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**TRANSACTIONAL DISTANCE AND DIALOGUE: AN EXPLORATORY
STUDY TO REFINE THE THEORETICAL CONSTRUCT OF DIALOGUE IN
ONLINE LEARNING**

A Dissertation in

Adult Education

by

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ABSTRACT

Theory building is complex and ongoing. Theories need to be constantly tested and the underlying constructs explored, as knowledge of a field evolves. This study, which is in support of Moore's (1980, 1993) theory of transactional distance, is exploratory and descriptive, and focuses on one of the key variables in the theory dialogue.

As discussed by Moore (1980, 1993) and Burbules (1993), dialogue is a purposeful journey that an individual or group undertakes with others to expand understanding and create new knowledge. Dialogue is not depicted by any one singular event, but the destination hopefully results in "aha" moments when concepts and constructs around ideas become clear. In education, as Burbules discusses, dialogue is a subset of educational exchanges and is different from chatting, arguing, or negotiating.

The intent of the study is to examine dialogue, one of the three main variables of the theory. Through a review of the literature on dialogue in education, the study proposes a conceptual definition of dialogue for online learning environments based on the works of Burbules (1993) and Moore (1980, 1983a, 1993), and a classification scheme for dialogue based on the philosophical work of Burbules on dialogue.

The study uses a form ethnography and content analysis in its research design and methodology. It is exploratory, so it does not rely on a random sample nor are the results intended to be generalizable across a large population. The results of the study discuss how the *a priori* classification scheme for dialogue, constructed from Burbules's work and other research studies on classroom/course interaction, is tested for inclusiveness of

all observed written speech acts and for the addition of other dialogic qualifiers. The analysis demonstrates how the classification scheme is used to classify speech acts as “Dialogue towards Understanding,” “Dialogue towards Conversation,” or “Passive/Silent” by the type of dialogic form, move, and outcome that exists in the speech act. The unit of analysis for this study is an entire written speech act that may contain one or more paragraphs.

This study provides a definition of dialogue, which is a subset of all educational communications where the intent is dialogic exchanges that lead to the increased understanding of the student and knowledge building. The definition of dialogue and the proposed classification scheme for dialogue are intended to support further testing of the theory of transactional distance. The study only represents a starting point and provides baseline tools so future studies can explore the affect of dialogue on transactional distance and the other key variables of the theory: structure and autonomy.

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Chapter 1

Introduction

Theory building is a complex and an ongoing process. Theories are not a one-time event, for as solid descriptors and predictors of physical or behavioral events they must stand the test of time and be constantly challenged. A theory's underlying principles should be continually reviewed as new information about phenomena come to the forefront.

For many social science disciplines, theory building is challenging as these disciplines deal with a complex subject of study: the human being. The vast number of variables that can affect the results of a study makes theory building, testing, and validation difficult and hard to replicate. However, if the distance education community and broader education community wants to reference and hold up transactional distance as a theory, then researchers must treat transactional distance like other theories. Researchers need to test and retest the premise of the theory, and they need to verify the underlying principles or constructs of the theory. This process is a healthy part of strong theory building, as not all theories hold up over time as new information about disciplines and fields of study are revealed.

This research is an effort to help expand our knowledge of the theory of transactional distance and to specifically examine one of the key constructs of the theory "dialogue." It is hoped that a better understanding of what we mean by dialogue, in relation to the theory will emerge, and an alternative means of analyzing/coding dialogue in online asynchronous educational environments will be presented.

Theory of Transactional Distance

The construct of transactional distance implies an exchange of something that occurs at a distance. The concept of “transaction” can denote an exchange of goods or services, an exchange of money, or in an educational setting it can represent an exchange of intellectual ideas or interaction between people. Today these transactions can and do happen instantaneously at a geographic distance, whether through online e-buy sites like Amazon.com, through online banking, or through online communications in our education courses. In addition these transactions can occur in real time (synchronously) or spread over time (asynchronously). Thus, one can view transactional distance as any exchange of goods, monetary instruments, or intellectual ideas that occur at a geographic distance and are facilitated by today’s electronic technologies.

Moore’s (1980, 1993) theory of transactional distance provides a framework for the exchange of intellectual ideas (dialogue), where the exchange is affected by the structure of a course and a student’s or students’ characteristic of autonomy. Moore’s theory implies that as dialogue increases transactional distance decreases. In other words the greater the level of communication or dialogue the more effective the exchange or transaction. The idea that transactional distance decreases or the exchange of intellectual ideas is more effective as dialogue increases is also supported by Saba and Shearer’s (1994) work. However, Saba’s (1989) work also introduces the idea of psychological separation as representing distance and distinguishes this construct from geographic separation.

In online education, the concept of psychological distance is important to the theory, as the geographic distance remains a constant between the learner and the

instructor. So when a transactional distance decreases it is experienced as an increase in efficiency of the transaction, an increase in comfort with the transaction, and specifically for distance education an increase in a feeling of connectedness to the learning transaction. For example, if someone is involved with a financial transaction online and feels confident that the information is secure, then the person is comfortable and one could argue that the transactional distance is reduced.

Therefore, transactional distance in learning environments is an educational exchange that happens at a distance. The effectiveness and efficiency of the exchange depends on dialogue, structure, and autonomy, and is affected by a psychological dimension of connectedness. This psychological aspect of the educational transaction is encompassed in what Garrison, Anderson, and others have viewed as an intersection of social presence and teaching presence in the community of inquiry model (Garrison and Anderson, 2003).

For years, educational transactions in the form of intellectual exchanges of ideas have played out through various media including print, telephone, and early electronic bulletin boards. These transactions now occur through online discussion forums and the new Web 2.0 Internet applications. With all these media the distance has been both geographic and psychological. Where the psychological distance can exist even if a student is geographically centric to the discussion, for they may feel emotionally distance due to passivity or the sheer number of people present (i.e., a large lecture hall).

Based on the theory the implied notion of transactional distance is the greater the level of communication/dialogue the more efficient/effective the transaction, which thereby reduces the possibility of miscommunication. For print-based courses with

minimal dialogue/educational transactions, the possibility of miscommunications can be large and thus the transactional distance, psychologically, is also large. On the opposite end of distance education technology is today's online courses with increased levels of dialogue, or at least the capability for increased dialogue. In these types of courses the possibility of miscommunication or misunderstanding is reduced which results in a reduced transactional distance. It is important to note that the dialogue referred to in print-based courses is that which would normally occur between the teacher and the student, and is not a form of guided didactic conversation that Holmberg (1983) discusses in connection with how text is written for print-based courses.

Conceptual Definitions

Critical to understanding Moore's (1980, 1993) theory of transactional distance is the presence of strong and well-vetted conceptual definitions of the three main variables (dialogue, structure, and autonomy). Well-described and vetted conceptual and operational definitions are crucial in order to explore, in depth, the affect each variable has on transactional distance. If the distance education community adopts new definitions for these three main variables for each study, then the effort to move the theory forward is minimized. Also, to further expand upon the systems dynamic model of transactional distance presented by Saba and Shearer (1994) a valid and reliable form of measurement must be presented for each variable based upon vetted conceptual definitions.

Dialogue: In the theory of transactional distance Moore (1980, 1993) implies that dialogue is an exchange between two or more partners in an educational environment where the expansion of knowledge is the desired outcome. However, is the concept of dialogue described by Moore within the parameters discussed by Burbules (1993)? For

Burbules dialogue is narrowly defined as the construction of knowledge (new for a subject, or new to an individual), where dialogue at the individual level assists in building upon or restructuring one's mental schema (Minsky, 1988) or neuronal networks (Zull, 2002) of a construct or topic. Or is dialogue a broader concept, where the intellectual transaction facilitated by dialogue includes exchanges that not only enhance new understanding on behalf of an individual, but also includes educational conversations that support social presence? The distinctions are important. How the field views dialogue must be clear in terms of which educational exchanges (verbal or written) are included in a conceptual definition for dialogue, and which exchanges or educational transactions fall outside of what is considered dialogue.

In higher education, especially in the United States, it can be argued that only at the post-doctorate level, and possibly during the dissertation phase, does one experience or witness new knowledge construction around a subject. However, at the individual level students constantly create new neuronal networks, for understanding of a subject at their level, as they sense and experience intellectual exchanges (Zull, 2002). These social and cultural experiences of concrete examples greatly affect one's ability to alter neuronal networks and construct understanding/knowledge of a topic. Thus, while Burbules (1993) implies that dialogue is focused on new knowledge construction, this is in the broad sense of new knowledge at the individual level and not limited to the construction of new knowledge in a field of study.

Structure: In the theory of transactional distance, Moore implies that structure is the latitude students have in affecting learning objectives, course sequence, assessment strategies, etc. If we accept this construct, then it can be argued again that structure is low

only at the dissertation stage. All other courses at the college level tend to be fairly well laid out prior to the start of the educational term with regards to sequence, objectives, and assessment strategies. Also, the field of “Instructional Design” has relied for years on designing and developing highly structured courses that help lead a student through the learning experience. If this structure is removed, then the level of communication between the instructor and learner must increase dramatically whether distance is geographic or psychological.

Autonomy: Student autonomy is an individual student characteristic and is related to a student’s propensity to be self-directed in his or her learning. Autonomy is a variable that is highly affected by course structure, as a highly structured course takes away an individual’s ability to be completely self-directed. If a student is highly autonomous, he or she may not need high structure or a high level of communication/dialogue in a course to be successful, therefore, the intellectual exchanges or transactions may be minimal. Alternatively, a student who is not self-directed may need a large amount of structure and dialogue to succeed.

Key to the theory of transactional distance is the interplay of these variables and how one variable affects the others. It is also important to understand if one variable outweighs the others, and as Gorsky and Caspi (2005) discuss, determine if the theory is actually a tautology where it is simply dialogue that determines the effectiveness and efficiency of the transaction at a distance.

As a starting point to develop a better understanding of the theory of transactional distance, this study focuses on the construct of dialogue and strives to develop a deeper understanding of what we mean by dialogue as related to the theory. Further this study

focuses on what is meant by dialogue in electronic exchanges in online asynchronous courses.

Previous Studies on Dialogue Related to Transactional Distance

During the past ten years there have been a number of studies that reviewed the theory of transactional distance and its three key variables (Braxton, 2000; Zhang, 2003; Lowell, 2004; Gorsky and Caspi, 2005; Dron, 2005). Braxton's study explored the development of an evaluation tool for instructional designers of distance education courses. She expanded on the idea of dialogue to include student – student interactions and to include the idea of medium levels of dialogue beyond just delineating between high or low levels. Braxton based her definition of dialogue on Moore and Kearsley's (1996) work and states, "Dialogue is the interchange of words, physical actions, or any other type of intercommunication between students and instructors when instruction is given and the students respond" (p. 3). Braxton presents a broad definition for dialogue, which is still grounded in what appears to be face-to-face or two-way interactive video experiences, and her study falls short of actually describing what is meant by the various levels of dialogue.

Lowell's (2004) work looked at the affect of social presence, fluency, and context on transactional distance, dialogue, and structure. In his work Lowell describes dialogue as "An exchange of ideas between two respondents made up of a series of communication transactions" (p.13). The main finding of the study highlights that social presence is the only key factor affecting the perception of transactional distance and a feeling of connectedness to the educational experience. Zhang's (2003) study explores the idea of constructing a "Scale of Transactional Distance" that could be used to

determine a student's perceived psychological distance between him- or herself and the learning environment. Zhang defines transactional distance as “cognitive, emotional, social, cultural, and/or physical distances between learners and other elements of their learning environments that prohibit active student engagement with learning” (p. 148). However, she does not examine the other key variables of the theory and does not propose a definition for dialogue. In essence, Zhang examined how the factors in her definition of transactional distance may affect a feeling of connectedness and the amount of possible dialogue, but did not examine the interplay of the key variables with transactional distance.

The studies by Braxton (2000), Lowell (2004), and Zhang (2003) have helped to highlight that transactional distance is affected by multiple dimensions of interactions, social presence, cultural influences, and other aspects of human interaction. However, they did not examine in-depth the underlying constructs of the theory to help reach well-vetted conceptual or operational definitions of the terms, nor have they explored possible classification or measurements of the variables.

Two studies that have challenged the theory of transactional distance and the underlying constructs are Gorsky and Caspi's (2005) work and the work by Dron (2005). Gorsky and Caspi's work explores the theory and arrives at a theoretical understanding that the theory is actually a tautology, where only dialogue is the determinant of transactional distance and all other variables affect dialogue. Dron's work highlights that “transactional distance theory applies whether we like it or not and the relationship between structure and dialogue is (at least in broad terms) immutable” (p. 322). However, Dron also discusses that the weakness of the theory is inherent in the “fuzzy

and constantly evolving definitions used for structure and dialogue” (p. 323) and this has resulted in some diverse understandings of the theory and the underlying constructs.

These two studies are important to theory building around transactional distance as they challenge our thinking and presumed understanding of the key variables of the theory.

Structure of Dialogue

Moore’s (1980,1993) and Burbules’s (1993) works help us understand what constitutes dialogue in learning environments, but how dialogue is structured online and how content is analyzed is not addressed in their writings. Searle’s (1969) work is important in this area as it provides a framework for how to analyze educational exchanges. For Searle an educational conversation is a series of speech acts where each speech act is not necessarily an individual sentence, but is a sentence or sentences that encapsulates the meaning of the utterance and how the utterance is understood. Searle states that “...it is in principle possible for every speech act one performs or could perform to be uniquely determined by a given sentence (or set of sentences)...”(p. 18). Thus, Searle’s work provides a means of categorizing dialogue by allowing us not to think only of each sentence or word, but to examine the meaning of the utterance, whether a single sentence or paragraph.

The works of Bloome, Carter, Christian, Otto, and Shuart-Faris (2005), Flanders (1964, 1970), Henri (1992), Saba and Shearer (1994) and others provide both a structural framework for how to analyze dialogue and present classification categories used in the analysis of educational content. Bloome et al. (2005) in their work on “Discourse Analysis and the Study of Classroom Language and Literacy Events” provide a broad structure for how to examine an educational exchange and how it unfolds. They describe

a structure where the educational and dialogic exchange is broken down into themes, followed by interactional units, followed by speech acts. Here, themes are seen as a coherent collection of related interactional units, and interactional units are topic threads. Further, the structure of the educational exchange and dialogue is determined by who initiates the exchange as presented in the classification works of Flanders (1964, 1970) and Saba and Shearer (1994).

Focus of the Research

Using the definitions of dialogue put forth by Moore (1980, 1993) and Burbules (1993) this study proposes a conceptual definition of dialogue. Then building upon Burbules's work and drawing on the work of Flander's (1964, 1970), Henri (1992), Saba and Shearer (1994), Rourke, Anderson, Garrison, and Archer (1999, 2001), and Gunawardena, Lowe, and Anderson (1997), the study proposes an *a priori* classification scheme for the educational exchanges. These educational exchanges or transactions encompass both those between the instructor and students, and those between students that develop within the group discussion spaces. The methodology of the study is qualitative and is a form of ethnographic or constitutive ethnographic (Mehan, 1979) research where the final classification scheme of dialogue is formed through observation of the written electronic exchanges in an online asynchronous course. The research also draws upon the work of Searle (1969), Bloome, Carter, Christian, Otto, and Shuart-Faris (2005), and Rourke, Anderson, Garrison, and Archer (2001) with regards to the methodology of content analysis, specifically the unit of analysis. This study takes a broad level view of an educational exchange and examines the paragraphs of a posting for intent of the intellectual exchange. Each posting is examined for evidence of dialogue

towards understanding and synthesis of ideas that demonstrate conceptual growth around the topic under discussion.

As this is an ethnographic study, it is not critical to do an in-depth review of all course postings. The study draws upon a subset of students' postings that exemplify dialogue and are identified by the researcher as he observes the educational exchanges across a twelve-week course. It is the intent that the findings of this study will lay sufficient ground work in exploring dialogue, in relation to the theory of transactional distance, so that future studies can use the conceptual definition and classification scheme to further test the premises of the theory.

Research Question

As an exploratory and ethnographic study the research does not intend to explore a causal type relationship between key variables of the theory of transactional distance. The study is designed to explore the nature of dialogue related to transactional distance through the literature, and to propose a categorization scheme for dialogue based on observed educational exchanges using an *a priori* scheme drawn from the literature. Thus, the following research questions emerge:

- 1) What is a conceptual definition of dialogue as defined in the literature in support of the theory of transactional distance?
- 2) Through observations of written speech acts in group discussion spaces within an online asynchronous course, can a valid classification scheme of dialogue, based on the findings of prior studies and Burbules's (1993) work, emerge that is inclusive of all written educational exchanges/transactions?

Methodology

The research design of this study is exploratory (Adams and Schvaneveldt, 1985) and uses a mix of content analysis methodology, as discussed by Krippendorff (1980), and an ethnographic approach. Walker (1985) would describe the study as being exploratory, preliminary, and designed to provide concept clarification and instrument design.

As the objective of the study is a better understanding of dialogue in relation to transactional distance, it is exploratory in nature. The ethnographic approach, while not in the true sense of immersing one in a cultural situation as discussed by Sanders (1976) in order to “to arrive at an understanding of the observed patterns of behavior engaged in by those being studied” (p. 177), is one where the researcher witnesses how dialogue unfolds within the social and cultural norms of an online asynchronous course.

As referenced in the Focus of Research section, the study explores through the literature, the philosophical meaning of dialogue using primarily the works of Burbules (1993) and Moore (1980, 1993) in relation to educational settings. The study then proposes a conceptual definition of dialogue for online asynchronous educational environments in support of the theory of transactional distance. An *a priori* classification scheme for dialogue is proposed based primarily on Burbules work, and informed by the work of Flanders (1964, 1970), Henri (1992), and Saba and Shearer (1994). Through analysis of students’ postings in discussion forms in an asynchronous course, the proposed classification scheme is tested and modified in order to categorize all educational exchanges and classify those postings that are considered to be dialogue. Per Searle’s (1969) work, the unit of content analysis is full paragraphs within a posting in a

threaded discussion, as it is the observed intent of the message being reviewed which determines if it is considered dialogue or something else.

Mehan (1979) discusses that the act of coding or classifying speech acts is “not an end in itself, but a means to an end” (p. 29), as speech acts perform “multiple tasks simultaneously” (p. 29) and the very nature of classifying speech acts forces the researcher to place an utterance in a specific category while recognizing that it is subjective and placement may not be shared with others who have a different frame of reference. Thus the process of classifying speech acts as dialogue or other is undertaken to further our understanding of which written speech acts may be classified as dialogue and why. It is recognized that the proposed classification of speech acts in this study may not be shared by other researchers whose contextual framework is different.

Limitations of the Study

It is understood that multiple factors affect how dialogue unfolds in an online learning environment including issues of privacy (Tu, 2002); cultural (Tu, 2001), gender, ethnicity, subject matter, and prior knowledge (Shearer, 2003). However, while the effect of these factors is important, they are beyond the scope of this study. It is also understood that content analysis is best suited for descriptive analysis that can provide insights, and it will not necessarily lead to results that are easily replicable or definitive. As Walker (1985) states in regards to ethnographic studies and participant observation, “there can be no absolute objectivity but only agreements or truth and validity shared by people who hold the same meaning system, most notably by researchers of the same methodological persuasion” (p. 13).

The study is, therefore, exploratory and descriptive, and is structured to provide further insights into what we mean by dialogue in online asynchronous learning environments in relation to the theory of transactional distance. It is also designed to examine the types of speech acts that exemplify dialogue based on the proposed conceptual definition.

This study has the following additional limitations:

1. The study did not examine synchronous communication aspects of a course.
2. The study does not examine how dialogue changes throughout the course.
3. The study does not capture personal emails that occur outside of ANGEL, the Pennsylvania State University's learning management system (LMS), whether between students or between the instructor and students.
4. The study only examined postings made in course discussion forums and did not examine individual emails sent to the instructor or to individual students outside of these discussion forums.
5. The study only uses a form of participant observation and does not include interviews with students to obtain their thoughts about the dialogic nature of their postings.
6. This study tested a proposed classification scheme for dialogue, and while key discussion forums throughout the course were examined only a small subset were explored in detail.

Chapter 2

Review of Literature

Dialogue and Content Analysis

The literature review encompassed within this chapter examines the philosophical thinking on dialogue and what is considered dialogue in online learning environments. Specifically, the chapter focuses on Burbules's (1993) work on dialogue and related works of Searle (1969) and Bloom et al. (2005) on how to identify dialogue through speech acts and content/discourse analysis. The literature review first starts with a brief discussion of Moore's (1980,1993) theory of transactional distance and how previous studies on transactional distance have operationalized dialogue and challenged the constructs of the theory.

Transactional Distance

Over the past ten years a number of dissertations and studies have reviewed the theory of transactional distance and looked at the idea of student satisfaction and perceptions of transactional distance. However, as discussed by Gorsky and Caspi (2005) few studies have carried out empirical research to test the validity of the constructs central to the theory. Further, Dron (2005) emphasizes that the fuzziness and constant evolution of the definitions of the key variables leads to muddiness around the understanding of the theory. In a field that has been light on solid grounded theory, where research in distance education has been practical in nature and not theoretical, and consumed by comparison studies focused on the equivalency of learning outcomes (Saba, 2000; Garrison, 2000; Keegan, 1996), Moore's (1980) theory of transactional distance

remains significant. The theory of transactional distance has opened the door to a variety of questions related to the idea of psychological separation and potential misunderstanding through communication space in distance education and face-to-face instruction. As discussed by Moore (1993) “[Transactional Distance] is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/or by time” (p. 22). It is the idea of an educational exchange between distant participants, facilitated by technology that helps reduce miscommunication so the result is an effective educational transaction. Although we tend to think of distance education as the geographic separation of learners from the instructor and learning institution, what makes the theory of transactional distance critical to the field is that it helps us focus on other dimensions of the learning equation. The theory elucidates ideas associated with learner characteristics, psychological separation and social presence, and design in terms of structure. However, as discussed by Gorsky and Caspi (2005), do all the variables in the education equation carry the same weight, or is dialogue and the broader notion of educational communication the critical variable which helps shape all others in the universe of the teacher – learner relationship? If Gorsky and Caspi are correct then it is important to understand what dialogue is and if it is dialogue or other forms of the educational communication spectrum that build a sense of connectedness and reduce the chance of miscommunication discussed by Moore (1993). Further, if Gorsky and Caspi are correct does the theory, as presented by Moore hold up as a relationship between dialogue, structure, and autonomy? Or is it only a tautology between dialogue and transactional distance?

At a macro level the theory of transactional distance examines how the three key variables: dialogue, structure, and learner autonomy interact to either increase or diminish transactional distance and the psychological separation between the instructor and the learner. As discussed by Moore (1980, 1993) and supported by Saba and Shearer (1994) when dialogue is high and structure is low we have low transactional distance, and if dialogue is low and structure is high we have high transactional distance. However, on the autonomous/dialogue plane, we see that when autonomy is high and dialogue is low we may still have low transactional distance, as high levels of dialogue may not be required by the autonomous learner. These relationships between the three main variables are illustrated in Figure 2-1 (TD = transactional distance).

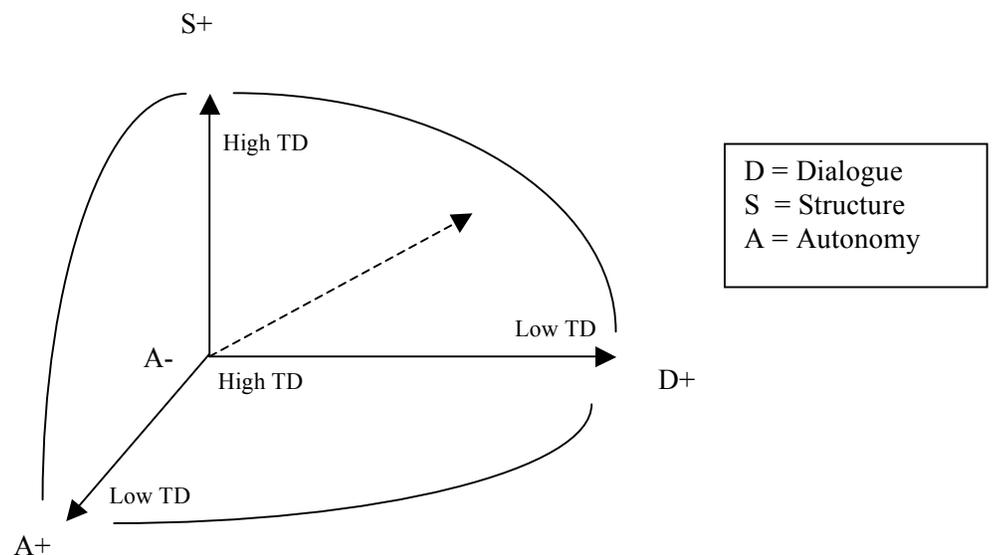


Figure 2-1

The Three Dimensions of Transactional Distance

Dialogue in Transactional Distance

Throughout Moore's (1972, 1973, 1980, 1984, 1993) refinement of the concept of transactional distance, from his earlier work on learner autonomy and independent study, he developed working definitions of dialogue. In his 1984 article "On a Theory of Independent Study" Moore states that "What makes a programme [of distance or telematic teaching] more distant than another...is a function of two variables in the learner-teacher relationship, which are the extent of dialogue in their communications, and the extent of structure in the teaching programme" (p 79-80). Dialogue as described by Moore (1983b) in his early works was:

...the extent to which, in any educational programme, learner and educator are able to respond to each other. This is determined by the content or subject-matter which is studied, by the educational philosophy of the educator and learner, and by the environmental factors, the most important of which is the medium of communication. (p. 157)

Moore's early work on transactional distance evolved out of the understanding of independent study, therefore we see that his early description of dialogue is restricted to learner – instructor communications and does not take into account group communications among learners. It does, however, account for multiple forms of communication media and is not focused primarily on print. In a later description of dialogue, Moore (1993) includes the aspect of other parties in dialogue and states:

A dialogue is purposeful, constructive and valued by each party. Each party in a dialogue is a respectful and active listener; each is a contributor, and builds on the

contributions of the other party or parties...the direction of a dialogue in an educational relationship is towards the improved understanding of the student.

(p.24)

Moore's 1993 definition of dialogue also focused on dialogue as the means of knowledge building for the student and distinguishes it from other forms of communication.

Structure and Autonomy

Within the theory of transactional distance, Moore (1980) defines structure as:

... the extent to which the objectives, implementation procedures, and evaluation procedures of a teaching program are prepared, or can be adapted, to meet specific objectives, implementation plans, and evaluation methods of individual students. Structure is a measure of the educational program's responsiveness to the learner's individual needs. (p. 21)

Moore (1984) further clarifies his view of structure when he states:

To the extent that a programme 'consists of pre-produced parts, at least in the form of particularized plans listing item by item the knowledge and skills to be covered by the programme,' the programme may not be responsive to learners' idiosyncracies, and structure is said to be high. (p. 80)

In this latter refinement of structure we see that structure is locked down by the presence of a detailed course syllabus or outline that lays out what will be covered week by week, the pace and sequence it will be covered in, and the assessment strategy to be used in the process. If a course has a well-constructed course outline, Moore considers the course to be highly structured and the program will not accommodate individual differences in

learners' needs. What Moore describes, however, is common in the field of instructional design. Practice and theory guide instructional designers to present students with well-developed and structured course outlines that help walk students through the course timeframe and keep them on track. If this is in fact what constitutes high structure in a course then we must explore further what defines a medium or low structured course, and how dialogue between the student and the instructor helps reduce structure. Further, as Braxton (2000) discusses, if dialogue is broader than just student – teacher interactions, and also includes student – student interactions, then we must question whether student – student dialogue can influence structure or if structure is simply influenced through teacher – learner interactions.

Learner Autonomy

Moore's theory on transactional distance is also heavily influenced by the idea of the autonomous learner and the individualization of the learning – teaching experience.

As Moore (1984) states:

In the context of a programme, the term learner autonomy describes the extent to which in the learning-teaching relationship, it is the learner rather than the teacher who determines the goals, the learning procedures and resources, and the evaluation decisions of the learning programme. (p. 85)

Although this statement helps describe what an autonomous learner may do, the attributes of the statement are about degree of course structure, not about degree of autonomy.

Therefore, the idea of learner autonomy needs to be developed further. Is learner autonomy a degree of control over the learning situation or the degree of control granted, or is it a measure of personal characteristics?

It is within the framework of dialogue, structure, and degree of learner autonomy that the theory of transactional distance evolved. Today, most studies tend to view transactional distance as the psychological separation between the learner and instructor, in a particular educational environment, where this separation or distance is mitigated by dialogue, and where it is also a measure of responsiveness to the learner's needs and the amount of autonomy allowed or present. In many ways, these studies ignore the main premise of the theory related to the effectiveness of the educational transaction and reduction of miscommunication provided by dialogue. Thus, the three primary variables of the model of transactional distance need to be explored and defined in greater detail in order to inform other studies, such as the systems dynamic model proposed by Saba and Shearer (1994), and to allow further testing of the theory without the current fuzziness and muddled interpretations of the theory (Dron, 2005).

In essence, the distance education community must come to consensus on solid conceptual definitions of the three main variables for transactional distance so we can avoid and/or explain differences in the results of studies on transactional distance. For example, Moore (1984) indicates that a programme of study with no dialogue, but with high structure is more distant than a course with high dialogue and no structure or low structure. However, if structure as defined by Moore tends to always be high due to instructor defined learning objectives, pace, and sequence, then what does this mean for our conceptual definitions? Further, in the systems model proposed by Saba and Shearer (1994) they indicate that a course with high dialogue and high structure cannot exist. Therefore, what is structure? These examples highlight how using varying conceptual definitions of the key variables (in this case structure), can lead to different results in

studies on transactional distance and make replicating studies virtually impossible. Also, it is important to note that the Saba and Shearer (1994) study did not take into consideration the idea of learner autonomy. Thus it is not possible to determine the affect of this variable on their results.

Three Levels of Interaction

In a 1989 editorial, in the *American Journal of Distance Education*, Moore outlined three levels of interaction that may occur in a distance education class. They were: instructor - learner, learner - learner, and learner - content. Although the levels outlined by Moore are sound and recognizable in practice, the levels mix individual aspects of transactional distance with group level dynamics. While the learner - instructor level of interaction is at the individual or personal level, the learner - learner may be at both a personal and group level so the conceptual definition of the dialogue may vary at this level. Another question that needs to be addressed is whether one level of interaction trumps another? In Moore's (1989) discussion of these three levels he infers that it is the learner - content level that is central to education and distance education, and key to Holmberg's (1983) idea of guided didactic conversation or the internal dialogue a student has between themselves and the content. However, others may argue that it is interaction or dialogue, and thus the learner - learner or learner - instructor interactions are central to education and distance education. Is one level more powerful than the others in the theory, and as Gorsky and Caspi (2005) discuss does the theory really revert to a tautology where dialogue is the key determinant of transactional distance? Also, the idea of learner - content may be more applicable to older modes of distance education delivery and may not reflect today's more dynamic online learning environments.

Chen's (2001) research lends support to the idea of a hierarchy of levels (individual, group, and institutional) that may exist independently of each other in terms of how they affect transactional distance. In an article that outlines his research Chen found that there was not a high level of correlation between the three levels of interaction and that it is possible for transactional distance to only exist in the instructor - learner level without it actually occurring in the other levels of interaction. Chen's results imply that there are multiple levels of transactional distance that, although connected in a systems model, can exist on their own depending on what is being examined within the theory.

Measurement of Transactional Distance and Dialogue

Before examining the concept of dialogue, central to this study, it is important to look at how dialogue has been measured in previous studies on transactional distance and what conceptual or operational definitions have been attached to dialogue. Many of the studies to-date have strictly looked at students' perception of transactional distance, viewed as a feeling of connectedness, and not at quantitative measures based on accepted definitions of the key variables. This section will briefly review studies on transactional distance to examine how dialogue has been conceptualized.

Attitudinal/Affective Domain Measures (Perceptions of Transactional Distance)

Recent attitudinal studies by Braxton (2000), Lowell (2004), and Zhang (2003) have focused on the theory of transactional distance in an effort to verify or support the theory. These studies have examined the theory with regards to expanding the underlying structure of the theory beyond the traditional variables of dialogue, structure, and learner

autonomy. The studies all looked at expanding the theory beyond the bounds of teacher – learner interaction, and have examined the addition of the student – student dimension of dialogue. In Braxton’s study (2000), she explored the development of an evaluation tool to assist instructional designers of distance education courses, and looked at not only expanding the theory to include student – student dialogue, but looked at expanding the definition of the variables dialogue and structure to include high levels, medium levels, and low levels. For her study Braxton based her definition of dialogue on Moore and Kearsley’s (1996) work and stated that “Dialogue is the interchange of words, physical actions, or any other types of intercommunication between students and instructors when instruction is given and the students respond” (Braxton, 2000, p. 3). Braxton’s definition of dialogue is broad and tends to include face-to-face environments as she includes both physical and non-verbal aspects of communication.

Although Braxton’s study falls short in actually describing or supporting the expanded levels of dialogue and structure, the study does highlight that “student expectations may draw the distance educator back into traditional roles” (Braxton, 2000, p. 84) and “advanced distance learners may require less structure and more collaboration” (p. 108). These two findings have bearing on a study of dialogue in transactional distance as they indicate that: (a) instructors may revert back to lecture modes, or monologues due to student expectations, and (b) new students or novice learners may contribute less to discussions until they are either comfortable with the technology or have built upon their mental schema of the subject area to a point where they feel they can contribute.

In Lowell’s (2004) study on transactional distance he also included the idea of student – student dialogue, but primarily strove to examine the affects of social presence

(being there), fluency (comfort level with using online technologies), and context (a student's personal educational context in terms of finances, distance from institution, etc.) on dialogue, structure, and transactional distance. In his study, Lowell (2004) defined dialogue as "an exchange of ideas between two respondents made up of a series of communication transactions" (p. 13). Lowell's definition of dialogue is also very broad and not specific to online environments or necessarily distance education. Nor does he focus on the idea of knowledge building in regards to dialogue.

Lowell's research results found that only social presence was a key factor affecting the perception of transactional distance and that fluency and context were not statistically loaded. Social presence or the feeling of "being there" was found to be negatively correlated to transactional distance, and the higher the perception of social presence the lower the perceived level of transactional distance. Although social presence tends to parallel dialogue in regards to how both correlate to transactional distance, according to Lowell social presence is not dialogue. Although social presence may foster dialogue among participants in the same way that dialogue may act to foster or suppress social presence, it is likely that one's perception of social presence is more closely related to the concept of intrinsic motivational conversation (supportive statements, encouragement, etc.) in educational environments and correlates to immediacy of response or feedback. While social presence is a form of educational conversation it is not dialogue, but it may be very important in terms of a student's feeling of connectedness to the educational experience. Likewise, the perception of immediacy of response will also affect the sense of being there or connected. Thus, although Lowell's findings tend to support the idea that dialogue is the central variable in transactional

distance, as discussed by Gorsky and Caspi (2005), other variables such as social presence affect how dialogue unfolds during the educational experience. However, Lowell's work again focuses on the social, psychological affect on educational environments and does not look at the affect on reduced miscommunication or efficiency of the transaction.

Lowell's (2004) work with graduate classes also found that students' level of perceived independence correlated negatively higher to transactional distance as the course progressed, but that the perceived level of dialogue, as correlated to perceptions of transactional distance, was fairly consistent across the span of a course. The insights from Braxton's (2000) study on novice and expert learners and Lowell's insights into differences across time provide support for how dialogue may unfold differently depending on the curriculum under study, whether a student is a novice or expert learner in the field, and depending on where a student is within the span of a course semester.

Zhang's research in 2003 examined the theory of transactional distance and explored the idea of constructing a Scale of Transactional Distance that could be used to determine a student's perceived psychological distance between them and the learning environment. Zhang (2003) defined transactional distance as "cognitive, emotional, social, cultural, and/or physical distances between learners and the other elements of their learning environments that prohibit active student engagement with learning" (p. 148), but did not set forth a conceptual definition of dialogue. Zhang's definition of transactional distance, like Lowell's work, looks at social impacts of how one perceives connectedness to the educational experience. The elements in Zhang's definition can be seen as impacting the type and amount of dialogue a student may experience or how they

chose to participate based on the emotional, social, and cultural elements. These same elements will predispose an individual to an expected perception of connectedness based on their cultural frame. For example an individual who is accustomed to the idea of the instructor as the sage may view a didactic lecture as being closely connected to the learning environment. However, for another individual this experience might feel quite distant. This is similar to Braxton's (2000) findings on student expectations for how a faculty member will behave, in that students may draw the instructor back into a lecture style format if the students are uncomfortable with a dialogic exchange.

Zhang's (2003) study does not look at the interplay of how dialogue, structure, and learner autonomy impact transactional distance, and thus it is unclear whether a student's perceived level of transactional distance is due to low dialogue, high structure, or a sense of low autonomy. Thus, a student's perception of connectedness does not, on its own, provide any insight into why they feel or do not feel connected. However, the study does shed light on how one may want to look at dimensions of dialogue and how student – student dialogue, student – content internal dialogue, and student – teacher dialogue affect the overall construct of dialogue, and supports the idea that all interaction dimensions impact one's perception of transactional distance. In her study, Zhang found that student – teacher measures and student – student measures accounted for 69 percent of variability in perceived transactional distance. Of interest is that the student – student dimension was the strongest measure of the two.

In a study conducted by Fulford and Zhang (1993) in the early 1990s they examined the perception of interaction and student satisfaction in two-way interactive video classes through student self reports on a survey questionnaire. The study did not

look specifically at transactional distance or the theory of transactional distance; however, it did identify a key dimension of the dialogue construct. In the study Fulford and Zhang determined that overall interaction, or that which is made up of personal interaction and “Vicarious Interaction” is a stronger prediction of satisfaction than just personal interaction. Similar to Zhang’s study in 2003 it is the notion that multiple levels of interaction or dialogue in distance education environments affect one’s notion of transactional distance and connectedness. Further, in Fulford and Zhang’s study it is important to note that a sense of connectedness may be enhanced simply through the vicarious nature of a student reading others’ postings and developing a sense of closeness to the educational exchange. This essence of vicarious interaction or a sense of connectedness to the class is enforced in the studies by Lowell (2004) and Zhang (2003), and brings into question how connectedness is measured for those learners who may be considered passive as described in the work by Saba and Shearer (1994). This also tends to support the idea that an autonomous learner may need less dialogue in an educational experience to be successful.

Fulford and Zhang’s (1993) study also highlights that perception changes over time. They noted learners’ perceptions of interaction and satisfaction decrease overtime as the class unfolds. Although the notion of longitudinal time is beyond the scope of this study the aspect of longitudinal time should be examined in greater detail for changes in dialogic patterns and to determine why this may occur.

Zhang’s (2003), Fulford and Zhang’s (1993), and Lowell’s (2004) studies are important to the theory of transactional distance as they bring into question other dimensions beyond the teacher – student interactions, and they make us question how

much perceived student satisfaction in distance education courses is caused by the idea of social presence. In other words if a course is highly interactive, but not necessarily dialogic, is the sense of connectedness strictly due to the social aspect in terms of social presence and not necessarily related to the idea of dialogue in terms of the construction of knowledge and the effectiveness of the educational transaction? These studies do not, however, address how these social dimensions affect dialogue towards knowledge building.

Quantitative Measures

Beyond the attitudinal measurement of perception, how do we quantitatively measure dialogue in transactional distance? To date, the majority of studies reviewing the theory of transactional distance have tended to focus on the construct of dialogue. As discussed in Gorsky and Caspi's (2005) work, "A Critical Analysis of Transactional Distance," most studies have only examined the number of interactions that occurred in the educational communications spectrum and the length of these exchanges. Although the work of Saba and Shearer (1994) proposed a classification scheme for educational communications, they did not fully define what should be considered dialogue and which communication speech acts should be considered other forms of educational communication. Thus, more work needs to be done in this area of quantification of dialogue: this would not only support the systems dynamic model put forth by Saba and Shearer, but the overall theory of transactional distance.

To understand what we mean by dialogue in online learning environments and explore how we may be able to classify dialogue and other educational communication speech acts this study explores the construct of dialogue. The study builds upon the work

of Burbules (1993), Searle (1969), Bloome et al. (2005), and the proposed classification scheme draws up the works of Flanders (1964, 1970), the classification scheme for dialogue presented by Saba and Shearer (1994) in their systems dynamic model of transactional distance, and other related studies.

Questions that need to be explored for dialogue include:

- What constitutes dialogue and how can it be classified?
- Should dialogue be viewed as a strict measure of interactions between the learner and the instructor? Or should we view dialogue in terms of the group to look at aspects of the social construction of knowledge as discussed by Vygotskii (Cole et al. 1978)?
- Should we include internal dialogue or as Holmberg (1983) discusses, guided didactic conversation (the internal conversation one has with the material as it is read and reflected upon)?
- Is dialogue a function of timeliness of response?

Once we have a better understanding of what constitutes dialogue in online learning environments, we can explore whether it is dialogue or other forms of educational communication that results in reduced transactional distance and a feeling of connectedness.

Dialogue

Conversing critically implies an openness to rethinking cherished assumptions and to subjecting those assumptions to a continuous round of questioning, argument, and counterargument. (Brookfield and Preskill, 2005, p. 7)

Central to this study is the concept of dialogue, and what constitutes dialogue in an online educational environment in support of the theory of transactional distance.

Webster's Dictionary (1988) defines dialogue as “interchange and discussion of ideas, esp. when open and frank, as in seeking mutual understanding or harmony” (p. 380). In Burbules's (1993) work “Dialogue in Teaching” he states:

...dialogue involves two or more interlocutors. It is marked by a climate of open participation by any of its partners, who put forth a series of alternating statements of variable duration (including questions, responses, redirections, and building statements), constituting a sequence that is continuous and developmental.

Dialogue is guided by a spirit of discovery, so that the typical tone of a dialogue is exploratory and interrogative. (p. 7-8).

And,

Dialogue is not like other forms of communication (chatting, arguing, negotiating, and so on). Dialogue is an activity directed toward discovery and new understanding, which stands to improve the knowledge, insight, or sensitivity of its participants. (p. 8).

Brookfield and Preskill (2005) who have blended the ideas of Burbules, Lipman, and others see dialogue, or as they have defined discussion as “...an alternately serious and playful effort by a group of two or more to share views and engage in mutual and reciprocal critique” (p. 6), where one of the main purposes is “to help participants reach a more critically informed understanding about the topic or topics under consideration” (p. 6). Thus, dialogue is seen as a serious and playful exchange, but where the main intent is the creation or refinement of knowledge.

This study draws upon the philosophical work of Burbules (1993) to help frame the definition of dialogue in teaching environments. As such, substantial attention is given here to how Burbules defines dialogue and what he sees as dialogic statements or moves. Burbules's work is central in the development of a conceptual definition of dialogue and forms the foundation for the development of a classification scheme for dialogue in online teaching environments.

Burbules's (1993) work draws upon the writings of Freire and other critical theorists and pedagogical theorists in his description of dialogue in theory and in practice. Burbules proposes that dialogue is a subset of conversation and distinctly defines dialogue as purposeful conversation that depends on mutual respect and understanding of the participants. He sees dialogue as a social, pedagogical, and democratic relationship and although he leans towards the postmodern views of dialogue, his work is also grounded in the pragmatic approaches of teaching. Further, he emphasizes that dialogue may not have an end in itself (a predetermined destination or conclusion), but may just be exploratory to enlighten thought around a subject. Burbules sees that "... there is a more or less discrete set of engagements that we can usefully think of as 'dialogical'..." (p. x), and "because not everything communicative counts as dialogue (for example, booing a politician passing in a motorcade), there must be some criteria, albeit fairly broad and flexible ones, that help us in identifying generally when something is dialogue, and when it is not" (p. xiii). To Burbules dialogue occurs in a dialogic relationship that is focused on the construction of knowledge and meaning, where one builds upon one's mental schema during the interchange, and where dialogue unfolds within a context of relationships (mutual respect), emotions, and cultural characteristics. Burbules states:

“There must be some level of reciprocity that binds the partners together in a mutual relation of concern and respect ... and there must be a real chance for everyone concerned to participate in, contribute to, or withdrew from the discussion. While in specific dialogical situations the nature and degree of actual participation by each member will not be exactly equal to that of every other ...” (p. 27). Here, Burbules puts forth a similar idea to what Cazden (1988) discusses as the structure of classroom discourse (IRE), where the teacher initiates a sequence, the student responds, and then the teacher evaluates. This is the type of ongoing reciprocity that Burbules refers to in a dialogical relationship. However, Burbules does not see dialogue as being a series of isolated IRE exchanges, but rather he sees dialogue as unfolding as the participants explore the subject under consideration. Thus although certain dialogic exchanges may appear as individual IRE segments they are ongoing and connected throughout the exchange. Figure 2-2 illustrates a conceptualization of a dialogic relationship as described by Burbules.

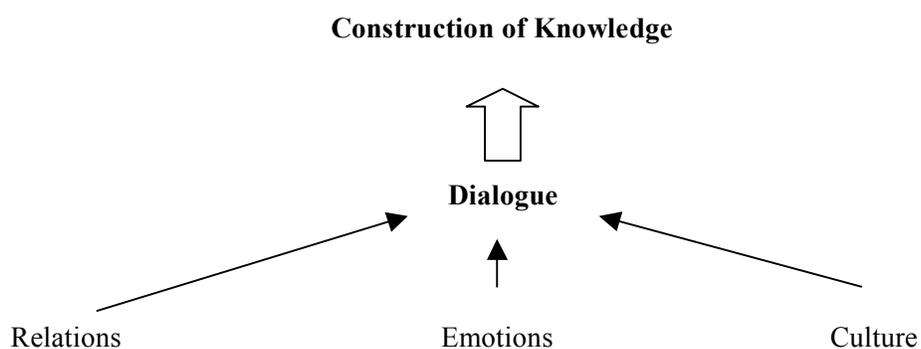


Figure 2-2

Conceptual Model depicting the affect on dialogue by relations, emotions, and culture.

Another theme of Burbules (1993) work on dialogue is the emotional aspect or motivational aspect of the dialogic relationship. He states "... the most complex problem in the formation and maintenance of a dialogical relation concerns aspects of character among the participants themselves" (p. 46). In essence for a dialogic relationship or dialogue to exist the participants must value, respect, appreciate, and have concern for others involved in the dialogue. They must also hold out hope that an understanding of the subject under discussion will be reached or at least a mutual respect on disagreement will be reached with an avenue for ongoing dialogue. It is this motivational, self-characteristic, aspect beyond the cognitive dimension of dialogue that as Burbules indicates "keep us in [the dialogue] when it becomes difficult" (p. 41).

The emotional aspect of dialogue described by Burbules highlights a probable correlation to feelings of connectedness in an educational environment and needs to be considered in the classification scheme of dialogue and other educational conversation speech acts. Although these types of speech acts may not be classified directly as dialogue they appear within the classification categories set forth by Picciano (2002), Swan (2002), and Swan and Shih (2005) that are related to the idea of social presence.

Foundations for a Classification Scheme of Dialogue

In Burbules (1993) work he first guides the reader through a broad definition of dialogue, and then describes dialogic moves, in the game of dialogue, and sees dialogue in educational settings occurring in four ways: dialogue as conversation, dialogue as inquiry, dialogue as debate, and dialogue as instruction. These four forms of dialogue are briefly described below.

Dialogue as conversation. This as an inclusive and divergent type of dialogue, one that is “generally cooperative, tolerant in spirit, and a direction toward mutual understanding. It does not necessarily aim toward agreement or the reconciliation of differences” (p. 112). It is inclusive as the participants in the dialogue are nurturing about the others feelings and the dialogue unfolds in a spirit of finding a common language. And it is divergent in that the dialogue may not necessarily lead to an end point or final agreement. This type of dialogue can also be motivational to the participants as it is inclusive and sensitive to the spirit of openness in the educational exchange. As Burbules states: “Partners in [dialogue as conversation] proceed interactively, cooperatively, not toward a specific common goal, but in a process of mutual engagement directed towards shared understanding” (p. 115). The term conversation may not be the best term for a category of dialogue as it implies that the dialogue occurring is casual in nature, and not focused on building knowledge and understanding. However, the important element of the category is the focus on drawing out how individuals feel about the topic under discussion.

Dialogue as inquiry. This is seen as an inclusive –convergent dialogue where it “...aims toward the answering of a specific question, the resolution of a specific problem, or the reconciliation of a specific dispute; it is convergent in its aim to produce an outcome agreeable to all” (p. 116). The primary difference between dialogue as conversation and dialogue as inquiry is that the questions around the dialogue are focused externally, towards world events and situations and not internally with regards to beliefs and values of the participants.

Dialogue as debate. This is seen as dialogue that has "...a sharply questioning, skeptical spirit, but does not have any necessary aim toward agreement or the reconciliation of differences" (p. 119) and is a critical – divergent form of dialogue. Although this form of dialogue may also be inclusive in terms of respect and a spirit of tolerance, the questioning is critical and challenging in terms of the positions put forth, but not in the way we normally think of debate. In other words the outcome is not to win, but to critically reflect on and expand the arguments or positions put forth.

Dialogue as instruction. This is a critical – convergent form of dialogue and is dialogue where "questions and statements help move the discussion toward a definite conclusion" (p. 120). In Burbules's discussion of dialogue as instruction he sees this form of dialogue not as simply leading someone through a line of inquiry to a logical end point, but a type of question – statement – question format where the instructor helps model inquiry and helps the students build on existing mental schema. It is seen as dialogue that helps students build understanding within what Vygotskii (cited in Burbules, 1993) called the "Zone of Proximal Development" or "that state of readiness in which a student will be able to make certain kinds of conceptual connections, but not others: anything too simple for the student will quickly become boring; anything too difficult will quickly become demoralizing" (p. 122).

Each of these forms of dialogue, laid out in Burbules's (1993) typology of dialogic types, has its purpose in an instructional environment. As Burbules states teachers and participants of dialogue are likely to move between them throughout the

instructional event. These dialogic forms can lead to a variety of outcomes, and Burbules's describes five possible outcomes of dialogic exchange in instructional environments. They are:

1. Agreement and consensus, identifying beliefs or values all parties can agree to.
2. Not agreement, but a common understanding in which the parties do not agree, but establish common meanings in which to discuss their differences.
3. Not a common understanding, but an understanding of differences in which the parties do not entirely bridge these differences, but through analogies of experience or other indirect translations can understand, at least in part, each other's positions.
4. Little understanding, but a respect across differences, in which the parties do not fully understand one another, but by each seeking that the other has a thoughtful, conscientious position, they can come to appreciate and respect even positions they disagree with.
5. Irreconcilable and incommensurable plurality.

Burbules stresses that as the participants move through a dialogic exchange, both the instructor and the students must guard against situations where the dialogic exchange moves in a direction that kills off dialogue, where respect of individual input is diminished or not valued.

Therefore, in examining a dialogic exchange we are likely to see many of the dialogic moves outlined by Burbules, and one of the above stated outcomes at the end of

an exchange between participants. It is possible that we may also witness an abrupt end to the dialogic exchange signaling that someone has killed off the dialogue.

The discussion of Burbules's (1993) work to this point provides a broad understanding of what constitutes dialogue in an instructional environment, the forms of dialogue, and the possible outcomes of dialogue. However, Burbules's work also dedicates considerable thought to the idea what comprises a dialogic statement or speech act. Here he outlines five categories of statements or speech acts and then refines each of them. Burbules draws heavily on the work of Searle's in this aspect of his discussion of dialogue, and upon Searle's idea of speech acts. Searle's work will be examined in more detail later, but the central theme is that speech acts are determined not necessarily by words or phrases, but by an individual sentence or sentences that capture "...what the speaker means, what the sentence uttered means, what the speaker intends, what the hearer understands, and what the rules governing the linguistic elements are" (Searle, 1969, p. 21).

Burbules (1993) parallels this point, made by Searle (1969), in his discussion of dialogic moves/statements. Burbules states "...by using the term statements, I don't mean that each of these is a unique and specific sentence uttered in a dialogue these statements can be of variable duration, and may span various utterances made over time within a dialogue" (p. 95). Burbules recognizes as Searle does that it is the intent of the speech act and how it is understood that is important to capture, and thus may be represented as a single statement, sentence or within a short monologue or paragraph. Thus, unlike some forms of discourse analysis where each word or sentence is dissected

for meaning, in Searle's view of speech acts and Burbules view of dialogue it is the intended meaning of the statement that is important.

Types of Utterances or Speech Acts

Burbules (1993) sees five general types of utterances or speech acts that one will encounter in an educational exchange. They are: questions, responses, building statements, redirecting statements, and regulatory statements.

Questions:

Burbules views questions as central to the dialogic exchange and key in initiating most dialogic exchanges. He outlines a series of question types and discusses how they may or may not fit into a dialogic relationship. For Burbules question types may be:

One-sided questions: "What day is it?" However, he sees these types of questions rarely leading to an ongoing dialogic exchange,

Probing questions: "Could you explain more about how you see Regan economics impacting the recession in the early 1990's?",

Challenging questions: "Why do you believe that?"

In all cases, he sees questions as initiating ongoing dialogue and warns that we as instructors cannot be too hasty to rush to judgment on questions posed by students as this may eliminate trust and close off the dialogic relationship. Although he prefers probing or challenging type questions Burbules also sees a use for narrow questions (not open-ended) in dialogue as they help to build confidence, diagnose understanding, or lead a student through complex material. But these narrow types of questions should not be the predominant form of question type.

Drawing on the work of Bridges (cited in Burbules, 1993, p. 99) Burbules lists potential questions that can promote open-ended discussion:

- Asking why someone holds a particular opinion.
- Asking how one point follows from another.
- Asking what is the relevance of some point of the issue at hand.
- Asking what alternative opinions might be presented.
- Calling for more clarification, explanation, illustration, precision, conciseness, reasons, evidence, or argument.
- Seeking a more systematic pooling of information; a more sympathetic hearing of divergent opinions, a more imaginative and open-minded conjecture, a more vigorous critical attack, a more ready and tolerant adjustment of one's own opinion to other people's.
- Encouraging orderliness, reasonableness, and respect for different points of view.

Responses:

Burbules (1993) sees responses as statements that immediately follow a question. He states that they cannot be “pre-established, unreflective assertions” (p. 90) that simply kill off dialogue, but must be responses that show an active attempt to explore the topic in more depth. They must indicate a desire not to finish the question, but to keep the dialogue moving forward. Burbules states, “reponses [should] invite further questions, or building statements, and in this they [should] serve to maintain the to-and-fro movement of the [exchange]” (p. 90).

Building Statements and Redirecting Statements:

These particular dialogic statements are not seen as responding to a particular question, but rather help in moving the dialogue forward. In essence, Burbules (1993) sees a building statement as "...a statement [that] tends to carry the discussion further along a particular line of development" and a redirecting statement as one that "...seeks to introduce a new topic or lead the discussion along a different course" (p. 91). Burbules further expands on his definitions of these statements by indicating that building statements may be logical implications, "If what you say is true then such and such is also the case" (p. 91); or nonlogical associations that are tangential, but not entirely redirecting of the flow of the dialogue. Also, he sees redirecting statements often occurring from misunderstandings that require a redirect of the dialogue to address the misunderstanding. Redirect statements are also seen as those that are not only tangential but those that "dramatically challenge the original terms of the discussion" (p. 92). Interestingly, Burbules sees lectures as a form of building statement or initiating statement, but limits these to lecture segments that are "inviting responses, open to questions, put forth in a way that encourages continual engagement and reflection" (p. 92). These would be seen as short lecture segments and not the monologues that we often view as lectures.

Regulatory Statements:

Regulatory statements are on the fringe of what may be considered as dialogue. They are motivational and seen as statements that help maintain the spirit of the discussion. As Burbules (1993) states, "regulatory statements can include the following: explicit and pointed statements of agreement, praise, or reassurance, ... commentary on

the communicative process itself; ... or emotional assessments of oneself or one's partner" (p. 93-94). These statements require special attention in the classification scheme; although they are not directly related to the building of knowledge and understanding, they are important for building a sense of value and trust between the participants and are related to one's sense of intrinsic motivation. Regulatory statements may also be more closely related to the classification categories set forth by Picciano (2002) and Swan and Shih (2005) in their studies on social presence in online learning environments.

Table 2-1 captures the essence of how Burbules (1993) has outlined dialogue in educational environments and serves as the starting point for the construction of a classification of dialogue in online learning environments.

Table 2-1
Preliminary Formulation of Classification System

Dialogic Intent	Dialogic Form	Dialogic Move
Dialogue towards Understanding	Inquiry Debate Instruction	Questions Responses Building Redirecting
Dialogue towards Conversation	Conversation	Regulatory

Of interest to this study is a statement Burbules (1993) makes regarding the dialogic game. He states, "we learn how to engage in dialogue with others by having been engaged in dialogue previously. Even our capacity to carry on internal dialogue

within our minds, or to imagine dialogues with people who are not present, derives from our experiences with dialogue in practice” (p. 61). This observation of how we intuitively understand how to engage in dialogue must be examined in terms of online dialogue. How does one know how to engage in online dialogue, which can be quite different than face-to-face, if one has never been involved in an online educational dialogic event? We must consider this factor when we review transcripts of online sessions as an individual’s lack of knowledge about how to carry on an online dialogue may be mistaken for passivity or being unengaged in the learning process. This consideration of how dialogue may unfold depending on whether a student is a novice learner or an expert relates back to some of the findings in Braxton’s (2000) study and how advanced distance education students required less structure and more collaboration in their learning environments.

However, it is important to remember that the discussion of dialogue in this study does not reflect on the importance of dialogue in teaching, but helps to classify what counts as dialogue. Thus, no attempt is made to ascertain whether a student has had previous online educational experiences that may affect their online behavior in a dialogic relationship. However, this aspect of a student’s behavior online is very important for future studies.

Speech Acts and Discourse Analysis

This study is not a study of linguistics or of the English language. However, the concepts of the philosophy of language and the idea of speech acts and discourse analysis are important to the study, in that they establish how dialogic speech acts should be structured in a classification scheme.

Searle's (1969) description of speech acts fits well with Burbules's work, as central to Searle's work is the notion that "communication necessarily involves speech acts" (p. 17). Searle also states that, "...speaking a language is performing speech acts, acts such as making statements, giving commands, asking questions, making promises, and so on; and more abstractly, acts such as referring and predicating..." (p. 16). For Searle, a speech act is not at the word or phrase level, but at the sentence(s) level. He sees a speech act as encapsulating the meaning of the utterance and the understanding of the utterance. Searle states "...it is in principle possible for every speech act one performs or could perform to be uniquely determined by a given sentence (or set of sentences)..." (p. 18).

Searle's (1969) work is extremely important to this study and the development of a proposed classification scheme for dialogue. Searle highlights that it is not the individual sentence or word that is spoken or written that is important, but the intended meaning of the utterance or written statement that is important, as well as how that statement is understood by the others in the dialogue or by the readers of the utterance. Thus, in the development of a classification scheme for dialogue this study examines the intent of an individual sentence or sentences and looks for where the intent of the utterance may change from questioning, to restatement, to building statements as described by Burbules (1993).

In addition to the work by Burbules (1993) and Searle (1969) the study also draws upon the idea of discourse analysis in terms of how sentences, phrases, or words are categorized. The concept of discourse analysis helps in forming a structure for how each speech act defined as dialogue is categorized, and how speech acts that are not defined as

dialogue are captured. Here, this study draws upon the work of Bloome, Carter, Christian, Otto, and Shuart-Faris (2005), “Discourse Analysis and the Study of Classroom Language and Literacy Events.” In the work of Bloome et al., they view discourse analysis as being both a theory and methodology for examining language. Discourse analysis is both social and contextual and depends on the research question, as within any discourse there exists many aspects of language (social, power, cultural, etc.). Bloome et al., base their methodology and approach to discourse analysis on the idea of “Linguistic Turns” and view linguistic turns “...as a part of a historical and ongoing movement within the social sciences and humanities to explicate how uses and forms of language create and recreate knowledge, power relations, identities ... [in terms of] what counts as research ... [and what counts] as language itself” (p. 45).

Bloome et al. (2005), view observational research as part of a dance where the dancer affects the dance and the dance affects the dancer. This is not uncommon for ethnographic research where the researcher affects the observations and the observations affect the researcher, as it is through the lens of the researcher that the observations are coded or classified. Although discourse analysis is primarily ethnographic and unfolds during observation it also depends on an *a priori* category structure defined by the researcher that outlines the particular research question that is to be answered. The research question could look at cultural connections between language exchanges, power relationships, or other social aspects however, it is the nature of the research question that defines the categories into which each utterance, sentence, or phrase is separated. This aspect of Bloome et al.’s work has direct relevance for this study as the research proposes a classification system for dialogue in online learning environments, and the test of the

system through the analysis of the transcripts helps inform or modify the classification scheme. Although the research is not observational the way we normally think of an ethnographic study, it is similar as we are observing the written speech acts that have been captured.

The approach/methodology used by Bloome et al. (2005), in discourse analysis uses the idea of a message unit and the idea of bounded events. For Bloome et al., message units are not necessarily sentences, word, or phrases but are contextual and depend on meaning. As they state, “The meaning of an utterance or other language act derives not from the content of its words but rather from its interplay with what went before and what will come later. Its meaning, or even the kind of act it is, cannot be determined outside of the ongoing event” (p. 8). Thus, as with Searle (1969), it is the intent of the message unit or speech act that determines the boundary of the language event and not the idea of a sentence, word, or phrase. Also, the meaning of a speech act or message unit is a point in time event as the same speech act may take on a different meaning at another time within a different context. Therefore, the meaning of the act is determined by point in time, by the people who utter the event, and by those (the researcher) who observes and codes or classifies the event. For Bloome et al., a message unit is “the smallest unit of conversational meaning” (p. 19). Further, Bloome et al. discount the idea of turn taking, as a turn (an individual’s utterance or written dialogic statement) may contain several message units or speech acts and thus, turns are not a good indication of the language event or speech act or the boundaries of any one act. Although turns may be a good indicator of participation, these “...simple accounts related to turn-taking do not provide access to interpretation” (p. 28). Bloome et al. also see

simple turn taking as the typical IRE pattern discussed by Cazden (1988), which is “closely associated with schooling” (p. 29). Simple patterns or IRE do not necessarily indicate that meaning is being shaped, as it may just represent an enactment of a known pattern of conversational interaction based on classroom experiences.

The thoughts put forth by Bloome et al. (2005), on turn taking, and that meaning in discourse analysis is a point in time event, parallel the work of Rourke, Anderson, Garrison, and Archer (2001) and Krippendorff (1980) on content analysis. Rourke et al., highlight that research which examines interactions in online learning environments needs to move beyond the simple counting of written messages (i.e., turn taking) and look at deeper meanings inherent in the written utterances. And Krippendorff indicates that meaning in content analysis need not be shared by all, as the meaning associated with the analysis may only be shared by those individuals close to the research topic. These concepts help form the methodology for this study and are reviewed further in the next chapter.

Within Bloome et al.’s (2005) work other key aspects of discourse analysis are discussed and two have relevance to the proposed classification scheme of this study. The first is the idea of interactional units. Interactional units are similar to topic threads or side bar discussions that may occur. They are a series of tied message units and as Bloome et al. discuss, interactional units may be “suspended, reinstated, overlapped, and abandoned” (p. 26) and cannot be determined prior to the analysis.

The second key aspect of discourse analysis discussed by Bloome et al. (2005) is “Thematic Coherence.” Thematic coherence is a “set of meanings in and through [a language] event” (p. 33). As discussed by Bloome et al., “An event is considered to have

thematic coherence when meanings generated in and through the event have a relationship to each other...” (p. 33). Thus in an instructional dialogue we have a series of interactional units that are tied together by a single theme and within each interactional unit we have a series of message units or speech acts that can be classified as dialogue or other conversation. This proposed structure or pattern of analyzing an educational exchange is shown in Figure 2-3.

Here, the idea is all utterances and shifts in themes and interactional units are captured and then each speech act is classified accordingly. In this way we can examine an entire transcript of a lesson and look for interactional units and speech acts that signify dialogue and those that may be classified as social presence, classroom management, or other types of exchanges.

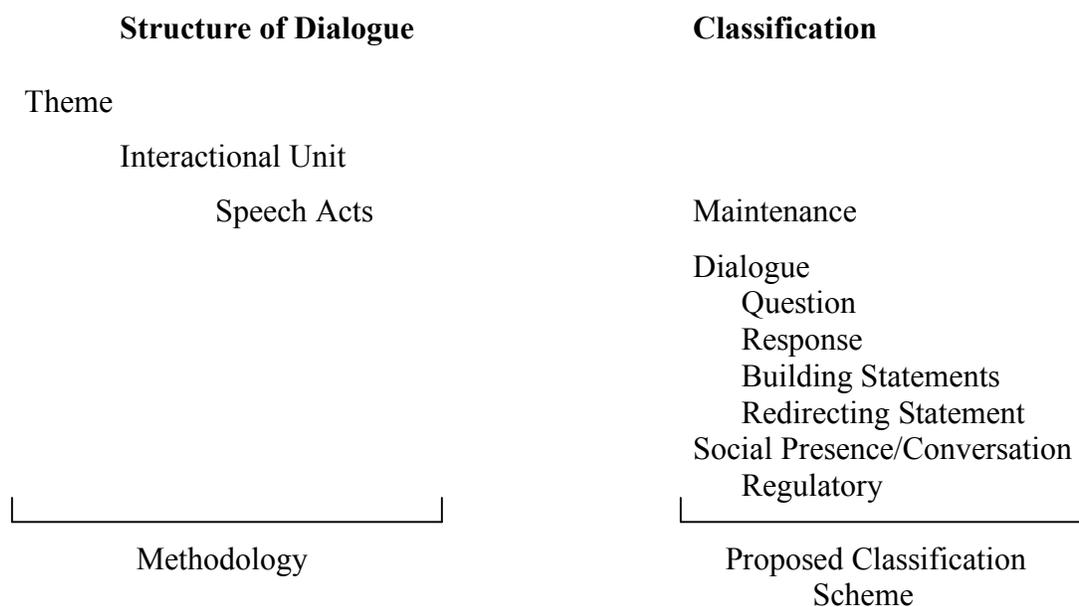


Figure 2-3

Structure of Educational Exchange and Classification Scheme

Discourse analysis, as discussed by Bloome et al. (2005), is a methodological approach to examining language exchanges and there is no single way to conduct discourse analysis as it depends on the context of the exchange that is being studied. Thus, discourse analysis is structured by the researcher and is impacted through the researcher's lens in regards to the question(s) under study.

Derived from the works of Burbules (1993), Searle (1969), and Bloom et al. (2005), there exists, for the propose of this study, a proposed structure for how to analysis educational conversation and a foundation for how one may classify dialogue in an online class. Table 2-1 and Figure 2-3 help conceptualize a proposed classification scheme for dialogue in online learning environments. The next section looks at classification schemes of educational conversation and dialogue that have been used in face-to-face and online learning environments. These studies help inform the classification scheme for dialogue that will be used for this study.

Classification Studies of Classroom Interaction and Dialogue

In the following section several studies are examined that explore the construction of classification systems in order to categorize interactions and dialogue in classroom environments and online environments. The review starts with Flanders's (1964, 1970) work on teacher talk and his classification scheme. Flanders's work and the description of dialogue presented by Burbules (1993) help to further conceptualize what should or should not be consider as dialogue in online learning environments.

*Early Work of Flanders and Bellack**Flanders*

Flanders's (1964) work "Interaction Analysis in the Classroom: A Manual for Observers" defined ten categories in an effort to categorize the types of communication events that occur in a classroom when "teachers and students are actively discussing schoolwork" (p. 4). Specifically, Flanders was interested in analyzing a teacher's control over a student's freedom of choice through verbal behavior, and was primarily interested in interaction analysis "in order to study patterns of teaching and learning" (Flanders, 1970, p. 29). Flanders saw interaction analysis as a means to understand the why of differences between an experimental group and a control group, and not just that there were observable differences. For Flanders, interaction analysis was a way to quantify observations of interaction that might result in a change in behavior or the unfolding of learning theory based on interaction analysis observations. Within the ten categories established by Flanders, seven were assigned to what he classified as teacher talk, two to student talk, and one to account for pauses or talk that is confusing or noisy. The seven categories for teacher talk were divided into two main groups: Indirect Influence or those that encourage student participation and increase student control or freedom of action, and Direct Influence or "those interactions that increase the control the teacher has over conformity and compliance" (Flanders, 1964, p. 3). Flanders was interested in capturing all exchanges that occurred in the classroom and his work was heavily based on what is considered the IRE approach to teaching. While the categories that Flanders defined appear to be based on dialogue, or the construction of meaning around a topic of

discussion, they capture much more than simply dialogue and he viewed the system to be totally inclusive “as the categories permitted all events to be classified” (Flanders, 1970, p. 33). Flanders saw the inclusive aspect of the classification system as being extremely important, for if one is to make statements or conclusions about observations or time spent on any one category then there cannot be uncoded events. Any events that were not coded would confound the findings and the statement about results would not be as valid. Further, Flanders felt it was important that every event or speech act was mutually exclusive in terms of how it was classified and that no event should fall into more than one category.

Flanders’s (1964) ten categories evolved out of work he conducted by himself and others between 1955 and 1960. They were subsequently modified to include the idea of response and initiate which he saw as key indicators of who starts a conversational exchange in education. Also, in the modified version of the classification scheme Flanders isolated “Questions” as a special event. This is similar to how Burbules (1993) and Bloome et al. (2005) view the importance of questions in an educational exchange or dialogue.

Flanders’s refined categories from his 1970 work are:

Teacher Talk

Indirect Influence

Response

1. Accepts Feeling: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included.

2. Praises or Encourages: praises or encourages student action or behavior. Jokes that release tension not at the expense of another individual, nodding head or saying, "um hm?" or "go on" are included.
3. Accepts or Uses Ideas of Student: clarifying, building, or developing ideas suggested by a student. As a teacher brings more of his own ideas into play, shift to category five.

Questions

4. Asks Questions: asking a question about content or procedure with the intent that a student answers.

Although questions are still part of Teacher Talk and Indirect Influence, in the 1970 version of the categories questions lies between Response categories and Initiation categories.

Direct Influence

Initiation

5. Lecturing: giving facts or opinions about content or procedure; expressing his own ideas, asking rhetorical questions.
6. Giving Directions: directions, commands, or orders to which a student is expected to comply.
7. Criticizing or Justifying Authority: statements intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.

Student Talk

Response

8. Student Talk – Response: a student makes a predictable response to teacher. Teacher initiates the contact or solicits student statement and set limits to what the student says. Freedom to express own ideas is limited.

Initiation

9. Student Talk – Initiation: talk by students which they initiate. Expressing own ideas; initiating a new topic; freedom to develop opinions and a line of thought, like asking thoughtful questions; going beyond the existing structure. Unpredictable statements in response to teacher. Shifts from 8 to 9 as student introduces own ideas.

Other/Silence

10. Silence or confusion: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

When Flanders's (1970) categories are compared to the work of Burbules (1993) it appears that the first two categories under Teacher Talk are related directly to the motivational aspect of an educational exchange or speech acts that Burbules and Searle (1969) discuss. However, the next two categories under Indirect Teacher Talk "Accepts or Uses Ideas of Students, and Questions" are specific to dialogue and knowledge building. Lecturing in terms of Flanders's definition is closely related to how Burbules viewed a monologue which falls outside dialogue, and the Giving Direction and Criticizing categories are related to communication maintenance or classroom management situations and not necessarily dialogue.

Unfortunately, Flanders does not spend much time capturing speech acts initiated by students. As defined by Flanders these Student Talk categories appear to be directly related to dialogue, however they could also reflect statements made by students in response to directions or other utterances not directly related to dialogue.

In Flanders's (1964, 1970) work when implementing the classification system around Teacher Talk and Student Talk an observer in a classroom would record the types of interactions that occurred every minute between the students and the teacher. In general, the observer recorded 20 to 25 observations per minute. For Bloome et al. (2005), this is more analogous with capturing every statement and using it as the boundary event instead of capturing the intent of an event or speech act that may encompass more than a single sentence or phrase and provide broader insight into the intent of the speech act. This aspect of Flanders's work related to turn taking will not be carried forward in this study as the concept of turn taking fails to capture intent of an utterance in educational exchanges.

Bellack, Kliebard, Hyman, and Smith

In a study conducted around the same time as Flanders's (1964), work Bellack, Kliebard, Hyman, and Smith (1966) looked at discourse analysis and linguistics as a means of studying teaching processes by observing language behavior between teachers and students. Primarily, they examined language as communication of meaning and examined utterances and pedagogical significance of what the speaker was saying in a classroom environment. For Bellack et al., the content or topic under discussion was very important for how they categorized each utterance or speech act. Similar to Burbules (1993), Bellack et al. designed their classification scheme based on the idea of "language games" introduced by Wittgenstein (1958, cited in Bellack et al., p. 3). Thus, their four primary categories were seen as pedagogical moves. Further, they saw these moves as occurring during discrete teaching cycles that are similar to Cazden's (1988) IRE sequence, but where each teaching cycle was not necessarily limited to a single IRE

cycle. They recognized that “more than one pedagogical move may occur with an utterance [or speech act], which is defined by a complete statement by a teacher or pupil at any one time in the discourse” (p. 16). Also, they saw each teaching cycle starting with either a structuring move or a soliciting move, and each observed speech act was coded in terms of the content under discussion and in terms of who or what was being listened to at the moment (teacher, student, or audio-visual device).

Bellack et al. (1966) defined their four primary pedagogical moves as:

1. Structuring: “... which serve the function of setting the context for subsequent behavior by (1) launching or halting-excluding interactions between teacher and pupils, and (2) indicating the nature of the interaction in terms of the dimensions of time, agent, activity, topic and cognitive process, regulations, reasons, and instructional aids” (p 16). These moves can either initiate a new line of discussion on a topic or can be related to classroom management or communication maintenance. As stated by Bellack et al., “Structuring moves do not elicit a response, are not in themselves direct responses, and are not called out by anything in the immediate classroom situation except the speaker’s concept of what should be said or taught” (p. 17).

2. Soliciting: “...intended to elicit (a) an active verbal response on the part of the persons addressed; (b) a cognitive response, e.g. encouraging persons addressed to attend to something; or (c) a physical response. Soliciting moves are clearly directive in intent and function....” (p. 18). These moves can be initiated by either the teacher or the student.

3. Responding: "...bear a reciprocal relationship to soliciting moves and occur only in relation to them. Their pedagogical function is to fulfill the expectation of soliciting moves and is, therefore, reflexive in nature." (p. 18). Similar to Soliciting, Response moves are on the behalf of a teachers initiation or a students initiation.

4. Reacting: "...are occasioned by a structuring, soliciting, responding, or a prior reacting move, but are not directly elicited by them. Pedagogically, these moves serve to modify (by clarifying, synthesizing, or expanding) and/or rate (positively or negatively) what was said in the move(s) that occasioned them" (p. 19).

These four pedagogical moves by themselves do not easily map over to Flanders's (1964,1970) classification scheme without the addition of what Bellack et al. (1966) classify as Substantive meanings, Substantive-Logical meanings, Instructional meaning, and Instructional-Logical meanings. For example, Responding, one of the pedagogical moves may appear to be Direct or Indirect when the teacher speaks, and it may be Active or Passive when a student speaks. It is unclear without knowing the intent and meaning behind the utterance. In essence, the four pedagogical moves may be related to dialogue, classroom management, or communication maintenance at any particular time and it is only through the attachment of meaning that the intent is clear. Thus, to assist with the classification of speech acts Bellack et al. defined four types of meanings. The first two Substantive meaning and Substantive-Logical meaning are related directly to the subject under discussion and to the cognitive processes involved in dealing with the subject. Instructional meaning and Instructional –Logical meaning are related to classroom

management and communication maintenance. Bellack et al. state, “Instructional meanings involve such matters as assignments, materials, and routine classroom procedures ... Instructional-logical meanings refer to distinctively didactic verbal processes such as those involved in positive and negative rating, explaining procedures, and giving directions” (p.5-6).

Therefore, the two categories of meaning that are of primary interest for this study are Substantive meaning or those speech acts related directly to the topic under discussion, and Substantive - Logical meaning or those that define the cognitive process in play during a substantive speech act. The following are the Substantive-Logical meanings defined by Bellack et al. (1966).

Substantive - Logical meanings

Defining – General: ... to give the defining characteristics of a class and to give a specific example of an item within the class. (p. 22)

Defining – Denotative: ... to refer to the objects (abstract or concrete) to which the term is applicable. A denotative definition cites the objects to which the term may correctly be applied, ... (p. 23)

Defining – Connotative: ...to give the set of properties or characteristics that an object (abstract or concrete) must have for the term to be applicable. (p. 23)

Interpreting: ... to give its verbal equivalent, usually for the purpose of rendering its meaning clear. (p. 23)

Fact-Stating: ...is giving an account, description, or report of an event or state of affairs. (p. 24)

Explaining: ... is to relate an object, event, action, or state of affairs to some other object, event, action, or state of affairs; or to show the relation between an event or state of affairs and a principle or generalization; or to state the relationships between principles or generalizations. (p. 24)

Opining: ... to make statements in which the speaker give his own valuation regarding (a) what should or ought to be done, or (b) fairness, worth, importance, or quality of an action, event, person, idea, plan, or policy. (p. 25)

Justifying: ...to give reasons for holding an opinion regarding (a) what should or ought to be done, or (b) fairness, worth, importance, or quality of an action, event, policy, idea, plan, or thing. (p. 26)

Not Clear: ...the wording or sense of a statement is ambiguous and the substantive-logical meaning cannot be determined. (p. 26)

These Substantive–Logical definitions provide a means of coding the intent of a particular verbal statement and what specifically was occurring during the educational exchange (e.g. interpreting a statement), and they map the intent back to the pedagogical moves of Structuring, Soliciting, Responding, or Reacting (e.g. the teacher solicited the student’s input by providing an opinion and asking for feedback). Further, although Structuring may be seen as being primarily related to classroom management or communication maintenance, and is similar to Flanders’s (1964, 1970) “Directions” it is possible that the pedagogical moves, Structuring and Soliciting, can occur whether a teacher is being direct or indirect. Also, it is possible for a student to initiate a Structuring

move or a Soliciting move and be classified as being either Actively or Passively engaged, or to respond or react and have the student be classified as being either Passively or Actively engaged. It is therefore Bellack et al.'s (1966) sub category "Substantive – Logical Meaning" that provides insight into dialogic intent. As such the Substantive–Logical Meaning categories inform the classification scheme of dialogue, for this study, in order to assist with the identification of the meaning of each dialogic move put forth by Burbules (1993).

Classification Studies Associated with Online Learning Environments

France Henri's Work

In 1992 France Henri proposed a classification system for messages in a Computer Mediated Communication (CMC) environment. Henri's (1992) work built upon the idea of content analysis by Muchielli (quoted in Henri, 1992) and the intent of the proposed classification scheme was to better understand the richness of the messages and how they affect learning. In other words, Henri wanted to look at how something was said, not just what was said. Of further importance to Henri's work was the recognition that messages in CMC environments were "polysemic" and can contain multiple messages in a single written message or what may be viewed as a single speech act. Henri did not use the message as the unit of analysis but divided the messages into "as many statements as there were units of meaning" (p.134). Also Henri recognized that interactivity may be affected by type of learner, novice or expert, and the learner would affect the types of interactions/dialogue observed. The difference between the classification of learners being the type of knowledge or cognitive processes expected in

the learning environment, whether simply knowledge acquisition or an expectation of higher order skills (problem solving, synthesis, analysis).

In terms of the methodology used in the construction of the classification instrument Henri (1992) followed the suggestion made by Miles and Huberman (1987, cited in Henri, 1992) and developed an *a priori* classification system similar to Bloome et al.'s (2005) described methodology for discourse analysis studies. Therefore, instead of using a qualitative method that relies on extracting the classification scheme from observations, an *a priori* classification scheme is proposed and then informed through the actual observation/coding of the written transcripts during the testing of the classification scheme and through future use.

The classification scheme or framework put forth by Henri (1992) has five main dimensions:

Participative: that looked simply at the number of messages generated and by whom.

Social: statements not associated with the subject matter, but related to introductions, support, and motivation.

Interactive: which looked at the flow of messages around the subject matter and built upon the idea of Bretz's (1983) idea where the communication flow in an educational exchange contained three steps: initiate, response, follow up. This communication sequence is again similar to the classroom discourse structure put forth by Cazden (1988) and is important to what is considered dialogue. As Henri states, "A conference without interactivity would comprise a series of statements

linked only by the theme or subject under discussion – we would be faced with a collection of monologues and one-way statements” (p. 128).

Henri’s description of interactivity also recognizes passivity on behalf of the learner and conveys a sense that passivity should not be viewed as a failure, or that the student is not engaged in the learning process. Henri also included the notion of independent statements, and indicated that one must question whether these statements are a part of dialogue and fall under internal dialogue (dialogue with yourself), or if they should be excluded as monologues.

Cognitive: this dimension of the framework can actually be seen as a sub-component to interactivity. Here Henri was interested in looking at the inference of the message in relation to reasoning skills. To capture this Henri developed another classification scheme that included: elementary clarification, in-depth clarification, inference, judgment, and strategies. All of these are related to the content under discussion and would be messages or speech acts of dialogue.

Metacognitive: the last primary dimension of Henri’s framework attempted to identify messages or parts of messages that were related to a student’s self-awareness about their learning or the learning process. Again statements or messages of this type may be viewed as a form of internal dialogue where the student is speaking out loud to help internalize the information and knowledge under discussion.

Beyond the interactive and cognitive categories, two important aspects of Henri's (1992) proposed framework are the social dimension and participative. The social dimension is an important category, as discussed by Keller (1983), Visser and Keller (1990), Gagne, Briggs, and Wager (1992) and others, as the motivational aspect of learning is primary to the learning process. Although messages or speech acts of this type may not be directly related to dialogue, as discussed by Burbules (1993), they are important in the overall communication scheme around the educational environment. Previous studies on transactional distance by Zhang (2003) and Lowell (2004) that examined students' perception of distance or closeness to the educational experience also noted that individual perceptions of connectedness may be tied closely to the amount of motivational support or social presence that is perceived by students. Therefore, a classification scheme should include categories related to social messages and should be separated into those that are initiated by the instructor and those initiated by the students. Some may be social presence statements in support of knowledge building and others will be those that are strictly general in nature.

The participative dimension in Henri's (1992) classification system (the counting of messages) provides a way of analyzing the percentage of speech acts that are directly related to dialogue, social presence, or other educational speech act. Although this dimension does not inform the categories in an *a priori* classification scheme it is useful for exploring whether it is dialogic speech acts or those associated with social presence that lead to a sense of connectedness in the learning environment. Further, the idea of participation (counting of messages) provides a means of capturing a sense of passivity by learners.

Saba and Shearer Study

In a study conducted between 1992 and 1994, Saba and Shearer (1994) used a simulated synchronous desktop video system to explore whether a systems dynamics model could help validate the constructs of Transactional Distance, Dialog, and Structure. The model was developed on the premise that the hypothesized interactions of structure and dialogue within the transactional distance theory were true, and that empirical evidence through the quantification of speech acts would support the theory. To analyze the observed speech acts a classification scheme was developed which drew upon Flanders's (1964,1970) work and that of instructional theorists such as Gagne and Merrill to inform the sub-categories.

In their study, the learner was viewed as being either Active or Passive. Learners were Active, in terms of educational exchanges, when they requested additional information, questioned ideas and concepts, or provided additional feedback, and they were considered Passive when they simply responded to guidance, requests, or directions. Instructors/teachers were viewed as being either Direct or Indirect. Instructors were Direct when they engaged in one-way delivery of content, did not ask students to elaborate on ideas, or provided simple forms of feedback. They were considered Indirect when they tried to draw the students into the discussions by asking them to elaborate on questions or ideas, provided detailed feedback to questions, or posed the student's questions in terms of other questions. To assist the speech act coders an *a priori* classification scheme was developed that encompassed many sub categories meant to help identify the various speech acts. For example under one of the Active categories, Feedback, the sub categories were "Supportive, Directive, and Corrective" (p. 58). As

with Flanders's (1964,1970) work Saba and Shearer's (1994) system was seen as inclusive, as all speech acts were captured. In Saba and Shearer's study, the focus tended to be on educational dialogue although many of the sub-categories were indications of speech acts associated with lecture, directions, or yes/no responses. Also during the initial test of the classification system, in order to account for speech acts that dealt with communication maintenance, Saba and Shearer (1994) created an additional category titled 'Communication Maintenance'. Further, within each of the four main categories (Active, Passive, Direct, and Indirect) a means of recording pauses during the educational exchange was provided. This aspect of a verbal pause in face-to-face environments, as discussed by Saba and Shearer (and others), may not have meaning within an online environment and should be examined in terms of inclusion in a proposed classification scheme of dialogue for online learning.

The four main categories defined by Saba and Shearer (1994) correspond closely to those defined by Flanders (1964, 1970). In Saba and Shearer's study, instructors' teaching styles of Direct and Indirect are similar to Flanders's Direct Influence and Indirect Influence, and the students' interaction styles of Active or Passive have similarities to Categories 8 and 9 (Response and Initiate) in Flanders. Another important element of Saba and Shearer's study is the idea that the variables under study in the theory of transactional distance are not static, but dynamic and that the levels of dialogue observed will vary over time and over the span of a class session. This dynamic flow is similar to what Fulford and Zhang (1993) observed in their study. How this ebb and flow of dialogue will manifest itself in an online educational environment needs to be factored into determining what segment of an online course should be examined. If the dialogic

interactions are reviewed early in a study there may be limited exchanges, thus it may be more probable to find a good dialogic exchange mid-way through a course than at the beginning.

Another factor in both Saba and Shearer's (1994) study and Flanders's (1964, 1970) work that needs to be excluded from a study of online educational exchanges is the idea of time intervals when coding observations. In Saba and Shearer's study, participants were asked to take a 30-minute lesson on culture that was conducted using a prototype of a desktop videoconferencing system. The same instructor conducted 30 identical lectures and each participant's interactions with both the instructor and the content were recorded. To analyze the interactions each minute of video was reviewed and a record made of the types of speech acts that occurred (i.e. Active, Passive, Direct, or Indirect). This aspect of coding speech acts that occur during a given time interval along with the idea of a time pause has little meaning when one looks at dialogue in written online environments. Time intervals in online learning environments will be more closely related to time between posting, as discussed by Neff (1998), instead of the idea of what occurs every x minutes as described in Flanders's work and Saba and Shearer's work.

Diana Laurillard's Work

In Laurillard's (1993) work, she outlines "a conversational framework for describing the essential elements of the learning process" (p 81). Her work describes four key elements of an educational conversation.

1. Discursive: allowing discussion between student and teacher, where each expresses his/her conception of how some aspect of the world is to be described, and reacts to the other's description;
2. Adaptive: where, assuming a didactic intention the teacher adapts the students' interaction with the world to enable them to experience it from the teacher's perspective;
3. Interactive: allowing students to interact with the world in ways that extend or enhance their experience; and
4. Reflective: where students reflect upon their experiences and their relation to the teacher's description and thereby adapt their own conception and their description of it.

In general, Laurillard (1993) describes the flow of an educational conversation where it starts with a statement by the teacher that leads to a discussion and further refinement based on the students' comments. It may then move to an inferential interactive stage where the instructor draws upon the students' real world experiences to help them grasp the new concepts. This then leads to the reflective stage where the students combine their interactive experiences with the new concepts. Laurillard describes the process in the following way:

At the discursive level, teachers and students exchange views, and their reasons for them, and that may be sufficient. But if a discrepancy arises, as in the student's supposition that 'you can tell by looking', the teacher adapts the discussion, to lead it towards discussion of a common experience that will allow consensus between them. The interactive phase does not require, in this case,

direct interaction with the world by setting up the experiment ... their past experience is sufficient to allow agreement about the interpretation of the event.

The student's reflection on that event then allows her to express her description of it as a new conception of an aspect of the issue under discussion. (p. 83)

Laurillard's (1993) description of an educational conversation is similar to how Saba and Shearer (1994) saw the educational dialogue flowing from teacher direct, to student active, to teacher indirect, to student passive, and back to teacher direct as other new concepts were introduced. This is the essence of the systems model they proposed around transactional distance. What Laurillard's four elements provide is a descriptive means by which coders or raters of dialogue can determine the stage of dialogue. Other than just saying the instructor was being indirect, the rater can use the idea that the instructor was being adaptive or interactive in their approach. Laurillard's elements of conversation mirror Burbules's (1993) dialogic moves, in that adaptive and interaction can be seen as either building or redirecting statements.

Of further importance in Laurillard's (1993) work is the acknowledgement that the conversational framework will play out quite differently for novice vs. expert learners. In her work she recognizes that for a novice learner an unstructured approach in dialogue or how information is presented, whether face-to-face or through media, can be "a nightmare of confusion" (p. 87). Novice students do not have enough experience with the subject matter to draw the necessary links to other knowledge and thus the dialogue may be very direct and one-way, in terms of a lecture, with little room for what she calls adaptive or interaction. As such, it may be a lecture or presentation of information only and does not count as educational dialogue. Here Laurillard's reference to the novice

learner is similar to how Burbules (1993) described the “Zone of Proximal Development” proposed by Vygotskii, and would imply that it would be better to test a classification scheme with upper level classmates or graduate students to assure that one will be able to capture sufficient dialogic moves/speech acts to examine a studies hypothesis.

Cookson and Chang Study

Cookson and Chang (1995) reported on the progress of the development of a multidimensional audioconferencing classification system (MACS) that looked at “systematic small-group interaction analysis, systematic classroom interaction analysis, and interaction in distance education” (p. 18). Their study built upon the works of Bales’ (1950, cited in Cookson and Chang, 1995) Interaction Process Analysis Scale, Flanders’ (1964, 1970) work, and Ober’s (1968, cited in Cookson and Chang, 1995) Reciprocal Category System. However, the early work on the multidimensional classification system proposed by Cookson and Chang looked primarily at the instructor/participant responses to being at a distance, and the instructional procedures.

The first dimension, instructor/participant responses to being at a distance, is similar to dimensions of classroom management and communication maintenance, and are related to interactions around class structure, attendance, technology issues, use of other technologies to assist with visualization, and other administrative aspects of conducting a class at a distance via audio. The second dimension, instructional processes, is similar to Burbules’s (1993) thinking around dialogue towards understanding and motivation. Of interest is how Cookson and Chang (1995) separated the motivational interactions, or what they referred to as Social Emotional Dimensions, into positive and negative categories. The positive categories of “shows solidarity, agrees, and

acknowledges” (p. 34) are statements that can stimulate dialogue and may lead to a feeling of connectedness. The negative categories of “disagrees, corrects (behavior is inappropriate or incorrect), shows tension, and shows antagonism” (p. 35) are statements that can close off dialogue and likely isolate students from feeling connected to the learning exchange. The social emotional dimensions of Cookson and Chang’s (1995) multidimensional classification system informs this studies proposed classification scheme on dialogue as they assist in separating conversation interactions that support dialogue and connectedness from those that close off dialogue and form a sense of isolation for the student. Their categories are also similar to those proposed by Swan (2002) in her classification scheme for social presence.

Oliver and McLoughlin Study

Oliver and McLoughlin (1996) looked at the study of discourse and communications in a live interactive television (one-way video, two-way audio) setting, and built upon the work done by Laurillard (1993) and Henri (1992). In their analysis of interactions between the teacher and students, and between the students, they used a content analysis framework that was adapted from Henri’s framework for CMC content analysis. The main categories in the classification instrument used by Oliver and McLoughlin were: social, procedural, expository, explanatory, and cognitive. Here, they eliminated the participative category from Henri’s classification scheme that was focused on counting the number of messages in a CMC environment and they eliminated the metacognitive category that was proposed to look at messages that garnered a self-reflection of where a student was in their understanding or how they approached a task. Further, the interactive category, that was proposed to look at links between messages in

CMC, was replaced by the three categories procedural, expository, and explanatory that looked at the intent of the message or speech act.

The modified classification scheme proposed by Oliver and McLoughlin (1996) is an important step in helping move the scheme proposed by Henri (1992) towards one where intent of each message or speech act is considered. Their scheme also helps narrow what was considered as a cognitive message or as Saba and Shearer (1994) described as speech acts that were indirect by the instructor or active by the student, and separated the speech acts into procedural, expository, and explanatory or what Saba and Shearer saw as communication maintenance (procedural) and direct speech act by the instructor (expository and explanatory).

Oliver and McLoughlin's (1996) noted in their study that most of the interactions were originated by the teacher and that the types of interactions were dependent on the content area and whether the course was for credit or non-credit. For non-credit courses the interactions were typically expository (where the teacher responses to a direct question about knowledge or a skill, e.g., "What is the correct periodic table element?"), however, for the credit bearing courses the "explanatory and cognitive interactions were quite prevalent" (p. 120). Further, they state "instructors tend to use the interactive elements [in ITV] more to create a supportive and stimulating learning environment than for instructional purposes" (p. 121). These insights are important for helping understand how dialogue will likely manifest itself in different learning environments. Interactions that are supportive and provide encouragement, and are related to the motivation or social presence of the learner, are categories in a classification scheme that need to be captured as speech acts if their affect on connectedness is to be analyzed.

Neff Study

In a study that looked at speech acts in an online public relations forum listserv in 1994 and again in 1997, Neff (1998) added support for the idea of a complete cycle in online dialogue. Neff drew heavily upon the work of Searle (1969) and proposed a quantitative means of classifying speech acts that were “dialectic with two or more interactions” (p. 351) and lead towards what Neff referred to as “language for action” or the social construction of knowledge.

In Neff’s (1998) study, he looked at each cycle for an initiation, a type of response, and a declaration of completeness. Neff then weighted each speech act with an initiation being either a declaration statement worth two points or a request worth one point; a response as either a Promise (two points), a simple No (one point), or a Yes, but with a counteroffer worth two points. A declaration of closure, or a statement that acknowledges that the cycle was complete and the speaker, who initiated the cycle, is satisfied with the response(s) was weighted as one point. This type of cycle is very similar to how Cazden (1998) and others have viewed a complete speech act cycle, but Neff adds an interesting component to his weighted classification scheme: time. In his study Neff also awards one point for timeliness of a response. Although he does not explicitly set a threshold for timeliness, he implies in his analysis and examples of coded speech acts that immediacy or statements responded to within 24 hours are timely and are awarded one point. For example, a response to a request that did not occur for 25 days was not considered timely, whereas responses that were almost immediate were awarded a single point. Therefore, Neff’s analysis implies that timeliness is within a 24-hour

window from the initiation to a response and within 24 hours from the time a response is posted until a declaration of completeness or another response is received.

Neff's (1998) study illustrates how speech act theory can be applied to an online interactive environment, and introduces the idea of time into the coding scheme of speech acts. From Neff's work it could be implied that if a posting to initiations or responses does not occur within a timely (24 hour) period then the speech act cycle falls outside the realm of dialogue and the initiations or responses move into the classification of a monologue or statement of fact, etc. Thus, the combination of the ideas of complete cycles and timeliness of response provides yet another tool for being able to classify a speech act as being part of a dialogue towards the construction of knowledge or simply a stand-alone statement. However, this premise needs to be explored in more depth and is outside the scope of this study.

Offir, Lev, Lev, Barth, and Shteinbok Study

In a study conducted by Offir, Lev, Lev, Barth, and Shteinbok (2004) the authors examined if "transactional distance elicits significantly different patterns of verbal and nonverbal teacher-student interactions in conventional and synchronous video-conferencing based DL environments" (p. 102). This study is significant in that it helps build upon the importance of the nonverbal aspect of dialogue in bridging the communication gap in distance education and leads support to the concept of Passive introduced in Saba and Shearer's (1994) study. As highlighted in the Offir et al. study, Knapp (1978, cited in Offir et al., 2004) found that "approximately 70% of messages transmitted in inter-personal communication are non-verbal ones transmitted by body language" (p. 104). This finding is important to help further the understanding of Passive

in the classification system of interaction proposed by Saba and Shearer and to inform the idea of social presence. The question of how non-verbal communications plays out in online learning environments needs to be examined. Are the nonverbal aspects of an educational exchange transmitted through emoticons, through the tone in messages, or in a student's summative posting? Also, the idea of Passive is difficult to code as a part of a dialogic classification system, as intent cannot be determined through analysis, but the presence of passive behavior needs to be captured.

The study by Offir et al. (2004) used a five-category content analysis instrument based on earlier categorization systems developed to look at interaction in distance education. The five categories used to classify interactions were:

1. Social interaction: The teacher/student talks in order to create and develop a social relations system.
2. Procedural interaction: The teacher/student dialogue serves for transmitting information concerning the requirements of the course and related procedures.
3. Expository interaction: The student or teacher expresses their knowledge in response to a question from the other party.
4. Explanatory interaction: The teacher uses the students' responses in order to explain and develop subject content presented in the lesson.
5. In-depth interaction: The teacher gives constructive feedback to the student, which will cause the student to re-examine his ideas (reflections) and consider points for an alternative view.

When compared against the classification system proposed by Saba and Shearer (1994) we see that the first two categories fall into what Saba and Shearer considered communication maintenance and what others described as motivational or social presence speech acts. The Expository, Explanatory, and In-depth categories fall into either teacher direct/indirect or student active depending on who initiated the dialogue. Also, the last three categories are associated with what Burbules (1993) described as responses, building, and redirecting statements.

Offir et al. (2004), built upon the work of Bretz (1983) and like others “defined verbal dialogue interactions operationally as a three stage process. In the first stage of communication, one of the parties transfers information. In the second stage, preliminary response to this information is obtained. In the third stage, a second answer which refers to the preliminary response is obtained” (p. 108). This approach is again similar to what Cazden (1988) referred to as the IRE sequence in classroom discourse and is similar to how Neff (1998) discusses dialogue in online learning where it needs to be characterized by an opening, a response, and a closing statement. A review of Bretz’s (1983) work “Media for Interactive Communication” highlights two other important aspects of personal communicative interactions. First, when there are only two actions, the initiation of an action or sending of a message followed only by a single response without a recurring interaction then this should be viewed as “quasi-interactive.” And second, lapse of time between the sending message and receiving a reply is important to the communication. Here Bretz (1983) states, “Interaction generally works best when there is the least time lapse between the sending of a message and the reception of its reply” (p. 21). Although Bretz, like Neff does not indicate an acceptable timeframe in which the

communication interaction should occur he does imply that the longer the intervening time between message–reply–response, the more likely the originator will have forgotten the importance or intent of the message. These aspects of communication interaction, the closing of a communication cycle, and timely response, are important considerations to the classification of dialogue in online learning environments and for establishing a conceptual definition of what constitutes dialogue in online learning environments. However, for this study the idea of timeliness is set aside and is beyond the scope of the study.

Discussion

What is dialogue? This chapter has laid the foundation for a conceptual definition of dialogue for studies exploring the theory of transactional distance. It has examined the literature on dialogue, discourse analysis, and speech act theory in order to propose both a conceptual definition of dialogue in online learning environments, and to propose a structure and a classification scheme of dialogue for online educational exchanges. The classification scheme should not only capture what may be considered as dialogue, but all speech acts so the system is inclusive as discussed by Flanders (1970).

Chapter 3

Methodology

This study is a critical analysis of one of the key variables “Dialogue” that is central to the theory of transactional distance. The research is exploratory in design and employs aspects of content analysis and ethnographic techniques. As discussed by Walker (1985) this type of study is preliminary and designed to provide concept clarification and instrument design.

The exploratory design of this study strives to provide a deeper understanding of what is meant by dialogue in relation to the theory of transactional distance and within the realm of online asynchronous distance education courses. The study seeks to provide a grounded conceptual definition of dialogue based on the works of Moore (1980, 1993) and Burbules (1993), and the study proposes a classification scheme for dialogue based on the work of Burbules’s dialogic forms and moves, and informed by the works of Flanders (1964, 1970), Henri (1992), and Saba and Shearer (1994). The study uses a form of content analysis as described by Krippendorff (1980) and is informed by the work of Searle (1969) in relation to the unit of analysis used in content analysis studies. The *a priori* classification scheme, that is proposed, is tested for both inclusiveness of all educational speech acts, and tested to assess which written speech acts, from a course’s discussion forums, should be categorized as dialogue towards understanding and which should be classified as dialogue towards conversation. Thus, the outcome of the study is both a grounded conceptual definition of dialogue and a proposed classification scheme for dialogue in online asynchronous learning environments, used to determine why

certain speech acts are considered as dialogic, whereas others are not. As stated by Adams and Schvaneveldt (1985) the exploratory nature of this study is to "...seek out new insights, ask questions, and assess phenomena in a different perspective" (p. 103).

The intent of this chapter is to outline the research methodology and research design used to develop the proposed classification scheme for dialogue, that evolved out of the literature review in Chapter 2, and describe how the classification scheme was tested and informed for the inclusion of new categories. Further, this chapter reviews how the discussion forums, in the Spring 2009 semester of an ADTED 507 course, are examined and how certain threads are explored in-depth for whether the postings did or did not denote dialogue towards understanding. The research design of this study does not rely on a single method, but is a combination of critical analysis of the literature on dialogue in educational environments, and is a form of content analysis. As described by Bloome et al. (2005), and Henri (1992) the method used here for content analysis starts with an *a priori* classification scheme and is then informed through testing and application.

Research Design

The design of this study is informed heavily by the work of Bloome et al. (2005), Searle (1969), Rourke, Anderson, Garrison, and Archer (2001), and the work of Krippendorff (1980) on content analysis; and by Sanders (1976) and Walker (1985) on participant observation techniques in ethnographic studies. The design of this study is inductive, as it draws from the literature in helping to construct a conceptual definition of dialogue in distance education environments, and to construct the *a priori* classification

scheme for dialogue in online learning environments. The classification scheme is tested for inclusiveness to assure that all speech acts within the observed educational conversation, in an online asynchronous environment, can be captured in the classification scheme.

Participant Observation

This study is not a traditional ethnographic study in terms of the researcher spending time "... in the normal flow of social life in a setting, organization, or culture." (Sanders, p. 178). It is a form of ethnography where the researcher is attempting to "... describe a cohort's behavior ..." (Sanders, p. 177) in terms of how dialogue unfolds in online discussion forums and which written speech acts are dialogue towards understanding. Only through following the flow of the conversation can the intent of individual written speech acts be categorized.

Content Analysis

Discourse/content analysis is a documented methodology and practice used in the analysis of linguistic events or written conversations. Bloome et al. (2005) discuss discourse analysis as a method by which the researcher analyzes the meaning of message units or speech acts to construct, validate, and test classification schemes that are proposed in order to delve into social, cultural, or hegemonic meanings behind educational exchanges. Discourse analysis or content analysis is a systematic way of analyzing content for meaning, trends, attitudes, values, etc., within the context of the environment whether that is social, organizational, or educational. This methodology can

be used to investigate manifest content (that which is apparent on the surface) or latent content, the deeper meanings contained within verbal or written statements.

Krippendorff (1980) states that content analysis is fundamentally empirical in orientation, exploratory, concerned with real phenomena, and predictive in intent (p. 9). He defines content analysis as "... a research technique for making replicable and valid inferences from data to their context" (1980, p. 20) and as stated by Stone et al. (1965, cited in Krippendorff, 1980), it is "...a research technique for making inferences by systematically and objectively identifying specified characteristics within a text" (p. 23). Content analysis parallels discourse analysis where the former and latter are both concerned with the meaning in the message unit and not the individual words used. For both content analysis and discourse analysis, the research technique is performed relative to and justified in terms of the context of the data. It is reliable in that those involved with the study or the area of study share the meaning of the data under investigation. As stated by Krippendorff, "... meanings need not be shared. Although consensus or intersubjective agreement as to what a message means would simplify a content analysis tremendously, it exists either only regarding the most obvious or 'Manifest' aspects of communication, or only for a few people that happen to share the same cultural and sociopolitical perspective" (p. 22). Walker (1985) shares a similar view for ethnographic studies and states, "Consequently there can be no absolute objectivity, but only agreements on truth and validity shared by people who hold the same meaning system, most notably by researchers of the same methodological persuasion" (p. 13). Thus, the findings of this study may only be shared by a few, whereas others may challenge the results given a different context outside of the examination of the theory of transactional

distance. Therefore, the transferability of the coding of individual speech acts may be limited and may be coded differently within a different context. However, a thorough description of how each speech act is reviewed and classified is provided, which should assist with transferability. Also, as a research technique, validity of content analysis studies is *ex post facto*, in that, "...others must be able to gather suitable evidence to see whether the inferences were indeed accurate" (Krippendorff, 1980, p. 28).

Content/discourse analysis is unobtrusive by nature, in that it reviews data after the fact and it accepts unstructured material in the review of the data. It is both quantitative in that the coded results can be quantified as numerical data, and it is qualitative as the analysis leads to observations about the data that can inform the *a priori* classification scheme. It is also a method that allows a researcher to review large volumes of data given enough time, personnel, and training of raters or coders of the data.

Rourke, Anderson, Garrison, and Archer (2001) provide a critical analysis of content analysis studies conducted between 1990 and 2000. Their analysis provides insights into the pros and cons of this type of research and examines many critical aspects of methodology associated with studies of this type. Key to their work is the desire to move content analysis studies beyond the descriptive nature and into more experimental designs. Also, they touch on the subjectiveness of looking at latent content or content/messages that are related to knowledge building or critical thinking skills, as compared to manifest content or that which is easily evident on the surface (i.e., number of posting, number of sentences or paragraphs, etc.). This study will rely on analyzing the latent meanings of speech acts and will not quantify the manifest aspect of the written speech acts.

Rourke et al.'s (2001) review of the methodology of content analysis studies for computer conferencing identified three key aspects of the studies: unit of analysis (message, word, sentence, theme, etc.), reliability (percentage agreement/inter-rater reliability), and research design (descriptive or experimental/inferential). They also identify five key steps in content analysis studies. These are: identification of representative sample, protocol for identifying and categorizing the target variable (*a priori* categorization system), training of coders, reliability assessment, and analysis.

Sample

This study is not concerned with random sampling of an audience. The *a priori* classification scheme is based on the literature review and is informed by the review of discussion forums drawn from a convenience/opportunistic sample of students from a single course, where the transcripts of the discussion forums are reviewed over a twelve-week period. Throughout the course, particular discussion forums are chosen for more in-depth examination of the written speech acts. Discussion forums chosen for in-depth analysis date from the beginning and middle of the semester. Speech acts occurring at the middle of the semester are selected, as the principal researcher anticipates fewer classroom management speech acts, and more speech acts around the subject matter. Further, as discussed by Saba and Shearer (1994), discussion forums dealing with a new topic are chosen to account for the ebbs and flow of dialogue, as students are first introduced to the subject matter and then feel more comfortable becoming active in the dialogue.

Proposed Classification Scheme for Dialogue

This research is interested in what constitutes dialogue, and thus, those message units or speech acts that are viewed as latent content. The literature review of this study has laid the foundation for a proposed classification scheme of dialogue in online learning environments. Although several content analysis studies reviewed by Rourke et al. (2001) drew upon the work of Henri (1992), this study is a blend of the works conducted by Burbules (1993), Searle (1969), Flanders (1964, 1970), Henri (1992), Saba and Shearer (1994), and draws upon other noted studies that were reviewed and were variations on many of these key works. Where determined important, ideas from these other studies are incorporated into the proposed classification scheme.

Training

Bloome et al. (2005), describe this type of research as a dance where the researcher both observes the dance and alters the dance through both their presence and the lens through which they view the variable. Normally, there is a need to substantially train coders so they understand the variables under review. However, this study is exploratory so it is premature to involve others in the analysis or the coding of speech acts, as the classification scheme needs to be tested for inclusiveness and the study looks to examine which speech acts are dialogic in intent and why. Therefore, for this study, no one but the principal researcher is engaged in the review of the discussion forums and written speech acts. Thus, the subjectivity of the proposed classification scheme needs to be recognized as that of the principal investigator of this study. Further, as the students do not know which discussion forums will be reviewed in-depth, it is hoped that the

researcher's presence in the course will be unobtrusive, and students will not behave differently in how they post responses or start threads. This will hopefully avoid "researcher-produced reactions" (Sanders, 1976, p. 183).

Reliability

In content analysis studies, the measure of reliability and whether the coding scheme can be used by researchers in future studies is critical. As Rourke et al. (2001) state, "...the definitive test of a coding scheme is replicability" (p. 13). In their paper, Rourke et al. (2001) describe two types of reliability measures: (1) Holsti's co-efficient of reliability that is a measure of percent agreement between coders, and (2) Cohen's Kappa statistic that is a "chance-corrected measure of interrater reliability" (p. 12). However, they reference that each researcher must decide on an acceptable level of agreement given the context and variable under study, as research of this type is subjective and subject to the influence of coders and the lens through which they view the world. Further, Rourke et al. (2001) state this type of research often requires compromise between meaningfulness of information gathered, productivity and efficiency in collection of data, and degree of reliability. As this study is exploratory and is not using others to code data, it is premature to look at reliability measures. It is hoped that in future studies, the classification scheme that is an outcome of this study can be used to further explore written speech acts in relation to the theory of transactional distance.

Analysis

For the discussion forums that are reviewed in-depth, speech acts will be reviewed using the proposed classification scheme. The theme of the discussion forum is

first identified, followed by the interactional unit, and then individual speech acts are examined. This approach is laid out by Bloome et al. (2005). This first step is designed to group speech acts by subject theme under discussion and then by topic threads or interactional units. Each speech act within an interactional unit is then reviewed for who initiated the speech act, for dialogic intent, dialogic form, and dialogic move as described by Burbules (1993). Dialogic intent defines whether a written speech act is dialogue towards understanding or other, and the dialogic form and dialogic move are qualifiers that help explain why the speech act is dialogue towards understanding and not other. Each dialogic move is examined for Direct, Indirect, Active, or Passive, based on who initiates the statement and as represented in the works of Saba and Shearer (1994) and Flanders (1970). Speech acts that are not denoted as having dialogic intent of “Dialogue towards Understanding” are classified as “Dialogue towards Conversation” or “Passive/Silent” and reasoning is provided along with discussion of any possible new category in the classification scheme.

Construct Validity

Validity for this study will come through future use of the conceptual definition and the instrument as discussed by Krippendorff (1980). Construct validity as stated by Merriam and Simpson (2000) “is established by both logical and empirical means” (p. 161), and it measures “the hypothetical constructs or concepts” (Creswell, 2003, p. 167) that the researcher proposes for a study. As discussed by Merriam and Simpson, “A construct is a theoretical explanation of an attribute or characteristic created by scholars for the purposes of study. Constructs are abstract and, having not been observed directly, are not considered actual behaviors or events” (p. 161). Thus, construct validity is

established logically through expert review and opinion, and then empirically through actual testing of the construct. As discussed by Krippendorff (1980), validity for content analysis is an *ex post facto* event in that others gain evidence to determine if the inferences about the construct under investigation are accurate through further use of the instrument. Thus, this study does not comment on the aspect of construct validity for the proposed classification scheme.

Use of Classification Scheme

It is often the case in content analysis studies and discourse analysis studies that the researchers have been able to use an existing classification scheme, or as a group of researchers they have tested a classification scheme and modified it through internal communications within the team members. These approaches have allowed researchers to move forward with the actual study of the characteristics of a variable under study. However, the intent for this study is to present the research community a classification scheme for dialogue in online asynchronous learning that may be used to further review key attributes of the theory of transactional distance. Testing of the proposed classification scheme for dialogue is central to the study in order to assure inclusiveness of all speech acts analyzed, and to assure that all speech acts examined and determined to be dialogic in intent are explored as to why they are dialogue towards understanding.

Selection of Sample Data for Content Analysis

As discussed by Saba and Shearer (1994), Lowell (2004), and Braxton (2000), dialogue will ebb and flow throughout a class session depending on where the class

occurs during the course. It is likely that one will see very low active participation by students early in a course and the majority of the speech acts, in the early stages of a course, will be lecture based. As the class progresses throughout the semester, students are likely to demonstrate a more active participation style and will not require as much direct lecture style by the instructor. Throughout one course, Braxton (2000) observed this change in behavior between novice online learners and experienced online learners as they progressed through the course. Swan (2002) also noted the increase of interactive social presence indicators, which are closely tied to the content under discussion, as a course progressed. Therefore, in order to assure that a representative sample of educational communication is examined in-depth with the proposed classification scheme, this study examines a discussion forum that occurred near the halfway point of the course.

The data examined is drawn from a non-quantitative course. It is assumed that a non-quantitative course will be richer in educational exchange, although this is not supported by any literature at this time. The primary focus of the data analysis is the group-based discussions. Further, the data is drawn from an online distance education course offered by Penn State's World Campus in the field of Adult Education.

This study is not looking to generalize the results to other populations or to describe trends in any particular variable, thus there is no need to have a random sample. The sample of student data examined will be purposeful, or as Creswell (2003) states, the participants are purposefully selected so they, "...will best help the researcher understand the problem and the research question" (p. 185).

Proposed Coding Sheet

A coding sheet that correlates to the proposed classification scheme is discussed in Chapter 4 and this sheet was used to code each speech act within the sample data reviewed. All speech acts within the threaded discussions examined were reviewed and coded.

Analysis

Each analysis of a participant's speech act is reviewed with the theme and interactional unit framework outlined by Bloome et al. (2005). Each speech act is classified by intent (Dialogue, Conversation, or Passive/Silent), based on dialogic form and dialogic move outlined by Burbules (1993). An explanation of why a speech act is dialogic or other is then provided. Each discussion forum/theme that was reviewed in-depth was examined four times. The first review was conducted when the speech acts were transferred from ANGEL (Penn State's learning management system) to the Excel spreadsheet for analysis; the second review occurred when each speech act was examined for intent, form, move and outcome, and rough notes were made on each speech act; the third review of the themes occurred when the rough notes were transferred to the Excel spreadsheet at which time each speech act was examined again to see if a re-reading of the speech act would change how the principal researcher had originally classified the speech act; and the fourth review occurred when the classified speech acts were examined for inclusion in the results section of Chapter 4.

The following table shows a representative example of how the data is analyzed. The analysis for this study did not use NVivo or other qualitative software analysis tools. Instead the researcher used Microsoft Excel to document the analysis.

Table 3-1
Proposed Content Analysis

Theme		
	Interactional Unit	
	Speech Acts	
	Student A	I'd like to propose that is was Reagan economic policy that started us down the path of economic instability that we now face. I would disagree with Student C that the problems stem from more recent actions. As discussed by....
	Intent/ Classification	Dialogue towards Understanding
	Form	Debate
	Dialogic Move	Building
	Reasoning for Classification	Student is building on discussion and debating premise put forth by Student C.
	Student B	I agree
	Intent/ Classification	Conversation
	Form	Conversation
	Dialogic Move	N/A
	Reasoning for Classification	As the student is not questioning, adding additional information, debating, or redirecting then the speech act is more social for motivation and support.

Throughout the analysis the principal researcher returned to earlier speech acts in the interactional units. This examination of the flow of the discussion was essential so the observed intent of individual postings was reviewed within the context of the educational exchange. Thus, while some individual speech acts may have appeared conversational,

outside the context of the educational exchange, the observed intent within the context was classified as dialogue towards understanding. Appendix A the “Flow of Speech Acts in Unit 3” depicts the interactional units within Unit 3 – Final Thesis Statement theme and shows how each speech act is related to previous postings.

What about time?

Unlike other content analysis studies that have occurred in the classroom, this study does not use a standard measure of time for coding. If this study did use time event coding as discussed by Flanders (1964, 1970) and Saba and Shearer (1994) (observations coded every 1 minute or 30 seconds) what would this mean? In written dialogue analysis, time is a measure of responsiveness between written statements (when posted), thus an act of coding X speech acts every Y minutes has no meaning in a study of online asynchronous educational conversation and dialogue.

Human Subject Review

At the Pennsylvania State University, guidelines exist for how research subjects will be handled. This study adheres to guidelines set forth by the Office of Research Protections under human subject research, and the proposed study was submitted and approved for an exempt review, as the subjects are not identified in the results.

Appendix B contains copies of the informed consent form and email that were sent to students in the selected class for the study.

Chapter 4

Results

As an exploratory and descriptive study the focus of the research is the development of a conceptual definition of dialogue, based on the literature review, and the development of a proposed classification scheme for dialogue in online learning environments. The intent of the review of the discussions forums from the ADTED 507 course is two-fold: (1) To examine how speech acts can be classified into one of the main categories using the proposed classification scheme, and (2) to examine if any additional categories or dialogic qualifiers emerge from the review of the speech acts. It is not the intent of the study to analyze speech acts in a manner where one could definitively state that knowledge, or an increase in understanding has been demonstrated by the student(s).

The results of this study are presented in four sections. Section I reviews the conceptual definition of dialogue that is drawn from the literature review. Section II outlines the building of the *a priori* classification scheme for dialogue based on the works of Burbules (1993) and informed by related studies discussed in the literature review. Section III examines, in-depth, speech acts captured in two discussion forums from the ADTED 507 Spring 2009 course. Speech acts are classified as dialogue, conversation, or passive/silent in relation to the conceptual definition and the review of the literature. This section also highlights those speech acts that do not easily fit into the proposed classification scheme. Section IV discusses additional dialogic qualifiers that are added to the classification scheme based on the review of the course discussion forums.

Section I: Conceptual Definition of Dialogue

The conceptual definition of dialogue presented here is in reference to online asynchronous distance education courses and in support of the theory of transactional distance.

As presented in the literature review, the conceptual definition is drawn from the works of Moore (1980, 1983a, 1993) and Burbules (1993).

In Moore's work from 1980 he states "Dialogue describes two-way communication between student and teacher" (p. 21). Also, dialogue is (Moore, 1983b) "... the extent to which, in any educational programme, learner and educator are able to respond to each other. This is determined by the content or subject-matter which is studied, by the educational philosophy of the educator and learner, and by the environmental factors, the most important of which is the medium of communication" (p. 157). Moore (1993) further expands upon his definition of dialogue and states:

Dialogue is developed by teachers and learners in the course of the interactions that occur when one gives instruction and the others respond... The term 'dialogue' is used to describe an interaction or series of interactions having positive qualities that other interactions might not have. A dialogue is purposeful, constructive and valued by each party. Each party in a dialogue is a respectful and active listener; each is a contributor, and builds on the contributions of the other party or parties. There can be negative or neutral interactions; the term 'dialogue' is reserved for positive interactions, with value placed on the synergistic nature of the relationship of the parties involved. The direction of the

dialogue in an educational relationship is towards the improved understanding of the student. (p. 23-24)

Burbules (1993) in his philosophical work on dialogue in teaching highlights key aspects of dialogue. Central to these are:

...dialogue involves two or more interlocutors. It is marked by a climate of open participation by any of its partners, who put forth a series of alternating statements of variable duration (including questions, responses, redirections, and building statements) constituting a sequence that is continuous and developmental. Dialogue is guided by a spirit of discovery, so that the typical tone of a dialogue is exploratory and interrogative. (p. 7-8).

Burbules also states that:

Dialogue is not like other forms of communication (chatting, arguing, negotiating, and so on). Dialogue is an activity directed toward discovery and new understanding, which stands to improve the knowledge, insight, or sensitivity of its participants. (p. 8) ...dialogue is not fundamentally a specific communicative form of question and response, but at heart a kind of social relation that engages its participants. A successful dialogue involves a willing partnership and cooperation in the face of likely disagreements, confusions, failures, and misunderstandings. Persisting in the process requires a relation of mutual respect, trust, and concern-and part of the dialogical interchange often must relate to the establishment and maintenance of these bonds (p. 19-20).

Thus, drawing from the works of Moore and Burbules this study defines dialogue as:

an educational exchange that involves two or more interlocutors. It is marked by a climate of open participation, and is an interaction or series of interactions that are positive. These interactions are purposeful, constructive, and valued by each party and lead to improved understanding of the students. Dialogic interactions are a series of alternating statements (including questions, responses, redirections, and building statements) that are continuous and developmental, and where the interactions persist in the face of disagreement, confusion and misunderstanding. The direction of dialogue in an educational exchange or transaction is guided by a spirit of discovery and is towards improved knowledge, insight, or sensitivity of the students.

Dialogue is therefore an educational exchange or transaction that leads to a restructuring of a student's mental schema or neuronal networks (Zull, 2002). This restructuring helps the student think differently about a concept or develop a deeper understanding of the concept. In essence, it leads to the expansion of an individual's knowledge, or in rare cases to actual new knowledge contributed to a field of study. Further, dialogue is not conversation or statements that are primarily social in nature or simple "Yes" or "I agree" statements, which help motivate, but do not necessarily lead to enhanced understanding. Also, dialogue is determined by the meaning of the utterance or written posting, and is represented by postings that question, redirect, or build towards increased understanding of the subject. Dialogue may also encompass short monologues that lead to open discussion around a topic, but are not lectures, and dialogue may also be

represented as personal monologues where a student is simply talking to themselves about the content under study, where this is manifest in terms of a written statement where a student expresses their thoughts, but where no reply is anticipated. Further, dialogue is not conversation around communication maintenance or classroom management. Also, dialogue for this study is the observable manifestation of a written speech act. Although it is likely that both the students and the instructor go through a type of internal dialogue or internal monologue/reflection as they read and mentally construct a response, this is not an observable act and is not a part of the definition for this study. Thus, dialogue for this study is an observable educational exchange between two or more participants that is leading towards increased understanding. Although, it is recognized that increased understanding may also be arrived at through internal dialogue and reflection. It is also possible that the internal dialogues that students have as they read and reflect may be more common in expert learners and more autonomous learners, however this is conjecture at this stage, but may be important to examine in future studies.

The above philosophical view of dialogue, drawn from Moore's (1980, 1983a, 1993) and Burbules's (1993) work, is used to analyze the written speech acts of the students from the ADTED 507 class.

Section II: Construction of Classification Scheme for Dialogue, Conversation, and Passive

Drawing from the literature review, Burbules (1993) lays the foundation for a proposed classification scheme for dialogue. Table 2-1 Preliminary Formulation of

Classification System from the literature review shows two primary categories and the four basic dialogic forms discussed by Burbules and his dialogic moves.

Table 2-1

Preliminary Formulation of Classification System

Dialogic Intent	Dialogic Form	Dialogic Move
Dialogue towards Understanding	Inquiry Debate Instruction	Questions Responses Building Redirecting
Dialogue towards Conversation	Conversation	Regulatory

The dialogic forms of Inquiry, Debate, and Instruction are grouped under Dialogue towards Understanding or construction of knowledge. All of these dialogic forms are those that drive towards further understanding of a topic under discussion in that they are a form of critical inquiry. Conversation as a dialogic form is one that is defined as “general cooperation, tolerant in spirit, and a direction toward mutual understanding” (Burbules, 1993, p. 112). Conversation is geared towards inclusion and motivation, and although important as the glue that often keeps an educational exchange moving forward, it is a dialogic form that is more related to the idea of social presence and not one related to building increased understanding. Therefore, this dialogic form is separated out and is placed under the category Dialogue towards Conversation in Table 2-1, which includes the concept of motivation.

Burbules’s (1993) dialogic moves that are drawn from the literature review are also shown in Table 2-1 and are grouped with dialogic forms for understanding or

dialogic forms for conversation. Dialogic moves of questioning, responding, building, and redirecting are moves/speech acts that are seen as being directly related to helping build understanding and knowledge of a subject under discussion. Thus they are grouped with the dialogic forms of Inquiry, Debate, and Instruction. The dialogic move “regulatory” is associated with speech acts that are related to agreement, praise or reassurance (Burbules, p. 93-94), and is grouped under Dialogue towards Conversation.

Table 2-1 forms the bases of the classification scheme for this study. When combined with the work of Searle (1969) and Bloome et al. (2005), which provides a structure for the analysis (see Figure 2-3), the classification scheme expands to include the idea of educational theme, and interactional unit where each speech act under a particular theme and interactional unit is classified by intent, dialogic form, and dialogic move. Table 4-1 shows the expanded classification scheme.

Burbules also discusses the idea of dialogic outcomes. These outcomes such as Agreement, Non-agreement, Common Understanding, Little Understanding, and Irreconcilable help us further identify when a series of postings or speech acts are dialogue towards understanding in intent. Thus, dialogic outcomes are grouped with the overall “Dialogue towards Understanding” and shown in Table 4-1 below.

Table 4-1

Proposed Classification Scheme Showing Structure for Analysis

Theme				
	Interactional Unit			
	Dialogic Intent	Dialogic Form	Dialogic Move	Dialogue Outcome
	Dialogue towards Understanding	Inquiry Debate Instruction	Questions Responses Building Redirecting	Agreement Non-Agreement Common Understanding Little Understanding Irreconcilable
Dialogue towards Conversation	Conversation	Regulatory		

The proposed classification scheme based on Burbules's (1993) work is informed by the work of Flanders (1964,1970), Saba and Shearer (1994), Henri (1992), and others discussed in the literature review. Based on Flanders's work, the idea of who initiates the speech act and if the instructor is being direct or indirect, and if the student is being active or passive were important in face-to-face content analysis studies and may be important in online dialogic exchanges in helping determine dialogic intent. Thus, they have been integrated into the classification scheme for this study under dialogic form. The dialogic forms of inquire and debate can be initiated by the instructor or student(s) and are likely indirect type statements by the instructor or active statements by the student(s). For the dialogic form "Instruction" it is likely that the instruction is initiated by the instructor and is indirect, with the intent of stimulating dialogue.

Flanders's notions of who initiates the speech act and whether the speech act is Active, Passive, Direct, or Indirect are also seen in Saba and Shearer's (1994)

classification scheme. Saba and Shearer also introduce the notion of communication maintenance and classroom management, which are different from Burbules's discussion of regulatory statements. These speech acts which are primarily related to assignments (i.e., what will happen in the class for the day's session), keep the discussion on track, or help guide students through the discussion, however, they are not dialogue towards understanding and fall under the grouping of speech acts related to conversation.

Drawing on other works from the literature review, another dialogic move that is related to Dialog for Conversation is the idea of structure introduced by Bellack et al. (1966). Structural speech acts are related to helping set the stage for the upcoming conversation or what Gagne (Gagne, Briggs, and Wager, 1992) discussed as advanced organizers for learning. Although Burbules indicates that short monologues or lectures that help initiate dialogue are dialogic in intent, for the proposed classification scheme "structuring" will be viewed as conversational with the intent of initiating dialogue. Whether positioning structure with dialogue towards conversation is appropriate is examined in the review of the discussion forums.

Further, the idea of Social Presence discussed by Henri (1992), and Cookson and Chang (1995) is included in the classification scheme under the grouping of Dialogue towards Conversation along with the idea of statements that close off dialogue, which is discussed by Burbules, and Cookson and Chang. Speech acts that close off dialogue are statements that abruptly end the educational exchange and cut off any further speech acts. Therefore, under dialogue outcomes the ideas of "Understanding of assignments/activities," "Feel connected and supported in learning process," and

“Isolation” have been added to the classification scheme to assist in identification of speech acts.

Finally under dialogic intent, the broad category of Passive/Silent is added. This category is added to capture speech acts that Laurillard (1993) refers to as reflective type speech acts where it is likely that no response is anticipated and the speech act is a type of personal dialogue where one is articulating their thoughts. The passive category would also take into account the idea of silence or limited postings by students; however, this category needs much attention in later studies and may not hold up following the review of transcripts from the ADTED 507 course.

Table 4-2 shows the final *a priori* classification scheme for dialogue that was used as a starting in this study.

Table 4-2

A Priori Classification Scheme for Research Study

Theme						
	Interactional Unit					
		Who	Primary Dialogic Category	Dialogic Qualifiers		
			Dialogic Intent	Dialogic Form	Dialogic Move	Dialogue Outcome
			Dialogue towards Understanding	Inquiry – Indirect/Active Debate – Indirect/Active Instruction – Direct/Indirect	Questions Responses Building Redirecting	Agreement Non-Agreement Common Understanding

						Little Understanding Irreconcilable
			Dialogue towards Conversation	Conversation	Regulatory Classroom management Communication maintenance Structuring – advanced organizer Social Presence Close off Dialogue	Understanding of assignments, activities, etc Feel connected and supported in learning process Isolation
			Passive/Silent	Reflective		

The primary classification category “Dialogic Intent” in Table 4-2 has three possible types: Dialogue towards Understanding, Dialogue towards Conversation, and Passive/Silent. The classification qualifiers of dialogic form, move, and outcomes exist to help the researcher classify speech acts and to justify why speech acts are categorized as one of the three primary types under dialogic intent.

Section III: Review of Transcripts from ADTED 507

At the mid point of the spring 2009 semester a meeting was held with the instructor of the ADTED 507 course. During this meeting it was determined that the following threads in the course should be scanned as a starting point in analyzing the speech acts in the discussion forums.

Research Critique Team 3

Unit 2 – Gender Effects Article

Unit 2 – My Research Question

Unit 3 – Final Thesis Statements (Teams)

Unit 3 – Thesis Team 3 Review

Unit 4 – Focus Groups

Unit 6 – Sampling

Unit 11 – Evaluation – Team 3

After reviewing the above threads it was determined that Unit 3 – Final Thesis Statement and Unit 6 – Sampling would be used for an in-depth review of speech acts. The reason for choosing these two units is discussed below.

The “Research Critique Team 3” thread was primarily structural and regulatory type postings around the assignment. The posts tended to be about process, format, and directions around the assignment. Although there was likely critical thought around the critiques of the articles that the students reviewed, it happened outside the discussion forum and may have occurred within the MS Word documents being shared by students through email. The following is a typical post from the students:

Student X & Student Y provided a great template to start, I think we should do the same, keep everything consistent. Student M & Student N both you wrote nice reviews earlier, would either of you like to start us off again? Quantitative: - Quigley, B. A. and Uhland, Roberta L. (2000). Retaining adult learners in the first three critical weeks. A quasi-experimental model for use in ABE programs. Adult Basic Education, 10(2): 55-68.

Unit 2 – The Gender Effect Article discussion forum was a critical review of the article by students in the course. The postings in this discussion forum started with long critiques of the article and were then followed by short threads of interaction. The length

of the threads increased towards the middle of the discussion forum and became shorter near the end of the forum.

Unit 2 – My Research Question discussion forum was focused around helping the teams formulate their research questions. There was substantial interaction in multiple threads as the students assisted each other in the formulation of the teams' research questions.

Unit 3 – The Final Theses Statement (Teams) discussion forum focused on a thesis generation activity. There was substantial interaction and what appeared to be dialogic posts as teams worked to take their research questions and formulate thesis statements. In the discussion forum there were several long threads and a number of posts by the instructor. There were also several side bar type discussions, as comments from students lead to posts that appeared to be both social in nature and some that redirected the discussion from the main topic. The overall structure and diversity of posts in this discussion forum made it a strong candidate for an in-depth review of the speech acts in relation to the classification scheme for dialogue.

Unit 3 – The Thesis Team 3 Review discussion forum is another forum where the postings were primarily structural and regulatory. Again, the postings tended to be about process and deciding which thesis statement should be used for the team. Here, final thesis statements were presented, but there were few educational exchanges in the forum.

Unit 4 – The Focus Group discussion forum had several threads with multiple posts. The forum was a discussion of focus groups: what are they, how are they structured, and how effective are they? Within this discussion forum there were again several posts from the instructor and many posts that appear to be dialogic in nature. This

is another discussion forum that was a strong candidate for an in-depth review of the speech acts in relation to the proposed classification scheme.

Unit 6 – The Sampling discussion forum was similar to the Focus Group discussion forum. It had several threads with multiple posts and many posts by the instructor. It was also a forum that drew heavily on the literature around sampling as the students explored what is a good sample size, how is it determined, what about non-experimental designs (no control group), etc. This was a forum where students really strived to understand the topic and appeared to be a discussion forum with several dialogic type posts. This discussion forum occurred in the middle of the course and was another good candidate for an in-depth review of the speech acts.

Unit 11 – The Evaluation – Team 3 discussion forum was towards the end of the semester. Although similar in nature to the Focus Group and Sampling forums it did not tend to have many threads or lengthy threads. The posts tended to be summative in nature around the topic of evaluation and were not dialogic in nature. Although the posts showed critical reflection and thought around the topic, there was limited interaction after each initial post in a thread. The reduced number of posts in this discussion forum may have been a result of students nearing the end of the semester and being focused on wrapping up final assignments. However, this is speculative and would need to be addressed in a future study. The following is a sample post from this discussion forum showing the summative nature:

•Level 1: Reaction Evaluation I would have trainees complete a reaction/comment sheet that would primarily result in quantitative data with the opportunity to express opinions/provide feedback in response to some open-ended

questions. •Level 2: Learning Evaluation I would administer a pre-test/post-test for trainees with a participating control group to better assess on-the-job transfer of skills. •Level 3: Transfer-of-Learning Evaluation I would conduct a 360 degree assessment of pre/post job performance periodically again attempting the use of a control group in an attempt to eliminate the likelihood of improvement based on the influence of variables in the workplace beyond the training. This assessment would be based on performance objectives established by the employee. •Level 4: Results Evaluation Assuming the completion of a results evaluation would even be possible, I would likely avoid a complex utility formula in favor of a pre/post-test system in an attempt to measure the measure the impact of the training. How would you ensure that your evaluation is utilization-focused? I would ensure that my evaluation is utilization-focused by getting key stakeholders involved in the process from start to finish soliciting the feedback of all those involved along the way. How would you include both formative and summative data collection? The formative data collection would take place at the start of the two-year period when the training program is being developed and the summative data collection would likely occur at the end of the one-year and two-year mark. What research design(s) and method(s) would you use? (Don't be constrained by the research methods that Kirkpatrick specifies at each level!) I would rely largely on the research methods suggested by Kirkpatrick with the exception of level 3. At level 3 I would integrate Endres & Kleiner's concept of the multi-dimensional on-the-job evaluations. Conclude by stating the strengths and limitations of your evaluation plan and the reasons that your supervisor should approve this plan.

This is an overall strong plan given the integration of formative data collection, reaction/comment sheets, pre/post-testing efforts with the inclusion of a control group (if and where possible), and summative data collection over a two-year period. The plan exhibits significant weakness where ethics are concerned (i.e. – instituting control groups leads to decisions regarding who should and should not have access to training).

The review of the above discussion forums, which were suggested by the instructor of ADTED 507, lead to the decision to do in-depth analysis of Unit 3 – Final Thesis Statement and Unit 6 – Sampling. Both of these discussion forums appeared to have good diversity in the type of postings made and appeared to have several threads of good length that provided a mix of speech acts that could be categorized using the proposed classification scheme for dialogue. They were also chosen from two different time periods of the course. One discussion forum was near the beginning of the semester and one in the middle of the semester.

Summary of In-depth Review of Unit 3 and Unit 6 Discussion Forums

Within the discussion forums related to Unit 3 – Final Thesis Statement, and Unit 6 – Sampling there were a total of 159 speech acts posted. Of these speech acts, 130 were easily classified as “Dialogue towards Understanding” or “Dialogue towards Conversation”. Twenty-nine speech acts lead to internal debate by the principal researcher in regards to how to best classify the speech acts using the proposed classification scheme. Also, the 29 speech acts that were difficult to classify lead to the inclusion of additional dialogic qualifiers, discussed later in Section IV. Table 4-3 shows

the number of speech acts from Unit 3 and Unit 6 that were easy to classify and the number that lead to internal debate and require more discussion around them.

Table 4-3

Summary of Ease of Classification of Speech Acts

ADTED 507 Discussion Forums	# Speech Acts Easy to Classify	# Speech Acts Difficult to Classify	Total Speech Acts
Unit 3	59	15	74
Unit 6	71	14	85
Total	130 (81.7%)	29 (18.3%)	159

Of the 15 speech acts in Unit 3 that lead to an internal debate about classification, six were related to the need for additional dialogic qualifiers, and three were in relation to further clarifying the idea of Conversation – Advanced Organizer for opening posts. Thus, only six speech acts in unit three or 8.1 percent truly lead to debate about dialogic intent and whether the posts were Dialogue towards Understanding, Dialogue towards Conversation, or Passive/Silent. Of these six, three speech acts were debated in terms of whether they were reflective or rhetoric and thus passive, and three were debated due to the lack of follow-up posts and thus the lack of closure. In Unit 6 of the 14 speech acts that lead to debate seven were related to new dialogic qualifiers, one was related to clarification around social presence vs. regulatory type conversation speech acts, and three were again related to the clarification of “advanced organizer – structuring” conversation speech acts for opening posts. Thus, only three speech acts from Unit 6, or 3.5 percent of the speech acts lead to debate around dialogic intent and whether the

speech acts were Dialogue towards Understanding, Dialogue towards Conversation, or Passive/Silent. Again two of these were associated with reflective type speech acts and one where the speech act was a single post with no follow-up posting. Therefore, of the 159 speech acts examined in depth only nine or 5.7 percent lead to debate around dialogic intent and were truly difficult to classify using the proposed classification scheme.

The following discussion of the in-depth of review of Units 3 and 6 exemplify how the classification scheme was used to classify speech acts that did not lead to internal debate, and highlights speech acts which were difficult to classify and those that lead to the inclusion of additional dialogic qualifiers.

In-depth Analysis of Unit 3 – Final Thesis Statement (Teams)

The Final Thesis Statement discussion theme had three primary interactional units, one by each student team where they started by proposing a research question and thesis statement. There was a good mix of dialogic speech acts and conversation speech acts in each interactional unit with the first unit having the most activity where many of the dialogic speech acts consisted of building type dialogic moves. Also, there were a number of postings that lead the principal investigator to debate whether additional categories were needed in the proposed classification scheme. Further, not all speech acts necessarily lead immediately to a dialogic outcome. There were a total of 74 posts in the Final Thesis Statement discussion forum, of which 59 were easily classified using the proposed classification scheme for dialogue.

The Final Thesis Statement discussion forum had posts related to an activity where each course team choose a problem from a prescribed list and then posted a

statement that addressed three questions: (1) the proposed research question, (2) the proposed thesis statement, and (3) why the research study is important. Each team had a lead person post their statement addressing the three questions and then all members of the class helped analyze the statement through debate and changes were suggested. The discussion forum was analyzed using an Excel spreadsheet that had the following layout for each speech act in the forum.

Table 4-4

Example of Excel Spreadsheet Layout

Interactional Unit			
Speech Act			
	#	Instructor or Student xxx	
		Dialogic Intent	
		Dialogic Form	
		Dialogic Move	
		Dialogic Outcome	
		Reason for Classification	
		Requires new category in classification scheme	

For each speech act/posting the person who initiated the speech act was identified using a code (e.g., Student A, Student B, etc.), then the primary category “Dialogic Intent” was determined informed by the dialogic qualifiers of dialogic form and move, and by the dialogic outcome if one existed for the speech act. A reason was then provided for why the classification was either Dialogue towards Understanding or Dialogue towards Conversation, and a note was made if there was a possible need for an additional dialogic qualifier in the classification scheme. A note about a possible new dialogic qualifier usually resulted when the principal investigator felt the post did not easily fit

into one of the primary categories or if the classification could not be supported by one of the existing qualifiers.

The following is a selection of written speech acts that demonstrate how speech acts in the Final Thesis Statement discussion forum were classified and provides a justification for the classification. Also, those speech acts that lead to debate about classification and questions of whether additional categories were needed are displayed and discussed. The first eight examples demonstrate the use of the classification scheme for determining if the intent of the speech act is Dialogue towards Understanding or Dialogue towards Conversation. The full in-depth analysis of Unit 3 – Final Thesis Statement is included as Appendix C for reference in relation to the following examples.

Example 1 – Dialogue towards Understanding – Speech Act # 2

Student C posts in response to the initial research question and thesis statement presented by one of the teams. She writes:

“I wonder whether it is really more valuable to start off so broadly; surely one will likely not need or be able to ascertain "all" contributing factors? Thus I would have opted to focus on ascertaining key or major factors that can be strategically dealt with via follow-up action. Just a few thoughts from a research newbie.”

The speech act is classified as Dialogue towards Understanding for intent, with dialogic form being inquiry and debate, and dialogic move being question and building. In the speech act the student starts by questioning the breadth of the research question and then follows with a building statement that helps focus the research question and scope. In the speech act, it is interesting to note that the

student closes with a phrase that implies they may not know enough to contribute. Although the overall intent of the post is Dialogue towards Understanding this phrase could lead others to dismiss the post, as the person implies a lack of knowledge.

Example 2 – Dialogue towards Understanding – Speech Act # 5

Student M posts later in the same interactional unit and current thread and writes:

“If I am analyzing the possible causes of something I want to at least recognize what all the possibilities are. If in doing this it proves what I thought all along, even better.”

The speech act is classified as Dialogue towards Understanding for intent, with dialogic form being debate and dialogic move being response. In the speech act, the student who posted the original thesis statement continues the debate around focus of the proposed research study and supports her accretion of why the focus should be broad. The post is also in response to a previous question by another student.

Example 3 – Dialogue towards Understanding – Speech Act # 7

The instructor posts a statement related to the second post in the thread of the interactional unit. She writes:

“This is an important point. How narrowly or widely to “cast the net” in figuring out the scope of the problem is a judgment call on the part of the researchers. Focusing too narrowly may lead to failure to uncover the root(s) of the problem. If researchers ask questions about program design but the main problem is a cultural belief, they will be no closer to understanding the problem.

On the other hand, as you say, getting at all potential factors is impossible. Although it's true that the agency will not be able to control all factors that might be uncovered, it's often helpful to at least know what some of those are in order to be better prepared should the context change (for example, new funding becomes available, restrictive policies are relaxed, new personnel resources, such as volunteers, become available, etc.).”

Here the instructor provides instruction to the students. The speech act is both instruction and building on the dialogue to help students think more about the research question. It is also written in such a manner as to stimulate further dialogue and it does not close off dialogue by being a summative type of post. Here, the dialogic outcome is towards helping the students move towards a common understanding.

Example 4 – Dialogue towards Conversation – Speech Act # 9

This is a post to the original speech act posted by Student C. It is related to the proposed research question and thesis statement and starts a sub-interactional unit or sub-thread in the discussion. Student G writes:

“Keeping it simple is a very good approach. It leaves the door open to a number of possibilities for research and enables a future reader to be kept informed about what to expect.”

This speech act is classified as Dialogue towards Conversation for intent with a dialogic form of conversation and dialogic move of regulatory and social presence. Also the dialogic outcome is one of agreement and support. The speech act is a bit difficult to classify: although it starts with a statement of agreement

and support about keeping it simple, it also has an element of a building statement about keeping the focus broad. However, the post does not move the dialogue forward by questioning, debating, or re-directing the dialogue thus, it is primarily conversational and it also leads to the remainder of the sub-thread being conversational in nature.

Example 5 – Dialogue towards Understanding – Speech Act # 19

This is an interesting post, by a student, in a sub-interactive unit. The sub-interactive unit is related to the original post that outlined the teams proposed research question and thesis statement. The student writes:

“I find this discussion interesting, since the introduction of the 'Thesis Generator' includes the instruction to address an issue "that makes you curious, angry, or enthusiastic." So, in my mind, the things that cause anger or enthusiasm will not be neutral. So, can you have it both ways? Regards, xxx.”

The post starts out conversationally with the student showing support in regards to the discussion and restates part of the activity assignment. However, the student then provides a building type statement and ends with a question that continues the debate. Therefore, the speech act is classified as Dialogue towards Understanding, is a form of debate, and the dialogic moves are both building and questioning.

Example 6 – Dialogue towards Understanding – Speech Act # 22

This speech act is by the same student who made the post in Example #5. Here the student responds to speech acts posted in relation to his speech act in Example #5. The student writes:

“I see the need to be neutral in evaluating data, but you need to care about the project, even if only for a grade, or it wouldn't be worth doing in the first place.”

The student continues the debate about neutrality, but is almost restating a post by a student from two speech acts earlier. Also, it verges on conversation as he introduces ideas of doing the research for a grade and doing it for the grade is all that makes it worthwhile. The post also tends to lean towards non-agreement for dialogic outcome and is of a tone that could easily close off dialogue. By itself, the speech act appears conversational, but in context overall the post is classified as Dialogue towards Understanding with dialogic form of debate and the move being a responding move.

Example 7 – Dialogue towards Understanding – Speech Act # 23

Within the same interactional sub unit this post follows the speech act in Example #6. It is included as an example, as it is one of the few posts where a student steps into an instruction mode. The student writes:

“Student L, I don't think it is neutral in the sense that you don't care about the topic. I think it is being mindful of being neutral because you really really care about the topic. With my earlier comment about writing research questions being a real struggle I think because for one reason, an emotional attachment. Often when I write a research question on a topic of my choosing I think it is easy to focus on something that I am passionate about which can cause me to lose neutrality because I so much want to prove or disprove something. For me when I wrote this it was the importance of being aware of the danger of wanting so much

want to prove or disprove something and being careful to not get in my own way and letting the research speak for itself.”

In this speech act, the student steps into an instruction mode and tries to bring the various opinions of the team together to drive towards a common understanding. The student provides personal examples related to the theme and the speech act is not intended to necessarily stimulate further debate, but is one that builds on previous ideas and leads to common understanding. A post follows this speech act from the instructor that picks up on this speech act and provides further instruction through example. Thus, the speech act is classified as Dialogue towards Understanding, is a form of instruction, and the dialogic move is responding. It also drives towards an outcome of common understanding.

Example 8 – Series from New Interactional Unit for Team 2 – Speech Acts # 64, 67, 71

In this example all three speech acts are from Student L. They demonstrate how this student minimizes debate and moves to close off dialogue. Further, Student L posts the original speech act related to the teams proposed research question and thesis statement.

In the first speech act in this example Student L is responding to Student M's post that debates the proposed research question and the focus of the question and thesis statement. Student L writes:

“Student M, The first thing we discussed was a thorough needs assessment for the village. However, since that wasn't the focus of this academic exercise, we moved on with some assumptions, including analyzing the failed program and

some possible cultural issues. Certainly, this would be a lot to cover in one course, let alone one week. Regards”

This speech act by Student L is easily classified as Dialogue towards Understanding as the student responds to Student M and continues the debate around the research question and focus.

However, in the next speech act in this example, after two students provide additional posts debating the research question and focus, Student L responds with a speech act that cuts off on-going debate and ends this particular thread in the interactional unit. Student L writes:

“Ye, I agree that further study would be needed. As I mentioned, we all had to discuss and publish results within a week. We could all spend much more time on this, but we have other things to accomplish. Regards”

Based on the tone of the message, and the fact that all further educational exchanges end in the thread after this post, the speech act is classified as Dialogue towards Conversation with dialogic move of “close off dialogue”. In essence the student responds in such a manner as to close off further debate around the topic by indicating time was a limiting factor and he had things to accomplish.

In a similar manner, Student L responding in another sub-interactional unit/thread to the original Team 2 speech act posts a response that once again closes off dialogue. In response to speech acts debating the idea of needs assessment in the research question and thesis, Student L writes:

“We did discuss 'needs assessment' in our group. However, for the purposes of this assignment, we moved on to addressing the failed program and determining how to proceed from there.”

Again the tone of the speech act closes off further debate around the topic and the speech act is followed by a single speech act where a student simply responds to a previous post by Student C with a statement of agreement about the research question. Thus, the speech act is classified as Dialogue towards Conversation with a dialogic move of “close off dialogue” as Student L dismisses further debate by saying we discussed it but moved on to another area.

This series of speech acts by Student L shows how the tone of the message can close off dialogue and end a sub-interactional unit or thread in an educational exchange.

The next nine examples from Unit 3- Final Thesis Statement highlight speech acts that were difficult to classify, and discusses why they were not easily classified using the *a priori* classification scheme. Many of these examples also illustrate the possible need for additional dialogic qualifiers to assist with categorizing the speech acts as either “Dialogue towards Understanding,” “Dialogue towards Conversation,” or in a few cases “Passive/Silent” type posts.

Example 9 – Series of speech acts related to a Sub-interactional Unit

– Speech Acts # 30 - 32

The following three written speech acts are related to a sub-interactional unit within a thread, which is itself a sub-interactional unit to the original/opening post. The series begins with a post that is slightly off topic. Student K writes:

“Here is another article that raises questions regarding even the ability of "experts" and judges to evaluate the scientifically based "evidence" used in courts. Many of these people are likely not prepared for even the basic understanding of how "BIAS" these statistical inferences can be presented.

<http://arstechnica.com/science/news/2009/02/national-academies-we-need-better-science-in-the-courtroom.ars> SO NOW A JUDGE MAY NO LONGER USE HIS INTUITION, SCIENCE DETERMINES LAW? This also shows how the scientific based community, (that I implied earlier, had worked its way deep into our childhood mindsets), are now rallied around how good it is to have finally taken inroads into the judicial systems. Good bye gut feelings & sixth senses otherwise know as intuition. Hence my my question to each of you is this. Can scientific evidence ever be wrong? Has it been? If you can answer yes, then logically it can only be assumed that the tools and techniques of researchers have been unfairly BIASED by the scientific community due to its recent financial success the past 100+ years, ironically during the same time as the industrial revolution was occurring. I am not saying that science does not have its merits. But I do believe it has its limits when dealing with developing new research agendas! Perhaps a focus on "Neutrality" or "Unbiased" research is really just a way for a researcher to simply take the easy way out, it is after all much safer not to ruffle feathers of the scientific community. If you do everyone will consider you a "Quack". The poor souls looking for UFOs, BigFoot, and Elvis can attest to that. Besides how do you explain something that can't be scientifically proven YET ? I say Neutrality is for those who prefer to arrogantly observe rather than Engage with

their Subjects of Observations! In our social science field of adult education, I prefer to ENGAGE my subjects, it provides so much more insight and data. While stats can help generalize populations, the new ideas will likely come from engagement!"

The post by this student tends to be a bit of a rant that is loosely tied to the topic of the main interactional unit. The student redirects the educational exchange from bias and neutrality to the idea of scientific evidence in the court system. The question surrounding the post is whether the speech act is Dialogue towards Understanding, a rant, or a rhetorical post by the student about scientific research and if it should be Dialogue towards Conversation? Although the post does have elements of the topic related to bias and neutrality, the post tends to be one of posturing rather than a building statement. If the post were classified as Dialogue for Understanding then it would be classified as having a dialogic form of debate and dialogic move of redirecting.

The next post in this sub-interactional unit is by Student C who responds and tries to be supportive in a social presence manner. Student C also continues the dialogue or conversation around scientific evidence and the judicial system. The student writes:

"Interesting news report, Student K! The jury is to deal with facts, so they would not deal with scientific evidence. The judge, while equipped to deal with points of law, has always been in my view generally ill-equipped to deal with "scientific evidence" - I read this report as indicative of welcome advances in courtroom dynamics, that a judge be required to acquire knowledge of basic

statistics and scientific terminology and methodology, so he/she can keep on top of the submissions propounded by scientific experts and the parties' attorneys. After all we have an adversarial trial system, and the judge as the overall arbiter must be able to take on substandard/ flawed scientific or statistical evidence propounded by anyone in his/her courtroom that may affect the outcome of the hearing.”

Student C’s speech act could be classified as Dialogue towards Understanding or Dialogue towards Conversation depending on how the previous post by Student K is classified. If the post by Student K were classified as Dialogue towards Understanding then the follow-up post by Student C would also be classified as Dialogue towards Understanding with a dialogic form of debate and a dialogic move of response. To better classify these two speech acts a conversation is needed with a second and possibly third reviewer.

The next post in the thread is by the instructor who responds to the speech act posted by Student K. The instructor takes time to respond and provide instruction around the idea of good scientific research and refocuses the educational exchanges back to the dialogue around bias, neutrality, and the notion of the stated outcome of research. The instructor writes:

“A good scientist (one who adheres to the rules of scientific research design and analysis of data) will NEVER claim to have proven something (since to do so would actually violate one of the principles of scientific investigation). He or she will tell you that within the limits of the experiment the results offer the "best fit" conclusion from the data. A good scientist ALWAYS leaves open the

possibility that future work will call current conclusions into question. That's one of the reasons that most scientists (not to be confused with those who love to see their names in the headlines) are very cautious about public announcements of "breakthroughs." Indeed, if you read their actual quotes--not what some reporter provides as an interpretation--they usually say that it's important NOT to draw the conclusions that the reporter usually goes on to report. Good science results in important, although tentative, conclusions related to narrowly focused questions. However, since the questions about human behavior are seldom narrowly focused and don't lend themselves to rigorous experiments in which all variables are controlled, the pure "scientific" approach isn't much help in answering many of the questions we want to ask about teaching and learning. Coincidentally there was a letter to the editor in our local paper this morning from a Psychology professor at Penn State that noted that "science," is a way of obtaining knowledge about the physical world "through our physical senses more rigorously than any other way." He goes on, however, to point out that there are other types of knowledge that provide answers not to the what and how questions about our world (which science does admirably), but rather to the "why?" questions. Science or intuition or religion or experience or other ways of obtaining knowledge are neither good nor bad in themselves, nor are they mutually exclusive. However, each is more (or less) effective for answering different types of questions by providing different types of information. The fact that some people misunderstand and misapply a particular method for gaining

and communicating knowledge says nothing about the validity of that method. It only says something about the judgment of the person who misapplies it.”

This post by the instructor is easily classified as Dialogue towards Understanding with a dialogic form of instruction, dialogic moves of redirecting and building, and a dialogic outcome that is focused on common understanding. It is a question, however, of whether the first two posts in the series are Dialogue towards Understanding, Dialogue towards Conversation, or another new primary category around rhetoric. It is interesting that the educational exchanges that follow the instructor’s post are conversational in nature thanking the instructor for making the point about the intended outcome of research and what can or should be stated in research studies. This example is included in order to underscore the difficulty of classifying some speech acts without further consultation with other raters/coders involved in the same or similar research within the same context.

Example 10 – Dialogue towards Understanding – Speech Act # 37

Student D responds to an earlier post from the instructor and starts a new sub-interactive unit. The post is included as an example as it highlights the question around example as a dialogic form or move. Student D writes:

“Before I read your response, Instructor, that was one question that I had...Must we always be neutral?? What is wrong with wanting to prove something with one's research as long as they are absolutely open to whatever the results show? There have been plenty of people who have set out to prove something because they felt a passion about it only to find that their evidence didn't support their theory. I think of Josh McDowell, who set out to prove that

God didn't exist. He was very passionate about that theory, but after many years of research, came to the conclusion, in his book Evidence that Demands a Verdict, that God, in fact, does exist. I think the researcher can be biased as long as they are open to finding results that they didn't expect.”

The student responds to the instructor by first posing a question and then continuing the debate around bias and neutrality. She also introduces a concrete example of how a study that set out to prove one thing ended up moving in the opposite direction. Thus, the speech act is definitely of the dialogic form of debate and dialogic moves of questioning and building, but should example be introduced as a dialogic form or move?

Example 11 – Dialogue towards Understanding or Reflection – Speech Act # 44

The following is another post by Student K who throughout the theme and three main interactional threads emerges as a student who is quite opinionated, and their posts are lengthy and somewhat off topic. In this lengthy speech act there is the question of whether it is Dialogue towards Understanding, a reflective post, or should it fit into a new category for rhetoric. Student K writes:

“Instructor, Is this is at the heart of the paradigm shift between Qualitative and Quantitative Research as discussed earlier? While the principles of the scientific method is embedded in our American educational systems from the time we were children, I am beginning to believe that to think that a good researcher can ever truly be unbiased is ridiculous. In fact, I believe it is quite the opposite. In that it is the unique perspective, or bias, that each researcher brings to the table that defines truly great cutting edge research agendas! The ironic

part is that the negative attitude towards bias, is likely derived from the scientific community's goal of being able to prove or disprove theories, overwhelmingly, thorough the use of a replicable experiments. For instance, in biology, a researcher may prepare slides, but even the procedures for slide preparation are subject to bias and hence influencing the very behavior of the observed subject. Had it not been that discovered bias,(or different technique), one never would have thought this mattered. In chemistry, the effort to controlling or at least identifying all possible variables is of the utmost importance during experiments since the observable properties can change so dramatically. Such things as heat and chemicals present, even in the air, change the chemical properties of the mixtures. (Just think about, how little drug companies really understand about the millions and billions of combinations and interactions that could happen by mixing different drugs and chemicals together.) Hence, the push for a researcher to be unbiased may only be driven by those wishing to move research from a theoretical framework of ideas to a practical framework for industrialized and commercial desires. This point can be made clearer as one moves toward physics for example, the theoretical constructs are built in which a simple experiment cannot be designed to prove or disprove one's intellectually bias theories(i.e. Theories of Black Hole creation and extinction, Sub-atomic particle existence, The belief that mankind will be able to one day built carbon nanotubes with cross linking electrical impulses). However, in these forms of research, bias is very likely the key ingredient in developing truly cutting edge research programs and theories. It is the belief in something yet unproven. I, therefore, have begun to

believe that the 'hunch' one gets comes from the researchers background, experiences, educational bias and slants. It is this BIAS that takes research to new levels. Just think if Edison didn't BIAS his thinking that the light bulb was possible, regardless of the evidence to the contrary, and in illogical pursuit after the many failures of his previous experiments, we may never have gotten the light bulb! <http://arstechnica.com/science/news/2008/10/carbon-nanotubes-take-over-solar-cells-setting-sights-on-the-world-ready-for-edits.ars>”

The student is responding to an earlier post by the instructor. Although the student is in some way continuing the debate, the post is also somewhat reflective as the student thinks through various scientific examples where the researcher or inventor was biased in their approach, or at least appeared bias in the eyes of this student. However, the post may also be viewed as simple posturing by the student. In some aspects the post helps the student think through the ideas of bias and neutrality, leads towards non-agreement as an outcome, and is one that ends the thread/interactional unit without further posts around the debate of bias and neutrality. A further conversation is required with other reviewers in order to classify this post as Dialogue towards Understanding, reflection, or possibly rhetoric. Also, the *a priori* classification scheme indicates that reflective posts are associated with passive type students who post infrequently. This is the case with Student K who has only four posts throughout the theme, and the posts tend to be a little off topic and redirect the debate around loosely related topics. This post does highlight the question of whether the classification scheme needs to include reflection under Dialogue towards Understanding as a dialogic move for debate,

or is it adequately captured in the classification scheme as reflective under the intent of passive/silent, or is it rhetoric?

Example 12 – Series from new Interactional Unit – Speech Acts # 47, 52, 53

The next three speech acts are from a new interactional unit starting with the initial post by Team 1. These three speech acts are included as they all lead to debate about the possible need for other dialogic qualifiers in the *a priori* classification scheme, and again exemplify the difficulty in classifying certain speech acts.

The first speech act is by Student B who posts the team's proposed research question and thesis statement. Student B writes:

"Our team selected problem #2. You are a graduate assistant in your adult education department. The department has offered a course called "Introduction to Adult Education" in a distance education format for the past five semesters. The students have been a mix from the U.S., Africa and Asia. Each course has been somewhat different, the content of each having been designed by 3 different instructors. The outcomes of the courses in terms of grades and student evaluations have also been mixed. You are curious about the differences. Your boss, who hasn't had time to look into it, has agreed to give you time to work on it so that you can find out what some of the factors might be for the uneven grades and course evaluations. Here are our answers to the three thesis builder questions; Q1: What are the key factors that cause the differences in student grades and evaluations for the distance education course "Introduction to Adult Education" offered by different instructors over the last five semesters? Are there

key factors other than course design and course instruction? Q2: The purpose of this study is to evaluate whether "Introduction to Adult Education" instructors should continue to be allowed academic freedom in providing content and design for the course and whether this course needs to be tailored to better suit the needs of all students based on course objectives. Q3: "Introduction to Adult Education" is one of the first courses in which Adult Education graduate students enroll and they need to find fulfillment for their efforts. Additionally, student satisfaction in these introductory courses typically determines whether students continue or drop out of distance education programs. Therefore, program administrators need to take measures to ensure that students succeed and perform consistently in each distance education course. This study should identify key areas that affect student performance and satisfaction levels. Adjustments based on these results could improve student retention, instructor morale, and the knowledge base of entering graduate students. Failing to evaluate and consider timely options for requisite improvement may adversely impact the validity and popularity of the overall distance education program."

The original posts by each team are classified as conversation as they are not instruction, debate, or inquiry however, they do initiate the dialogue. Per the proposed classification scheme the dialogic move is structuring – advanced organizer. The question that arises from this speech act is whether initial posts in interactional units are truly conversation or should they be Dialogue towards Understanding? And if they are Dialogue towards Conversation is a new dialogic

form or move required related to “Intent to Initiate Dialogue”? This question is explored further in the review of Unit 6 – Sampling.

Following the original post in the interactional unit there are four speech acts that move from Dialogue towards Understanding to Conversation and back to Dialogue towards Understanding. One speech act that is classified as conversation is related to a question with regards to a standard definition of academic freedom. The next speech act discussed here is from the same interactional unit and thread, and is by the instructor in response to a question of the definition of academic freedom. The instructor writes:

“There has long been debate on the meaning and intended extent of the concept "academic freedom." For an interesting recent perspective see Stanley Fish in the New York Times: <http://fish.blogs.nytimes.com/2008/11/23/an-authoritative-word-on-academic-freedom/?pagemode=print>”

In this post, the instructor provides guidance in the form of a link for those students who may be interested in pursuing the concept of academic freedom. The instructor does not provide direct instruction nor indirect instruction that could lead to continued dialogue around the speech act. Thus the speech act is classified as Dialogue towards Conversation, with a dialogic form of conversation and a dialogic move of structuring. However, the move is not structuring – advanced organizer and is more of a move of guidance. Thus the question that emerges is whether the proposed classification scheme needs to have a dialogic move of structuring–guidance or does the speech act have a dialogic move of structuring–

advanced organizer with a dialogic outcome of guidance? Further debate around this speech act is required.

The speech act that follows the post by the instructor is one by Student H that also leads to debate around how to best classify the speech act. Student H writes:

"I see academic freedom as an issue worthy of further research, especially in regard to classes that serve as prerequisites for other classes. I used to work for a private business school that prided itself in its academic freedom policy. Overall, this policy worked well for the school, which required instructors to have bachelor's degrees and work experience in fields related to the subjects they taught. With my journalism degree and experience as a newspaper and magazine editor, I was able to teach English and writing courses. In the beginning, I struggled with teaching because I had trouble explaining why certain sentences were grammatically incorrect, and obviously "just because" was not a sufficient answer. The owner of the school pulled me aside one day and simply said "Teach them what you know," which led to my incorporating more of a "no-nonsense" approach to learning grammar and improving readability in students' writing. I taught them to remember writing and grammar issues through memory hooks and simplified explanations. I steered clear of textbook terminology and rules, which most students rarely understood when they studied grammar high school. Based on post-test scores and student evaluations, my teaching style was effective and successful. Even though we had academic freedom, we still had to meet certain outcomes, and students were given pre- and post-tests to determine their

performances. How we taught the lessons, however, was up to each individual instructor. The only problem arose when some instructors interpreted academic freedom to mean that they could skip certain lessons altogether or not thoroughly cover areas they didn't quite understand themselves. This proved to be problematic and frustrating for students who found themselves unprepared for their next classes (moving from English I to English II, for example). Based on Team One's question, I think online instructors need academic freedom to a certain extent, as long as outcomes based on the agreed curriculum are reached.”

This post is difficult to classify based on the previous posts around the concept of academic freedom that have been classified as conversation. In this speech act, the student provides a personal example of academic freedom and it is a type of monologue about the topic through example. There are no further posts related to the speech act by Student H and the thread ends after one more speech act that simply thanks the instructor for the URL. If the interactional unit and topic of discussion had been focused more around the concept of academic freedom then it could be argued that this post is Dialogue towards Understanding. However, in this context it appears to be Dialogue towards Conversation with a dialogic move of example, which is not currently in the *a priori* classification scheme. Also, the speech act is not reflective as the student is not reflecting on the previous posts and it is more of a monologue through example. Also, it does not tend to be a form of rhetoric. Therefore, a broader discussion around this speech act is required to better determine classification.

Example 13 – Dialogue towards Understanding – Speech Act # 6

In this speech act example the student continues the dialogue around the Team 3 original posting of the research question and thesis statement. Student C writes:

“I do agree. A proposal to identify key factors for strategic implementation does not intend to exclude the researcher from unearthing other factors. The researcher must review all factors before he can identify which ones are key.”

Here the student starts out with a motivational social presence type of statement and then moves to a type of consensus building that pulls the two sides of the debate together. Although the speech act is easily classified as Dialogue towards Understanding, and has a dialogic move of building, and a dialogic outcome of common understanding, the dialogic form is unclear. The speech act is not debate or inquiry, but could be a form of instruction or consensus. Although it may be most closely tied to instruction it could be argued that a new dialogic form is required in the classification scheme to capture consensus-building statements.

Example 14 – Dialogue towards Understanding – Speech Act # 24

In this speech act, the instructor provides further instruction in one of the sub-interactive units related to the original post for Team 3. Here the instructor provides instruction through example around the concepts of neutrality and bias. The instructor writes:

“I think this is more pervasive than a research issue; it's a basic issue of human nature. Although we claim to want to find and know the truth, often what we really want is confirmation of what we already believe to be true. If we either

refuse to continue examining a phenomenon or situation or close ourselves off to competing evidence, it might be that what we're committed to is not the truth, but rather to being right at all costs. This is certainly not unusual and we've probably all struggled with situations in which for whatever reason our core identity is tied up in seeing the situation in a certain way, that is, seeing as truth what is really open to multiple plausible interpretations. Now, there certainly are areas of our lives where the "truth" or "falsity" of our interpretation is based not on our failure to consider alternatives but rather on our values or our world view. This is not the same as being closed to information; differences between people in such cases aren't informational, they're philosophical. Take the case of PETA (People for the Ethical Treatment of Animals) people vs. meat eaters. It's not that either group doesn't understand the information provided by the others; it's that their world views cause them to come to completely different conclusions from the same information. When we're talking about research, lack of bias would be reflected when two researchers from radically different philosophical "camps" got the same results from a study (that is, one "replicated" the study of another). However, it's entirely possible, particularly with constructivist research, that these two researchers would draw quite different conclusions, implications, and recommendations from the results. This would NOT indicate research bias as long as both sets of conclusions were plausible given the resulting data."

This post along with others of similar nature is relatively easy to classify as Dialogue towards Understanding with a dialogic outcome of common understanding. However, the question arises around dialogic form and dialogic

move in terms of a form of instruction that is example based. Should the classification scheme have a dialogic form of example or should the classification scheme have a dialogic move of example related to instruction?

Example 15 – Dialogue towards Understanding – Speech Act # 27

Student L posts a speech act after a post by the instructor, where the instructor gave further instruction about the idea of personal values affecting research and neutrality. The student writes:

“That does change perspectives for those of us with science backgrounds. So, there really are multiple truths. One way to look at the possibility of two 'right' answers is to state: based on the assumptions of ... research shows... . So, one can choose to agree with the assumptions, or even become enlightened when looking at a situation from another perspective. Regards, xxx”

The student is articulating a type of “aha” moment when the concepts being debated and discussed in the dialogue start to make sense. Although the speech act is classified as Dialogue towards Understanding, with a dialogic move of building, and a dialogic outcome that leans towards common understanding, the question of dialogic form is not clear. The speech act is not debate, inquiry, or instruction, and is more of a gestalt type statement where the ideas come together to make sense for the student. Thus, is there a need for another dialogic form or is there a need for another dialogic move under the dialogic form of debate? Further, this is not a reflective type statement by the student where there is no expectation of a response.

Example 16 – Dialogue towards Understanding – Speech Act # 29

In this speech act, Student M responds to the instructor's previous post on values and multiple perspectives. Student M writes:

“So if I understand correctly part of the struggle is because of our basic human nature, just as fingerprints we each have varying perspectives in how we see the world and really in how we define 'truth'. So then this supports multiple truths like with the example you shared with the two researchers from radically different philosophical "camps" doing research particularly constructivist research, each arriving at different conclusions and this being plausible given the resulting data.”

Here the student provides a type of summative statement around the dialogue. The speech act is easy to classify as Dialogue towards Understanding with a dialogic outcome of common understanding; however, a question arises around dialogic form and move. Although the speech act may appear to have a dialogic move of questioning, it is a speech act that ends the thread or sub-interactional unit and is therefore more summative in nature. Thus, is there a need for a different dialogic form or move? Should there be a dialogic form of summative or should there be a dialogic move of summative associated with the dialogic forms of inquiry or debate?

Example 17 – Dialogue towards Conversation – Speech Act # 57

This speech act comes from the second interactional unit related to the original post by Team 1. Here Student C simply needs an edit in the proposed statement of the research question and thesis statement. Student C writes:

“One edit needed pl.:”

The speech act can be classified as Dialogue towards Conversation as it is not related to building, questioning, or redirecting the dialogue. However, the dialogic move comes into question. It is not a regulating move, per Burbules, where regulating moves are related to praise, agreement, and reassurance, and it is not related to closing off dialogue, communication maintenance, or structuring. Thus, one could question if it is related to classroom management or if a new dialogic move associated with conversation needs to be included, in the classification scheme, to account for speech acts related to formatting of assignments.

Throughout the Final Thesis Statement theme, the speech acts in the three primary interactional units were a good mix of Dialogue towards Understanding and Dialogue towards Conversation and included several that lead to questions regarding the addition of dialogic qualifiers in the proposed classification scheme for dialogue. Of interest in this instructional unit/theme, is only the first interactional unit had a large number of speech acts posted in the interactional unit and sub-interactional units: a total of 46. The other two interactional units had minimal postings: the second interactional unit had 13 speech acts and the third interactional unit had 15 speech acts. Overall, Student M tended to be the main driver in all three interactional units, providing several posts to each team's proposed research questions and thesis statements. Also, in the third interactional unit Student L tended to post speech acts that closed off dialogue and limited the dialogue from unfolding further.

In-depth Analysis of Unit 6 – Sampling

Unit 6 – Sampling was an interesting theme/discussion forum and had a much different flow of educational exchanges than the Final Thesis theme. The speech acts in Unit 6 moved between dialogue, conversation, and occasionally reflective-type posts. Many of the posts lead to further internal debates by the principal researcher with regards to intent of the speech act, whether dialogic or conversation.

The assignment associated with Unit 6 asked students to post their thoughts on sample size for a non-experimental design, and then as a group they were to respond and discuss. Thus, in Unit 6- Sampling there were 13 interactional units as compared to only three main interactional units in the Final Thesis theme. Only one of the interactional units in Unit 6 had a substantial number of posts (33) with the next longest having ten and the third longest having eight. Ten of the interactional units were quite short with some only having an initial post followed by one speech act. One could question whether the interactional units with only two speech acts are dialogic as there is no complete IRE cycle, but as noted earlier, the rationale for whether incomplete cycles are dialogic or not is beyond the scope of this study. The two longest interactional units in the study are also the only ones where the instructor commented in the educational exchange. Further, the longest interactional unit is very conversational and social in nature with speech acts moving between conversation and dialogue (21 classified as conversation and 12 classified as dialogue). The speech acts in Unit 6 were reviewed using the same Excel spreadsheet format used in the analysis of Unit 3.

The following analysis of speech acts from Unit 6 highlights examples that lead the principal researcher to further debate around the need for additional dialogic qualifiers. Also, the in-depth review of the theme “Sampling” helped solidify understanding of the classification of similar speech acts that occurred in Unit 3 (e.g., Example 12 related to the classification of opening posts).

Classification of Opening Posts

In the Sampling theme, how to classify opening posts in each interactional unit depended on whether the student was posting original thoughts on sample size or if they were clearly responding to posts made in other interactional units while providing their thoughts on sample size. This is much different from the thesis theme where all three of the original posts were classified as conversation with the intent of initiating dialogue. For example, the following post shows an original speech act on sample size with the intent to initiate a dialogic exchange, it is not responding to posts from other interactional units:

“In reading (and rereading) the discussion question, I feel like I don't have enough information to give a good answer. The discussion question says "nonexperimental quantitative research design" using the same variables. From my understanding of nonexperimental quantitative design there is no control group. What isn't clear is which type of nonexperimental design we are to use. In chapter 2 of McMillan and Wergin, quantitative nonexperimental research is conducted to describe phenomena or to investigate relationships among variables (p. 13). I guess I'm wondering if we are to look at the independent or the dependent variables or both. Chapter 2 then goes on to describe all the different

ways variables can be compared and contrasted. I may be way off base, but I feel I am struggling because I don't have enough information to give the correct answer."

In contrast, the next example of an initial post (from a new interactional unit within the sampling theme) shows the student is responding to posts from speech acts in other interactional units. The posts build on the concept of sample size:

"I, too, believe that based on the definitions of experimental and nonexperimental research (McMillin & Wergin, p. 4), a nonexperimental quantitative design would remove the control group -- 50 subjects -- used in the experimental example given in our Unit 6 discussion. According to the "Sampling" discussion: "Our control group will learn the same content, but it will not use audioconferencing as part of the courses" (para. 4). This, according to our text, is the "manipulation" that is taking place to make it an experimental research design. By using a nonexperimental research design, the researchers will only observe what is occurring "naturally" in the courses that offer audioconferencing and ignore the control group (the courses that do not provide audioconferencing). Based on this, the sample size will decrease to 50 -- 25 for the cell that represents the younger students (age 18-30) who use audioconferencing and 25 for the cell that represents the older students (age 35-47) who use audioconferencing. The number of subjects in our sample will now be 50, not 100. I agree that neither study as it stands (experimental or nonexperimental) will provide substantial evidence to determine the dependent variable -- success in distance learning courses in developing countries. As pointed out in the "Threats to external

validity" section of Dr. Trochim's Web site, "There are three major threats to external validity because there are three ways you could be wrong -- people, places or times." The people involved are only separated by age (young and old); therefore, more is needed based on sex, race, culture etc. The same is true for the places from where the samples are being drawn. Limiting the samples to Latin America ignores other developing countries and cultures. In regard to time, we do not know when this study is occurring. Since the global economy seems to be changing (or worsening) on a daily basis today, the time of the study will likely affect the sample of students. For example, our sample might only include the richest people in the developing country. Times of economic hardships might be pushing the poorest students away from education, leaving only those students with the financial means to work fewer hours, pay for tuition etc., and support or find the technological tools to learn at a distance. Thanks for reading"

In this example, the student starts his speech act with the phrase 'I, too, believe...,' indicating that he has read previous posts in interactional units and he is responding in a way that continues the dialogue and builds on the idea of control groups and sample size. Therefore, the intent of the speech act is Dialogue towards Understanding and not Dialogue towards Conversation. Although these two examples do not highlight the need for any new dialogic qualifiers in the proposed classification scheme, they help to distinguish between opening speech acts that are dialogic towards understanding and those that are dialogue towards conversation, with structuring-advanced organizer as a dialogic move. The distinction allows for the possibility that not all opening posts should be assumed to be conversation with a dialogic move of structuring-advanced organizer.

Regulatory vs. Social Presence

The Unit 6 sampling theme further highlights the difference between regulatory and social presence type speech acts within the dialogue for conversation classification categories. For example the following speech act is classified as regulatory as the student indicates agreement with a previous statement on sample size. Per Burbules the regulatory speech acts are related to praise, agreement, and reassurance.

“After reviewing far more about statistics than I ever planned Ditto! After sketching out all possibilities, I came to the same conclusion--without a control group, there is only one answer: 50”

In the next example the student does not indicate agreement, or provide reassurance or praise, the student simply injects a social-type statement about the nature of the overall interactional unit. The student posts:

“I suspect a psychology major could squeeze out a dissertation out of this discussion...human nature to fill in the blanks to make it logical.”

This is a statement that interjects a sense of humor and provides a sense of connectedness to the other students. Thus it is classified as social presence and not regulatory.

These speech acts in the theme have assisted the principal researcher to better articulate the difference between regulatory and social presence speech acts (based on Burbules’s work on dialogue) however, more discussion is needed around the classification of these types of speech acts. Further, do regulatory conversational speech acts only follow dialogic exchanges while social presence only follow conversational exchanges, especially where the speech acts appear to have a form of agreement? Further

analysis of these types of speech acts is required in future studies to solidify the understanding of how to classify speech acts that may be regulatory or social presence.

Humorous Speech Acts

In the following examples, humor is used by both the instructor and the students in an exchange around the intent of the assignment and if there is a correct answer. In the first speech act the instructor responds in a segment of an interactional unit about the simplicity or complexity of the assignment. In an earlier post, the instructor wrote that sometimes a simple assignment is just a simple assignment. A student thanks the instructor for the post and the instructor responds with the following speech act:

“Of course, I didn't say what the correct simple answer is. :-)”

The instructor uses an emoticon to add a sense of humor to the exchange. A few posts later after another student asks if the instructor is going to actually reveal the answer, the instructor again posts a humorous speech act and writes:

“When I tell you what the answer is you'll probably want to hit me over the head, so it's a good thing (for me) that this is an online course.”

Again the instructor provides a humorous post in part to break the tension around the assignment and to add a sense of connectedness to the students. The instructor's speech act is followed by a post from a student who picks up on the humor in the instructor's speech act and writes:

“I'm a pacifist, so I promise--no violence from me ;o)”

Following this post the instructor moves the educational exchange back to a dialogic form and posts a speech act that instructs and builds on the assignment and the idea of sample size.

These three examples show the use of humor in written speech acts and raises the question of whether a dialogic outcome of “Humor” needs to be added to the proposed classification scheme in relation to the dialogic move of Social Presence, or if a dialogic move of “Humor” should be added. Research by Rourke, Garrison, Anderson, and Archer (1999) and Swan (2002) would indicate that the addition to the classification scheme should be under dialogic outcome in association with social presence.

Reflection and Statement of Fact vs. Dialogue

Throughout the Sample theme, there were a number of speech acts that at first glance appeared as Dialogue towards Understanding with form and move of debate and build, however, they could also be reflective or statements of fact. How to classify these speech acts depends on whether there are follow up postings/speech acts, whether there is a complete dialogic cycle, and whether the student only posts one or two speech acts throughout the entire theme. The follow examples highlight a few of these speech acts and poses the question of whether a new dialogic form or move is required related to “Statement of Fact.”

The first example is a single post in a new interactional unit. There are no follow-up posts and the student only posted one other time in the Sample theme. The student writes:

“I tend to agree that the #of subjects would be 50 as the control group is removed in a nonexperimental quantitative research design. I think it is difficult to determine whether or not this research should be classified as descriptive, comparative, correlational or ex post facto with the little information we are

given. I am, though, leaning toward saying that if anything, it is correlational as you could calculate correlation coefficients with the correct information.”

Here, the student appears to be responding to posts made in other interactional units so the speech act would not be classified as conversation with the intent to initiate dialogue. Also, the student starts off agreeing with the number of sample subjects suggested in other posts, but then moves on to question and state her opinion about the type of research. Overall, this speech act tends to lean towards being reflective by the student, which is reinforced by the fact there are no further posts after this speech act and the student is very passive throughout the theme in the number of posts they contribute. However, this speech act could easily lead to a dialogic exchange so classification becomes very difficult without further review and discussion.

The next two examples are dialogue towards understanding in intent, but are not of a form of debate, inquiry, or instruction, and bring up the question of whether another form related to “Statement of Fact” needs to be added to the classification scheme. In the first example the student writes:

“I have convinced myself (for now), that we need to use an expert sample in the first survey and then apply ourselves to the data collected. We then use a snowball sample based on those results to see if in fact what we come up with something that is statistically significant to then generalize to the greater population. 25 (each age group) then after preliminary results form a hypothesis & null hypothesis. Then sample another 25 (each age group) and analyze the results. 100 total chosen before beginning, hence removing bias, but capable of providing insight into the phenomena.”

In this instance the speech act ends the interactional unit. Although the speech act could lead to further debate, it tends to be more of a statement of fact by the student. It brings up the question of dialogic form, and if it is classified as a “Statement of Fact” does it also close off dialogue, which would move the speech act from Dialogue towards Understanding to Dialogue towards Conversation.

The next example is very similar in that it is the last post in an interactional unit and the major focus of the speech act tends to be a statement of fact. However, at the end of the speech act the student opens the exchange to debate with a sentence about grouping of developing countries as another variable. The student writes:

“I think, just to answer the question, that the correct number would be 200, reasons as follows: Audio conferencing and no audio conferencing, for each age bracket, for developing countries and developed countries. For each column of experimental and control group you have to have a row for both age brackets each for developing and developed countries. (8 cells of 25 = 200 subjects) But I agree, I think it would be a fairly simplistic solution to group all developing countries into one category.”

Overall, the intent of the speech act tends to be as a statement of fact, but is it dialogue or conversation, as it tends to end the dialogic exchange? Whether a new dialogic form or move should be added to account for a “Statement of fact” speech act needs to be explored in more depth beyond this study.

Another question that arose during the review of the Sampling theme, and related to the notion of reflection and statements of fact, was completion of cycle (IRE). In one of the interactional units there were only two posts. The first was classified as

conversation with the intent to initiate dialogue. This speech act was the opening post where the student expressed their opinion about the sample size in order to initiate a dialogic exchange. The second post was clearly dialogic with a form of debate and move of questioning, but there were no further speech acts posted to the interactional unit. Thus, should the second speech act be classified as Dialogue towards Understanding or Dialogue towards Conversation? The intent appears to be dialogue towards understanding, however, further debate needs to occur to address the question about the impact of completeness of cycle as discussed by Cazden (1988) and Neff (1998).

The “Aha” Moment

Similar to Example 15 from the in-depth review of the “Final Thesis Statement” theme the following example shows a speech act where the student appears to have a gestalt-type moment when the concepts being discussed become clear. The student writes:

“Thanks Instructor- This makes me feel a little better and a little more confident in my understanding. I felt at first the answer was to clear and easy it couldn't be correct. I then tried to dig deeper and quickly found I had more questions than answers. So your answer of - "it depends" is actually reassuring and I have no desire for any form of violence. 8-) I also understand from another of your posts how this exercise helped reinforce the level of detail and clarity needed in developing and analyzing research. This has been a big "aha" week for me. I venture to guess it has been for many of us.”

As with the thesis theme, it appears that speech acts of this type require a new dialogic form for classification. The speech act does not have a form of debate, inquiry, or

instruction and is a statement showing understanding by the individual. Again intent, dialogic move of building, and dialogic outcome of common understanding tend to be clear for classification. Further, the speech act is not a statement of fact as discussed in earlier examples.

References

The following example shows a speech act that occurred as the only post in an interactional unit. It was posted at the end of the educational exchange in the theme and was purely informational providing a reference. The student wrote:

“Here was another very useful read, I just came across.

<http://www.surveysystem.com/sdesign.htm>”

The post is definitely Dialogue towards Conversation; however, the move is not regulatory, social, or structuring. Nor does it tend to be related to classroom management or communication maintenance, and it cannot be classified as closing off dialogue because it is not part of a dialogic exchange. Thus, it is likely that a new dialogic move under conversation is required to account for speech acts that simply provide references.

Section IV – Additional Categories

Overall a combined total of 159 speech acts were reviewed in Unit 3 – Final Thesis Statement and Unit 6 – Sampling. Of the 159 speech acts 130 were classified with little debate by the principal researcher using the proposed classification scheme for dialogue in online asynchronous learning environments. However, in both in-depth reviews, a number of speech acts brought into question the appropriate classification of

the speech acts and whether additional dialogic qualifiers need to be added to the proposed classification scheme of dialogue in online learning environments.

In Unit 3 – Final Thesis Statement, 40 speech acts were classified as Dialogue towards Understanding and 34 were classified as Dialogue towards Conversation. In the Unit 6 – Sampling, 38 speech acts were classified as Dialogue towards Understanding, 42 as Dialogue towards Conversation, two as Passive/Silent, and three speech acts were not coded as the student who posted two of the speech acts did not return a signed informed consent form, and in one case the follow-up post to this student could not be coded out of context.

Many questions that arose about how to classify speech acts from Unit 3 were cleared up in the researcher's mind as the speech acts from Unit 6 were reviewed and classified. Particularly questions around opening posts that started new interactional units became clearer in terms of classification. Of the fourteen speech acts from Unit 6 that lead to debate around classification, four were related to the idea of humor. Also, most of the speech acts that were readily classified as either Dialogue towards Understanding or Dialogue towards Conversation had multiple dialogic forms and moves as the unit of measure for the study was the entire speech act, which allowed multiple dialogic forms to exist in a single post/speech act.

Drawing upon the speech act examples reviewed in Section Three of this chapter, the following reflects on those that have prompted the inclusion of new dialogic qualifiers in the proposed classification scheme and those that require further debate in order to adequately classify the speech act.

New Dialogic Qualifiers

From Unit 3 – Final Thesis Statement, Example 10 raises the question of whether a new dialogic move is required for “Example.” The student wrote:

“Before I read your response, Instructor, that was one question that I had...Must we always be neutral?? What is wrong with wanting to prove something with one's research as long as they are absolutely open to whatever the results show? There have been plenty of people who have set out to prove something because they felt a passion about it only to find that their evidence didn't support their theory. I think of Josh McDowell, who set out to prove that God didn't exist. He was very passionate about that theory, but after many years of research, came to the conclusion, in his book Evidence that Demands a Verdict, that God, in fact, does exist. I think the researcher can be biased as long as they are open to finding results that they didn't expect.”

Although the student’s speech act tends to have a dialogic form of debate, it also has dialogic moves of building, questioning, and providing a concrete example. As examples are often included in speech acts that are building (e.g., Example 14 from Unit 3) it would seem appropriate to include the dialogic move “Example” grouped with Dialogue towards Understanding. The addition of this qualifier will further assist researchers with the classification of speech acts when using the proposed classification scheme.

Example 12 from Unit 3 contains a post by the instructor that is Dialogue towards Conversation, but the dialogic move is unclear. The instructor wrote:

“There has long been debate on the meaning and intended extent of the concept “academic freedom.” For an interesting recent perspective see Stanley Fish in the New York Times: <http://fish.blogs.nytimes.com/2008/11/23/an-authoritative-word-on-academic-freedom/?pagemode=print>”

In this post, the instructor provides a form of guidance for further research. The speech act is clearly Dialogue towards Conversation, as it is not instruction, debate, or inquiry. Also, it tends to be a form of structuring, but not as an advanced organizer to initiate dialogue. Thus, speech acts like this would be better classified as having a dialogic move of structuring–guidance. However, in a similar example from Unit 6 where a student writes:

“Here was another very useful read, I just came across.

<http://www.surveysystem.com/sdesign.htm>”

the speech act tends to be a pure form of a reference. In this case, the dialogic intent is also conversational and not dialogic, but is it guidance? As both of the above speech acts are conversational in nature and it is the dialogic move that tends to be in question, it is proposed that a single dialogic qualifier of “Structuring–Guidance” be added to the classification scheme in order to assist with the classification of these types of speech acts.

Example 13 raises another question about the inclusion of a new qualifier “Consensus” as a dialogic form. A student wrote:

“I do agree. A proposal to identify key factors for strategic implementation does not intend to exclude the researcher from unearthing other factors. The researcher must review all factors before he can identify which ones are key.”

As discussed in Section Three, this statement starts with a conversational component and then moves to a statement that pulls together the different sides of the debate. Thus, the statement is not a building type, in terms of expanding the dialogue around the topic, and it does not have a dialogic form of instruction or inquiry. However, it could be considered debate with a responding type dialogic move. As this was the only instance of a consensus type statement noted during the in-depth review of Unit 3 and 6, it is premature to include “Consensus” as a new dialogic form.

The “aha” moment as represented in Example 15 from Unit 3 and from the example discussed in Section Three under the sub-title of “Aha Moment” highlight the need for the addition of a new dialogic qualifier in the proposed classification scheme for dialogue. In Example 15 the student writes:

“That does change perspectives for those of us with science backgrounds. So, there really are multiple truths. One way to look at the possibility of two 'right' answers is to state: based on the assumptions of ... research shows... . So, one can choose to agree with the assumptions, or even become enlightened when looking at a situation from another perspective. Regards, xxx”

and in the example from Unit 6 the student writes:

“Thanks Instructor- This makes me feel a little better and a little more confident in my understanding. I felt at first the answer was too clear and easy it couldn't be correct. I then tried to dig deeper and quickly found I had more questions than answers. So your answer of - "it depends" is actually reassuring and I have no desire for any form of violence. 8-) I also understand from another of your posts how this exercise helped reinforce the level of detail and clarity needed in

developing and analyzing research. This has been a big "aha" week for me. I venture to guess it has been for many of us."

In both these examples the students are indicating that concepts are now clear, and indicate that they have had a gestalt-type moment in their understanding of the topic under discussion. In both cases, the dialogic intent of understanding, the dialogic move of building, and the dialogic outcome of common understanding tend to be apparent. However, there is the question of dialogic form. The speech acts do not appear to be those of inquiry, debate, or instruction. Nor are they reflective in nature. They seem to have a new dialogic form of "Gestalt" where the organized whole of their thoughts is now clearer than the sum of the parts from other posts and readings. Although it is unclear how many of these types of speech acts occur throughout online discussions, it seems appropriate to add a new dialogic form in order to help classify these types of speech acts. Further, although there were 78 speech acts observed in the study where there was dialogue building towards understanding, only the two speech acts noted above exhibited a type of end point for the students. An observable manifestation by the two students indicating that a new level of understanding had been reached or where new knowledge had been added to the student's mental schema. While the identification of an end point depicting increased understanding or the construction of new knowledge is not a part of this study, the existence of these types of speech acts could assist future researchers who want to pursue evidence of the manifestation of increased understanding or new knowledge construction in online discussion forums.

Unit 3, Example 16 raises the question of summative type speech acts. In this example the student writes:

“So if I understand correctly part of the struggle is because of our basic human nature, just as fingerprints we each have varying perspectives in how we see the world and really in how we define 'truth'. So then this supports multiple truths like with the example you shared with the two researchers from radically different philosophical "camps" doing research particularly constructivist research, each arriving at different conclusions and this being plausible given the resulting data.”

As with other speech acts that lead to debate about the addition of a new dialogic qualifier in the classification scheme, it is the context in which this one occurs that raises the question of how to best classify the speech act. Although it seems apparent that the speech act is Dialogue towards Understanding with a dialogic form of debate, and a dialogic move of building/questioning, the issue is that it appears at the end of an interactional unit with no further dialogue. Thus, is it summative? At this moment, it is premature to include a new qualifier in the classification scheme for summative, as a broader debate with other interested researchers is required.

Example 17 from Unit 3 highlights the possible need for a category around the formatting of course assignments and activities. In this speech act the student writes:

“One edit needed pl.:”

Few speech acts in the Unit 3 or 6 themes were related to the formatting of an assignment. However, there were a couple speech acts of this type, as discussed in Section Three, that did not fit easily into the classification scheme. Although the classification scheme has “Classroom management” and “Communication maintenance” under dialogic moves for dialogue towards conversation, speech acts about formatting do

not tend to fit into either. Thus, it seems appropriate to add a new qualifier to capture these types of speech acts and label it “Learning Activity–Formatting.” This would be a temporary label until more testing of the proposed classification scheme is conducted in future studies.

Humor was used in four speech acts in Unit 6 – Sampling. While these speech acts fit nicely into dialogue towards conversation as intent, and have a dialogic move of social presence, as discussed by Swan (2002), they may require the addition of a dialogic outcome. It could, however, be argued that they are just another form of a social presence speech acts that have an outcome of “feeling connected and supported in the learning process,” thus further debate around the inclusion of a new qualifier “humor” in the classification scheme is required before it should be added.

In Example 1 from Unit 3, it is noted that the student closes with a phrase that implies they may not know enough to contribute to the dialogue. The notion of positioning oneself in relation to other students may lead to the dismissal of dialogic contributions made by students. The occurrence of these types of statements by students may also be used as a means to protect themselves from cross-examination of their ideas. While the overall intent of the speech act in Example 1 was Dialogue towards Understanding the closing phrase raises the question of whether it is beneficial to add a dialogic qualifier for “positioning” to dialogic move. As this example was the only occurrence of positioning that was observed, the idea of an additional dialogic qualifier needs to be reviewed with other researchers before being added to the classification scheme.

Speech Acts Requiring On-going Debate

Within the in-depth review of Unit 3 –Final Thesis Statement and Unit 6 – Sampling, several of the 29 speech acts, that were not readily classified using the proposed classification scheme, require further discussion about how to classify them and whether they actually lead to the inclusion of new dialogic qualifiers in the classification theme. Speech acts related to reflection and statement of fact tend to be associated with the idea of the completeness of an IRE cycle as discussed by Cazden (1988) and others. It needs to be determined if the completeness of cycle is important or if it is strictly dialogic intent that is important when classifying these types of speech acts. Further, more debate is required around the idea of speech acts that are regulatory versus social presence.

Other speech acts that lead to an internal debate by the principal researcher were those that appeared to be dialogue towards understanding, but were off topic while not being redirecting statements, as well as those that appeared to be rants on a topic or rhetoric. These speech acts may build on the dialogic discussion, but they tend to either close off dialogue or are followed by a speech act where a student or the instructor drive the exchange back to the topic under discussion. It is possible that these speech acts will not lead to the inclusion of a new primary category in the classification scheme, but more debate is required around how they are best categorized.

Deletion of Dialogic Qualifiers

Within the *a priori* classification scheme, two categories were included related to classroom management and communication maintenance. During the in-depth review of Unit 3 and Unit 6 only a single occurrence of classroom management was observed.

Thus, it could be argued that they should be removed, but it is probably premature to remove any dialogic qualifiers until further testing of the proposed classification scheme is conducted in future studies. Also, there tended to be no apparent use for the qualifiers of Indirect/Active/Direct in relation to the dialogic forms associated with Dialogue towards Understanding. In online learning environments, all dialogic speech acts that are open and lead to ongoing debate or inquiry are by nature active by the student(s) or indirect by the instructor. Also, any speech acts by the instructor that would be direct would not lead to a dialogic exchange and would be classified as Dialogue towards Conversation or a new primary category. Although it would seem appropriate to remove these qualifiers, further testing of the proposed classification scheme is needed before a final decision is made.

Overall, the proposed classification scheme tended to hold up and allowed for relatively easy classification of the majority of the speech acts reviewed. However, it is clear that in the use of the classification scheme, more than one coder is required so speech acts that do not easily fit into Dialogue towards Understanding or Dialogue towards Conversation can be debated.

Revised Classification Scheme for Dialogue in Online Asynchronous Environments

Table 4-5 represents a revised classification scheme for dialogue in online asynchronous learning environments. It includes the new dialogic qualifiers that have been discussed in this section of Chapter 4 (Gestalt, Example, Learning Activity – Formatting, and Structuring – Guidance).

Table 4-5

Revised Classification Scheme for Dialogue in Online Learning Environments

Theme						
	Interactional Unit					
	Who	Primary Dialogic Category	Dialogic Qualifiers			
		Dialogic Intent	Dialogic Form	Dialogic Move	Dialogue Outcome	
		Dialogue towards Understanding	Inquiry – Indirect/Active Debate – Indirect/Active Instruction – Direct/Indirect Gestalt	Questions Responses Building Redirecting Examples	Agreement Non-Agreement Common Understanding Little Understanding Irreconcilable	
		Dialogue towards Conversation	Conversation	Regulatory Classroom Management Communication Maintenance Learning Activity – Formatting Structuring – Advanced Organizer Structuring - Guidance Social Presence Close off Dialogue	Understanding of assignments, activities, etc Feel connected and supported in learning process Isolation	

			Passive/Silent	Reflective		

Chapter 5

Discussion

At the outset of this study the intent of the principal researcher was to explore the idea of dialogue in online asynchronous learning as related to Moore's (1980, 1993) theory of transactional distance. Through this exploration, it was hoped that a better understanding of the construct "dialogue" would emerge and a proposed classification for dialogue in online asynchronous learning environments could be proposed and tested for inclusion of all speech acts within a select number of discussions forms. This chapter reviews the intent of the research, examines the findings of the study, discusses how the findings affect the theory of transactional distance, and briefly outlines future studies that are required to validate the conceptual definition and the proposed classification scheme for dialogue.

Study's Intent

At the heart of this study is the desire to expand our understanding of the theory of transactional distance by exploring in-depth the conceptual meanings behind the three key variables of theory. For this study dialogue was the starting point of the exploration.

Starting with a review of the literature on dialogue in education, a solid conceptual definition of dialogue emerged that has construct validity and set the foundation for a proposed classification scheme of dialogue in online learning. It is hoped that future studies will adopt this definition, along with the proposed classification

scheme for dialogue, to test a variety of questions associated with the theory of transactional distance. By using an accepted conceptual definition of dialogue, in relation to the theory of transactional distance, future studies will be able to move the examination of the theory forward without constantly recreating a conceptual definition that does not build on previous work. This is central to Dron's (2005) critique of the theory where he states the weakness of the theory is in "fuzzy and constantly evolving definitions used for structure and dialogue" (p. 322). To address the issue of evolving definitions, this study set out to answer two questions:

- (1) What is a conceptual definition of dialogue as defined by the literature?
- (2) Can a valid classification scheme of dialogue based on the work of Burbules (1993) and the findings of prior studies, emerge that is inclusive of all written educational exchanges/transactions?

The results of this study are preliminary and designed to provide concept clarification and instrument design. More studies need to be conducted in order to validate the conceptual definition of dialogue and the proposed classification scheme. Further, it is not the intent of this study to state definitively that increased understanding has occurred or that new knowledge construction has definitively occurred through a dialogic exchange.

Current Findings

Based on the philosophical work of Burbules (1993) on dialogue, and informed by the definitions of dialogue put forth by Moore (1980,1993) in his work on the theory of transactional distance in distance education, a solid conceptual definition of dialogue has emerged. The definition is focused on knowledge-building in a atmosphere of mutual

trust and respect where all participants willingly exchange ideas, and where the outcome is improved understanding of the students. The definition of dialogue, put forth in this study, ties into the concepts of socially constructed knowledge discussed by Vygotskii (Cole et al., 1978) and supported by the work of Zull (2002) on how individual neuronal networks are altered through these types of exchanges. The definition, restated below, is a broad definition and is one that is likely valid across many educational settings not just online asynchronous learning environments. For this study, dialogue is defined as:

an educational exchange that involves two or more interlocutors. It is marked by a climate of open participation, and is an interaction or series of interactions that are positive. These interactions are purposeful, constructive, and valued by each party and lead to improved understanding of the students. Dialogic interactions are a series of alternating statements (including questions, responses, redirections, and building statements) that are continuous and developmental, and where the interactions persist in the face of disagreement, confusion and misunderstanding. The direction of dialogue in an educational exchange or transaction is guided by a spirit of discovery and is towards improved knowledge, insight, or sensitivity of the students.

Based on the work of Burbules and informed heavily by the work of Flanders (1964, 1970), Saba and Shearer (1994), and Henri (1992), a classification scheme for dialogue in online learning environments was also proposed and tested in this study. Testing the *a priori* classification scheme through an in-depth review of 159 speech acts in two discussion forums within a graduate Adult Education course, resulted in a revised

classification scheme for dialogue that is inclusive of all speech acts observed/coded. The revised classification scheme is reprinted below for reference in this discussion.

Table 4-5

Revised Classification Scheme for Dialogue in Online Learning Environments

Theme						
	Interactional Unit					
	Who	Primary Dialogic Category	Dialogic Qualifiers			
		Dialogic Intent	Dialogic Form	Dialogic Move	Dialogue Outcome	
		Dialogue towards Understanding	Inquiry – Indirect/Active Debate – Indirect/Active Instruction – Direct/Indirect Gestalt	Questions Responses Building Redirecting Examples	Agreement Non-Agreement Common Understanding Little Understanding Irreconcilable	
		Dialogue towards Conversation	Conversation	Regulatory Classroom Management Communication Maintenance Learning Activity – Formatting Structuring – Advanced Organizer Structuring -	Understanding of assignments, activities, etc	

					Guidance Social Presence	Feel connected and supported in learning process
					Close off Dialogue	Isolation
			Passive/Silent	Reflective		

Although validity of the classification scheme can only be reached through its use in future studies, it forms a strong base for the continued examination of dialogic speech acts in distance education environments, and can be used in other studies where the research focus is around the study of the theory of transactional distance. Further, it is understood that the classification of written speech acts or verbal speech acts is contextual and may only be agreed upon by the researchers engaged in the same study that view the data through the same conceptual frame (Krippendorff, 1980, Rourke et al., 2001). Thus, for studies that may use the classification scheme it is recognized that each study may classify speech acts differently, but it is hoped that the scheme can be used to classify most speech acts without a great deal of modification.

It is also clear that to adequately code and classify written speech acts, a team approach is essential in order to settle debates of whether a speech act is dialogic towards understanding or dialogic towards conversation. In this study, of the 159 speech acts reviewed in-depth, 29 lead to an internal debate by the principal researcher in regards to the best way to classify the speech acts. In future studies that choose to use the

classification scheme, it is recommended that more than one rater or coder be used to establish inter-rater reliability.

Of importance for this study was the overall intent of the posting, as the unit of analysis was the entire posting or speech act and not individual sentences, phrases, or paragraphs. It is understood, however, that it is not truly possible for an observer to state that they know the intent of a speech act, written or verbal. Only the person uttering the speech act knows the intent. Thus this research examined the literal value and what was interpreted as implied intent. For example if someone writes, "I spilled the milk" is it an apology, a statement of admission, or a declaration. Observations are subjective and viewed through the contextual lens of the researcher. Thus, while a researcher can gain insights into intent as an educational exchange unfolds, they cannot state that the known intent is clear for any given speech act. Therefore, while Searle (1969) discusses the idea of meaning being between the person initiating the speech act or utterance and the person(s) receiving or listening to the utterance, it is only the initiator that truly understands the intent of their speech act. Thus, as discussed in Chapter 3 the analysis is subjective and the results of the classification of each speech act is how the principal researcher viewed the intent of the speech acts within the context of the overall discussion threads that were reviewed in-depth.

Classification of Speech Acts

As defined in this study, dialogue is a series of exchanges/transactions that lead to a greater understanding or the construction of new knowledge. Dialogue is a journey, thus it is not implied that any single speech act depicts an end point of knowledge

creation. However, each speech act can primarily be seen as moving the dialogue towards understanding or it can be viewed as dialogue towards conversation where the exchange/transaction is supportive. While there was evidence of the journey towards understanding through dialogue in each of the discussion forums reviewed in-depth, there were no overt displays at the end of the discussion forums that represented definitive knowledge creation by a student or students. It is likely that only in a final assignment or paper would evidence of critical reflection on the topic be observed that would denote individual knowledge creation. Thus, this study is focused on providing a classification scheme that can be adopted in future studies where the researcher(s) wish to classify written speech acts as dialogue towards understanding or other, and explore how dialogic exchanges do or do not result in increased understanding or the creation of knowledge.

For both this study and future studies, it is important to understand that the classification scheme is designed to primarily distinguish between speech acts that are: Dialogue towards Understanding/building of knowledge, those that are Dialogue towards Conversation, and those that are related to reflective type speech acts. The dialogic qualifiers in the classification scheme exist to assist the researcher or coder in determining what primary category a speech act falls under. For example, a speech act that is classified as Dialogue towards Understanding may be classified that way as it exemplifies a speech act that has a dialogic form of debate, where the speech act is building on previous statements in the educational exchange, and where it may have a dialogic outcome of common understanding. These three attributes of the speech act all help in its classification. The first eight examples in the “Results” chapter provide guidance on how to use the classification scheme to determine if a written speech act is

Dialogue towards Understanding or Dialogue towards Conversation. These eight examples show how the dialogic qualifiers were identified in each speech act and provided the bases for the primary classification of the speech acts.

Also, in the results of the current research a number questions arose concerning the addition or deletion of dialogic qualifiers. Some of the questions focused on the notion of Active, Direct, and Indirect; and others on the need to continue to include communication maintenance or classroom management. These qualifiers did not tend to come into play when classifying speech acts however; it is premature to remove them from the classification scheme until it has undergone further testing with other courses in different disciplines and at different educational levels (i.e., undergraduate).

Further, this study does not attempt to use the classification of the written speech acts to make a statement about the validity of the theory of transactional distance or how speech acts classified as dialogue towards understanding affect transactional distance. Whether it is Dialogue towards Understanding or Dialogue towards Conversation that has a greater affect on transactional distance, in terms of reduced miscommunications or an increased feeling of connection to the learning environment, is a focus for future studies. The conceptual definition and the proposed classification scheme, which are the result of this research, simply set a base line and provide a starting point for future studies so researchers do not need to reconceptualize a conceptual definition for dialogue each time they want to explore the theory and its key variables.

Use of Classification Scheme

The classification scheme proposed within this study provides a simple schema for dialogue. The classification scheme consists of three primary categories for the classification of speech acts: “Dialogue towards Understanding,” “Dialogue towards Conversation,” and “Passive/Silent.” Associated with each primary category are dialogic qualifiers made up of dialogic forms, dialogic moves, and dialogic outcomes. These qualifiers assist the researcher with the classification of each speech act. For Dialogue towards Understanding, the dialogic form is used to determine if the speech act is a form of debate, inquiry, instruction, or a gestalt-type statement. The dialogic forms are then a type of questioning, responding, building, example, or redirecting type of move. Also, each speech act may lead to a dialogic outcome (e.g., common understanding). Identifying the dialogic form, move, and outcome determines the primary classification of the speech act.

For example, suppose a student puts forth an idea as a post in a discussion forum. A speech act that debates this idea and continues to build understanding of the topic would be classified as “Dialogue towards Understanding.” A speech act that shows agreement with a previous post and supports the individual, but does not question, build, or redirect around the topic of discussion, would have a form of conversation, a move of both regulatory and social presence, and an outcome of agreement and support. Thus, it would be classified as “Dialogue towards Conversation.”

Overall, the classification scheme is straightforward in its application and should allow researchers to easily integrate the scheme into their studies of dialogue in online learning environments.

Next Steps in Research

As an ethnographic study, the findings of this research would be further supported through actual interviews with the students and the instructor to discuss and better understand their intent of various messages posted in the discussion forum. However, this is a difficult task and should be done while the course is in session. It may also introduce “researcher effect” as discussed by Sanders (1976). Further, the students are at a distance, so conducting both group and individual interviews would require using a collaborative tool like Elluminate Live or Adobe Connect. Both these technologies may inhibit a more natural flow of conversation between the researcher and the subjects. Also, these tools may introduce technology factors in the study that would affect how students openly discuss their thoughts on their postings/speech acts.

However, it is essential that there is more testing of the proposed classification scheme for dialogue to determine its validity. It needs to be tested with courses at different education levels (undergraduate lower division and upper division), and with courses from different disciplines.

Impact on the Theory of Transactional Distance

There are many questions that remain concerning the theory of transactional distance. If the educational research community accepts the definition of dialogue put forth in this study and the proposed classification scheme, then these key research

elements can be used to seek answers and insights related to how dialogue affects transactional distance. The education community can explore whether “Dialogue towards Understanding” truly reduces miscommunication in educational exchanges and leads to a more efficient and effective educational transaction, or if it is “Dialogue towards Conversation” that is more important. Further, what is the affect of “Dialogue towards Understanding” on the constructs structure and autonomy? Also, the psychological dimension of transactional distance needs to be explored. If the psychological aspect of connectedness is an element of transactional distance, then is it “Dialogue towards Understanding,” “Dialogue towards Conversation,” or both that reduce the idea of psychological separation.

The conceptual definition of dialogue, if accepted by the community, can set the baseline for how we view dialogue in online learning environments, and the proposed classification scheme can be used in future studies to classify dialogic speech acts so the interaction between dialogue, structure, autonomy, and transactional distance can be examined in more detail. Further, the conceptual definition of dialogue and the classification scheme can be used to re-examine the systems dynamic model of transactional distance put forth by Saba and Shearer (1994). As stated by Saba (2000) “...learning at a distance [is] a self-adaptive, non-linear activity of the learner” (p. 6). In other words, studying distance education and variables associated with learners, institutions, instructors, etc., in merely cause-and-effect relationships minimizes the complexity of distance education as a system and ignores humans as self-adapting organisms.

This research study is just one step in exploring and testing the theory of transactional distance. The educational research community needs to continue to test the assumptions of the theory and the underlying key constructs in order for the theory to have or continue to have validity and relevance to the field.

Future Studies

As an exploratory study, this research has likely raised as many questions as it may have answered in relation to dialogue in online learning environments. Beyond additional work required to validate the classification scheme for dialogue, address questions around regulatory statements versus social presence statements, determine the deletion or inclusion of classroom management and communication maintenance, and the inclusion of other categories discussed in Chapter 4, a number of questions arose in both the literature review and the results sections that should lead to future studies around dialogue and the theory of transactional distance.

Tu (2002) has posed questions concerning privacy in online learning environments, Shearer (2003) has raised questions about the effect of gender, ethnicity, subject matter, and prior knowledge on dialogue, and Braxton (2000), and Laurillard (1993) have discussed the affect of novice versus expert learners on dialogue. Also, questions arise concerning synchronous online discussions and whether the classification scheme is applicable for these environments, and whether dialogue even exists in micro-blogs like Twitter? Further, in relation to the current study, additional work is required around the ideas of passivity and reflective type speech acts, around the idea of completion of cycle in dialogic exchanges (Cazden, 1998) and the affect of completion of

cycle on classification of speech acts, and around the notion of rhetorical type speech acts. Also, the idea put forth by Neff (1998) related to the timeliness of response should be explored to determine if it has an affect on dialogue and how a researcher would classify a speech act.

Great importance should also be focused on the continued exploration and testing of the theory of transactional distance and the other two key variables, structure and autonomy. The constructs of “Structure” and “Autonomy” need to be examined in-depth so sound conceptual definitions can be developed and used in future studies. These are required before the educational research community can explore the affect of dialogue on structure and whether highly autonomous learners engage in high or low levels of dialogue in their online courses. Also, further research could return to review Moore’s (1989) three levels of interaction and examine what is meant by learner – learner and learner – instructor interaction. Is it dialogic exchanges or other educational transactions that are important, or is it a blend?

This current study is simply a starting point of an in-depth exploration into the key constructs associated with the theory of transactional distance. Much additional work is required for the educational community to have faith in the underlying principles of the theory and to know that the theory holds up under continual examination as new technologies and instructional strategies are introduced into distance education courses.

Appendix A

Flow of Speech Acts in Unit 3

Unit 3 – Final Thesis Statement (Teams) – Discussion Thread

Team 3 Thesis Statement

Author: Student M

Re: Team 3 Thesis Statement

Author: Student C

Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Team 3 Thesis Statement

Author: Student D

Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student C

Re: Re: Team 3 Thesis Statement

Author: Instructor

Re: Re: Re: Team 3 Thesis Statement

Author: Student D

Re: Team 3 Thesis Statement

Author: Student G

Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Team 3 Thesis Statement

Author: Student N

Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student N

Re: Team 3 Thesis Statement

Author: Student L

Re: Re: Team 3 Thesis Statement

Author: Student D

Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Team 3 Thesis Statement

Author: Instructor

Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student H

Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student L

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student N

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student F

Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student L

Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Instructor

Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student D

Re: Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Instructor

Re: Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student L

Re: Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Can Science be wrong?

Author: Student K

Re: Can Science be wrong?

Author: Student C

Re: Can Science be wrong?

Author: Instructor

Re: Re: Can Science be wrong?

Author: Student E

Re: Re: Can Science be wrong?

Author: Student N

Re: Can Science be wrong?

Author: Student B

Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student I

Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student D

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student I

Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student I

Re: Re: Re: Re: Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Team 3 Thesis Statement

Author: Student K

Re: Re: Re: Re: Re: Re: Re: Re: Re:

Re: Re: Team 3 Thesis Statement

Author: Student M

Re: Re: Re: Re: Re: Team 3 Thesis Statement

Author: Student K

Re: Team 3 Thesis Statement

Author: Student E

Re: Re: Team 3 Thesis Statement

Author: Student M

Team 1 Thesis Statements

Author: Student B

Re: Team 1 Thesis Statements

Author: Student M

Re: Re: Team 1 Thesis Statements

Author: Student E

Re: Re: Team 1 Thesis Statements

Author: Student C

Re: Re: Re: Team 1 Thesis Statements

Author: Student M

Re: Re: Re: Team 1 Thesis Statements

Author: Instructor

Re: Re: Re: Re: Team 1 Thesis Statements

Author: Student H

Re: Re: Re: Re: Team 1 Thesis Statements

Author: Student C

Re: Team 1 Thesis Statements
 Author: Student G
 Re: Team 1 Thesis Statements
 Author: Student L
 Re: Team 1 Thesis Statements
 Author: Student C
 Re: Re: Team 1 Thesis Statements
 Author: Student B
 Re: Re: Re: Team 1 Thesis Statements
 Author: Student C

Team 2 statement by Student L

Author: Student L
 Re: Team 2 statement by Student L
 Author: Student N
 Re: Team 2 statement by Student L
 Author: Student M
 Re: Re: Team 2 statement by Student L
 Author: Student I
 Re: Re: Team 2 statement by Student L
 Author: Student L
 Re: Re: Re: Team 2 statement by Student L
 Author: Student C
 Re: Re: Re: Team 2 statement by Student L
 Author: Student K
 Re: Re: Re: Re: Team 2 statement by Student L
 Author: Student L
 Re: Team 2 statement by Student L
 Author: Student B
 Re: Team 2 statement by Student L
 Author: Student C
 Re: Re: Team 2 statement by Student L
 Author: Student C
 Re: Re: Re: Team 2 statement by Student L
 Author: Student L
 Re: Re: Team 2 statement by Student L
 Author: Student L
 Feedback for Team 2?
 Author: Instructor
 Re: Feedback for Team 2?
 Author: Student N

Appendix B

Human Subject Review Form and Email

Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: Dialogue in Online Learning Environments: Operationally Defining the Construct and Construction of a Classification Scheme for Dialogue in Support of the Theory of Transactional Distance

Principal Investigator: Rick Shearer
225H Outreach Building, University Park, PA 16802
rxs57@psu.edu 814-865-0642

Advisor: Dr. Michael Moore
411C Keller Building, University Park, PA 16802
mgmoore@psu.edu 814-863-3501

Co-Chair of Committee: Dr. Gary Kuhne
411B Keller Building, University Park, PA 16802
gwk1@psu.edu 814-863-3781

1. Purpose of the Study:

This study is designed to provide a critical review of one of the main variables in the Theory of Transactional Distance: Dialogue. The intent of the study is to propose a conceptual definition and a classification scheme for dialogue in online learning environments. Then through an ethnographic approach determine which written speech acts can be classified as dialogue (those that contribute to knowledge building and understanding around the subject under discussion), and which are classified as other in support of social presence, or other interactions.

2. Procedures to be followed:

The research involves the review of existing interactions from a class, ADTED 507 – Section 001 - Spring 2009. Students will not be asked to complete surveys or participate in any interviews. Your permission is required for the principal investigator to review postings you have made in the threaded discussions throughout the course. No names or references to you will be cited in the published results. Only certain excerpts from your postings will appear with student names removed.

3. Duration/Time:

It is estimated that I will have access to the course site to review the data from February 1, 2009 to November 30, 2009. While I will be reviewing postings made throughout the course I will not start compiling the transcripts of the postings until the conclusion of the course in mid May 2009.

4. Statement of Confidentiality:

Your participation in this research is confidential. The data already exists within the Angel Learning Management System and is secured by password and can only be viewed by those given access by the instructor of the course. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.

5. Right to Ask Questions:

Please contact Rick Shearer at (814) 865-0642 with questions or concerns about this study.

6. Voluntary Participation:

Your decision to be in this research is voluntary. You can stop at any time. You do not have to allow the principal investigator access to the use of your electronic postings from the course. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

I agree to allow postings, made by myself, in the discussion forums related to the Spring 2009 ADTED 507 – Section 001 course to be released to the principal investigator and the research team of this study in support of the research on dialogue in online learning.

I DO NOT agree to allow postings, made by myself, from the discussion forums related to the Spring 2009 ADTED 507 – Section 001 course to be released to the principal investigator and the research team of this study.

_____ I do give my permission for portions of my postings from discussion forums in the Spring 2009 ADTED 507 – Section 001 course to be directly quoted in publications/presentations.

_____ I do not give my permission for portions of my postings from discussion forums in the Spring 2009 ADTED 507 – Section 001 course to be directly quoted in publications/presentations.

Participant Signature

Date

Person Obtaining Consent

February 20, 2009

Date

Email to Students in ADTED 507 – Section 001

Spring 2009

Dear _____

I want to thank you for allowing me to be a guest in your course this semester, and for allowing me to spend time reviewing written postings made by the class in the various discussion forums.

As Dr. (Instructor's Name) mentioned I am currently working on my dissertation in Adult Education. The research is an exploratory study designed to examine the variable 'Dialogue' in connection with Dr. Michael Moore's theory on transactional distance. The research seeks to explore what we mean by dialogue in asynchronous online courses, and to propose a possible classification scheme of dialogue for categorizing written speech acts. Various discussion forums in the course will be reviewed in depth and each posting will be analyzed to determine if it should be categorized as dialogue, based on the literature review, or if it should be categorized as other.

In the research findings of the study some postings or excerpts of posting may be included to help clarify the findings of the study, but all student names will be removed and replaced with Student A, B, etc. to assure confidentiality.

To fulfill the requirements of the Office of Research Protection I need each member of the class to complete the attached Informed Consent form. On the form there are two areas that you need to complete. The first is in reference to permitting me to have access to review your postings, and the second is in reference to allowing me to quote portions of your postings.

I hope you will agree to both items on the informed consent form and provide your signature on the form. You may sign and return the form to me electronically at rxs57@psu.edu if you have a graphic of your digital signature; you may print the form out, sign it and return it to me by fax at 814-863-2362; or you may print the form out, sign it and return it to me at the following address.

Rick Shearer
Penn State's World Campus
The Pennsylvania State University
225H Outreach Building
University Park, PA 16802

Again I want to thank you for allowing me to be a guest in your course and for participating in this study. If you have any questions about the study please contact me at 814-865-0642 or at rxs57@psu.edu

Sincerely

Rick Shearer
Doctoral Candidate in ADTED
Interim Director World Campus Learning Design

Appendix C

In-depth Analysis of Unit 3 – Final Thesis Statement

Description of Unit Activity

For the first half of the week, your team will work through the discussion together in a private discussion forum created for your team. (That discussion forum is a space that only you and your fellow team members can access. I may access it, too, from time to time to see how you are progressing, but you should send any questions you have for me directly to my course e-mail account to make sure I see those.) You may also choose to use the course e-mail or a chat room. I will be looking in on the various private team discussion forums to see your progress. If you have questions for me at any point, you should e-mail me directly. During the second half of the week (no later than Monday morning, please), you will share your team's "final" answers with the entire class through a whole-class discussion forum. (See 2nd Tab for full description)

All Posts between 2/3/09 and 2/11/09

Theme

Unit 3 - Final Thesis Statement

**Interactional Unit
Team 3 Thesis Statement**

Speech Acts

1 Student M – Female

Team 3 – We chose Problem/Issue 1 You've decided to volunteer in an adult literacy program in your community. The majority of participants are single mothers attempting to take their GED (General Education Degree equivalent to a high school diploma) in order to find a job and get off welfare. You find out after you've been there a few weeks that both the performance of the group of students and the retention rate are lower than those in surrounding communities. You're curious to know why and you'd like to be able to do something that is meaningful to you about the program you're working with. You talk with the program supervisor who says she's also perplexed about the situation but has no time or other resources to spend on it, and says she would be very grateful if you could spend some time on it. Research Question: Why are the performance and the retention rate of local GED students lower than those

in surrounding communities?

Purpose of Study: The purpose of this study is to determine the factors contributing to lower than normal program retention rates and lower than normal performance in the local GED program. Value of Study: Determining contributing factors is helpful in being able to develop strategies to overcome what is impeding student success. Ultimately the reward is when student success increases thus allowing them to transition from welfare to work and be a financially contributing member of the community.

Intent	Dialogue towards Conversation
Form	Conversation
Move	Structuring - Advanced Organizer
Outcome	Proposed Activity
Reason for Classification	Although this is not a lecture or short monologue, it is a posting of a proposed learning activity that starts a dialogue. It is also not instruction, what is the dialogic intent?
Requires new category in classification scheme	It may require a new category not currently covered in the classification scheme.

2	Student C - Female	I wonder whether it is really more valuable to start off so broadly; surely one will likely not need or be able to ascertain "all" contributing factors? Thus I would have opted to focus on ascertaining key or major factors that can be strategically dealt with via follow-up action. Just a few thoughts from a research newbie
	Intent	Dialogue towards understanding
	Form	Inquire and Debate
	Move	Question and Building
	Outcome	N/A at this stage
	Reason for Classification	Student starts with questioning breadth of research question and then has a building statement that helps to possible focus activity.

**Requires new
category in
classification
scheme**

3	Student M - Female	I am afraid that if I get too specific that this may 'lead' the research rather than letting the research lead.
	Intent	Understanding
	Form	Debate
	Move	Response
	Outcome	N/A
	Reason for Classification	Student responds to question and provides reason for not focusing research question.
	Requires new category in classification scheme	

4	Student D - Female	But what if there is something specific you want to prove?
	Intent	Understanding
	Form	Debate
	Move	Question
	Outcome	N/A
	Reason for Classification	Another student questions reasoning and debates about focus of research question.
	Requires new category in classification scheme	

5	Student M - Female	If I am analyzing the possible causes of something I want to at least recognize what all the possibilities are. If in doing this it proves what I thought all along, even better.
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Intent	Understanding
Form	Debate
Move	Response
Outcome	N/A
Reason for Classification	Student who posted original message again asserts why focus should be broad.
Requires new category in classification scheme	

6	Student C - Female	I do agree. A proposal to identify key factors for strategic implementation does not intend to exclude the researcher from unearthing other factors. The researcher must review all factors before he can identify which ones are key.
	Intent	Understanding
	Form	Dialogic Form is unclear. It is a statement of reconciliation of understanding and is a form of instruction from another student
	Move	Building
	Outcome	Leans towards a common understanding by trying to pull debate together.
	Reason for Classification	The post/speech act starts with a motivational statement and then moves to a type of consensus building that pulls the two sides of the debate together by saying one should start broad and then determine key factors.
	Requires new category in classification scheme	

**7 Instructor -
(Relates Female
to 2)**

This is an important point. How narrowly or widely to "cast the net" in figuring out the scope of the problem is a judgment call on the part of the researchers. Focusing too narrowly may lead to failure to uncover the root(s) of the problem. If researchers ask questions about program design but the main problem is a cultural belief, they will be no closer to understanding the problem. On the other hand, as you say, getting at all potential factors is impossible. Although it's true that the agency will not be able to control all factors that might be uncovered, it's often helpful to at least know what some of those are in order to be better prepared should the context change (for example, new funding becomes available, restrictive policies are relaxed, new personnel resources, such as volunteers, become available, etc.).

Intent Understanding

Form Instruction

Move Building

Outcome Leads toward common understanding

Reason for Classification Instructor picks up on post #2 and provides similar input to post 6 from a student. It is instruction and building to help students think more about the scope of the research question. But it is written in such a way as not to close off dialogue

Requires new category in classification scheme

**8 Student D -
Female**

I guess I'm still a little fuzzy on how specific or how broad to state these questions.

Intent Understanding

Form Inquiry

Move Question

Outcome Outcome is not clear as student is left hanging as the discussion after this speech act moves to a new sub-thread and post to original speech act. The post ends the thread.

Reason for Classification The speech act starts out conversational, but intent is to question the notion of scope of research question.

Requires new category in classification scheme Although the intent is dialogue towards understanding one could argue that this is not dialogue as there is no follow up to the post and no closure.

Response to first post by Student C - Starts New sub interactional unit

9
(Relates to 1)

Student G - Female

Keeping it simple is a very good approach. It leaves the door open to a number of possibilities for research and enables a future reader to be kept informed about what to expect.

Intent Conversation

Form Conversation

Move Social Presence

Outcome Agreement/Support

Reason for Classification This is a difficult post to classify. It shows agreement and social presence of being connected and supported. It appears that it may be a building statement, but it does not move the dialogue forward by questioning, debating, or re-directing. Thus it is labeled as conversation in intent. It also leads into a conversation thread.

Requires new category in classification scheme

10

Student M - Female

I Agree--- the KISS method is there for a reason. Have you ever started to research something and the research starts to talk to itself? What I mean is as you are connecting the dots a clear path emerges and you start to see trends and commonalities. I love when that happens!

Intent Conversation

Form Conversation

Move Social Presence

Outcome	Connected
Reason for Classification	The speech act is primarily conversational and supportive in agreement. It does have one sentence that tries to introduce an idea or a possible re-direct, but it is not expanded upon in the thread or is their elaboration.
Requires new category in classification scheme	

11	Student N - Female	You are so right,...that happened with my first master's...it was an exploratory project and those trends and commonalities that you speak of practically glow in the dark.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Connected/Supported
	Reason for Classification	Speech act is supportive of previous post and brings a personal element in to the conversation. Does not build on original post on scope of research question.
	Requires new category in classification scheme	

12	Student M - Female	Student N, wait a minute did you say your first masters?
	Intent	Dialogue towards Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Feel connected to class member
	Reason for Classification	Is a question about a personal statement made by the student in the previous post.

	Requires new category in classification scheme	No
13	Student N - Female	Yes. I have a Master of Science in Curriculum and Instruction. Some people collect stamps.....
	Intent	Dialogue towards Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Feel connected to class member
	Reason for Classification	Continues conversation about personal aspect of Student N. Conversation Thread ends at this point.
	Requires new category in classification scheme	No
	Response to first post by Student C - Starts New sub interactional unit	
14 <i>(Relates to 1)</i>	Student L - Male	Nice job. Your posting was clearly explained and seemed to cover the situation in the scenario.
	Intent	Dialogue towards Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Supportive
	Reason for Classification	Here the student is supporting the post as being well done. It does not add to understanding but is stating that the thesis statement is clear and covers the scenario
	Requires new category in classification scheme	No

15	Student D - Female	I liked the simplicity of it. There wasn't too much going on so it seems like you could easily research the topic. Good Job.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement
	Reason for Classification	Student supports the post of the thesis statement, but does not try to debate, question, or build upon the thesis statement post.
	Requires new category in classification scheme	

16	Student M - Female	In writing research questions I think it is of utmost importance to always to be mindful of neutrality. This can be a real struggle I think because for one reason, an emotional attachment. Often when I write a research question on a topic of my choosing I think it is easy to focus on something that I am passionate about which can cause me to lose neutrality because I so much want to prove or disprove something. Maybe it was easier with this task because we were given the topic on which to focus.
	Intent	Understanding
	Form	Inquiry
	Move	Re-direct
	Outcome	N/A
	Reason for Classification	Student who posted original thesis statement for team redirects the dialogue to inquire about the idea of neutrality in forming the research question. Starts new line of inquiry.
	Requires new category in classification scheme	

17	Instructor - Female	It's important to keep in mind that there are quite compelling arguments around the question of whether its truly possible to be neutral (since choice of question, choice of method, choice of sample, interpretation of data, etc. all are based at some level in value questions). There's also the question of whether a high level of personal concern means that a person can't conduct good research. After all, if we really care about something, we may be even more invested in getting a true picture of the situation in order to improve it. Why would we even bother doing research about something we didn't care about? I think you have a valid concern when it comes to having an emotional investment in finding a specific answer to the research question. Researchers have to be able to separate themselves from whatever appropriate passion they might have related to the problem and focus on interpreting the results of the study only in ways supported by the data, which means looking at all possible interpretations, resisting the temptation to ignore data that doesn't "fit" what you'd hoped to find, etc.
	Intent	Understanding
	Form	Instruction - Direct
	Move	Building
	Outcome	N/A
	Reason for Classification	Instructor builds on ideas of neutrality posed by the last student. She does not necessarily agree or disagree, but provides examples for further thought.
	Requires new category in classification scheme	
18	Student H - Male	This seems to touch on McMillan and Wergin's description of educational research in our text. Research is systematic, rigorous, and empirical. Specifically, "Research is rigorous. It embodies a certain skepticism about observations and conclusions and employs procedures designed to reduce and control bias." I agree that conducting research without bias is next to impossible. Bias can drive research that effects positive change; however, if the researcher's passion blinds him or her from findings that contradict his or her views, bias is obviously problematic. Maybe this is a worthy ethical topic for

all graduate program curricula.

Intent	Understanding
Form	Debate
Move	Building
Outcome	N/A
Reason for Classification	Student continues dialogue about neutrality around idea of bias and brings in quotes from textbook. Also poses idea of ethical considerations.
Requires new category in classification scheme	

19 **Student L - Male** I find this discussion interesting, since the introduction of the 'Thesis Generator' includes the instruction to address an issue "that makes you curious, angry, or enthusiastic." So, in my mind, the things that cause anger or enthusiasm will not be neutral. So, can you have it both ways? Regards, xxx.

Intent	Understanding
Form	Debate
Move	Building/Questions
Outcome	N/A
Reason for Classification	Although the post starts out on a conversational mode with support and idea of understanding assignment, it moves to questioning if one can be neutral and passionate at the same time.

Requires new category in classification scheme

20 **Student N - Female** Not necessarily...the problem or issue may cause you to be passionate about it, but the research itself will unfold itself to you--only if you manipulate the research will it not be neutral.

	Intent	Understanding
	Form	Debate
	Move	Response/Building
	Outcome	Non-Agreement
	Reason for Classification	The student begins by disagreeing and then states passion may not necessarily impact neutrality. Introduces idea of passion getting in the way of neutrality if the research lets it.
	Requires new category in classification scheme	
21	Student F - Male	I think though as a researcher you need to be neutral to ensure you do not influence the outcome of the data. In other words you manipulate it to say what you want instead of what was really meant.
	Intent	Understanding
	Form	Debate
	Move	Building
	Outcome	N/A
	Reason for Classification	Student restates that the researcher must be neutral and then elaborates on idea.
	Requires new category in classification scheme	
22	Student L - Male	I see the need to be neutral in evaluating data, but you need to care about the project, even if only for a grade, or it wouldn't be worth doing in the first place.
	Intent	Understanding
	Form	Debate
	Move	Response

Outcome ? Form of non-agreement

Reason for Classification Student continues to debate, but in many ways is restating student N's post in # 20. It verges on conversation, but not for social presence or regulatory. Could almost be seen as a statement that closes off dialogue.

Requires new category in classification scheme

23 Student M - Female Student L, I don't think it is neutral in the sense that you don't care about the topic. I think it is being mindful of being neutral because you really really care about the topic. With my earlier comment about writing research questions being a real struggle I think because for one reason, an emotional attachment. Often when I write a research question on a topic of my choosing I think it is easy to focus on something that I am passionate about which can cause me to lose neutrality because I so much want to prove or disprove something. For me when I wrote this it was the importance of being aware of the danger of wanting so much want to prove or disprove something and being careful to not get in my own way and letting the research speak for itself.

Intent Understanding

Form Instruction

Move Response

Outcome Common Understanding

Reason for Classification Here the student takes time to elaborate and explain idea of neutrality and bias from there own personal experience. It becomes a form of instruction and is not debate or building.

Requires new category in classification scheme

24	Instructor - Female	<p>I think this is more pervasive than a research issue; it's a basic issue of human nature. Although we claim to want to find and know the truth, often what we really want is confirmation of what we already believe to be true. If we either refuse to continue examining a phenomenon or situation or close ourselves off to competing evidence, it might be that what we're committed to is not the truth, but rather to being right at all costs. This is certainly not unusual and we've probably all struggled with situations in which for whatever reason our core identity is tied up in seeing the situation in a certain way, that is, seeing as truth what is really open to multiple plausible interpretations. Now, there certainly are areas of our lives where the "truth" or "falsity" of our interpretation is based not on our failure to consider alternatives but rather on our values or our world view. This is not the same as being closed to information; differences between people in such cases aren't informational, they're philosophical. Take the case of PETA (People for the Ethical Treatment of Animals) people vs. meat eaters. It's not that either group doesn't understand the information provided by the others; it's that their world views cause them to come to completely different conclusions from the same information. When we're talking about research, lack of bias would be reflected when two researchers from radically different philosophical "camps" got the same results from a study (that is, one "replicated" the study of another). However, it's entirely possible, particularly with constructivist research, that these two researchers would draw quite different conclusions, implications, and recommendations from the results. This would NOT indicate research bias as long as both sets of conclusions were plausible given the resulting data.</p>
	Intent	Understanding
	Form	Instruction
	Move	Building
	Outcome	Common Understanding
	Reason for Classification	Instructor takes idea of neutrality and bias and expands on ideas by introducing a broader view of human nature and philosophical differences. The instructor also provides concrete examples.

Requires new category in classification scheme

? Is examples a form of dialogic move or simply part of building.

25	Student D - Female	But they both can't be right...right??
	Intent	Understanding
	Form	Inquiry
	Move	Question
	Outcome	N/A
	Reason for Classification	Student questions idea and seeks further information through question
	Requires new category in classification scheme	

26	Instructor - Female	Let's say they both gathered evidence that students in a program were deeply unhappy with the lack of any opportunity for a group face to face meeting as part of an online master's program. Researcher 1 believes that the purpose of education is to meet students' expressed needs, especially for social contact that leads to community building, and that any educational activity that doesn't include personal contact doesn't really "count" as education. As a result, this person might see as an implication that the program should add a required face-to-face orientation week at the beginning of the program and recommend that universities limit themselves to such programs in order to maintain the quality of a "real" higher education. Researcher 2 believes that the purpose of education is to strengthen the economic and social structure of the country by allowing as many people as possible to benefit from the knowledge and expertise of the university, that requiring a face-to-face week will limit access for some people, and that an educational community can be built even in the absence of physical proximity.
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As a result, on the basis of the same information gathered in the research study, this person might see as an implication that the university needs to clearly communicate to prospective students the differences and challenges in the online environment, as well as provide an appropriate orientation to it, support during it, and training for faculty so that they are able to make students feel connected to each other and the university. Certainly each of us might be tempted to say one researcher is right and the other wrong, but it would be because we either share their values or don't, not because they conform, or don't, to an absolute standard of "right." So, I'd say yes, they can both be right when drawing different conclusions from the same data.

Intent	Understanding
Form	Instruction
Move	Building/Example
Outcome	Common Understanding
Reason for Classification	Instructor builds on understanding by providing some concrete examples that students in an on-line course can relate with.
Requires new category in classification scheme	

27	Student L - Male	That does change perspectives for those of us with science backgrounds. So, there really are multiple truths. One way to look at the possibility of two 'right' answers is to state: based on the assumptions of ... research shows... . So, one can choose to agree with the assumptions, or even become enlightened when looking at a situation from another perspective. Regards, xxx
	Intent	Understanding
	Form	Debate ?
	Move	Building
	Outcome	Leans toward common understanding

	Reason for Classification	Student brings personal nature of understanding into post. Can see an aha moment of understanding of concepts of no absolute truths and idea of effect of one's values.
	Requires new category in classification scheme	This is not debate or inquiry, it shows a student's gestalt or aha moment, but it is still a type of building statement for understanding of the community.
28	Student M - Female	Excellent example. Thank you.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement/Thank You
	Reason for Classification	Student simple thanks instructor for example
	Requires new category in classification scheme	
29	Student M - Female	So if I understand correctly part of the struggle is because of our basic human nature, just as fingerprints we each have varying perspectives in how we see the world and really in how we define 'truth'. So then this supports multiple truths like with the example you shared with the two researchers from radically different philosophical "camps" doing research particularly constructivist research, each arriving at different conclusions and this being plausible given the resulting data.
	Intent	Understanding
	Form	? Summative statement of discussion topic
	Move	Building/Summative
	Outcome	Common Understanding

Reason for Classification Summative type of statement capturing essence of the dialogue. As a summative statement it tends to end discussion thread.

Requires new category in classification scheme It is not debate or inquiry, but summative. Should it be a new form or move?

Sub-Interactive Unit

30 Student K - Male Here is another article that raises questions regarding even the ability of "experts" and judges to evaluate the scientifically based "evidence" used in courts. Many of these people are likely not prepared for even the basic understanding of how "BIAS" these statistical inferences can be presented.
<http://arstechnica.com/science/news/2009/02/national-academies-we-need-better-science-in-the-courtroom.ars> SO NOW A JUDGE MAY NO LONGER USE HIS INTUITION, SCIENCE DETERMINES LAW?
 This also shows how the scientific based community, (that I implied earlier, had worked its way deep into our childhood mindsets), are now rallied around how good it is to have finally taken inroads into the judicial systems. Good bye gut feelings & sixth senses otherwise know as intuition. Hence my my question to each of you is this. Can scientific evidence ever be wrong? Has it been? If you can answer yes, then logically it can only be assumed that the tools and techniques of researchers have been unfairly BIASED by the scientific community due to its recent financial success the past 100+ years, ironically during the same time as the industrial revolution was occurring. I am not saying that science does not have its merits. But I do believe it has its limits when dealing with developing new research agendas! Perhaps a focus on "Neutrality" or "Unbiased" research is really just a way for a researcher to simply take the easy way out, it is after all much safer not to ruffle feathers of the scientific community. If you do everyone will consider you a "Quack". The poor souls looking for UFOs, BigFoot, and Elvis can attest to that. Besides how do you explain something that can't be scientifically proven YET ? I say Neutrality is for those who prefer to arrogantly observe rather than Engage with their Subjects of Observations! In our social science field of adult education, I prefer to ENGAGE my subjects, it provides so much more insight and data. While stats can help generalize populations, the new ideas will likely come from engagement!

Intent Understanding ?

Form Debate

Move	Redirecting
Outcome	N/A
Reason for Classification	The post is a bit of a rant by the student that is loosely tied to the topic under discussion, but he does redirect dialogue around bias and neutrality to scientific evidence. One could question if this is dialogue towards understanding or a rant about scientific research.
Requires new category in classification scheme	

31	Student C - Female	Interesting news report, Student K! The jury is to deal with facts, so they would not deal with scientific evidence. The judge, while equipped to deal with points of law, has always been in my view generally ill-equipped to deal with "scientific evidence" - I read this report as indicative of welcome advances in courtroom dynamics, that a judge be required to acquire knowledge of basic statistics and scientific terminology and methodology, so he/she can keep on top of the submissions propounded by scientific experts and the parties' attorneys. After all we have an adversarial trial system, and the judge as the overall arbiter must be able to take on substandard/flawed scientific or statistical evidence propounded by anyone in his/her courtroom that may affect the outcome of the hearing.
	Intent	Understanding?
	Form	Debate
	Move	Response
	Outcome	N/A
	Reason for Classification	Response to debate about scientific evidence in the courts. Expands on judicial system and supports use of scientific evidence. Again off topic and one could question if it is dialogue towards understanding or conversation, as it is not truly focused on the topic under discussion.

**Requires new
category in
classification
scheme**

32	Instructor - Female	<p>A good scientist (one who adheres to the rules of scientific research design and analysis of data) will NEVER claim to have proven something (since to do so would actually violate one of the principles of scientific investigation). He or she will tell you that within the limits of the experiment the results offer the "best fit" conclusion from the data. A good scientist ALWAYS leaves open the possibility that future work will call current conclusions into question. That's one of the reasons that most scientists (not to be confused with those who love to see their names in the headlines) are very cautious about public announcements of "breakthroughs." Indeed, if you read their actual quotes--not what some reporter provides as an interpretation--they usually say that it's important NOT to draw the conclusions that the reporter usually goes on to report. Good science results in important, although tentative, conclusions related to narrowly focused questions. However, since the questions about human behavior are seldom narrowly focused and don't lend themselves to rigorous experiments in which all variables are controlled, the pure "scientific" approach isn't much help in answering many of the questions we want to ask about teaching and learning. Coincidentally there was a letter to the editor in our local paper this morning from a Psychology professor at Penn State that noted that "science," is a way of obtaining knowledge about the physical world "through our physical senses more rigorously than any other way." He goes on, however, to point out that there are other types of knowledge that provide answers not to the what and how questions about our world (which science does admirably), but rather to the "why?" questions. Science or intuition or religion or experience or other ways of obtaining knowledge are neither good nor bad in themselves, nor are they mutually exclusive. However, each is more (or less) effective for answering different types of questions by providing different types of information. The fact that some people misunderstand and misapply a particular method for gaining and communicating knowledge says nothing about the validity of that method. It only says something about the judgment of the person who misapplies it.</p>
Intent	Understanding	

	Form	Instruction
	Move	Redirecting
	Outcome	Common Understanding
	Reason for Classification	The instructor takes the posts on scientific research and refocuses it back to idea of bias/neutrality and the notion of stated outcome of research.
	Requires new category in classification scheme	
33	Student E - Female	Thank you for this point. I can remember having this drilled into my head. You never prove anything, you only observe results that can be replicated under the same conditions.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Connected/Supported
	Reason for Classification	Student thanks instructor for post and provides personal insight into having had the concept around the results of research pointed out to them earlier in their educational career.
	Requires new category in classification scheme	
34	Student N - Female	These are very important consideration, Instructor. Thank you for this!
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement/Support

Reason for Classification Student thanks instructor for points raised in post.

Requires new category in classification scheme

35 Student B - Female I believe an important aspect to all of this is the analysis of data. There are a lot of ways you can "spin" data to tell the story you want it to or just the opposite. Maybe it is my personality, but I'm always spectacle of a study at first. I need to look at who initiated the study, funding, sample sizes, etc. I'm not saying researchers are always intentionally "spinning" data in the direction they want, but I've observed how easy it can be. It brings to mind a study I heard reported on the radio a few years ago after a big snow storm. "Shoveling snow causes heart attacks", was the tag line read. The reporter then went into telling how heavy snow fall and out-of-shape individuals were more likely to have a heart attack than those individuals who used a snow blower to remove snow. There were stats to support how much more likely someone was to have a heart attack from shoveling snow than snow blowing. The best part was at the end when the report said, the study was financed by Toro (a leading snow blower manufacturer). I'm not sure the science was wrong, maybe more mislead.

Intent Understanding

Form Example/Instruction

Move Building

Outcome Common Understanding

Reason for Classification Student returns to topic of bias and neutrality and discusses how one must question studies and look for bias or spin on data. Student gives example of how a company sponsored study had possible erroneous findings.

Requires new category in classification scheme

Return to Original Interactional Unit

36	Student I - Female	You are so right Student L. Can you imagine doing research on something you have no passion for? The neutrality needs to come in the design of the study.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement/Connected
	Reason for Classification	Student agrees with idea of neutrality and having a passion about study. Does not build, debate, or elaborate on post.
	Requires new category in classification scheme	

37 <i>(Relates to 17)</i>	Student D - Female	Before I read your response, Instructor, that was one question that I had...Must we always be neutral?? What is wrong with wanting to prove something with one's research as long as they are absolutely open to whatever the results show? There have been plenty of people who have set out to prove something because they felt a passion about it only to find that their evidence didn't support their theory. I think of Josh McDowell, who set out to prove that God didn't exist. He was very passionate about that theory, but after many years of research, came to the conclusion, in his book Evidence that Demands a Verdict, that God, in fact, does exist. I think the researcher can be biased as long as they are open to finding results that they didn't expect.
	Intent	Understanding
	Form	Debate/Example/Agreement
	Move	Building/Example
	Outcome	Common Understanding
	Reason for Classification	Student returns to post by instructor on bias and neutrality. Agrees can be passionate as long as researcher is open to results that may contradict hypothesis. Provided a concrete example.

**Requires new
category in
classification
scheme**

38	Student I - Female	Student D, I had a similar experience as an undergrad in my first seminar class. It was on world food production. I remember choosing the topic of bottle feeding in third world countries. By the time I finished gathering information, I met with the professor and told him I wasn't sure of my position anymore. I had started out passionately believing one side, and by the end, while I hadn't come 180, I certainly could see validity in other viewpoints. I believe passion should point us in a direction for research, but should not blind us to what we might find.
	Intent	Understanding
	Form	Example
	Move	Building/Example
	Outcome	Common Understanding
	Reason for Classification	While post starts out conversationally it moves to dialogue by providing a personal example about passion and not being blind to results that do not support original view.
	Requires new category in classification scheme	

39	Student M - Female	Student I, I am in absolute agreement with your point that "I believe passion should point us in a direction for research, but should not blind us to what we might find". Even from the time we build the structure around our initial research question. I am curious what you found through this study you mentioned.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement/Support

Reason for Classification Student states agreement and support, then turns question to results of study student I mentioned in previous post. Moves dialogue off topic.

Requires new category in classification scheme

40 Student I - Female I started out believing that Nestle, and other infant formula manufacturers were evil. They were convincing mothers in third world countries that formula feeding was better than breast feeding. By the time the mothers realized they couldn't afford the formula, breast feeding was not an option for them. Formula was being diluted with unclean water in unsanitary conditions. While I still believe that breast feeding is the best nutrition for babies, I was able to see the situation through a different perspective, although I couldn't tell you now what perspective that was:) It has been almost 30 years since that class. I'm lucky to remember where I put my reading glasses.

Intent Conversation

Form Conversation

Move Social Presence

Outcome Connected

Reason for Classification Student states results of the study that student M asks about and provides personal aspects of when they read the study regarding the time in their life. The post does not tend to drive towards further understanding of interactional unit.

Requires new category in classification scheme

41 Student M - Female I lost my keys for 3 days this week and had to borrow my husbands! Maybe it was that formula was better than milk from mothers who are themselves malnourished-- just a wild guess. How sad about the conditions with the formula though-- I can see your passion for the topic.

Intent Conversation

Form	Conversation
Move	Social Presence
Outcome	Connected
Reason for Classification	Student continues conversation on personal experience and about results of study being sad.

Requires new category in classification scheme

42	Student K - Male	I never understood the argument for baby formula myself. Science can do better than Nature? Pretty warped logic if you ask me. Now in cases where the mother can't produce milk, I can understand. On a side note my heart still goes out of all the Chinese parents and infants, who were sold this myth, and now these precious infants may have problems for life. I also pray no more children get sick from this horrible act of greed and neglect. 600 tons of this poison, I sure hope the government has informed the most remote and poorest among them! http://www.iht.com/articles/2009/01/22/asia/milk.3-413815.php http://www.cnn.com/2009/WORLD/asiapcf/01/22/china.tainted.milk/ over 900 metric tons of formula KNOWINGLY AND PURPOSEFULLY TAINTED!!
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Intent	Conversation
Form	Conversation
Move	Social Presence
Outcome	Connected
Reason for Classification	Student continues conversation about results of study, but not around understanding or methodology or focus of research thesis, or idea of bias or neutrality.

Requires new category in classification scheme

43	Student M - Female	<p>Student K, thank you for sharing. The study that Student I had mentioned was from some 30 years ago. Amazing how some things don't change. I have been heart sunk over the loss from the May 2008 Sichuan China earthquake. Because of the one child rule many parents have had permanent surgeries making it impossible for them to conceive. With where this earthquake was situated a number of school children lost their lives and their parents their only child. There have been many issues raised around this one child rule.</p> <p>http://www.foxnews.com/story/0,2933,358112,00.html</p> <p>http://www.telegraph.co.uk/news/worldnews/asia/china/2058726/China-earthquake-Chinese-one-child-families-rush-to-take-in-orphans.html</p>
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Connected
	Reason for Classification	<p>Student continues conversation thread around children in disasters and the milk study. Conversational postings end with this post and next post returns to responding to instructor's last post.</p>
	Requires new category in classification scheme	

44	Student K - Male	<p>Instructor, Is this is at the heart of the paradigm shift between Qualitative and Quantitative Research as discussed earlier? While the principles of the scientific method is embedded in our American educational systems from the time we were children, I am beginning to believe that to think that a good researcher can ever truly be unbiased is ridiculous. In fact, I believe it is quite the opposite. In that it is the unique perspective, or bias, that each researcher brings to the table that defines truly great cutting edge research agendas! The ironic part is that the negative attitude towards bias, is likely derived from the scientific community's goal of being able to prove or disprove theories, overwhelmingly, thorough the use of a replicable experiments. For instance, in biology, a researcher may prepare slides, but even the procedures for slide preparation are subject to bias and hence influencing the very behavior of the</p>
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observed subject.

Had it not been that discovered bias,(or different technique), one never would have thought this mattered. In chemistry, the effort to controlling or at least identifying all possible variables is of the utmost importance during experiments since the observable properties can change so dramatically. Such things as heat and chemicals present, even in the air, change the chemical properties of the mixtures. (Just think about, how little drug companies really understand about the millions and billions of combinations and interactions that could happen by mixing different drugs and chemicals together.) Hence, the push for a researcher to be unbiased may only be driven by those wishing to move research from a theoretical framework of ideas to a practical framework for industrialized and commercial desires.

This point can be made clearer as one moves toward physics for example, the theoretical constructs are built in which a simple experiment cannot be designed to prove or disprove one's intellectually bias theories(i.e. Theories of Black Hole creation and extinction, Sub-atomic particle existence, The belief that mankind will be able to one day built carbon nanotubes with cross linking electrical impulses). However, in these forms of research, bias is very likely the key ingredient in developing truly cutting edge research programs and theories. It is the belief in something yet unproven. I, therefore, have begun to believe that the 'hunch' one gets comes from the researchers background, experiences, educational bias and slants. It is this BIAS that takes research to new levels. Just think if Edison didn't BIAS his thinking that the light bulb was possible, regardless of the evidence to the contrary, and in illogical pursuit after the many failures of his previous experiments, we may never have gotten the light bulb!
<http://arstechnica.com/science/news/2008/10/carbon-nanotubes-take-over-solar-cells-setting-sights-on-the-world-ready-for-edits.ars>

Intent	Understanding
Form	Debate
Move	Response
Outcome	Non-Agreement
Reason for Classification	Student continues to question idea of bias and provides insights (not concrete examples) of what they see as bias informing research agendas (confuses bias in research and innovation in invention)

**Requires new
category in
classification
scheme**

Return to Original Interactional Unit Post

45 <i>(Relates to 1)</i>	Student E - Female	I like that you focused on beginning with gathering the information you needed to reach your later goal. It would be easy to focus on how to improve retention and performance before truly understanding why they are lower in that community.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement/Support
	Reason for Classification	Student provides encouragement and support for proposed research question and focus of research, but does not question, build, or debate statement.

**Requires new
category in
classification
scheme**

46	Student M - Female	First things first. The earlier should help to answer the later.
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement
	Reason for Classification	Simple response of agreement. Tends to close of dialogue. No debate, building, or redirect of dialogue.

**Requires new
category in
classification
scheme**

New Interactional Unit Related to Team 1

- 47 Student B - Female** Our team selected problem #2. You are a graduate assistant in your adult education department. The department has offered a course called "Introduction to Adult Education" in a distance education format for the past five semesters. The students have been a mix from the U.S., Africa and Asia. Each course has been somewhat different, the content of each having been designed by 3 different instructors. The outcomes of the courses in terms of grades and student evaluations have also been mixed. You are curious about the differences. Your boss, who hasn't had time to look into it, has agreed to give you time to work on it so that you can find out what some of the factors might be for the uneven grades and course evaluations. Here are our answers to the three thesis builder questions; Q1: What are the key factors that cause the differences in student grades and evaluations for the distance education course "Introduction to Adult Education" offered by different instructors over the last five semesters? Are there key factors other than course design and course instruction? Q2: The purpose of this study is to evaluate whether "Introduction to Adult Education" instructors should continue to be allowed academic freedom in providing content and design for the course and whether this course needs to be tailored to better suit the needs of all students based on course objectives. Q3: "Introduction to Adult Education" is one of the first courses in which Adult Education graduate students enroll and they need to find fulfillment for their efforts. Additionally, student satisfaction in these introductory courses typically determines whether students continue or drop out of distance education programs. Therefore, program administrators need to take measures to ensure that students succeed and perform consistently in each distance education course. This study should identify key areas that affect student performance and satisfaction levels. Adjustments based on these results could improve student retention, instructor morale, and the knowledge base of entering graduate students. Failing to evaluate and consider timely options for requisite improvement may adversely impact the validity and popularity of the overall distance education program.

Intent	Conversation
Form	Conversation
Move	Structuring/Advanced Organizer

	Outcome	Proposed Activity
	Reason for Classification	This is similar to post #1 as it is a posting of a proposed assignment activity that starts a dialogue.
	Requires new category in classification scheme	May need new category in classification scheme.
48	Student M - Female	Some initial thoughts-- The second part of question 1 I believe is too leading, "Are there key factors other than course design and course instruction?" I would not make any supposition, I would work from a position of neutrality and try to determine 'the key factors.' since there may be other things going on here just under the surface such as differences based on students places of origin. I think stating up front that there are key factors other than course design and course instruction is leading. Regarding question 2, I am not sure that this is the purpose of the study. This seems very guided. I would try to be more open such as "The purpose of this study is to determine what some of the key factors might be for the uneven grades and course evaluations" Jumping right to the instructors academic freedom may cause you to miss some other equally if not more important factors.
	Intent	Dialogue towards Understanding
	Form	Debate
	Move	Building/Response? (Is it responding to a questions)
	Outcome	N/A
	Reason for Classification	Student responds to proposed thesis statement and research question, and suggests changes to broaden statement without jumping to assumptions.
	Requires new category in classification scheme	
49	Student E - Female	Good point, Student M. Until we know what the factors are, we should not move on to decide what to do about them.
	Intent	Conversation

Form	Conversation
Move	Social Presence/Agreement
Outcome	Support/Agreement
Reason for Classification	Student agrees with previous post, but does not redirect, build, or question.
Requires new category in classification scheme	

50 Student C - Female Actually, Student M, I do see validity on your comment on Q2 - I personally do not know if there is a standard definition of "academic freedom" - and anyway, a DE course instructor may have agreed to circumscribe his modus operandi under the specific terms of his teaching contract.

Intent	Conversation
Form	Conversation
Move	Social Presence
Outcome	Agreement
Reason for Classification	Student agrees with student M comments, also redirects conversation from focus of thesis statement to idea of academic freedom
Requires new category in classification scheme	One could question if this is dialogue as it begins to explore the idea of academic freedom, but doesn't seem to be building on idea and it is not directly related to the interactional unit.

51 Student M - Female I was thinking too, with the different faculty in this scenario maybe given the contrasting student demographic each had to adjust in order to ensure an environment where students had the opportunity to realize educational success.

Intent	Understanding
Form	Debate
Move	Building

	Outcome	N/A
	Reason for Classification	Student returns to proposed thesis statement and continues dialogue on whether impact is on demographics.
	Requires new category in classification scheme	
52	Instructor - Female	There has long been debate on the meaning and intended extent of the concept "academic freedom." For an interesting recent perspective see Stanley Fish in the New York Times: http://fish.blogs.nytimes.com/2008/11/23/an-authoritative-word-on-academic-freedom/?pagemode=print
	Intent	Conversation
	Form	Conversation
	Move	Structuring
	Outcome	Guidance?
	Reason for Classification	Instructor provides link for those interested in pursuing further research on academic freedom. Does not instruct directly or do they indirectly provide a post that could lead to further dialogue.
	Requires new category in classification scheme	Guidance is a new idea in outcomes that may need to be reviewed in the classification scheme.
53	Student H - Male	I see academic freedom as an issue worthy of further research, especially in regard to classes that serve as prerequisites for other classes. I used to work for a private business school that prided itself in its academic freedom policy. Overall, this policy worked well for the school, which required instructors to have bachelor's degrees and work experience in fields related to the subjects they taught. With my journalism degree and experience as a newspaper and magazine editor, I was able to teach English and writing courses. In the beginning, I struggled with teaching because I had trouble explaining why certain

sentences were grammatically incorrect, and obviously "just because" was not a sufficient answer. The owner of the school pulled me aside one day and simply said "Teach them what you know," which led to my incorporating more of a "no-nonsense" approach to learning grammar and improving readability in students' writing. I taught them to remember writing and grammar issues through memory hooks and simplified explanations. I steered clear of textbook terminology and rules, which most students rarely understood when they studied grammar high school. Based on post-test scores and student evaluations, my teaching style was effective and successful. Even though we had academic freedom, we still had to meet certain outcomes, and students were given pre- and post-tests to determine their performances. How we taught the lessons, however, was up to each individual instructor. The only problem arose when some instructors interpreted academic freedom to mean that they could skip certain lessons altogether or not thoroughly cover areas they didn't quite understand themselves. This proved to be problematic and frustrating for students who found themselves unprepared for their next classes (moving from English I to English II, for example). Based on Team One's question, I think online instructors need academic freedom to a certain extent, as long as outcomes based on the agreed curriculum are reached.

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Intent Understanding or Conversation?

Form Conversation

	Move	Social Presence and Example (Personal Example)
	Outcome	N/A
	Reason for Classification	This is an interesting post. If the dialogue had been around academic freedom and understanding of academic freedom it would be tempting to classify it as dialogue towards understanding through example. However, it tends to be a personal monologue about a personal experience related to teaching and academic freedom. It is off topic somewhat and does not question or redirect.
	Requires new category in classification scheme	
54	Student C - Female	Thanks, Instructor; I will share this with my colleagues at the local University where I work
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Support
	Reason for Classification	Student thanks instructor for link on academic freedom.
	Requires new category in classification scheme	
Response to Initial Team 1 Post		
55	Student G - Female	When I read the question I was hoping that the students' origins would NOT play a role in the statement. Perhaps it might have had an impact, but focusing on the content and design, I agree, takes priority. The initial statement looks like a correlation between the evaluation and grades and the content and design, however the purpose of the study diverges somewhat to being an investigation of whether freedom for instructors should be allowed.
	Intent	Understanding

Form	Debate
Move	Building
Outcome	N/A
Reason for Classification	Student returns to original post in interaction unit and debates the thesis put forth in terms of scope and focus.
Requires new category in classification scheme	

56 Student L - Male I agree with question #1, why the difference. However, it seems that in question #2 you jump into instructor academic freedom, possibly as the primary cause. Although this may be a reason, there are potentially more causes. What made you pick this one?

Intent	Understanding
Form	Debate
Move	Question
Outcome	N/A
Reason for Classification	Student continues to debate focus and scope of proposed thesis statement.
Requires new category in classification scheme	

57 Student C - Female One edit needed pl.:

Intent	Conversation
Form	Conversation
Move	Regulating? Or other new move

	Outcome	Formatting of assignment
	Reason for Classification	Student requests edit in thesis statement
	Requires new category in classification scheme	May require new dialogic move.
58	Student B - Female	Oh my goodness- I'm SO sorry Student C. I'll make the edit right now!
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement
	Reason for Classification	Student indicates they will integrate edit.
	Requires new category in classification scheme	
59	Student C - Female	Not a problem!
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Support
	Reason for Classification	Student simply responds with a phrase indicating support.
	Requires new category in classification scheme	

New Interactional Unit Related to Team 2

60	Student L – Male	<p>Our group chose scenario 5. The residents of a village in Mauritania have a need for a specified adult educational program. This program has been successfully implemented in the US and has previously been introduced to the village in Mauritania with less than successful results. How can this program be implemented successfully into Mauritanian village culture to meet the needs of the local people? The purpose of the study is to determine if this program is, in fact, the program that will truly meet the needs of the local residents analyze the previous program implementation in the village to determine program strengths and weaknesses research and identify barriers that prevent villagers from understanding the program; cultural, language, etc.. identify milestones and measures to monitor implementation of this program, including feedback to ensure barriers are being overcome and goals are being reached This problem is worth solving since the the people of this village have demonstrated a need for a program similar to this program.</p> <p>The US program is successful, and with proper preparation, the adapted program would be of great help to this local population. Before beginning development of an entirely new program for the local population, this study would identify the feasibility of using an existing program, providing that adaptations are made for this Mauritanian village. Success in implementing this program in rural Mauritania may lead to successful implementation into other cultures. Submitted by Team 2:</p>
	Intent	Conversation
	Form	Conversation
	Move	Structuring - Advanced Organizer
	Outcome	N/A
	Reason for Classification	As with post #1 and #47 the student proposes a lesson activity for the team that starts dialogue.
	Requires new category in classification scheme	New category other than conversation needed?

61	Student N - Female	<p>Just my two cents; Seems like there's a whole lot going on in this situation-certainly enough to make choosing one aspect difficult...Perhaps it would be more succinct to ask: "Why does this program work in the United States but not in Mauritania?"</p> <p>Needs...culture...I'm not convinced they have much place in the thesis question itself. Perhaps those are things that will arise in the study that will turn out to be a factor and answer the "why" question. By addressing concepts such as needs and culture into the research question itself, it's almost as though you're expecting them to be a factor before the research begins. You can speculate that the program isn't working because of the Mauritanian culture or their needs, but you may also find out the program isn't working because the education program is written in Sanskrit-or some other bizarre thing that had nothing to do with the culture to begin with. That's where the neutrality comes in...you only want to know "why"...let the factors uncover themselves. It sounds like a fascinating research situation, though...I'd be interested to learn what the study would uncover.</p>
	Intent	Understanding
	Form	Debate
	Move	Building
	Outcome	N/A
	Reason for Classification	Student responds and builds on original thesis post and tries to help focus research question.
	Requires new category in classification scheme	

62	Student M - Female	<p>Ok, I think you may be dead on with the cultural issues; however there very well may be other contributing factors. Let's just suppose for a minute that your predecessor somehow fell through the cracks. Why was he in Africa? Is there anything in the scenario that describes the United States run program as 'successful'? No, just that he had based this program on those he had done for years in the United States. Perhaps he is out of touch or the program is out of date, or just doesn't meet the needs of the intended audience for any host of other pedagogical reasons. Perhaps this is the first time that someone has looked closely at his program in years. He</p>
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admitted that results were far from satisfactory and given that he has done this for years, I would be a bit suspect that he has no advice as to what might be done differently. I would be very cautious in trying to implement the same program based on my immediate intuition that the overarching reason why this was not successful with the villagers was because of the cultural differences.

I would think going into a different country and a different culture altogether to deliver a program that this would be evident up front-that is that you would have already accounted for these cultural differences.

Intent	Understanding
Form	Debate
Move	Building
Outcome	N/A
Reason for Classification	Student helps continue dialogue around factors that may impact research question to help focus the question.
Requires new category in classification scheme	

63 Student I - Female We actually talked quite a bit about needs assessments and whether to try and resurrect the failed program, or if we wanted to throw that one out the window and just start over with figuring out what needs the village had. The consensus was that for this scenario, the previous program had been put in place for a reason, and perhaps there were some redeeming qualities that just needed to be reevaluated for the current setting.

Intent	Understanding
Form	Debate
Move	Respond/Building
Outcome	N/A
Reason for Classification	Student continues debate around focus of research question and thesis statement.

**Requires new
category in
classification
scheme**

64	Student L - Male	Student M, The first thing we discussed was a thorough needs assessment for the village. However, since that wasn't the focus of this academic exercise, we moved on with some assumptions, including analyzing the failed program and some possible cultural issues. Certainly, this would be a lot to cover in one course, let alone one week. Regards
	Intent	Understanding
	Form	Debate
	Move	Response
	Outcome	N/A
	Reason for Classification	Student responds with reason for current focus of question.
	Requires new category in classification scheme	

65	Student C - Female	Why not then include the needs assessment factor in the Question?
	Intent	Understanding
	Form	Inquiry
	Move	Question
	Outcome	N/A
	Reason for Classification	Student poses question about inclusion of needs assessment in research question.
	Requires new category in classification scheme	

66	Student K - Male	<p>Studnet L, Perhaps, an ethnographical study would be helpful to begin to understand the cultural issues, even if just to see that the local and the program goals are inline with each other. This is an interesting research approach to use. http://faculty.chass.ncsu.edu/garson/PA765/ethno.htm</p>
	Intent	Understanding
	Form	Debate
	Move	Building
	Outcome	N/A
	Reason for Classification	Student suggests idea of ethnographic approach to research/thesis.
	Requires new category in classification scheme	

67	Student L - Male	<p>Ye, I agree that further study would be needed. As I mentioned, we all had to discuss and publish results within a week. We could all spend much more time on this, but we have other things to accomplish. Regards</p>
	Intent	Conversation
	Form	Conversation
	Move	Close off Dialogue
	Outcome	Section of Thread ends
	Reason for Classification	Student responds with an agreement statement, but then dismisses further debate on topic due to time for activity. In essence they close off dialogue with this post.
	Requires new category in classification scheme	

Response to original post for Team 2

68	Student B - Female	Similar to Student M's point with team 1 statements, I wonder if the purpose of the study is too guided. In group 1 we were trying to understand causes vs. being open to causes and then analyzing. I looks to me that group 2 was also excited to find answers.
	Intent	Understanding
	Form	Debate
	Move	Building
	Outcome	N/A
	Reason for Classification	Student responds to original post to this interactional unit and questions scope of research question and thesis statement.
	Requires new category in classification scheme	

Response to original post for Team 2

69	Student C - Female	Team 2: I take it the following sets out your Q1? "How can this program be implemented successfully into Mauritanian village culture to meet the needs of the local people"
	Intent	Understanding
	Form	Inquiry
	Move	Question
	Outcome	Common Agreement
	Reason for Classification	Student responds to original post to the interactional unit and presents a possible research question as an inquiry to the team.
	Requires new category in classification scheme	

70	Student C - Female	Thanks, Student L. The question "How can this program be implemented successfully into Mauritanian village culture to meet the needs of the local people" seems self-limiting, as it specifies "this program" - I guess you are thinking that any revision or even a total rewrite of that failed program will still be "this program"? It seems to me that to craft any program to fulfill the locals' needs, the specific needs must be first ascertained. I am not sure to what extent the following suggested statement changes the focus, but here goes: "What are the issues or concerns of the local people that should be addressed, and what must be incorporated into the adult education program to empower the locals to deal with these issues or concerns?"
	Intent	Understanding
	Form	Debate
	Move	Building
	Outcome	N/A
	Reason for Classification	Student starts off with a conversational approach, but switches to debating the research question and focus.
	Requires new category in classification scheme	

71	Student L - Male	We did discuss 'needs assessment' in our group. However, for the purposes of this assignment, we moved on to addressing the failed program and determining how to proceed from there.
	Intent	Conversation
	Form	Conversation
	Move	Close off dialogue
	Outcome	Closes off dialogue for this portion of interactional unit
	Reason for Classification	Student indicates a particular focus was discussed, but the team moved in another direction. Shortness of post and summative nature closes off on-going dialogue.

Requires new category in classification scheme

72	Student L - Male	Student C, Yes, that is the question for the basis of the study. Regards,
	Intent	Conversation
	Form	Conversation
	Move	Social Presence
	Outcome	Agreement
	Reason for Classification	Student agrees to previous post in interactional unit and dialogue ends for interactional unit.
	Requires new category in classification scheme	

Response to original post for Team 2

73	Instructor - Female	Hi everyone. I hope you didn't miss Team 2's posting down at the bottom of the page (which means they were the early birds!). I'm sure they're waiting anxiously for your feedback.
	Intent	Conversation
	Form	Conversation
	Move	Classroom management
	Outcome	Understanding of activity
	Reason for Classification	Instructor reminds everyone to review team 2 posts that were made early in the overall theme of the discussion forum.
	Requires new category in classification scheme	

74	Student N - Female	Holy Smokes...as a matter of fact, I did....reading through it now.
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Intent	Conversation
Form	Conversation
Move	Social Presence
Outcome	Agreement
Reason for Classification	Student shows agreement with the instructor by indicating they had missed earlier posts for team 2.
Requires new category in classification scheme	

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VITA

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Rick Shearer has been involved with distance education for over 25 years. During this time he has worked for public and private institutions of higher education and has lead major instructional design units. During Mr. Shearer's tenure at National University he was the Director of Institutional Research and Educational Technology. Over the years at National University Mr. Shearer was involved in projects related to Computer Based Education (CBE) through the PLATO system, Education Television productions, Two-way interactive video, and the early years of the Internet involving the integration of communication environments in distance education courses.

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Mr. Shearer has authored a number of book chapters on instructional design in distance education, has had journal articles and white papers published, and has presented extensively at national conferences. Currently Mr. Shearer is the chair of the Distance Learning Community of Practice for UCEA, and is on the editorial boards of the Distance Education Report, and the New Zealand Journal of Distance Education. Mr. Shearer has also served as a volunteer ski instructor in California and in New York for the Adaptive Ski programs in those states.