

**Viewing More than Just the Tip of the Iceberg:
A Sociocultural Study of Achievement Motivation**

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EDCI 615

Mini-Prospectus

Spring 2006

Problem and Generative Promise. Our current conceptions of motivated behaviors in school settings may reflect only a "tip of the iceberg." The field of motivation research in educational psychology has predominantly been built in a social-cognitive framework. The emphasis in this framework is on the individual; particularly, how he or she cognitively processes and interprets stimuli from the social world (Hickey, 1997). Most dominant models of achievement motivation (e.g. Eccles et. al., 1983 - Expectancy-Value Model; Deci & Ryan, 2000 - Self-Determination Theory; Ames, 1984, Dweck, 1986, Maehr, 1984, Nicholls, 1984 - Achievement Goal Theory) are based upon social-cognitive theoretical assumptions and methodology. Some scholars have argued that the predominant methodology used in this framework, self-report instruments, and the theory itself produce static snapshots of only a slice of the factors influencing student motivation (i.e. Turner & Meyer, 1999; Hickey, 2003). Moving our study of student motivation in the school context from social-cognitive perspectives to a socio-cultural perspective may provide deeper insights regarding how to facilitate students' behavioral, emotional, and cognitive engagement in school-based practices.

Socio-cultural theory provides assumptions that paint a stridently different view of student motivation. Many scholars have suggested that this theory offers the opportunity to understand behavior and cognition *in situ* rather than through the decontextualized abstract constructs that proliferate the current literature (Brown, Collins, & Duguid, 1989; Wertsch, 1998, p. 3). In this view of behavior, emphasis is given to participation in socially constructed activities and mediation of those activities through discourse and cultural tools. Sociocultural models for learning (i.e. Lave & Wenger, 1991, and Wenger, 1998) may also provide models by which we can view student's motivated behavior in school-based practices.

In particular, three notions from this perspective have influenced my own thinking about a student's motivated behaviors. Lave and Wenger (1991) introduce the notion of legitimate peripheral participation, "the process by which a newcomer becomes part of a community of practice" (p. 29). Wenger (1998) posits that communities of practice are everywhere; while some are more organized than others it involves a people in joint enterprise, a shared repertoire to language and tools, and mutual engagement (p. 73). The formation of identity as a legitimate participant within a community of practice may prove most useful in understanding student motivation from this perspective. Wenger (1998) extends two other concepts that further explicate this conceptual framework for describing participation in school-based practices: trajectories of participation; and negotiation of identities of participation. Through processes involved in legitimate peripheral participation, participants develop qualitatively

different identities of participation (p. 148). Identity development is not an individual process; rather identity development is negotiated socially through discourse with others in the community of practice (p. 163). It is in the negotiation of identity that different trajectories of participation begin to form. Generally, trajectories may be inbound toward full participation in the practice or outbound toward marginalization (p. 167). The dynamic interplay between these two constructs (trajectory and identity of participation) leads to different forms of participation within a practice. Thus these two constructs may have the most generative promise to both the discipline of educational psychology as well as to practitioners in understanding students' motivated behaviors in school-based practices.

The purpose of this study is to describe students' motivated behaviors from a sociocultural perspective. More specifically my purpose is to illuminate the usefulness of processes involved in Lave & Wenger's (1991) concept of legitimate peripheral participation as a socio-cultural model for explaining motivated behaviors such as choice, persistence, effort, and interest. For reasons I will explicate later, I have chosen to situate the study within the school-based practice of student leadership development. Specific questions I seek to answer include: How do different patterns of discourse among newcomers and old-timers during activities related to leadership development influence the negotiation of students' identity of participation with the practice? How do different identities of participation influence a student's trajectory within leadership practices? How do student identities of participation and differing trajectories explain student's motivated behaviors with the practice of student-leadership?

Theoretical Framework. Socio-Cultural Theory (Wertsch, 1998; Wertsch, 1995) is the guiding theoretical framework for this study. This theory brings together two key notions which guide the unit of analysis and give coherence to the methods chosen for the study: human action and mediation. Human action as defined by Wertsch (1995) "may be external as well as internal, and it may be carried out by groups, both small and large, or by individuals" (p. 10). The notions of human action advanced by this position are rooted in such works as Leont'ev's Theory of Activity (1981) and Vygotsky's Cultural-Historical Psychology (1978). Wertsch's (1995) sociocultural theory emphasizes, more so than its predecessors, that action is not located in individual mental processing alone. Rather mental processes on the part of an individual is just one "moment" of action that does not exist in isolation from the action occurring across the context of cultural, institutional, and historical settings (p. 11).

The second assumption critical to this position is that of mediation. Wertsch (1998) asserts that human action is shaped through mediational means. This notion is rooted in Gibson's (1978) Theory of Affordances where he asserts that meaning rises and action is shaped from our perception of affordances, "what the environment

provides or furnishes [an animal] either for good or for ill" (p. 127). Vygotsky (1978) also asserts that speech is essential to shaping our behavior and use of tools in the environment. Sociocultural theory brings these notions together and establishes the key assumption that human action is shaped, transformed, empowered, and constrained through mediation (the process), mediational means (signs, cultural tools, symbols), and mediated action (the behavior shaped by what the context affords).

Discourse analysis provides a research methodology with which to conduct a sociocultural study of human action and mediation. While discourse analysis does not reflect a theory alone, discourse analysis deepens the sociocultural theoretical framework by offering defined stances, methods, and analytic procedures with which to conduct the study proposed. Gee, Michaels, and O'Connor (1992) propose two "stances" discourse analysis often takes during inquiry; both are useful in this study. First, discourse may be used as evidence of social and cognitive processes. In this sense, a researcher takes the discourse occurring as the starting point and attempts to use it as evidence of larger processes. Discourse analysis may also take the stance of studying "discourse genres" (p. 229). From this stance the focus is on explicating the "form, meaning and regularities" represented by a particular "genre" (p. 229). This stance with discourse analysis affords the study of the particular patterns of discourse between students and teachers as well as among students related to the genre of leadership development. Depending upon the stance discourse analysis also provides specific rules for the transcription, formatting, and analytic concepts for interpreting the texts such as syntax and morphology, cohesion, contextualization cues, and thematic organization.

Research Design - Setting. In order to answer the study questions posed it believe it is most useful to view a community of practice that reifies a joint enterprise in developing students as leaders rather than a loosely defined practice with a similar enterprise. Thus, I have chosen the high school agricultural education classroom as the setting for this study. The agricultural education curriculum purports leadership development as one of the three key dimensions of the total program. The agricultural education curriculum also offers a variety of opportunities for mutual engagement and has a defined shared repertoire of language and tools surrounding the practice of student leadership. Finding a setting that will have explicit and implicit forms of these dimensions of a community of practice should produce rich data from which to answer the questions posed. Likewise enrollment and participation trends suggest a great deal of variance among students involved in the program with regard to the quality of participation in leadership practices.

Participants and Site. In selecting the site I propose using typical case sampling (Patton, 2002). My questions are interested in the typical everyday discourse that occurs regarding student leadership development. I propose selecting three sites in the state of Indiana in which to view the discourse as it unfolds over a semester. The sites will be selected by using data from the Indiana Department of Education. Data will be analyzed to determine a "typical" agricultural education program based upon: average agricultural education class enrollment; ratio of agricultural education students to FFA membership; overall school population; male-to-female student ratio; and teacher gender.

Regarding the selection of participants for the study; my questions are focused on the participant's development of identity and trajectory within the practice of leadership. Lave & Wenger (1991) characterized the actors in their study of practices as newcomers and old-timers. Presumably first-timers, or ninth grade students, will provide a rich data source from which to watch the social processes such as identity formation and trajectory development unfold. However, discourse in a community is shaped by old-timers. In this study I have chosen the agriculture instructor and students older than ninth grade (who are also enrolled in agricultural education and participate in the selected episodes) to represent the old-timers within the practice. For purposes of data collection I will initially collect data and notes at the classroom level. At this time I do not plan to narrow my observations to only a few students at each site.

Data Collection. Once sites are selected, I propose an exploratory period where I enter the school to view discourse in the classrooms as a whole and interview the teacher regarding his or her calendar of activities related to leadership development. After transcribing the interviews I will proceed to identify themes of episodes to view at each site. I will focus my observations of discourse on episodes of leadership development activity. In selecting episodes to view I will balance scenes that occur within the classroom with scenes that occurs outside the classroom. During the data collection in each of the episodes I will act as an outside onlooker. Data will be collected during the episodes via field notes and video tape. Detailed field notes will record both my personal observations as well as detailed notes about what is happening in the room. I will keep both of these sources separate in a field notebook. All data from the video tapes will be transcribed by episode with field notes integrated after discourse is recorded. Documents and artifacts produced by newcomers and old-timers in the course of participating in leadership development activities will also be collected. These documents and artifacts are representative of the ongoing discourse regardless of what is being said in the room. Examples may include (but are not limited to): letters home from the teacher to parents; copies of assignments and original works produced by students under the auspices of

leadership development; lesson plans on leadership development; and flyers developed for leadership activities.

Documents will be collected and associated with the specific episode to which they belong for later analysis. Video-taped episodes containing discourse will be transcribed using conventions outlined by Gee, Michaels, and O'Connor (1992) with the focus on separating the text into idea units. Actors will also be clearly identified in transcripts as a newcomer or old-timer (for the purposes of analysis later) along with a pseudonym.

Data Analysis. The questions for the study call for a mix of description and interpretation as outlined by Peshkin (1993). For instance, the first question regarding the influence of discourse on development of identity and the second question regarding identity development and trajectory are descriptive in nature. The third question calls for interpretation by explaining the relationship between the sociocultural model of legitimate peripheral participation and current motivated behaviors usually measured in achievement contexts. The data analysis will incorporate both inductive and deductive techniques. I will work with my thesis committee throughout data analysis to check the credibility of my procedures.

Analysis of the data to produce findings for the first two study questions will first produce case study narratives using steps outlined by Patton (2002). At the first step of data analysis, raw discourse data from the three sources (video transcripts, field notes/observations, and documents/artifacts) will be assembled by according to the specific episode at each site. A case record for each of the episodes will be generated to condense this raw data into a manageable format. The second step will involve analyzing the content of the records for each episode to search for common temporal groupings for further analysis (i.e. introduction to leadership; newcomers first leadership experience/event). This will assist in organizing the data for comparative pattern analysis (Patton, 2002). No priori categories will be established for this step. Once this level of grouping is achieved then analysis will proceed with a third major step by organizing the data into like patterns of discourse organization and themes. This step will again be inductive in nature and follow procedures outlined by Gee, Michaels, and O'Connor (1992). One discourse data is organized into coherent patterns I will code the grouped discourse data using priori categories in a sensitizing framework based upon the theoretical constructs outlined by Lave & Wenger (1991) and Wenger (1998). In particular, patterns of discourse with old-timers (patterns identified by Meyer, 1993 literature on scaffolded instruction), identities of participation (assuming there will be at least two: participant and non-participant) and trajectories of participation (assuming there will be at least two: full participant and marginalization). I chose to proceed this way in an effort to allow the inductively produced categories to provide a check on the strength of the

priori categories and theory. However, during coding other categories will also be allowed to emerge from the discourse data as suggested in the grounded theory approach proposed by Strauss and Corbin (1990). Each time a pattern or theme is identified a search for negative cases will ensue across the other case records for similar episodes. A goal of data analysis in creating these narratives will be triangulation among all data sources (Patton, 2002). Based upon this analysis process I will synthesize a case study narrative for each grouping of episodes will be constructed (i.e. a case study narrative for all episodes involving student's introduction to leadership). According to Patton (2002) qualitative data can be converted into quantitative data as a form of triangulation. Thus, following creation of narratives process, I will take the raw data coded with the priori categories and convert it into quantitative data for statistical analysis. Statistical t-Test for significance will determine if any of the variables are significantly different from one site to the next. An analysis of variance (ANOVA) test will tell us upon which variables the sites differed. Lastly, a multiple regression analysis can be performed to analyze the relationships between the different patterns of discourse detected as an (multiple level) independent variable with trajectory (as a two level variable) and identity (as a two level variable). As well, identity will be used as an independent variable to determine the strength of the relationship with trajectory. I am creating the narratives first so that the results from the quantitative analyses do not influence the narrative description of the processes. Case narratives describing the processes will be triangulated with the quantitative data to inform the response to the first two questions posed in the study.

Finally, to address the third question the case records and narratives will be coded a second time with priori categories representing motivated behaviors (persistence, interest, effort). Again categories representing other motivated behaviors will be allowed to emerge from the data. The coded data will be converted to statistical data to run multiple regression analyses to determine relationships between the various motivated behaviors detected and trajectories of participation and non-participation and identities of participation. Following the regression analysis data will be produced to identify core themes and trends. Depending upon themes identified a search in the raw discourse data, documents, and field notes will be conducted to begin building a case record of students who intensely represent (and potentially disconfirm) the trends revealed in the statistical analyses. A narrative case study will be constructed using raw data from the case records for each of the students selected to assist in further describing and analyzing the trends reported. The second question calls for explaining the relationships to ensure

credibility I believe proceeding deductively first and then inductively creating the narratives will produce the most credible source of knowledge to respond to the question based upon the data collected.

Write-up. According to Alvermann, D.E, O'Brien, D.G, & Dillon D.R. (1996) the write-up should focus on final representation of the units of analysis. Thus, findings from the analysis will be presented in two forms. First, a case narrative for each "category" of episode will be used to describe the processes and relationships involved in students' identity development and trajectory with the leadership development practices. Case narratives will represent episodes from multiple sites and are intended to provide a thick description of the patterns of discourse detected, the processes involved in formation of identities of participation, and the relationship between identities and trajectories. Negative cases and outliers will be reported to demonstrate if and when the theoretically derived constructs do and do not hold up in the real-world. The statistical data will also be provided and findings explained along with the narratives. The focus will be on showing where the two analyses triangulate or perhaps diverge. Together with a brief interpretation these will provide a unique descriptive picture of the processes involved in legitimate peripheral participation.

Second, the case narrative for the students (newcomers) who represent intense examples of the relationship between the holistic process of legitimate peripheral participation and the traditional conception of motivated behavior will be produced through analysis. Statistical analyses provide the hinge-pin of data for this section thus they will lead in the write-up. reported and interpreted as a basis for the student narratives. Negative cases or contradictory findings will be contrasted against confirmatory findings within each narrative. Interpretations that respond to the third study question will be reported following the student narratives. All assertions will be supported with data from the field and statistical analyses.

Following a presentation of the findings for the questions I believe a discussion section linking up this work with relevant theory in the achievement motivation field will be appropriate. In the end, the purpose of this study is to describe student motivation using constructs and methodology from a socio-cultural perspective. The discussion should address this purpose and rely on the data collected to support assertions and suggested directions for the field.

Researcher Role and Ethics. Eisner (1991) discusses the role of perceptivity in conducting qualitative research. Perceptivity according to Eisner is a researcher's ability to "notice" what is important in a setting. My experience as an agricultural educator combined with my pursuits as an emerging educational psychologist are, in part, evidence of the perceptivity required to adequately represent this setting. As an agricultural educator I have a

total of four years of professional experience with both formal and informal classrooms. However, I recognize that this source of perceptivity is also a large source of bias. I will rely on my lens as an emerging educational psychologist to bring forward constructs and a sensitizing framework from which to make that which is familiar - unfamiliar. The use of multiple methods and a thesis committee will also act to reduce any such bias that may enter from either source of my identity as a researcher.

I will play several roles throughout the study: applied researcher, onlooker observer, and data analyst. As an applied researcher I have conceptualized the purpose of the study and questions. It is in this role that I will have to make decisions about how to proceed as the study unfolds. Changes in direction from this proposal will be reported in the final write-up of the study. As an observer in the study I will primarily be an onlooker observing the action from a distance. I believe that this is a role where both the agricultural educator and educational psychologist in me will balance both an emic and etic perspective in collecting data and as decisions have to be made in the field. Given my role as an observer in the classroom I believe I will have to be overt in fully disclosing my purposes with teachers and students. Also, knowing my affiliation as a staff member for the National FFA Organization I know that I may be asked for feedback from the instructors or students. I believe for the credibility of the findings that it will be important to agree upfront that I will remain neutral so that discourse unfolds as naturally as possible. As a data analyst I will be responsible for ensuring a sense of trustworthiness and confidence in the data produced. In the analyst role I will also have to constantly practice reflexivity as defined by Patton (2002 which includes consideration of my own bias, reflexivity about those studied, and reflexivity about the audience to whom I am reporting.

Conclusion. This study is about more than just theory-for-theory's sake. It may provide a new and comprehensive model by which we can look at student motivation in achievement contexts. Most certainly it will afford data to foster future studies of the sort. Our current methodologies provide us with a view of the tip-of-the-iceberg; or, as some have said a view similar to the blind men all touching different parts of the same elephant. This study proposes to move us beyond that approach into a new line of research on a very important topic in our schools.

Timeline

Task	Date
Proposal Development <ul style="list-style-type: none"> ▪ Complete full proposal ▪ Submit proposal to advisor and committee for review ▪ Edit proposal and submit for final review 	May, 2006
IRB Approval <ul style="list-style-type: none"> ▪ Develop IRB Protocol with Advisor and Committee and Submit ▪ Review Changes and Revise - Resubmit 	May-June, 2006
Site Recruitment <ul style="list-style-type: none"> ▪ Secure public data on schools working with agricultural education representative at Indiana Department of Education ▪ Analyze public data on schools using criteria outlined in proposal ▪ Select short list of schools meeting criteria as "typical" ▪ Send recruitment letter to schools that match criteria ▪ Visit with agriculture instructor and administration in person to further explain study ▪ Select sites from those who indicate interest and give permission 	July, 2006
Exploratory Visit(s) <ul style="list-style-type: none"> ▪ Observe classes for one day ▪ Interview instructor to identify episodes ▪ Meet with students to provide permission documentation and explain study ▪ Collect student and parent permission forms (Second Visit) 	August, 2006
Episode Selection <ul style="list-style-type: none"> ▪ Transcribe data collected from interviews with teachers ▪ Analyze and code data into common episodes related to leadership development ▪ Develop a schedule with specific episodes at each site ▪ Contact instructors and set up episode viewing dates 	August, 2006
Conduct Episode Visits (Ongoing) <ul style="list-style-type: none"> ▪ Visit sites throughout the semester ▪ Conduct Recording ▪ Collect artifacts and documents ▪ Record field notes ▪ Video-tape episodes 	August - December, 2006
Transcription of Episodes and Compilation of Raw Data (Ongoing) <ul style="list-style-type: none"> ▪ Transcribe video tapes for each episode ▪ Type up field notes and integrate into transcribed video data ▪ Attach documentation/ artifacts collected 	August - December, 2006
Data Analysis <ul style="list-style-type: none"> ▪ Development of Case Records by Episode ▪ Categorization of Episodic Case Records ▪ Coding of Case Records - Study Questions 1 &2 ▪ Analysis and Synthesis of Coded Data (Qualitative and Statistical) ▪ Synthesis of Episode Narratives ▪ Re-coding of case records - Study Question 3 ▪ Selection of Student Cases for Narratives ▪ Analysis and Synthesis of Coded Data (Qualitative and Statistical) 	January - March, 2007
Writing-Up <ul style="list-style-type: none"> ▪ Developing draft of interpretations and assertions ▪ Developing discussion and linking up with theory ▪ Revising sections of proposal for use in final write-up ▪ Submitting for editing by committee ▪ Re-writing and synthesizing final report 	March-April, 2007
Defending Thesis	May, 2007

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