendix B: Supplemental Student Orientation Material

Research Study Introduction

Purpose

The purpose of this study is to determine the impact of a collaborative online formative evaluation of learning environment in a higher education course. This research will study the effect of an internet-based discussion board on meaningful two-way feedback between instructors and learners. The researcher will examine the utility of such a program, and whether the dialog produced will have an effect on engagement and accountability among participants.

Description

The instructor and all consenting learners will be able to participate in conversations on an internet-based discussion board using the Internet Classroom Assistant (ICA), hosted by Nicenet. All posting will occur outside of class time. Each learner will create an anonymous ICA account: as the administrator, the instructor account will not be anonymous. With an ICA account and the access code, users will be able to access the discussion board and weekly surveys. Complete instructions on how to utilize the ICA, give and receive feedback effectively, and maintain anonymity are provided in separately. Details about the potential risks and benefits of this research are provided in the *Participant Consent Form*.

Schedule

The program begins when you sign the consent form. If you chose to participate in the ICA discussion board and corresponding surveys, you must set up an account using the guidelines provided. Creating an ICA account takes approximately 5 minutes. The post-pilot interview, will take approximately 15 minutes. Since participation is voluntary, you may spend as little or as much time as you would like on posting to the discussion board and completing surveys. The ICA account is accessible at all times, so you have complete control over your posting schedule.

Commitment to Anonymity and Confidentiality

Anonymity and confidentiality are very important to the success of this study. The instructor will not be present when consent forms are being signed, and will not have access to them. As a result, the instructor will not know who is participating in the study unless a student self-discloses. Unless a student identifies him/herself, the instructor will not be able to associate post-class surveys and discussion-board comments with a particular student. In addition, the instructor will not be present during the post-pilot interview, and will not have access to that data. All reported data will be non-identifiable aggregate data.

Neither the researcher nor instructor will be able to associate discussion board comments with individuals. To ensure you do not reveal your identity, use the *Tips for Maintaining Anonymity*. If you have questions about this study, please contact the researcher.

Tips for Maintaining Anonymity

Introduction

Anonymity (the state of being unidentified by name) is a critical feature of the online formative evaluation process. The Internet Classroom Assistant (ICA) by Nicenet, which will be the host of the online components of this program, is designed to effectively support anonymous interaction. However, the human element is a significant piece in the challenge to maintain anonymity. In order to ensure that no individual's identity is revealed, a number of measures should be taken by all participants. The following sections of this handout describe the student's role in maintaining anonymity when providing feedback. The most important thing to remember is that **you are the only person who can reveal your identity**.

Protect Account Access

Always keep your ICA class access code, username and password a secret. **Do not share you account access information with even your close friends.** Anyone with access to your account has access to your identity, and if anyone other than you knows your identity, then you are no longer in control or your anonymity.

Manage Profile Privacy

If not carefully managed, user profiles can present challenges for maintaining anonymity. ICA user profiles allow a user's first and last name, email address, and phone number to be entered into the system. Since none of that information is required to create an account**, you should not include personal contact information when signing up.** However, it is understandable that a user may want email confirmations, forwarded personal messages, or forgotten password services. An email address can be added to your user profile after signup, but remember to take two important precautions. First, and most importantly, **change the privacy setting to hide your information** from other users before adding an email address. Second, try to use an email address that others cannot associate with your identity, in case you accidentally unhide your user information. **Your first name, last name and phone number should never be included in your user information.**

Design Unidentifiable Communication ID and Username

ICA only allows two types of communication IDs to be displayed in the system: the name you sign up with or a randomly assigned unidentifiable unique code. Since the ICA does not require you to enter a name when creating an account, **you should leave out your name during setup so that the unidentifiable code will be automatically assigned** as your communication ID upon login. Your randomly assigned unique communication ID will help you maintain anonymity as well as some degree of individuality. You may keep that same communication ID for as long as you have the account, provided that you do not add a name to your profile.

The username that you choose for logging into your account is not the same as your communication ID. While your username is not connected to any of your communications within the ICA, your username is displayed together with your communication ID in the course administration section to which your instructor has access. If the instructor recognizes you username, the instructor will be able to connect your username with your communication ID and subsequently your ICA communications including discussion board posts. Therefore, **the username that you choose for logging into your account should not in any way reflect details of your identity**, such as contact

information, personal history, actions that have or could have been witnessed by others, physical characteristics, preferences, perspectives, patterns of speech, etc.

Do Not Use Language That May Reveal Your Identity

Whether in an ICA, classroom, or social environment, be careful not to use language that could jeopardize your anonymity by associating you with your comments on the discussion board. Remember, although ICA allows a user to be anonymous, other users including the instructor will be able to view that user's comments, and those comments give other users the opportunity to create a perception of that user's identity. The objective is to keep your perceived identity in the ICA environment completely disconnected from your actual identity in any other environment. Follow this rule when discussing the alignment between instruction and learner expectations:

> ***Never reveal details about your identity (contact information, personal history, actions that have or could have been witnessed by others, physical characteristics, preferences, perspectives, patterns of speech, etc.) in one environment in such a way that others might recognize them from having been revealed in another environment.***

Try to remember the context in which you are operating, because if the rule is broken, it may be easy for other users to "put two and two together". If your perceived identity is connected with your actual identity, you will no longer have anonymity, which could result in unfair treatment or embarrassment. However, if the rule is followed consistently and other tips for managing anonymity are used, it is very unlikely that your identity will ever be revealed. Please see the examples at the end of the handout for more information.

Do Not Use Language That May Reveal Another's Identity

Mistakes happen, and **if you ever unintentionally discover the actual identity of another user, it is imperative that you do not pass that information on to anyone else**, in order to prevent a larger problem. Also, treat the identified individual with respect, regardless of your feelings about that person's comments on the discussion board. Use the considerations above for protecting personal identity, and guard the other user's identity as if it were your own.

Examples

It may be beneficial for you to thoroughly read the following examples, which share some common themes. The following examples show that the less unnecessary identifiable details you divulge while discussing the alignment between instruction and learner expectations the more effective you will be at maintaining anonymity. The following examples also show that other users, including the instructor, would probably have no trouble identifying who wrote the bad example, even if the other user had no intention of doing so. Remember to read the paragraph at the end of each example describing why the bad examples are problematic.

Discussion Board Example

- **Bad Example:** "When I met with the instructor last Wednesday, I basically explained that it is difficult to read the words on the PowerPoint, basically due to the red and green hues, since I am colorblind. Do these combined colors bother anyone else?"

  ~ Casey ~

- **Good Example:** "I am curious to know whether the PowerPoint from last class was difficult for anyone to read. It seemed to me that the combined red and green hues could have been a challenge for those who are colorblind."

  ~ Thanks ~

The comment in the bad example refers to the specific action of meeting the instructor on a particular day, which narrows down the possible identities of the user. Then the comment refers to a specific conversation with the instructor regarding perspectives and preferences, which could further narrow down potential users. Next, the comment refers to a specific physical characteristic of the user, leaving little doubt about the user's identity at this point. Also, the word *basically* is used often, possibly indicating a pattern of speech that, if used elsewhere, could be identifiable. Finally, *Casey* appears at the end of the comment, clearly identifying the name of the user.

Classroom Interaction Example

- **Bad Example:** "Here's the thing, as I mentioned on the discussion board last week in response to the PowerPoint comment, I am enrolled in a visual media class, and I have a few ideas for how the PowerPoint color scheme could be more effective. So, here's the thing, would you like to hear my ideas?"

- **Good Example:** "I have a few ideas for how the PowerPoint color scheme could be more effective. Would you like to hear my ideas?"

The comment in the bad example first refers to posting on the discussion board the week prior, and anyone with access to the discussion board could figure out who posted last week. Also, knowing that the comment was part of the PowerPoint conversation narrows down the possible online identities of the user. Then associating the individual speaking with the specific comments about current enrollment* and intentions for improvement almost guarantees that the user will be identified. Finally, the phrase *here's the thing* is used often, possibly indicating a pattern of speech that, if used on the discussion board, could be identifiable.

*It probably would have been best to not mention enrolment in any other class on the discussion board to begin with, since other users might have been aware of that outside of the discussion board. However, now that the comment has been made outside of the discussion board and can be connected to the statement inside the discussion board, this users identity will almost certainly be found out.

Tips for Effective Discussion-Based Online Formative Evaluation

Introduction

Collaborative online formative evaluation of course learning environment is the foundation of this program. Discussion-based feedback is a primary component and, as a result, written feedback must be given and received on a regular basis. Such feedback is important because it will help the instructor and learners improve their performance and contribute to a satisfying course experience. This document provides a number of tips for both giving and receiving feedback effectively.

Providing Feedback Effectively

Quality feedback should be:

- **Timely** – Giving feedback as soon as you see that it could be useful.
- **Constructive** – Building people up with encouragement (supportive), not bringing them down with hostility (judgmental). Considering context, not jumping to conclusions. Addressing topics that are meaningful, not wasting time with triviality. Maintaining professional communication, not using inappropriate or offensive language. Focusing on behaviors, not focusing on the person. Recognizing both positive and negative aspects of the experience. Owning feedback by remembering that perspectives may only be opinions and not necessarily facts. Promoting mutual understanding by asking for and giving clarification when necessary.
- **Thorough** – Including a complete account of your perspective.
- **Detailed** – Explaining issue components clearly, giving descriptive examples when possible.
- **Actionable** – Giving specific, reasonable suggestions for improvement.
- **Honest** – Saying what you truly think, not just saying what you think others want to hear.

Receiving Feedback Effectively

Quality feedback should be:

- **Welcomed** – Encouraging others to provide meaningful feedback, being grateful when given helpful feedback of a negative or positive nature, and accepting that this an activity in performance improvement* not personal attack.
- **Considered** – Being flexible to change and open to seeing things from another point of view while reflecting on the meaning of feedback and how it may be used to improve performance or the learning experience.
- **Applied** – Acting on feedback implications, implementing actionable items whenever possible.

*When the instructor and students are being considered in terms of a higher education course, the areas of performance to be focused on for the purpose of this study include teaching and learning in general and in relation to course objectives.

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