

INTEGRATIVE LEARNING WITHIN TUTORING IN HIGHER EDUCATION:
CONTEXTS FOR CONNECTIONS

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by
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Abstract

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In response to a gap in the literature regarding integrative learning within higher education tutoring services as well as the discursive gap that limits how such tutoring is imagined, this multiple case study explored the ways integrative learning takes place within tutoring in higher education and the tools that enabled or constrained such learning. Six tutor-tutee pairs engaged in regular appointments for the topics of college algebra, psychology, finance, biology, theatre, and history, respectively. During the course of one academic semester, the 12 participants took part in three interviews, and each pair was observed up to four times. In a process grounded in sociocultural activity theory, the transcripts were coded and analyzed to identify examples and mediational means of integrative learning in these cases. This analysis yielded a working definition in which integrative learning in tutoring in higher education takes place as learners create relevance from required coursework by articulating

why the content has value, making connections, and exercising agency. Major tools affecting integrative learning in this study included dialogue, examples, and context. This study provided descriptive data and patterns that could contribute insights into integrative learning, expand the way tutoring is conceived in higher education, and offer models for tutor training and classroom instruction.

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Chapter 1: Introduction

Over the past decade, many institutions of higher education in the United States have pursued reforms in order to articulate the outcomes of a liberal arts education to varied stakeholders. Prominent in these reforms are efforts to foster an outcome called integrative learning, including major initiatives by the Association of American Colleges and Universities (AAC&U) and the Carnegie Foundation for the Advancement of Teaching (Carey, 2005). Interpretations of integrative learning vary, raising frequent questions for those who might wish to foster this outcome (Himbeault Taylor, 2011; Huber, Hutchings, & Gale, 2005). The desire to understand integrative learning better and its potential within college tutoring services led me to conduct this multiple case study within the tutoring center at Franklin State University (all participant names and locations are pseudonyms).

At peak hours in Franklin's central tutoring lab, the large room is always filled to capacity. At every table, tutors and tutees are in motion, and an observer can hear fragments of chemistry, algebra, and Spanish phrases mix in a buzz of white noise. Sometimes the same word emerges from more than one table, even though most tutoring pairs discuss different subjects. Typically, though not always, the tutor's voice echoes more loudly than the tutee, who is more tentative in attempts to converse about these topics. The use of hand gestures parallels this contrast; the tutors' hands move frequently and emphatically, touching textbooks, pointing to images on PowerPoints, or tracing lines and numbers on the white

board. Far more hesitantly, the tutees mirror these gestures, over time beginning to point more often to the words on the pages or the numbers on the board. Through words and gestures, both tutor and tutee reach for the concepts before them, as if to hold one piece steady as a potential launching point.

The tutors in this study were successful, creative, and motivated, well-suited to not only tutor content but also to serve as models and mentors. For example, College Algebra Tutor Lizzie, a physics major, strove to build warm relationships with her tutees and share her enthusiasm for learning and the value of the content. In one tutoring session she enjoined her tutees:

You better figure it out because you are going to be dealing with them all semester.

It's okay, though. Functions are a good thing . . . a way of communicating movement, and everything in the world is just a series of movements. From little ionic compounds in our body that move around to make us move to electricity in the flow and currents of electrons, which I was studying today. (College Algebra Tutoring Observation 1, September 4, 2012)

Tutor Lizzie saw her role as a tutor as helping students succeed not just with the content at hand but in college and beyond. After personally exploring multiple majors and approaching her studies with the goal of mastery, rather than simply passing tests, she frequently advised her tutees on connections between math, majors, and future career options.

On the other side of the tutoring relationship, Theatre Tutee Thomas spent 16 years in the manufacturing industry before returning to complete a degree, once he realized that advancement was not possible and after weathering one too many rounds of layoffs in this

volatile economy. He recalled times when he was reporting to a lead mechanic to describe a concern or to suggest “ideas that may make the machine run more efficiently . . . he’d take time to look it over, and then . . . brush it off. And . . . later, when it . . . would break down, we’re the lowest ones . . . we got blamed for it” (Theatre Tutee Thomas Interview 2, September 28, 2012). These life lessons led him to be more assertive as he returned to college, including taking advantage of tutoring each semester to manage his load more efficiently. In most tutoring sessions observed during this study, the tutors spoke more loudly and gestured with more authority than the tutees. In this case, though, Tutee Thomas was one of the few who spoke more loudly than his tutor, and he directed the tutoring conversations with diplomacy to ensure he stayed on track in his theatre course, where he felt less confident with the material.

As Theatre Tutee Thomas looked back at the challenges of the semester in the context of so many life changes as he moved from manufacturing to the path to a college degree, he stated,

I can say I’ve seen a big shift in myself, because . . . I’ve been going through other things within my life that was causing me some stress, . . . but since then, . . . being here at the school, I find myself thinking things through more clearly and making better decisions and making more decisions that are going to directly impact my own life . . . At one point in my life I relied too heavily upon the standards everybody else set for myself; now I find myself setting my own standards and working towards my own goals, and I work hard toward them. And when I accomplish them, they’re

personally enriching, so I've seen a big shift. (Theatre Tutee Thomas Interview 3, November 2, 2012)

Like many tutees, Thomas came to the tutoring lab carrying challenges beyond the need to succeed in the class, and the tutoring sessions provided a chance for him to collaborate with peers to identify strategies to move forward.

Examples such as these, in which Tutor Lizzie explains why functions matter, or Tutee Thomas takes control of his own learning, suggest that integrative learning has a place within tutoring in higher education, an activity in which peers meet for recurring appointments to discuss disciplinary content. According to the AAC&U (2010), integrative learning calls on the learner to make meaningful connections, such as connecting content to personal experiences, multiple disciplines, or new situations (Rhodes, p. 51). Nationally, institutions have aimed to foster integrative learning through curriculum and co-curricular efforts such as first year seminars, linked courses, capstone courses, service learning, and learning portfolios (Himbeault Taylor, 2011; Huber & Hutchings, 2005). Over several years, the AAC&U developed rubrics to help colleges assess integrative learning as an outcome (see Appendix A). Despite these efforts, the term "integrative learning" remains vague, so this study aims to provide specific examples of what integrative learning might mean within tutoring in higher education.

At the time of this study, however, tutoring was not included within the recommended practices to cultivate integrative learning. Often almost invisible within higher education in general, tutoring is typically viewed as a means to accelerate learning for college students who may have had fewer educational opportunities prior to college. Beyond addressing

gaps, though, tutoring is less frequently recognized for its potential to serve as a unique space for collaborative learning and reflection, frequently suggested as activities critical for integrative learning (e.g., Klein, 2005; Miller, 2005). The assumptions that cause tutoring to be viewed as a limited service—under the misunderstood label of “remediation” with the false assumption of rote learning—most likely explain why these services are not included in comprehensive reviews of strategies to foster integrative learning.

Purpose Statement and Research Questions

The purpose of this multiple case study was to explore how integrative learning takes place within one-on-one tutoring appointments by interviewing and observing six pairs of tutors and tutees at a regional public university in the southern United States. For this project, the tutoring occurred during recurring weekly appointments held face-to-face between a tutor and tutee pair of undergraduates addressing specific course content within a centralized university tutorial center.

My guiding questions were:

1. In what ways did integrative learning take place within one-on-one tutoring appointments?
2. What mediational means enabled and/or constrained integrative learning within tutoring appointments?

The intent was to benefit higher education stakeholders such as students, tutors, faculty, and administrators by providing rich descriptive data on integrative learning within tutoring because integrative learning has been offered by some of the most prominent higher education advocates in the United States as a way to identify essential outcomes of a college

education. Huber, Hutchings, and Gale (2005) explained that “institutions are seeking to help students see the larger pattern in their college experience” as a means to prepare for increasingly complex and changing challenges after college (p. 4-5). If integrative learning addresses some of the goals of liberal education overall, academic support providers can benefit from this exploration of the ways tutoring fits into this picture.

Background

This study was conducted during a time of increasing national pressure to adapt to a global economy with volatile job markets and expanding technologies. At the same time, public institutions of higher education faced new funding challenges which brought increased attention on measuring the value of a college degree. Though often ignored, the role of tutoring within a college education deserves a fresh look. Each of these issues will be discussed in turn.

Globalization and 21st Century Skills. The ongoing movement to articulate learning outcomes in higher education takes place during an era of globalization in which advanced technology appears to close physical distances. This change has been embraced by some experts in idealistic terms as a chance for greater economic, intellectual, and social opportunities; many experts call for new forms of learning that could be transferred and adapted to an ever-changing economic landscape (Friedman, 2005; Hansen, 2010; Hull & Stornaiuolo, 2010; Zhao, 2009). From this perception arises what has been referred to as 21st Century Skills, a national movement to reform the K-12 curriculum to prepare students for this globalized economy (Partnership for 21st Century Skills, 2011). Although other theorists, well-summarized by Steger (2009), provide critique and context to these benign portraits of

globalization, the 21st Century Skills movement continues to gain traction, and echoes of this language and priorities continue to appear within higher education mission statements (e.g., Association of American Colleges & Universities, 2011). Huber, Hutchings, and Gale (2005) include globalization as one justification for intentional efforts to cultivate integrative learning. They argued that “all of us are faced with information that is more complex, fast moving, and accessible than ever before, challenging the integrative and critical capacities of experts and novices alike” (p. 5).

Funding challenges in higher education. At the same time, increased scrutiny is being placed on higher education funding, as various members of the public question the role of a liberal arts education and search for the best way to control costs (Benjamin, 2008; Jones & Wellman, 2010; Lingenfelter, 2010; Matthews, 2010). In many states across the country, the year 2011-2012 heralded increased cuts to overall operating budgets in public universities. In addition to cutting program offerings at the campus level, more costs of a public college education are being passed along to students through increasing tuition hikes (“Budget cuts,” 2011; Lewin, 2011; Lobianco, 2011).

These budget battles cast a fresh light on the national efforts to identify outcomes of a liberal arts education, including the pursuit of integrative learning. The Association of American Colleges and Universities (AAC&U) developed flexible rubrics to assess learning outcomes, and many campuses shifted from a subject-based core curriculum to a thematic, integrated outcomes-based general education (Albertine, 2011). Identifying and measuring such outcomes represent efforts to communicate to the broader public and stakeholders the intrinsic value of a liberal arts education. In these ways, universities seek new ways to

answer Herbert Spencer's (1896) classic question, "What knowledge is of most worth?" in order to advocate for higher education.

Liberal arts education in the United States is based on the belief that engaging in deeper study of core disciplines will yield overall value. For example, a guiding belief is that students gain something in the study of biology or history that will transfer to a new situation in some way, but this claim is sometimes contested by frustrated students, cynical taxpayers, or legislators (e.g., Bennett & Wilezol, 2013; Stancill & Frank, 2013). The reform of general education related to discipline-specific courses is based on the expectation that something called "integrative learning" will occur, thus justifying their continued inclusion in the the general education requirements (Soven, Lehr, Naynaha, & Olson, 2013).

History of learning assistance. In the United States, universities have always needed to meet the challenge of students entering with varying levels of preparation and to provide learning assistance, an umbrella phrase that encompasses a range of activities, including tutoring, developmental courses, study skills instruction, and related services. From their start in the 1700s, Harvard and Yale sought ways to address students' diverse levels of academic experience, including providing tutoring and accommodations for those who had not had the chance to attend secondary schools (Casazza & Silverman, 1996). Arendale (2010) reported that tutoring was common in American higher education throughout the 1600-1800s. Since then, as the nature of higher education has developed, so, too, has the role of learning assistance to meet various needs, including that of expanded access to underserved populations. Arendale (2010) summarized historical records revealing that frequently over half the college population took advantage of learning assistance.

More recent developments included structured first year experiences, proactive advising models, and federal legislation, such as the federally-funded TRIO programs, which included Talent Search for middle schools, Upward Bound for high school students, Student Support Services for college students, and Ronald MacNair for graduate students. These TRIO programs typically funded specialized academic advising and tutoring services to support minority and low-income students (Casazza & Silverman, 1996; Council for Opportunity in Education, 2013). Even though learning assistance services have played a consistent role in U.S. higher education since its beginning (Boylan & Bonham, 2011), Arendale (2010) found that this long history gets underreported, undermining support and understanding of learning assistance.

The dominant narrative of deficit. Many of my friends and colleagues express surprise at the existence of tutoring in higher education because they assume that students in college should not need tutoring. History suggests otherwise; academic services have consistently played a role in higher education in the United States, yet they nonetheless tend to be invisible or diminished discursively. Rose (2003) indicted similar assumptions about writing instruction in his discussion of the term “remedial,” meaning “to correct errors or fill in gaps in a person’s knowledge” (p. 556). Rose reveals that the concept of remediation rests on a belief that knowledge consists of static packets of information that can be absorbed uniformly in all settings. He critiqued the faulty logic when stakeholders presume that every secondary school system provides a uniform experience, that what is taught at the university level is unchanging, or even that in education, clearly definable levels such as high school versus college learning exist. Stahl and King (2009) reported on a similar challenge in which

college reading is “an intellectual pariah” within the discipline of reading, even though college reading has existed over a century (p. 3). Similar to the challenges inherent in such negative views of college reading and writing instruction, academic support services in higher education suffer from negative portrayals as remedial.

The tendency to undervalue academic support in higher education does not necessarily lie in the services themselves. Overall, research shows that tutoring and learning assistance services are effective, as I review in Chapter 2. The greatest challenge to providing tutoring as a learning resource to college students is in perception, parallel to Rose’s (2003) portrayal of the impact on writing instruction of such limited conceptions:

When student writing is viewed in this particularistic, pseudo-scientific way, it gets defined in very limited terms as a narrow band of inadequate behavior separate from the vastly complex composing that faculty members engage in for a living and delve into for work and for play. And such perception yields what it intends: a behavior that is stripped of its rich cognitive and rhetorical complexity. A behavior that, in fact, looks and feels basic, fundamental, atomistic. A behavior that certainly does not belong in the university. (pp. 552-553)

Similarly, the academic engagement in services such as tutoring is harmed by the perception that this work is somehow inappropriate at the university level, regardless of historical and quantitative evidence otherwise. Arendale (2010) documented a similar concern in the misuse of the label of remedial as a way to refer to students, rather than topic. He pointed out that academic support services get stigmatized, and students feel conflicted about the

services, grateful for the benefits yet also feeling a sense of lower self-esteem that they must use them (p. 12).

Indeed, at-risk students are more likely to use tutoring services if they are not stigmatized but viewed as a mainstream resource (Arendale, 2010; Martin & Arendale, 1994; M. Maxwell, 1990). Further, Rose (2003), Arendale (2010), and Parker (2009) synthesized research on the consequence of limiting the service discursively to at-risk students because legislators and administrators then strive to reassign such instruction to high school and community colleges, embracing a fallacy that the nature of what is taught in tutoring and learning assistance can be easily reduced into consumable lessons provided outside the context of higher education.

In my experience as a learning assistance professional, tutoring tends to be dismissed by outsiders as a service for students who do not, in one way or another, measure up to the cultural norms of the higher education setting. Faculty have told me they cannot understand why students cannot “figure it out on their own,” and students have reported that some professors explicitly advised them not to go to tutoring. Graduate students in English have stated to me that they assumed the campus Writing Center had nothing to offer them, and a colleague once confessed that she mistakenly thought our services “watered down academia.” Baucom and Lantz’s (2001) study of faculty perceptions of student athletes revealed how some faculty suspected that the use of tutoring services violated academic integrity. Indeed, national research that led to the development and implementation of the program called Supplemental Instruction (SI) responded to this concern (Martin & Arendale, 1994). SI is deliberately targeted to the class, not the student, by offering group review

sessions with a skilled tutor three times a week to anyone enrolled in a historically-challenging class. The structure of Supplemental Instruction is thus designed to address the way students rule out tutoring as a resource (Martin & Arendale, 1994).

In contrast to these perceptions of deficit, my study addresses this discursive gap by making tutoring services the focus of a study of integrative learning, a higher order learning outcome of higher education. By uncovering examples of rich integrative learning opportunities afforded by tutoring, my research expands the narrative of tutoring in higher education.

Methodology

These research questions call for a qualitative approach in order to study tutoring in depth. My goal was to generate rich descriptive data that provided reliable, specific examples of integrative learning in practice and that surfaced the tools, or mediational means, for integrative learning available within these dialogic interactions. I relied on ethnographic methods of observation, interview, and artifact collection to develop case studies of each tutor-tutee pair. In designing this study, I drew from insights into case study research provided by Miles and Huberman (1994) and Merriam (1998). As necessary in qualitative research, I identified and reflected carefully on my perspectives as the researcher conducting the observations and interviews. As such, I subscribed to a constructivist epistemology, in which meaning is actively constructed through social interactions (Guba & Lincoln, 2000). This epistemology and my interest in dialogue led me to adopt activity theory as a means to analyze these cases (Cole & Engeström, 2007; Nowacek, 2011; Wells, 2011). As the study unfolded, I increasingly gained insights from Lave and Wenger's (1991) theories of situated

learning and legitimate peripheral participation. Given the dearth of research in higher education tutoring and the tendency to envision tutoring in terms of deficit, this research design was also designed to bring to light the potential strengths of tutoring experiences. I will discuss my methodology in more detail in Chapter 3.

Significance

This study has the potential to contribute to theory and practice, and in the final chapter I discuss a number of possible implications. This research may have significance in terms of higher education policy. In her analysis of policy issues related to college reading and study strategy instruction, Parker (2009) reported that universities tend to offer academic support services simply as a “part of the mission and history of higher education to educate for the public good” (p. 49). Despite this general goal, tutoring is rarely viewed as central to the university mission. Instead, this service is subject to cuts, inconsistent funding, and efforts to relegate such instruction to outside agencies, such as community colleges or private agencies (Arendale, 2010; Parker, 2009; Stahl & King, 2009).

At the same time, efforts are being made nationally to identify and document specific overall outcomes for higher education, including integrative learning (Albertine, 2011). Higher education tutoring is a collaborative educational space constructed through dialogue, where integrative learning could occur. An investigation of integrative learning in this setting, therefore, serves to identify ways tutoring relates to the overall mission of the university and provides a more complex vision for the role of tutoring in higher education. This study informs practice and policy related to higher education tutoring. In practical terms, articulating a complex vision of tutoring has the potential to guide tutoring program

development and evaluation. This study also supports the ongoing efforts of the AAC&U to uncover examples of integrative learning, aiding in contextualized evaluation for higher education in general and tutoring in particular. Furthermore, a more nuanced glimpse of the potential of tutoring might aid in educating faculty, staff, and students, perhaps increasing the impact of tutoring. Administrators could consider these findings in reflecting on institutional priorities.

Personal Connections to the Project

This research project fits my interests, experiences, and values. My profile does not match a student at-risk; my parents both earned advanced degrees and were always committed to my earning a higher education degree in any field of interest. My experiences in education, for the most part, match those of the middle class students described by Lucey, Melody, and Walkerdine (2003), who progress easily along a kind of “educational conveyor belt” in sharp contrast to the working class participants who faced countless invisible struggles and tensions (p. 289). Even with these advantages, though, I recall many moments in my educational biography when I felt out of place or uncertain, or when a service such as tutoring shed new light on a subject for me. If I could go back in time to repeat my college education, I would have lived in our writing center and sought out formal or informal tutoring relationships for every class I took. Yet at the time, I gave such options little thought, a source of regret and one reason for my interest in generating descriptive data of the role of tutoring in advanced learning.

My connections to this topic, this research site, and these participants are strong. I have served in many roles over the past decade in learning assistance, including tutoring

services. Much of the research I find on higher education tutoring is based on experimental design or attempts to measure success through numbers (e.g., Cooper, 2010). Such studies are not designed to reveal some of the nuances that might suggest ways to deepen our practice or provide an alternative vision for the value of tutoring. I had a practitioner focus in this undertaking; I wanted to explore what works and gain a deeper understanding of what appears to be happening, rather than distilling numeric values that may attest to impact but are empty of detail.

At heart, I love learning. I would like to see a similar spark lit in every student who enters our tutoring lab. I care that Americans in general and college students specifically gain skills in thinking and learning to help them handle complexity, ambiguity, and moral dilemmas, and I believe higher education has the potential to challenge the absence of critical thinking that undermines democratic systems and intensifies social inequities. As an intellectual, I enjoy digging deeper for meaning, and I relished this opportunity to turn a qualitative researcher's gaze upon the world in which I have been immersed for over a decade.

Definition of Terms

Acculturation. In coding data, I came to identify specific statements and actions as qualities of acculturation, in which an individual begins to engage in cultural practices as an insider, rather than an outsider. In this project, the cultural practices of interest were those of academics.

Activity theory. Drawing originally from the work of Vygotsky (1962), activity theory conceives of learning as a complex, situated process (Cole & Engeström, 2007). In

contrast to research that focuses on one aspect of learning in isolation, this theory provides a framework with which to consider multiple influences and interactions within a specific context. The typical elements of an activity system include the setting, subject, object/ motives, and mediating tools.

Agency. For this project, agency refers to an individual's sense of control over a situation, an awareness of the choices and opportunities available, even if these options are also limited by various barriers. Activity theory addresses expressions of agency by the subject(s) within a cultural setting (Engeström, 2001, p. 141). Also fitting is Bandura's (1997) concept of the agentic perspective that "people are self-organizing, proactive, self-regulating, and self-reflecting . . . contributors to their life circumstances not just products of them" (2006, p. 3).

Dialogue. Educational researchers and theorists from a range of paradigmatic perspectives point to dialogue as a rich tool for learning. Though they may use differing terms for this concept, such as instructional conversation (Tharp & Gallimore, 1988), conversational learning (Baker, Jensen, & Kolb, 2002), or exploratory talk (Rojas-Drummond, Gomez, & Velez, 2008), a common thread is that such dialogue generates deeper understandings and typically requires engagement with open-ended questions, rather than simple call and response. Activity theory places dialogue at the center of social practice, in which the words are products of the context in which they are spoken (Burbules & Bruce, 2001). At the same time, words create the context.

General education. At Franklin State, general education refers to the courses required of all students in addition to the courses required for the major. This sequence of

courses at this institution had been revised in recent years to identify specific outcomes and articulate general themes rather than subjects, such as quantitative, scientific, and wellness literacies, local to global connections, aesthetics, and social and historical connections (General education program goals, 2013). Articulating and attempting to add such themes to the curriculum were institutional responses to increased national interest in integrated curriculum and learning outcomes.

Integrative learning. Integrative learning has been identified as one of several core learning outcomes of higher education by the Association of American Colleges and Universities (AAC&U). This concept is rooted in theories of interdisciplinary learning. While the field of interdisciplinary studies includes multiple definitions of integrative learning, the AAC&U has pooled the work from many campuses to identify general attributes, including connecting to experience, connecting across disciplines, transfer, integrated communication, reflection and self-assessment (Rhodes, 2010, p. 51). My research project led me to refine this definition as follows: Integrative learning is both a developmental process and a disposition, in which students create relevance from assigned coursework by articulating why the topic has value, making connections, and exercising agency.

Legitimate peripheral participation. Lave and Wenger (1991) proposed that situated learning can include legitimate peripheral participation (pp. 34-35). As learners actively engage with learning within a meaningful context, Lave and Wenger suggested, they begin to engage in legitimate peripheral participation in which they learn “how to talk (and be silent) in the manner of full participants” (p. 105).

Social constructivism. Social constructivism is an epistemology that suggests knowledge is constructed within a social context (Guba, 1990). Thus knowledge is not seen as a static, isolated, objective truth but as something far more fluid, and to learn requires action and interaction by the learner(s). Adopting this approach to learning requires greater attention to context and complexity. A focus on dialogue fits well with constructivism, since dialogue is a constructive, interactive, social process.

Situated learning. According to Lave (2009), learning must be viewed as a whole, part of an overall relationship between person, activity and situation, all of which is situated within social and cultural practice. This approach means that no single action should be viewed in isolation of its context. Learning and knowledge require action and change; this approach rejects the transmission model that conceives of teaching as a process of transmitting information directly from teacher to learner.

Tools. Mediating tools, also called mediating means, are an element of an activity system within activity theory. This term refers to a range of physical objects, mental concepts, attitudes, and dispositions, any of which serve to create change for the learner (Cole & Engeström, 2007; Nowacek, 2011). Dialogue is central to the activity setting as a contextually-mediated tool.

Chapter 1 Summary

This chapter introduced the research purpose to explore how integrative learning takes place within tutoring in higher education and the tools that enable and constrain such learning. The background for this study included an overview of the history and current challenges for tutoring and learning assistance within higher education in the United States.

This purpose and background indicated that a qualitative multiple case study grounded in sociocultural activity theory would be an appropriate approach to address these research questions. The chapter concluded with definitions of essential terms.

Organization of Dissertation

In the next chapter, I review the literature most relevant to the design of this research project and the theories that framed this study. In Chapter 3, I describe at length my proposed research design and guiding methodologies. Details are provided for the study's setting, participants, and plans for data collection. I explain my methods for data coding, analysis and addressing my researcher subjectivities. In the fourth chapter, I provide my overall results and descriptive data to address how integrative learning emerged within tutoring relationships and the mediational tools or means that enabled and constrained such learning. In my final chapter, I discuss ways in which my research addresses some of the gaps that led me to conduct this study. I draw conclusions in terms of implications of my findings for educational practice and further research.

Chapter 2: Literature Review

The purpose of this research project is to reveal the ways integrative learning took place within specific tutoring relationships and the mediational tools or means that influenced this process. The overall research base on tutoring includes multiple definitions, implementations, and settings that are dubbed tutoring by researchers (e.g., Baroffio et al., 2006; Jung, Molfese, & Larson, 2011; Stephen, O'Connell, & Hall, 2008). For this study, however, tutors are defined narrowly as a college student peer who has excelled in the academic area in which he or she tutors. Such students generally possess strong academic and interpersonal skills, and they serve as knowledgeable academic mentors rather than content experts. This study focuses specifically on tutors and tutees engaged in recurring face-to-face (as opposed to virtual or online) tutoring appointments to address a specific class the tutee was taking, such as finance, theatre, and biology. Within these limits, this research project was designed to identify examples of integrative learning and mediating tools and constraints. Therefore, the primary goal of this literature review is to synthesize relevant research on integrative learning, identify gaps in the literature, and discuss why activity theory is the appropriate conceptual framework for this study.

Integrative Learning in Higher Education

National efforts over the past decade to articulate the goals of a liberal arts education led to increased attention on integrative learning as an outcome. Integrative learning has

been described as “developing the ability to make, recognize, and evaluate connections among disparate concepts, fields, or contexts” (Huber, Hutchings, Gale, Miller, & Breen, 2007). Klein (2005) detailed the results of cultivating integrative learning as students increase their capacities to “ask meaningful questions about complex issues . . . , locate multiple sources of knowledge . . . , compare and contrast them to reveal patterns . . . , and create an integrative framework and a more holistic understanding” (p. 10). Huber, Hutchings, and Gale (2005) explained that “developing such a synthesizing, creative cast of mind has long been a goal of liberal education” but what had changed was the way higher education institutions more intentionally support students in developing this mindset by making meaningful connections between their courses (p. 4). The authors also argued that the need for students to succeed through integrative learning was intensified by the demands of a fluid global economy (p. 4-5).

Educational leaders recognize that deliberate strategies are needed to increase the number of students who succeed in making meaningful connections with the undergraduate curriculum (DeZure, Babb, & Waldmann, 2005; Huber, Hutchings, & Gale, 2005). As stated in the introduction, intentional efforts typically include first year seminars, thematically organized courses, learning communities, capstone work, and portfolios (Huber & Hutchings, 2005; Klein, 2005; Soven, Lehr, Naynaha, & Olson, 2013). The investment in such programming aims to enhance the impact of a college education. These goals are highly relevant to the mission of higher education tutoring services, designed to support academic achievement as established by the instructors and required curriculum. As attention is

focused on how the university as a whole supports the development of integrative learning, the role of tutoring in this process deserves attention.

Specific insights into integrative learning aided in the design of this study. In particular, the Association of American Colleges and Universities (AAC&U) and the Carnegie Foundation for the Advancement of Teaching led efforts to identify, assess, and cultivate integrative learning (Huber, Hutchings, & Gale, 2005; Rhodes, 2010). Their combined efforts provide rubrics as an alternative to generic, multiple-choice standardized testing, a competing movement for accountability and assessment in higher education (Benjamin, 2008). To facilitate more contextualized assessment efforts, the AAC&U published a collection of rubrics to evaluate student learning outcomes in the following areas: inquiry and analysis, critical thinking, creative thinking, written communication, oral communication, reading, quantitative literacy, information literacy, teamwork, problem solving, civic engagement, intercultural knowledge and competence, ethical reasoning, foundations and skills for lifelong learning, and integrative learning (Rhodes, 2010). Some overlap exists between these categories. The range of options allows campuses to decide which goals are most meaningful to their curriculum and campus culture. Each rubric includes an overall definition, specific measures, benchmarks, and capstone levels of achievement for these areas. Of this list of learning outcomes, however, integrative learning appears to be the least well-established in educational vernacular, and at the same time, touted in the literature. Integrative learning has been specifically linked to efforts to reform general education curriculum. Indeed, the development of the rubric represented an effort to

provide further guidance to those seeking to foster integrative learning. Therefore the rubric for integrative learning (see Appendix A) offers a launching point for this investigation.

The AAC&U rubric for integrative learning. The rubric for integrative learning developed by the AAC&U includes the following definition:

Integrative learning is an understanding and a disposition that a student builds across the curriculum and cocurriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus. (Rhodes, 2010, p. 51)

This definition emphasizes the increasing levels of achievement ideally possible as a student progresses through the undergraduate experience. Wells (2011) echoes this concept of disposition, as well as some of the arguments provided by advocates for fostering integrative learning, in his definition of society's goals for education in general:

namely that students should achieve deep understanding of the topics they study and develop the dispositions that will enable them to be both self-directed and collaborative in using their knowledge to seek solutions to the challenges they will encounter in their lives beyond school, both as citizens and as participants in the activity systems of the global economy. (p. 92)

In both definitions, the phrases “disposition” as well as “understanding(s)” stand out, and these allude to what may be a dual nature of integrative learning. That is, integrative learning involves the building of an understanding and the making of connections, each of which may yield varied knowledge sets. At the same time, though, engaging in integrative learning

across the disciplines may allow a student to develop an overall disposition over time, an outcome distinct from the multiple learning experiences along the way.

Similarly, from the field of interdisciplinary studies, Repko (2007) defined integration as a “natural and accessible learning outcome” based on “integrating insights by producing a more comprehensive understanding” (p. 3). Additionally, Repko (2007) alluded to attempts to determine whether integration is an outcome or instead a means to reach an interdisciplinary outcome, such as a deeper understanding (p. 13). These threads in the literature create a challenge in speaking of integrative learning, which could be a verb or noun, a process or outcome, or, as the AAC&U appears to suggest, both.

This layered definition is then distilled into a rubric with five specific attributes, each offering a range of developmental achievements. In the next section, I briefly unpack these attributes that served as points of investigation for this project.

Attributes of integrative learning. The first of the five attributes in the AAC&U rubric on integrative learning is when the student “connects relevant experiences and academic knowledge” (Rhodes, 2010, p. 51). When students are able to connect their personal experiences to content they are learning in their classes, they are engaging in integrative learning. The milestones in the AAC&U rubric indicate that these connections should lead to a deeper understanding of the content learned.

Additional studies offer specific ways in which such connections may take place. Arendt (2008) theorized the way metaphors “allow for a greater knowledge of the world” (p. 134). Drawing on aspects of activity theory, Arendt concluded that a key is to consider not the metaphor itself but its effect on the learner. The use of metaphor by a learner would

require transfer and integration in order to draw a connection between two unrelated concepts. A metaphor by definition requires the learner to consider a real life example as a way to understand a concept or problem in a new light. Similarly, Evens' and Michael's (2006) experimental design studies provide evidence that effective tutors used analogies as teaching tools, increasing the tutees' success in mastering specific skills (p. 392).

In her dissertation on integrative learning, Leonard (2007) revealed that students frequently stated their interdisciplinary studies called on them to be open-minded and to seek personal connections. Leonard further suggested that integrative learning is relevant to connected knowing, a concept arising from the landmark work in women's epistemological development by Belenky, Clinchy, Goldberger, and Tarule (1986). In order to explore possible differences with Perry's earlier study of male students, Belenky et al. (1986) conducted and coded extensive interviews with 135 women, 90 enrolled in colleges and 45 served by family agencies rather than formal higher educational institutions. As opposed to separate knowing, in which the learner strives to be objective, connected knowing takes place when learners draw on personal insights and values to connect to what they are learning. Learners come to take charge of their learning, driven by their own interests to make meaning out of their academic work. The way a student makes meaning can hinder or support academic success overall. These findings on personal connection and agency are helpful in making sense of the concept of integrative learning.

Huber and Hutchings (2005) echoed these findings when they stated that "integrative learning . . . has emotional appeal. Indeed, emotion can be a catalyst for integrative learning. When students become passionate about their learning, when a topic ignites

enthusiasm, integration is more likely to happen” (p. 2). These theories suggest that if tutoring conversations provide a space for emotion or enthusiasm, integrative learning may be taking place. Indeed, the very act of connecting what one is learning to what one has experienced is both a moment of integration and a catalyst for emotional responses.

A related attribute, yet more challenging to achieve, takes place when the student “sees (makes) connections across disciplines, perspectives” (Rhodes, 2010, p. 51).

Facilitating such connections across disciplines has been a critical focus of interdisciplinary studies. In his review of leading theories of interdisciplinarity, Repko (2007) focused on the process “to create common ground among conflicting disciplinary insights” (p. 3) through terminology and knowledge within and outside the disciplines. Repko reviewed the ways language from different disciplines can be used as tools for integration, and in particular, that developing common vocabulary provides a way to bring together the disparate disciplines. He acknowledged that there will remain areas in which agreement is not possible.

His focus on common vocabulary is helpful when observing tutoring in action, particularly to look for ways in which discussion of concepts opens up common ground or translations between one disciplinary heuristic and another. In the field of writing across the curriculum, for example, increased attention is being given to help students accommodate differing terms for similar tasks, such as *synopsis*, *abstract*, and *précis* (G. Rhoades, personal communication, December 7, 2011).

This focus on translation brings to light the interdisciplinary role of peer tutoring. In designing this study, I considered the typical reason for a student to seek tutoring, such as failing a chemistry class and seeking a peer who can help the student make sense of the

material and review more effectively. This tutee is not necessarily interested in a philosophical discussion of the ways his chemistry class connects with his theatre class, and such esoteric discussions were not the primary focus of this study. What mattered was the way in which the tutor and student were able to create common understandings of the disciplinary material through their conversations. Frequently, the tutor and tutee are not majoring in the same field. Further, the tutor typically has comfort, affection, and connection with the subject matter he or she is tutoring. Thus, the tutor and tutee have to find ways to communicate despite potentially differing attitudes about the material. Indeed, they often communicate across differing disciplinary perspectives—such as a physics major tutoring a social work major.

A further goal of integration is that the student is able to gain an “interdisciplinary understanding of the problem” (Repko, 2007, p. 11)—one that yields solutions that may not otherwise be available. Such results do not arise smoothly or predictably, though. For example, Nowacek (2011) used activity theory to analyze three linked college classes to consider the ways writing can support interdisciplinary learning and related challenges, building on Engeström's (2001) research by identifying the double binds students and instructors face when they start from a disciplinary perspective. She concluded that interdisciplinary thought was “not freedom from all disciplinary constraints but awareness of the constraints, complements, and interrelations of a limited number of disciplines” (Nowacek, 2011, p. 382).

A third component of integrative learning on the AAC&U rubric seemed well-suited to the individualized nature of tutoring: the student “demonstrates a developing sense of self

as a learner, building on prior experiences to respond to new and challenging contexts (may be evident in self-assessment, reflective or creative work)” (Rhodes, 2010, p. 51). Such self-assessment supports metacognition, identified by Huber and Hutchings (2005) as a positive result of integrative learning. Assessment and reflection are typical tutoring and learning assistance activities.

Jacobsen (2010) defined integration as including “critical thinking skills, breadth, and appreciation of diverse types of knowledge, creative thinking, and tolerance for ambiguity” (14). Reflection and self-assessment provide a space for such thinking. Arendt (2008) considered how the learner changes as he balances between individual reflection and social interactions. Arendt proposed that the learner has to change his thinking for himself, but his interactions with others “provoke the individual, induce him to think them over, and attribute a meaning to them, based upon his own experience” (p. 130). Indeed, reflection and self-assessment seem to be not only an attribute of integrative learning but also an engine to foster other attributes of integrative learning, such as connections to experience and between disciplines.

The remaining two attributes identified by the AAC&U did not appear likely to occur frequently within the proposed research design. One attribute is transfer, in which the student “adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations” (Rhodes, 2010, p. 51). This particular goal is at the heart of expansive learning and other research in integrative studies (Engeström, 2001; Jacobsen, 2010; Repko, 2007). To transfer what is learned in one situation to a new situation represents a pinnacle achievement. Successful graduates should have gained insights from their undergraduate

education that they can apply creatively to new situations that lie ahead. Yet as a capstone achievement, this kind of integration was unlikely to be easily observable within tutoring sessions in the course of one semester.

The final attribute is integrated communication—the student is able to choose the most effective and powerful means to communicate their ideas. This kind of accomplishment also seems appropriate to a capstone project or a major research project, both of which were not typical of the kinds of tutoring that took place within this research setting because learners typically sought support for such work directly from the faculty member and/or a space such as the writing center.

Gaps in the Literature

Several gaps in the literature led to this study, including the need for examples of integrative learning, the need for qualitative studies of content-area tutoring in higher education, and the need to expand the discourse of tutoring in higher education.

A need for examples of integrative learning. No simple solution or strategy exists in order to foster integrative learning in higher education. By identifying integrative learning as a critical learning outcome in higher education and providing rubrics for assessment, the AAC&U calls on individual campuses to identify measures of success and to develop academic programs to foster integrative learning. “What we need are approaches that develop students’ capacity to make connections *for themselves*,” enjoined Huber and Hutchings (2005, p. 5). Yet their reports suggest that educators still seek concrete examples of what integrative learning “might actually mean in practice” (Huber, Hutchings, & Gale, 2005, p. 7). Over the past decade, efforts have been made to generate answers to this

question, primarily case studies of programmatic changes in terms of intentional programming, such as linked courses and similar practices (Huber, Hutchings, Gale, Miller, & Breen, 2007; Soven, Lehr, Naynaha, & Olson, 2013). Much of this work also yielded explorations of the best means to assess this learning outcome (Rhodes, 2010).

Even as campuses adopt some of these recommended practices, there remains a gap in terms of specific examples of integrative learning in action. As Himbeault Taylor (2011) stated so eloquently, “in the research domain, the construct of integrative learning is a bridge being built as it is being walked upon, with yet limited findings available to demonstrate evidence for how integration is achieved” (p. 13). One gap this study sought to address, therefore, was the need for examples that might aid in intentional efforts to cultivate integrative learning. As proposed by the AAC&U, though, fostering integrative learning should be tailored to the culture of each individual campus. Indeed, not only would the pursuit of integrative learning on each campus vary, but also the way each learner develops connections would vary, depending on the learner’s specific experiences and interests. The contextual nature of integrative learning means that an investigation such as mine should be qualitative in nature, including efforts to acknowledge the subjective nature of the results and to offer data that is relatable rather than generalizable. My review of the literature revealed that tutoring has not been the focus of studies on integrative learning (Himbeault Taylor, 2011; Huber & Hutchings, 2005; Soven, Lehr, Naynaha, & Olson, 2013). Given the emphasis in the literature on individual reflection, the contextual nature of learning, and role of dialogue in learning, I concluded that tutoring would be a rich context to explore integrative learning for this study.

A need for qualitative research in content-area tutoring. In addition, the need exists for more research on higher education content-area tutoring in general (Evens & Michael, 2006; M. Maxwell, 1990; Topping, 1996). A survey of the literature reveals a particular need for qualitative literature. This dearth is in stark contrast to the wealth of qualitative studies on writing centers, which provide individualized support for writing development within the higher education context.

Instead, primarily quantitative studies and/or evaluative studies exist on content-area tutoring in higher education. The majority tend to document the positive benefits of tutoring in general. For example, Rheinheimer, Grace-Odeleye, Francois, and Kusorgbor (2010) found that tutoring related positively to retention and academic results for a sample of 129 disadvantaged students at a public university. In Cooper's (2010) study, the frequent use (more than 10 times) of a drop-in tutoring lab correlated to statistically higher persistence and grades.

Larger studies of multiple institutions suggest academic support programs targeting at-risk students achieved similar results. For example, a national study of the efficacy of support programs found that tutoring programs that included a tutor training component resulted in higher grade point averages (Boylan & Bliss, 1997), and a meta-analysis of 60 evaluations of academic support services resulted in positive gains in terms of grades and retention compared to control groups (Kulik, Kulik, & Schwalb, 1983). Similar findings are reported by Arendale (2010), Boylan and Bonham (2011), Casazza and Bauer (2006), Evens and Michael (2006), Mynard and Almarzouqi (2006), and Topping (1996). In general,

tutoring appears to correlate with improved student grade results and retention, though the results vary depending on multiple factors.

VanLehn's (2011) reviewed experiments assessing the impact of human-based tutoring versus computer-based versus no tutoring. His analysis offers some support and challenge to the assumptions that guide tutoring practice. For years, apparently, B.S. Bloom's (1984) study of tutoring led educators to assume that tutoring had a significantly higher impact on learning than classroom-based learning. VanLehn's (2011) comprehensive review revealed instead that human tutoring and computer-based tutoring led to a slight increase in results on post-tests on the specific problems studied, less than predicted by Bloom's study. VanLehn limited his review to specific tutoring situations to address specific tasks. Several of the studies were not based in naturalistic settings but rather matching trained tutors, or computer programs, with individuals taking part in the study as a research volunteer rather than a college student seeking tutoring to increase success in a college class overall. The studies summarized by VanLehn (2011) therefore address targeted questions but can provide only limited insight into the contextual factors that may affect success in human tutoring.

At the time of this study, relatively few qualitative studies of content area tutoring in a naturalistic setting in higher education could be found (e.g., Dvorak, 2001). In addition to revealing more about contextual factors, a qualitative study of tutoring in higher education also has the potential to provide rich data related to the concept known as legitimate peripheral participation (Lave & Wenger, 1991). As learners actively engage with learning within a meaningful context populated by more experienced members of the community they

wish to enter, Lave and Wenger suggested, they begin to engage in legitimate peripheral participation. By meeting with tutors, for example, tutees have the potential to learn “how to talk (and be silent) in the manner of full participants” (p. 105). A qualitative study that yields more in-depth studies of the participants, contexts, and dialogues in action can reveal how this process takes place within the tutoring lab. Finally, at the time of this study, my searches of existing research yielded no multiple case studies of content-area tutoring in higher education analyzed through a sociocultural lens.

A need to address the deficit view of tutoring in higher education. Furthermore, the history of learning assistance as discussed in Chapter 1 points to a need to address the deficit model and discourse of tutoring. Tuck (2009) called for an end of damage-based research in which individuals from marginalized communities are viewed as damaged rather than as sources of agency—complex, talented individuals capable of making choices based on the tools available within their contexts. Similarly, Harry and Klingner (2007) called for discarding the deficit model in identifying special learning needs, recommending access to individualized instruction for all, a role tutoring can fill. Such research revealed that damaged-based views limit our ability to assess services. For example, if funding for tutoring is based on dire need, such funding will always be in jeopardy because the level of identifiable need will vary. Tutoring services are diminished because faculty and students often view the students and the focus of tutoring in terms of damage. Tuck (2009) emphasized the sovereignty of individuals to make meaning, and this study could reveal what and how meaning is made in each of the tutoring relationships, seeking input from the participants in interpreting their work. Data revealing integrative learning—an ideal outcome

of a liberal arts education—within tutoring could serve as a competing story to those who envision tutoring as ancillary or remedial.

Theoretical Framework

My overall epistemological perspective is one of constructivism, the belief that reality is not fixed but generated through interactions within a specific social context (Guba & Lincoln, 2000). Constructivism as an epistemology also supports the focus on dialogue-based learning, such as tutoring. This perspective is further shaped by theories of situated learning that suggest learning always occurs within a specific social and cultural activity (Lave & Wenger, 1991).

Activity theory. Within this overall epistemological approach, activity theory, sometimes called cultural-historical or sociocultural activity theory, served as the conceptual framework best suited to my research base and overall research design. Drawing from the landmark theories of Vygotsky (1962), Cole and Engeström (2007) view activity theory as a means to bring together the multiple factors related to learning, including the role of artifacts or tools, “activity as the essential unit of analysis,” and the overall cultural context (p. 486). In reviewing the literature on activity theory, Rojas-Drummond, Gomez, and Velez (2008) suggested that this research can be viewed as a whole, despite diverging interpretations and developments, even as some researchers favor the term “sociocultural” rather than “cultural-historical” (Daniels, 2008).

Nowacek (2009) used activity theory as a framework to explore a research question particularly relevant to this project, in which she investigated the challenge of

interdisciplinary teaching and learning in a classroom. Figure 1 presents the way Nowacek represented the classic simple version of the activity system, as proposed by Vygotsky:

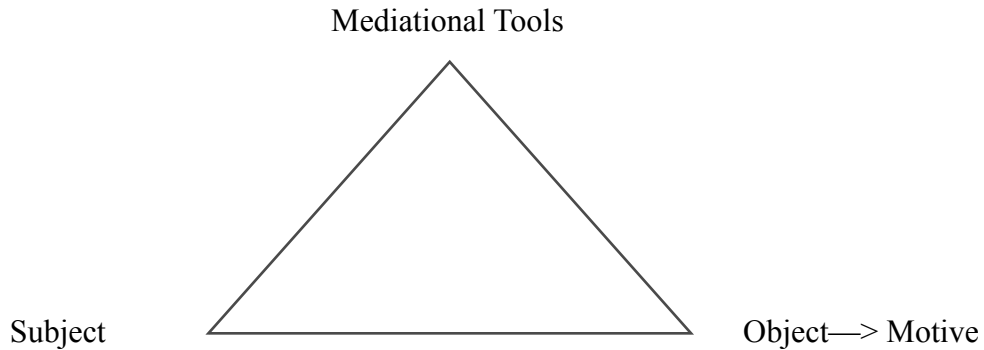


Figure 1. Basic elements of an activity system depicted as a triangle (Nowacek, 2009, p. 495).

According to this model, the subject refers to the individual(s) involved, such as the tutor and student, and the object/motive relates to the desired learning outcome, solution or reasons for action, such as the reasons for seeking tutoring. The term “mediational tools” encompasses the many possible factors or attributes that could affect any learning activity, such as physical objects (e.g., textbooks, writing utensils, etc.), mental concepts, (e.g., heuristics, formulas, abstractions, etc.), and even attitudes and dispositions. The holistic scope of the term of tool, or what I also refer to as mediational means, was quite helpful in undertaking an interpretive study of tutoring relationships, since I sought to make visible or asked my participants to make visible the tools that they used in their sessions. Arnseth (2008) explained that in activity theory, “tools shape how we interact with reality as well as human consciousness” (p. 296). Wertsch (1998) claimed that “almost all human action is

mediated action” (p. 25). Daniels (2008) also emphasized the concept of mediation, such as mediated tools. As he described, “activity-based mediation” allows researchers to observe the setting in which the “individual acts upon and is acted upon” (Daniels, 2008, p. 58). In this framework, analyzing mediational means provides access to the kinds of learning that may be taking place.

In tackling questions of interdisciplinary learning, as well as ways to make sense of the role of disciplines in learning, Nowacek (2009) envisioned the disciplines as overlapping activity systems. She sought specifically to analyze if the mediating tool of the thesis-driven essay might aid students in negotiating overlapping disciplines, and the learning outcome she sought to observe was the students’ “awareness of the constraints, complements and interrelations of these three disciplines [of literature, history, and religion brought together within a learning community]” (p. 498). Her study pointed to the need for students to recognize the differences between disciplines as well as the interconnections.

Activity theorists have developed more advanced models of the activity system to better represent the multiple influences and interactions involved. For this study, I first adapted the simple model to reflect overlap, as suggested by Engeström (2001), to identify the multiple activity systems that come together when tutor meets tutee.

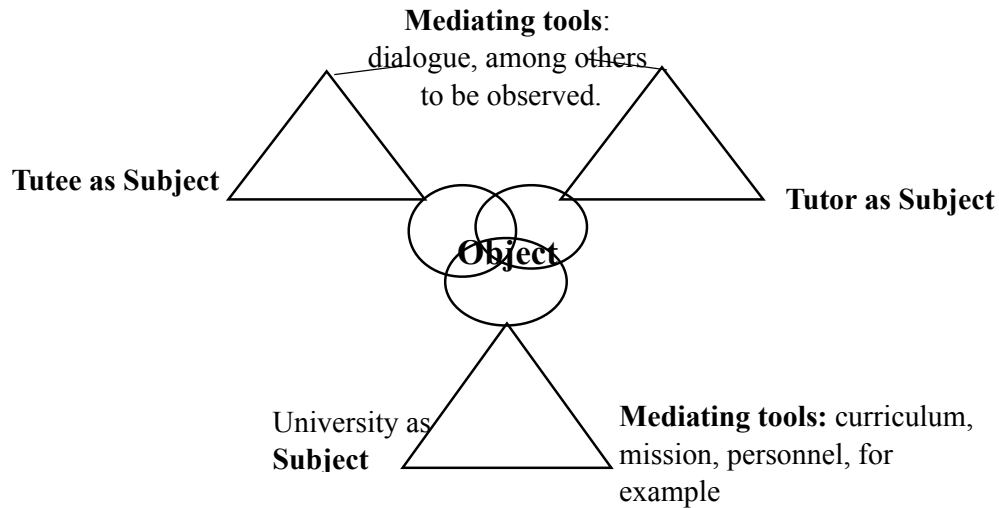


Figure 2. Tutoring as overlapping activity systems. The overlapping circles in the center reflect the way the object consists of differing outcomes desired by each subject & system. This model was particularly useful in analyzing the impact of disciplinary context on the tutoring conversations.

Daniels (2008) described the connection between the setting and the tools in which “the mediational means, or cultural tools, are inherently situated, culturally, institutionally, and historically” (p. 59). This explanation makes clear why the conceptual framework of activity theory fits well with a qualitative research project focused on specific individuals in a particular time and place. Sociocultural researchers seek to provide contextualized descriptions of learning by using the phrase “activity setting” that includes a range of actions and reactions, participants, and tools that enable and constrain what may occur. Multiple models exist to represent the activity setting which nonetheless can only provide a limited snapshot of the many influences at work. One of the models most helpful for this study across cases was Engeström’s (2001) expanded model in Figure 3, which pays closer

attention to the interactions and tensions of the community, differing roles of the subject(s), and the rules, acknowledged and unacknowledged, that affect learning:

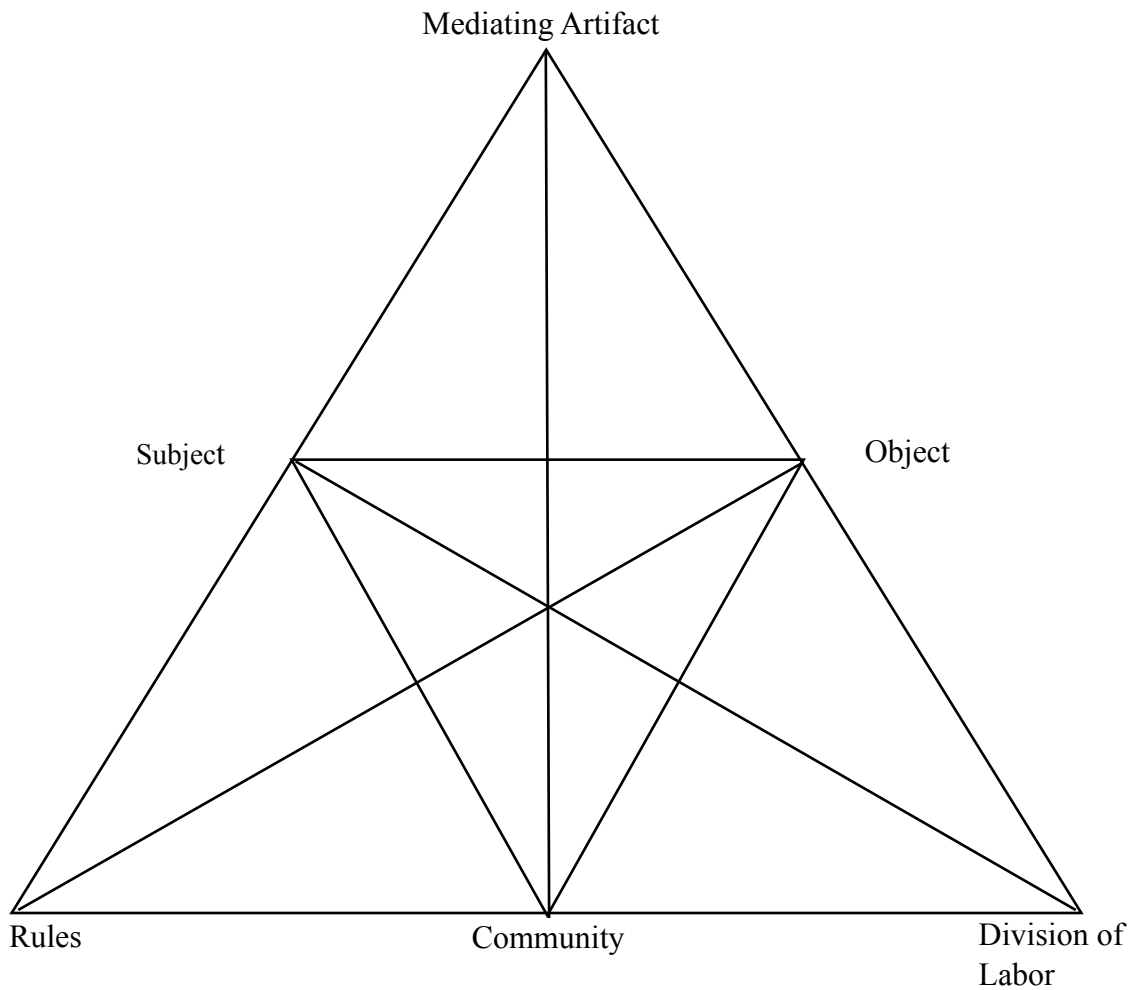


Figure 3. Expanded model of the activity setting (Engeström, 2001, p. 135).

This graphic shows the interactions between multiple influences within an activity setting, and each piece may reveal insight into the other. Wertsch's (1998) discussion of mediated action identifies tensions related to the way that "mediated action serves multiple purposes . . . often in conflict" (p. 32). Sociocultural activity theory provided a way to analyze some of the prominent elements that enable or constrain integrative learning.

Dialogue in activity theory. Multiple researchers emphasize the connection between external actions and internalized thought processes first suggested by Vygotsky's (1962) focus on language (e.g., Arievidtch, 2008; Tharp & Gallimore, 1988). Drawing from extensive cognitive-based research and applied practice, Stauffer (1975), Tharp and Gallimore (1988), and more recently Alexander (2006) advocated instructional conversations as the "basic process of understanding the world" (Tharp & Gallimore, 1988, p. 110). Belenky et al. (1986) also highlighted the role of dialogue as women developed their own voices and found their feet in academic life. Multiple voices in the field of adult education highlight the critical value of effective dialogue (e.g., Baker, Jensen, & Kolb, 2002; Freire, 1970; Vella, 2008), and a consistent thread in this literature base is the value of meaningful questions and interactions rather than empty recitation.

Bakhtin's (1986) classic theories of dialogism suggest the need to study dialogue in context, rather than limited to a study of words alone. In his well-cited reflection on speech genres, Bakhtin (1952/1986) posited that "rejoinders are all linked to one another . . . they presuppose *other* (with respect to the speaker) participants in speech communication" (p. 72). Though a powerful learning tool, dialogue cannot be studied in isolation. As Burbules and Bruce (2001) described in their review of research of dialogue in education, "What people say and how they are heard is wrapped up with other kinds of relations and interactions among them" (p. 1103). Analyzing that full range of influences, interactions, and objects is a goal of Engeström's full model of the activity setting. Nonetheless, dialogue has a unique role. As Burbules and Bruce explained:

Learning aims are seen in terms of group dynamics and meaning-making, and not only as individual achievements among the participants. Once again, dialogue plays a central role because it is a medium through which participants are able to share their conceptions, verify or test their understandings, and identify areas of common knowledge or of difference. (p. 1104)

In this sense, dialogue is a critical tool for learning, and it serves as a medium that may also reflect the contextual influences underlying each interaction.

One particularly productive form of dialogue is described by Wegerif (2008) and Rojas-Drummond, Gomez, and Velez (2008) as “exploratory talk” in their work drawing on sociocultural perspectives. Wegerif (2008) defined exploratory talk as “shared inquiry so it allows critical challenges and explicit reasoning within a cooperative framework” (p. 279). Rojas-Drummond et al. (2008) clarified that the “communicative intention is to explore different perspectives, to negotiate and eventually to be able to reach consensus” (p. 337). The Rojas-Drummond et al. (2008) study of 84 children in fifth and sixth grades revealed that exploratory talk aided students in developing their reasoning skills not only in collaborative settings but also individually. They point to such talk as “a mediating tool” (p. 335). This focus on reaching consensus fits well with Repko’s (2007) report that integration is aided by the search for common language and common ground, which also suggests a strong connection between dialogue and integrative learning.

Dialogue in tutoring. In tutoring, the open-ended questions that spur dialogue may bring the student to tutoring—how to succeed in the class, how to make sense of the content,

and how to address the assigned task. The goals the tutee hopes to achieve by taking part in tutoring may serve as a catalyst for the kinds of dialogue acclaimed in the research base.

Particularly significant were the findings of the Chi, Siler, Jeong, Yamauchi, and Hausmann (2001) extensive, mixed-methods study. They found that when the tutor was restricted to prompting rather than providing any explanations, the student engaged in more of the talking and made greater gains in post-tests. Their findings suggested that the tutee's engagement with the tutor may be more important than the tutor's expertise, adding nuance to earlier studies that documented the positive benefits of tutor training (e.g., Boylan & Bliss, 1997). Follow-up research by Siler and VanLehn (2009) supported this finding, which fits well with constructivist theories of learning. Related studies by Evens and Michael (2006) confirmed the value of dialogue in learning and that tutoring dialogues lead to transfer of learning because students engaged in tutoring were better able to solve problems than those who studied alone (Evens & Michael, 2006, p. 173). Tutors are able to identify gaps in the students' knowledge and aid the students in addressing those gaps, a supported model for self-assessment, one of AAC&U's identified attributes of integrative learning. These studies did not attempt to address the role of context nor analyze the activity setting, which may suggest a further gap in the research.

A recent dissertation on writing center work aided in the design of this study. Senese (2011) analyzed journals, interviews, and transcripts drawn from 72 recorded sessions of eight writing center tutors. She reported that recurring appointments between writing center tutor and student allowed for more complexity. Her findings of the value of recurring sessions is also supported by a descriptive report on a nursing tutoring program in which long

term patterns of tutoring supported better diagnosis of needs, mentoring, and improved performance (Blowers, Ramsey, Merriman, & Grooms, 2003). These findings suggested that richer data related to dialogue and integrative learning might occur within recurring tutoring appointments.

Chapter 2 Summary

This chapter reviewed the literature most relevant to this study. Particular focus was given to the recent case studies and theories regarding the value of integrative learning in higher education in which curriculum is revised to foster opportunities for college students to make connections across disciplines and transfer these insights to face new challenges. As a part of this review, elements of the AAC&U's assessment rubric for integrative learning were discussed in order to identify broad categories within which tutoring practices might fit. I discussed the gaps in the literature, which suggest a need for more qualitative research on tutoring in higher education and integrative learning in particular, as well as a need to expand the way tutoring is conceived discursively. The literature review also provided the rationale for adopting sociocultural activity theory as the theoretical framework within the broader theories of constructivism and situated learning.

Chapter 3: Methodology

In this chapter I discuss the methodological approach and specific research design for this study to explore integrative learning within tutoring in higher education and the tools that enable and constrain such learning. I review the guiding questions and provide details on data collection methods, setting, participants, and related insights that shaped this project.

Qualitative Research Paradigm

A qualitative approach was appropriate to my research paradigm of constructivism in which meaning is not fixed or static but situated in social contexts, particularly through social interactions (Guba, 1990; Guba & Lincoln, 2000). This overall epistemological stance underpins activity theory, sometimes called cultural-historical activity theory, or more recently sociocultural activity theory (Cole & Engeström, 2007; Daniels, 2008). Further, the theory of situated learning emphasizes the ways in which learning is based in cultural and social practices (Lave, 2009). These theories provided a framework to analyze tutoring in context, considering potential influences and intervening factors within what could be called an activity setting, including the subject, object/motive, and mediating tools (Engeström, 2001; Nowacek, 2011). These perspectives also provide support for a focus on dialogue as an aspect of learning in general, and they are appropriate theories with which to consider integrative learning.

Purpose Statement and Research Questions

For this interpretive, multiple case study, I interviewed and observed six pairs of tutors and tutees at a regional public university in the southern United States to explore integrative learning within one-on-one tutoring services. For this project, the tutoring occurred during recurring weekly appointments held face-to-face between a tutor and tutee pair working on specific course content within a centralized university tutorial center.

My guiding questions were:

1. In what ways does integrative learning take place within one-on-one tutoring appointments?
2. What mediational means enable and/or constrain integrative learning within tutoring appointments?

Research Design

These questions were best addressed through rich, descriptive detail generated by ethnographic methods and a multiple case study approach. The classic definition of ethnography involves the researcher spending extensive time on site, often years, and making use of ethnographic methods of observation, interview, and artifact collection to gain a better understanding or make meaning of certain behaviors (Anderson-Levitt, 2006; Heath, 1988; Schram, 2006). While this study was limited to a shorter time period than a classic ethnography, the methods typical for an ethnography yielded the descriptive and holistic data needed to address my research questions.

Since my focus was tutor-tutee pairs, I approached each pair as a distinct case. Merriam (1998) stated that case studies contain aspects of ethnography, yet the focus of the

study is contained. She suggested that a case study is a “bounded system” that has natural limits in time or number of participants (pp. 27-28). Miles and Huberman (1994) defined case studies as “a phenomenon of some sort occurring within a bounded context , . . . [a] unit of analysis” (p. 25). They called for identifying dimensions of the cases in terms of concepts, size, location and time period. Such boundaries were reasonably identifiable for this project because the academic semester provided a natural limit to the tutoring relationships, in this case the fall semester of 2012. The six tutees signed up for recurring appointments at the start of the semester, as soon as they identified a specific class for which they felt tutoring would help. As peer college students, most tutors’ involvement in the work of tutoring was typically limited to a few semesters. Conceptually, the tutor-tutee pair was a logical space to observe and analyze dialogue in action and to interview the tutors and tutees to identify the impact of these dialogues and any evidence of integrative learning.

Focusing my analysis on each tutor-tutee pair as a bounded system made this research process manageable. Conclusions are limited to what was revealed within the interviews and observations. Wells, Hirshberg, Lipton, and Oakes (2002) clarified that identifying each case’s boundaries continues to unfold throughout the research process. For this study, though I considered each pair as a contained case, I repeatedly reflected on the overall setting and context of the physical tutoring lab as well as potential influences of individuals outside the tutor-tutee pair, particularly the class, professor, and university as an overall context. My in-depth, holistic, contextualized cases were thus contained and focused through this approach. Treating each student-pair as a complex and contained system provided a means to compare across cases. According to Miles and Huberman (1994),

multiple case studies provide “an even deeper understanding of processes and outcomes of cases” (p. 26). This approach was in keeping with the literature suggesting that integrative learning is individualized and contextual (Dezure, Babb, & Waldmann, 2005), so studying multiple examples could allow for greater data on not only commonalities but also distinctions among cases.

Design Rationale

A pilot study in 2010 guided me in developing this research design. In considering the literature and unexpected patterns within my pilot study, I focused on words alone when I conceived of dialogue or learning outcomes. The pilot study provided glimpses into the role of relationship and context, which led me to pay closer attention to the tutoring pair rather than tutor or tutee individually. The pilot study also made me aware of the need to observe tutoring in action and work in partnership with tutors and tutees to make sense of these phenomena.

Role of the Researcher

As the researcher in this project, I carried the primary responsibility of implementing every step of the process. I received approval from the institutional review board and actively took steps to insure that this study complied in every way to appropriate research ethical guidelines. At the start of the semester, I met with the director of tutoring and the director of the Learning Assistance Program to review the goals of the study. I attended the opening meeting of the peer lab managers and initial training of brand new tutors to introduce myself and explain the goals of this study so they would understand my presence in the lab and my recruitment process. At each of these meetings, I asked that they share

concerns with me, or if needed, the director of tutoring, my dissertation advisor, or the Institutional Review Board. I also posted prominent signs in the tutoring lab itself announcing that this study was underway, that participation was completely voluntary, and that any concerns or questions could be directed to me, the director of tutoring, or the director of the Learning Assistance Program. I collaborated with the director of tutoring to compile a list of tutors and tutees she felt met my criteria of strong and/or experienced tutoring participants, which I discuss below. I emailed a short initial invitation to the names on this list, and when the participant expressed interest, I sent the full research summary and explanation of how the study would work. Once the participant confirmed interest, we met to discuss the consent form that had been submitted to the institutional review board. At that time, I stressed the fact that they could still bow out of the study at any time and that they could choose to decline to any part of the interview process, for any reason and without apology. At the start of the first and second interviews, I reviewed this expectation. I also invited them to share additional comments or questions each time we met.

In order to increase participation in light of the extra time and effort that the interviews required, I paid participants \$8 per interview. I was solely responsible for conducting all 36 interviews and 22 observations, and I personally transcribed all except for the final five observations. I took steps to protect the privacy of the participants, assigning first numerical codes instead of names on all files and notes related to them that I later changed to pseudonyms. I stored the consent forms and initial surveys in a locked box, as well as the graded work and any other artifacts I collected. I was responsible for coding and analyzing the data. To improve the fidelity of my work, I consulted with my dissertation

chair and committee, and I sought feedback from participants at multiple points in the process during subsequent interviews and through follow-up emails.

Above described my practical responsibilities. Lincoln and Guba (2002) provided a further overall vision to undertake high quality case study research that fits with my goals for this study. They set forth standards in terms of “resonance, rhetoric, empowerment, and applicability” (p. 206). They believed that the research study should be consistent with the paradigm and framework used, and constructivist studies such as this one should not claim objectivity but instead emphasize “conscious reflexivity” (p. 207), the awareness that the researcher’s involvement in a study such as mine shapes and constructs the research. In keeping with this perspective, I continued to examine and account for my subjectivities throughout the research project.

Lincoln and Guba’s (2002) rhetorical standards provided insight in how to write about these cases, aiming for qualities of good writing, such as organization and clarity, as well as goals to write with power, elegance, creativity, openness, craftsmanship, independence, courage, and a sense of egalitarianism (pp. 208-210). These approaches provided ambitious and effective suggestions to guide me in crafting this study.

Ethical Considerations

This research design brought forth multiple ethical considerations. Some were true of any qualitative research design, and I took steps as described above to protect the rights and privacy of my participants. In addition to these standard strategies, I paid close attention to the challenges that could arise when conducting research in the so-called backyard. Although I did not work directly in the tutoring center, I have multiple ties to this work. I have

provided training in study skills to tutors, for example, and I collaborate with the director of tutoring on multiple initiatives, such as providing general tutoring, Praxis tutoring, and evaluation activities. No one in the tutoring program reports to me within our organizational structure. Completing this research project will not have a direct impact on my professional involvement in the Learning Assistance Program, nor does this tutoring program or the Learning Assistance Program rely on the results of this study in any way. Nonetheless, others may perceive me as having more authority than I would claim, including the tutors and tutees I interviewed. For this reason in particular, I increased my awareness of the impact my connection to this site might play on this research project, and I gave special emphasis to the voluntary and collaborative nature of participation in this study.

One pragmatic strategy came to light during my pilot study in the tutoring lab in 2010. Although informed consent had been obtained, my role was not fully communicated to the student lab managers and tutors working in the lab and the nonverbal message they were likely to absorb was one of administrative oversight and program evaluation rather than that of a researcher at work. For this reason I made multiple attempts, as described above, to telegraph my intentions so that my presence in the tutoring lab would be easy to interpret. Further, I collaborated with the administrators of the tutoring program in assessing relevant data and representing this program fairly.

Since my focus was to unpack existing best practices rather than to test an intervention, the tutoring lab was not treated as a laboratory setting. Throughout the study, I was aware that if I observed anything occurring in the tutoring lab that concerned me as a professional or if a participant reported on tutoring activities that in some way seem

inappropriate or in need of change, I was ready to discuss this concern with the director of tutoring. No such moment occurred in the course of the study. At our initial meeting to discuss the consent form, I also communicated this sense of responsibility to my participants as well.

Researcher subjectivities. In addition to considering ethical concerns, as a qualitative researcher I needed to be aware of the multiple subjectivities I brought to my work. Glesne (2011) summarized the way subjectivities interact with the research project in differing ways. She drew on Peshkin's definition that subjectivity refers to "autobiographical, emotional states that were engaged by different research situations" (as cited in Glesne, 2011, p. 152). Such states are not unchanging, but a qualitative researcher needs to consider the impact of such subjective stances.

My professional and educational biography led me to this work. I have engaged in multiple ways with tutoring, first as a high school exchange student in Switzerland learning German for the first time and later as an English major taking Physics. In both cases, tutoring led to greater success and deeper engagement. I volunteered as a tutor for inner-city children in Philadelphia, worked as a peer tutor as a graduate student, and provided direct professional tutoring for students preparing for the Praxis I reading and writing tests. I have trained tutors and developed tutor training programs, including a re-certification application to the College Reading and Learning Association (CRLA). My employment history includes serving as a part-time graduate student tutor several years before I became a full-time professional. My doctoral internship involved tutoring as a writing consultant in a university writing center. Though I hold an advanced position, pursue an advanced degree, and benefit

from over a decade of professional work experience, I studied tutoring as an insider. I claim this community with all of its flaws and badges of honors. Further, this perspective influenced my choice of research questions because I could conceive that the tutoring lab could hold insights into the overall goals of undergraduate education.

I also brought to my work an appreciation for feminist, critical, and postmodern theories, as well as a dedication to social justice. I gravitate toward a reciprocal stance, rather than distancing myself from the site or participants (Berlin, 2003; Fletcher & Ragins, 2007; Freire, 1970). My personal leanings and experiences all contributed to what I produced as a researcher. Good practice calls on me to acknowledge the ways my perspectives influenced this research project, yet these very subjectivities also served as assets to me as a researcher, accelerating, for example, my ability to connect with participants and engage in productive conversations.

Setting

The observations of the six tutor-tutee pairs took place in the central tutoring lab at Franklin State University during the fall semester 2012, when a total of 127 tutors provided tutoring by appointment to a total of 1,050 tutees. University Tutorial Services delivered tutoring services in a variety of formats, including drop-in and group, but the largest academic support service was individualized tutoring, in which tutor and student met for recurring appointments for specific courses, such as biology, accounting and psychology. Tutor and tutee were required to make every effort to attend regularly, and the tutee was advised to come prepared for each tutoring session. All contacts between the tutor and student were documented by the Tutor Trac software program. The tutoring administrators

provided initial training and then supervision through periodic observations and monitoring of weekly software-generated reports. Additionally, the tutoring service requested that both tutors and students fill out an online survey evaluating their experiences at the end of the semester. Students, typically experienced tutors, were also hired to serve as lab managers who helped new students sign up for tutoring appointments in the central lab.

Participant Selection

For this study, I observed and interviewed six tutor-tutee pairs, in keeping with my goal to identify what Merriam (1998) described as the appropriate sample size for a qualitative study. I had proposed that four to six pairs would generate sufficient data to meet the goals of the study, as long as they were based on appropriate criteria. To accommodate potential attrition, I initially sought to identify eight pairs. By the third week of classes, six pairs committed to the study and participated in the first round of interviews and observations, sufficient to suggest that I could end recruitment.

Miles and Huberman (1994) recommended purposive rather than random sampling for qualitative research. For this project, I used what Patton (2002) described as intensity sampling, seeking “excellent or rich samples of the phenomenon of interest but not highly unusual cases” (p. 234). My sampling approach also fits the definition of criterion sampling (Miles & Huberman, 1994) because I identified specific criteria in selecting participants.

In each tutor-tutee pair, I set the criterion that one or both could be considered a strong partner in a successful tutoring relationship. A tutor was considered strong if he or she had already worked at least one previous semester in the tutoring center, and this involvement yielded one or more of the following indicators of success—recommendations

by a tutoring administrator and positive feedback from students. Four of the tutors selected came from a list of ten tutors highly recommended by the director of tutoring, all of whom had tutored more than two semesters. Another aspect of the recruitment process was to seek, if possible, variety in content specialty, and one tutor was recommended to me by the director during a follow-up phase of recruitment, when I sought to line up a pair tutoring a different content area.

Identifying a strong tutee required different criteria. College students vary in the frequency of their use of tutoring, but a student who meets only once or twice with a tutor is rarely able to comment on the relationship, dialogue, or complex learning outcomes such as integrative learning. Therefore, a rich source of data would be any participant who has previously attended tutoring regularly. The director of tutoring provided a list of several tutees who had attended tutoring regularly in previous semesters; from that list, I recruited the theatre tutee. Thus the theatre tutor was the only tutor in the study who was tutoring for the university for the first time that semester. To the extent possible, I considered additional factors such as academic standing, major, age, race, gender, etc., to aim for variety in cases. Table 1 is an overview of the results, including the pseudonyms I assigned the participants.

Table 1

Overview of participants

| Subject/ Pseudonym | Experience | Gender | Ethnicity | Year | Major |
|---------------------------------|------------|--------|---------------------|-----------------------------------|---|
| College Algebra Tutor Lizzie | Yes | F | Caucasian | Senior | Applied physics |
| College Algebra Tutee Rachel | No | F | Caucasian | First semester Freshman | Athletic training/ switched to social work |
| Psychology Tutor David | Yes | M | Caucasian | Senior | Music therapy |
| Psychology Tutee Mark | No | M | Caucasian | First semester Freshman | Undecided |
| Finance Tutor Diana | Yes | F | Caucasian | Senior in final semester | Finance |
| Finance Tutee Cole | Yes | M | Caucasian | Senior in final semester | Risk management & insurance |
| Biology Tutor Laurie | Yes | F | Caucasian/ Asian | Senior | Biology |
| Biology Tutee Joan | No | F | Latino | First semester Freshman | Biology |
| Theatre Tutor Kate | No | F | Caucasian | Sophomore | Theatre |
| Theatre Tutee Thomas | Yes | M | Caucasian | Non-traditional student/junior | Technology education |
| History Tutor Jennifer | Yes | F | Caucasian | Sophomore | Studio art |
| History Tutee Tiana | Yes | F | African American | New transfer/ sophomore | Marketing |

The primary selection criterion was strength as a tutor or tutee. Next I sought variety in content area, then gender and ethnicity. The most popular tutoring subjects in the tutoring lab vary each semester; by way of contrast to the subjects sampled here, in fall 2012 according to the end of the semester tutoring reports, the top ten subjects tutored by appointment included 938 sessions of math tutoring, 562 sessions of economics, 563 sessions of chemistry, 331 sessions of physics, 410 sessions of biology, 269 sessions of accounting, 228 sessions of Spanish, 118 general/multiple subject tutoring sessions, 129 sessions of psychology, and 86 sessions of Chinese. Thus half of the cases in this study were part of the highest demand subjects; the other half—finance, theatre, and history—came from the less frequently demanded subjects.

The tutoring administrators also provided the following data on gender. In Fall 2012, tutors were 62% female, and tutees were 59% female, in contrast to study participant tutors, who were 83% female, and study participant tutees, who were 50% female. Data on age, ethnicity, or transfer status for tutors and tutees overall was not collected by the tutoring lab, so a direct comparison on these criteria is not possible. Among the participants, one tutor identified as part Asian, one tutee as Latino, and one tutee as African American. By way of a limited comparison, Franklin State as a university is composed of 11% ethnic minority students (Student information, 2013). Additionally, one tutee was a transfer student, and one tutee was a nontraditional student based on age. By way of limited contrast, the campus is composed of 6% transfer students and 7% nontraditional students aged 25 and older (Student information, 2013). From the potential pool, the following participants were selected.

College Algebra Tutor Lizzie. College algebra tutor 21-year-old Lizzie consistently modeled excitement, engagement, and “digging” into one’s studies. Lizzie came across in tutoring and interviews as a whirlwind of warmth, smiles, math jokes, physics allusions, intense philosophical reflections, and wry, ironic asides. No matter how tired after hours of study and lab work in upper level physics classes, Lizzie was enthusiastic about the subject, stressing to her tutee that “What you are learning really matters,” (College Algebra Tutoring Observation 1, September 4, 2012). She peppered every discussion of a math problem with general strategies to succeed in math and science classes, as well as connecting the work to majors and various careers. She deliberately found out as much as she could about her students. In every session, Lizzie set a rapid pace, covering as much ground as she could, though she was quick to back up or repeat steps, if needed.

College Algebra Tutee Rachel. Rachel was an 18-year-old first-semester freshman from a coastal town seven hours from campus. Her initial choice for major was athletic training, though she switched to social work by the end of the semester. In interviews, Rachel answered questions conscientiously but never wasting an extra word. In tutoring sessions, she was more forthcoming, always bringing a list of questions from class and laughing at Lizzie’s jokes and sometimes making a brief joke of her own, such as sharing a deadpan “Yay,” when Lizzie declared they were going to work a new kind of problem (College Algebra Tutoring Observation 4, October 9, 2012). Over time, both in tutoring and interviews, Rachel opened up, though still frequently laconic. She always spoke in a practical, direct manner with an occasional trace of irony.

Psychology Tutor David. Part of the nine percent of out-of-state students at this state university, 21-year-old David left his home in the Midwest to join the school of music at Franklin. He spoke with a distinctive grace and dignity, echoes of his musical training and intellectualism. Based on advice from a choir teacher who told him, “if the judges can’t hear you, they can’t judge you,” David valued the goal of learning to “communicate effectively across all domains, including music, what I know and what I don’t know” (Psychology Tutor David Interview 1, September 10, 2012). An honor student majoring in music therapy, a field of study that included several semesters of psychology courses, David connected his joy in music with his intellectual interest in research and research-based methods as well as an ambition to address the different needs of individuals, particularly those with intellectual disabilities. These interests combined with his training in therapy made him particularly skilled at guiding tutoring dialogues. Like the other tutors in this study, he was an overachiever with impressive credentials.

Psychology Tutee Mark. At 18, Psychology Tutee Mark was fresh-faced and soft-spoken. A first semester freshman, Mark knew he would like to be a pilot someday but had not yet found a major to pursue. His strength as a student was that he had learned how to study in high school, so he knew how to put in the time needed, unlike peers who sailed through without cracking a book. Mark enjoyed reading his textbooks on his own, particularly topics that he could relate to, such as his religion and psychology classes. On the other hand, he admitted that he did not enjoy lectures or homework. He valued tutoring as an efficient means to study psychology; “I probably get more out of an hour tutoring than I

would a few hours by myself,” he commented (Psychology Tutee Mark Interview 2, October 3, 2012). Still Mark longed at times to do anything other than show up for tutoring.

Finance Tutor Diana. Finance Tutor Diana, a 22-year-old, came across as energetic even on days when she complained about being tired. She was warm, engaging, and direct in an honest yet tactful way; a grounded Southern-style courtesy guided her interactions. She was the type to laugh and to share an easy empathy, implying, *oh yes, I’ve been there, sister*, yet still maintained a professional distance from me and her tutee. She was the first participant to commit to the study, responding almost instantly to my email invitation. When we first met, she explained that her alacrity stemmed from a desire to give back to Franklin, a sense of community spirit both for the tutoring program and the university as a whole. A finance major, Diana has a strong work ethic. Her pursuit of a career in finance stemmed not only from pragmatism but also an intellectual interest in the problem-solving challenges in this field.

Finance Tutee Cole. A 23-year-old, Cole was easy to get along with. Even when he complained, he would find a reason to crack a smile. In his final semester pursuing a degree in Risk Management and Insurance, he had to complete one last math-based finance class. “Math and me don’t get along,” he told me more than once, with a rueful shake of his head (Finance Tutee Cole Interview 2, September 19, 2013). He started this final semester with a sense of reaching a pinnacle, but as the semester progressed, his stress increased, juggling job searches and challenging capstone courses, plus the extra time he had to put in for the finance class. As a freshman, Cole actually enrolled in a college reading strategy class I taught, a positive association for both of us. He had developed into a senior who

knew how to commit himself to his studies. He put in a good faith effort on his classes, and he regretted when his efforts did not yield higher grades. Cole worked with Diana the previous semester when he took a course called Introduction to Finance, and he praised her as a tutor, especially in contrast to past experiences with tutors who did not make much effort or did not seem as competent with the material.

Biology Tutor Laurie. 21-year-old Laurie had a low, melodic voice that conveyed caring and empathy. Like the other tutors, she was very sharp, and she appeared to relish the chance to reflect on learning and tutoring in our interviews. She came to Franklin from the West Coast to pursue a degree in studio art, but later switched to biology, stating that she loves biology “because that’s me, that’s what I am,” yet she also fell for chemistry once a professor in her first college chemistry class was “able to relate it to so many different places” (Biology Tutor Laurie Interview 1, September 14, 2012). After benefitting from math tutoring herself, she began tutoring math for several years; the year prior to this study she also began tutoring biology and chemistry, including the specialized group tutoring known as Supplemental Instruction. She intended to pursue a career in private sector research and eventually return to higher education. As a tutor, Laurie was very genuine, honest with herself, and empathetic with her tutees. Her interpersonal strengths included her ability to focus and collaborate, following where the tutee led and providing reassurance and support along the way.

Biology Tutee Joan. Joan was an ambitious 18-year-old student who recognized she needed extra support to keep up with her biology class, as a first semester freshman making the transition to college and testing out the possibility of a career in medicine. Despite the

proactive stance she took in signing up for tutoring, Joan described herself as lazy. She was trying to figure out how to manage herself now that she was in college and likely to embark on one of the most academically rigorous majors to prepare for medical school. As a pre-med student, Joan was the most academically competitive of the tutees in this study. She also stood out because she most frequently expressed intellectual curiosity, saying quite often in a session, “That’s so cool.” Her self-assessment as lazy notwithstanding, Joan was lively and alert. She had a frisson about her, jumping into conversations easily and intensely.

Theatre Tutor Kate. An honors student majoring in theatre, 20-year-old Kate had an understated grace. Whether in interviews with me or discussing plays with her tutee Thomas, she automatically quoted snippets of dialogue, adding subtle shades of emphasis to these speeches that tell stories. Kate often waved her hands in expressive, graceful motions. Both voice and motion were measured, never exaggerated or intrusive, but a persistent clue of her connection to her major, a pursuit that was both career-focused and academic since she thrived on the study of history and dramaturgy. “I tell my mom that there are two things I’ve ever been good at—that’s theatre and school,” Kate commented, tending always to speak with a quiet snap and touch of irony, so her word choice also served as a shrug of sorts, her attempt to keep her own role in the world in perspective (Theatre tutor Kate Interview 1, September 11, 2012). As a brand new tutor, she nonetheless brought many strengths to the tutoring relationship, including a comfort with the material, since she had completed the same class previously with the same professor, a theatre professor she knew well, even performing in a play he was directing that same semester. Thus her tutee had the benefit of

receiving tutoring from a student who took the class as part of her major, and all the insights that could bring. Kate also stood out as an attentive listener.

Theatre Tutee Thomas. Married with two children and commuting an hour to campus, 35-year-old Thomas was considered a nontraditional student at Franklin, since this campus was primarily geared for 18-21 year old students. Thomas was completing a required general education theatre class, and he proactively sought tutoring to increase his confidence in his ability to interpret the readings correctly. This fall semester was the first he committed to full-time status, after being laid off again from the manufacturing jobs he had held for most of his life. His pursuit of a degree in technology education arose from his frustration with this line of work, stating that “the previous sixteen years hadn’t worked,” because he was always at the mercy of a volatile market and limited career options (Theatre Tutee Thomas Interview 1, September 7, 2012). Even though he chose to work after high school, he actually always wanted to teach, ever since he first came to campus in high school as a part of the federal Upward Bound program, designed to set first generation, low-income students on the path to college. Before transferring to Franklin, he was inspired by examples of instructors in his community college, who encouraged him to pursue this new path. As a nontraditional student, he faced additional barriers, sharing a poignant story with me about his attempts to ask classmates for help with AUTOCAD software in another class, most of whom blatantly ignored him. At the time of the study, he had discovered a few people with whom he could exchange greetings as he crossed campus, but for the most part, he found his time on campus lonely.

History Tutor Jennifer. At age 19, Jennifer was the youngest of the tutors. Thanks to college credits earned as a home schooler co-enrolled in courses at two community colleges, one early college, and her local high school, she had sophomore status and sufficient accomplishments to be in her second semester of tutoring. Jennifer was a studio art major, Latin minor, and honors student. A straight-A student, Jennifer explained that “art is what challenges me to think differently, and it’s what stretched me the most” (History Tutor Jennifer Interview 1, September 19, 2012). An avid reader and critical thinker, she was vetting one completed young adult novel with readers and agents, while she began work on a new one. In the summers, she produced musicals with her friends, since singing was another strength. As a tutor, Jennifer modeled an ease with historical facts. After just a quick glance at a text or notes, Jennifer could launch into stories of historical events and people with a speed and a depth that were remarkable. Occasionally she threw in asides culturally significant to her, such as allusions to the *Lord of the Rings* or forays into Islamic language and religion. Before attending Franklin, Jennifer had developed a volunteer tutoring program at an early college. Despite the many talents she brought to tutoring and despite the fact that she and her tutee met twice a week rather than once a week, this pair was not a successful example of tutoring because the tutee eventually dropped the history class and ended all tutoring. Nonetheless, Jennifer completed all three interviews, and two of the four observations were conducted, so this discrepant case provided rich data to consider, at times in contrast to the successful cases in which the tutee and tutor worked together for the entire semester.

History Tutee Tiana. Tiana, a 19-year-old, transferred to Franklin to pursue a major in marketing, though she has kept law school as an option. Before coming to Franklin, she spent the summer as a camp counselor at a nearby camp, an eye-opening experience for her, she explained, because she had never spent much time outdoors. This opportunity increased her appreciation of the natural world and allowed her to get to know people with different lifestyles. Throughout high school and now at college, she continued to seek out experiences that might enrich her. For this first semester at Franklin, she enrolled in an ambitious load of 18 hours and worked 15 hours a week off campus, so she was often tired and overloaded. She sought tutoring originally for all of her classes, regardless of need, she said, “because I’d rather have somebody right there by me making sure I get my work in and making sure I understand” (History Tutee Tiana Interview 1, September 12, 2012). For the majority of her classes, Tiana made many personal and professional connections, pointing out ways her accounting class could help her as an entrepreneur, for example, or how lessons from her economics class have real world applications. Overall, Tiana was a motivated, enthusiastic student, but she concluded that she was not benefitting from her history class. Eventually she decided to drop the class and end tutoring with Jennifer, preferring to try again with another professor in a future semester.

Data Collection Methods

The primary means of data collection included an initial survey, three interviews, four observations (for all but one case) of actual tutoring sessions, and artifact review.

Initial email survey. In order to gather general demographic information to save time for lengthier questions during the interviews, I emailed each participant a list of short

answer survey questions to complete prior to our first interview. They had the choice to print it out and bring it or email their replies. (See Appendix B for the questions.)

Interviews. Interviews provided the opportunity to gain insight into what the tutor and tutee perceived was happening rather than relying solely on my interpretation of the observed tutoring sessions. J. A. Maxwell (2005) stressed that in qualitative research, I must consider “the theories and perspectives of those studied” (p. 46). These interviews also provided opportunities for reflection on the part of the tutors and tutees that were indicated by my review of the literature on integrative learning.

For this research project, I conducted and digitally recorded three interviews with every participant in my office on the same floor as the tutoring lab. These interviews averaged 30 minutes each. The first interview took place as soon as possible after each participant committed to participate in the research project, a time span that ranged from the first to the fifth week of classes. The second interview took place after the second observation of the tutoring sessions. The final interview took place after I had conducted all observations of the tutoring pairs. By transcribing and analyzing each observation and interview within three days of conducting them, I was able to draw from those transcriptions to alter the interview questions, including asking participants to comment on specific issues related to a previous observation or interview.

While I started with a set of questions prior to the interviews, I treated the questions as a “general interview guide” as described by Patton (2002), in which the guide provided a starting place rather than a limited set of standard questions to follow without deviation. In addition to the scheduled interviews, I sent emails or asked occasional follow-up questions if

the opportunity arose to clarify key points. (See attached interview protocols in Appendix C.) In recognition of the extra time involved to meet with me for interviews, I paid each participant \$8 per interview completed.

Observations. I conducted four observations of each tutee-tutor pair, sessions that averaged 50 minutes in length. The only exception was the history pair, who ended tutoring after I had only completed two observations. The first observation took place as soon as possible after the tutor and tutee committed to the study, again within the time span of the first and fourth weeks of classes. After placing a digital recorder between the tutor and tutee, I positioned myself at a nearby table or chair for each observation. During each tutoring session, I took notes and created sketches in a large artist sketchbook. The second observation took place typically a week or so after the first observation and first interview had been completed. During this time period, I drew on my observations of these tutoring sessions in developing questions for my interviews with each participant. The third and fourth observations took place after the second interview in as timely a manner as possible. I always communicated in advance with the participants so they would know which session I would observe. A few observations were postponed at their request for varying reasons, such as canceled sessions due to approaching holidays or other commitments. (See attached the detailed observation protocol in Appendix D). I transcribed all of the interviews and observations, except for the final five observations, which were transcribed by a professional company called GMR Transcriptions. The costs of three transcriptions were funded by a grant from Appalachian State's Office of Student Research.

Archival data. I considered multiple sources of archival data. First, I reviewed existing public websites that included varying university documents and programs of study, paper and online tutor training materials, flyers, past tutoring annual reports, Tutor Trac reports, and the tutee/tutor end-of-semester evaluations. I asked tutees to share sample assignments and graded work, all of which would be kept anonymous, and four tutees did so. During each observation, I took note of all learning materials such as textbooks, syllabi, PowerPoints, technology, and handouts as they were integrated in the tutoring session, and I noted all marks written on the white board as part of the tutoring session, such as when the College Algebra Tutor modeled a problem. My review of archival data was noted either in my observation notebooks or in reflective memos.

Reflective memos. Reflective memos were a final source of data. Following interviews and observations, I composed brief reflective memos on the specific interview or observation, either within the transcript of the session or as a lengthier memo. From the start of the research project until I began composing the final report, I wrote a general memo at least once a week reflecting on the fieldwork in general, research design, analytical notes, emerging patterns, and similar. As time permitted, I engaged in an ongoing review of the literature, and these readings often generated reflective memos as well. For the month following data collection, I engaged in daily writing sessions to compose reflective memos to capture overall impressions of the project, participants, and emerging patterns.

Time Period

I conducted this study during the fall semester when demand for tutoring tends to be the highest at this institution. I met with the tutoring director prior to the start of the semester

to discuss a system to identify participants and review research plans. I recruited almost all of the participants by the third week of classes, confirming the final pair in the fourth week of classes. I conducted the first interviews and observations as soon as possible after the participants consented to participate. The second observation occurred typically one or two weeks after the first. The second round of interviews took place within a week or two after the second observation. I then attempted to complete the final two observations as quickly as possible, but failed to do so in time to complete all the observations needed before the failed history pair ended all tutoring. By the first week of November, I had completed all observations and interviews, which met several goals. I was able to observe the tutoring sessions during the peak times for tutoring before the pressure of holidays and end of semester deadlines led to disruptions in the schedule. I also was able to use the time in November and December to engage in reflection, analysis, and a few member checks to confirm minor questions with participants.

Data Coding and Analysis

For the first nine weeks of data collection, I reviewed, coded, and jotted down analytical notes within an average of three days after each interview and observation. Based on these reviews, I added additional questions to my second and final interview protocols in order to gain feedback on some of the emerging codes and patterns. During the final two weeks in the field, I received grant funding that allowed me to send recordings to be transcribed by a transcription service. I reviewed each of those transcriptions immediately, then reviewed them again after all data had been collected by using Dedoose analytical software. For this phase of analysis, I reread each transcript and highlighted significant

excerpts to mark and create 116 codes, some drawn from specific points of interest based on the literature review and research design, and some emerging from my review of the data. As I moved through this coding process, I gradually sorted the codes into larger categories, occasionally rearranging and recoding as connections became more apparent. The larger categories that I used to organize the codes at this point in the analysis included connections, agency, tools, constraints, dialogue, and relationship.

The following tables provide an overview of these overall codes and categories across cases.

Table 2

Codes categorized as connections

| Codes | Tally of coded excerpts |
|--|-------------------------|
| Connecting subject to student personally | 70 |
| Connecting subject to real life examples | 65 |
| Identifying relevance | 58 |
| Intellectual curiosity | 44 |
| Passion for subject | 43 |
| Connecting across disciplines | 29 |
| Connections (general) | 25 |
| Commonalities | 23 |
| Class concepts fit together, build in some way | 21 |
| Distinctions within disciplines | 19 |
| Ability of tutor to see connection | 19 |
| Structured reflection opportunity | 16 |
| Push assignment | 10 |

Table 3

Codes categorized as agency

| Codes | Tally of coded excerpts |
|--|-------------------------|
| Study strategies | 88 |
| Identity | 84 |
| Sense of efficacy | 84 |
| Agency | 82 |
| Confidence | 57 |
| Responsibility | 35 |
| Level of complexity | 28 |
| Tutee believes tutoring helps | 26 |
| Modeling flexibility | 21 |
| Actively constructing a passion | 19 |
| Multiple approaches, not one right way | 18 |
| Comfort with ambiguity | 11 |
| Guessing your way in | 11 |
| Unscripted problem-solving | 6 |

Table 4

Codes categorized as tools

| Codes | Tally of coded excerpts |
|--------------------------------|-------------------------|
| Clarifying the task | 64 |
| Images + voice | 40 |
| Example | 38 |
| Providing Insights | 38 |
| Modeling | 37 |
| Knowing How | 36 |
| Knowing Why | 36 |
| Pace | 35 |
| Time | 34 |
| Identifying Gaps | 31 |
| Textbook | 29 |
| Self-awareness/self-assessment | 26 |
| Unpacking | 25 |

| | |
|---|----|
| Energy/liveliness/creativity | 22 |
| Class quiz results content and/or grade | 18 |
| Dealing with emotions, id stress points | 15 |
| Patience | 15 |
| Continuity between sessions | 14 |
| Effective use of professor or class | 14 |
| Repetition | 13 |
| Tools (general) | 12 |
| Being genuine | 12 |
| Charm, teaching as charming | 11 |
| Communication aid | 11 |
| Physical proximity | 11 |
| White board | 10 |
| Read aloud | 9 |
| Technology-computer, iPad | 8 |
| PowerPoints | 7 |
| Facial expressions | 6 |
| Notes | 5 |
| Knowing what | 3 |
| Metaphor | 3 |
| Money | 2 |
| Syllabus | 1 |

Table 5

Codes categorized as constraints

| Codes | Tally of coded excerpts |
|--|-------------------------|
| Aspects of class or professor or discipline or major | 27 |
| Developmental | 26 |
| Constraints (general) | 25 |
| Frustration | 25 |
| Communication breakdown | 22 |
| Failure to integrate | 22 |
| Failure in relationship | 19 |
| Limits in knowledge | 17 |
| Fatigue | 15 |

| | |
|--|----|
| Lack of agency | 13 |
| Not ready and/or willing to learn | 12 |
| Relevance is less accessible | 11 |
| Unable to verify specifics from class | 8 |
| Resistance | 6 |
| Lack of excitement | 5 |
| Lack of waiting | 5 |
| Closed questions | 2 |
| Lack of self awareness | 2 |
| Student cannot see how tutoring is helping | 2 |

Table 6

Codes categorized as dialogue

| Codes | Tally of coded excerpts |
|---|-------------------------|
| Fluency | 58 |
| Feedback loop | 57 |
| Tutor prompt | 43 |
| Student prompt | 41 |
| Collaborative | 40 |
| Dialogue as tool for focus | 39 |
| Boiling down | 35 |
| Dialogue (general) | 29 |
| Conversation as workspace | 29 |
| Revealing gaps | 29 |
| Woven together via dialogue/narrating internal | 29 |
| Persistence in communication | 21 |
| Interesting | 19 |
| Active listening and/or invitational | 17 |
| Echoes | 15 |
| Proximity allows for vague referents (this, that) | 13 |
| Insider language | 8 |
| Reading assignment aloud | 6 |
| Specific questions that help focus/easy to answer | 6 |
| Coaching on how to make best use of tutoring | 4 |

Table 7

Codes categorized as relationship

| Codes | Tally of coded excerpts |
|------------------------------------|-------------------------|
| Relationship (general) | 75 |
| Mentoring | 43 |
| Ease in communicating together | 42 |
| Peer Status | 40 |
| Normalizing/acclimation | 37 |
| Humor | 35 |
| Warmth | 34 |
| Insights into other | 32 |
| Insights into discipline | 26 |
| Establishing/negotiating authority | 23 |
| Enthusiasm | 20 |
| Orienting to major | 16 |
| Sense that other cares in some way | 15 |
| Orienting to college | 13 |
| Vicarious experiences | 12 |

Halfway through the coding process, I created a web of the various codes, minor and major, that emerged in order to create these categories. This type of exercise was critical to my analysis process, since so many codes had emerged that the quantity of any code emerging became less significant than the way several patterns fit together or if the coded excerpts were particularly compelling. A further review of my observation notebook revealed that many of my observations served to inform conclusions, and these findings led to many of the overarching themes and findings that I discuss at length in Chapter 4.

This cross-case coding and analysis provided a base from which I also analyzed each individual case. I identified the most prominent codes for each individual case, creating the following table:

Table 8

Prominent codes per case

| Pair 1 Math | | Pair 2 Psychology | | Pair 3 Finance | | Pair 4 Biology | | Pair 11 Theatre | | Pair 12 History | |
|---------------------------|-------|--|-------|---|-------|--|-------|--|-------|--|-------|
| Code | Tally | Code | Tally | Code | Tally | Code | Tally | Code | Tally | Code | Tally |
| Agency: study strategies | 23 | Dialogue | 17 | Tools: clarifying the task | 23 | Relationship: ease in communicating | 15 | Agency | 25 | Agency: identity | 26 |
| Tools: knowing why | 22 | Relationship | 17 | Agency: study strategies | 21 | Agency: identity | 15 | Connections: connect to student | 19 | Constraint: lack of agency | 13 |
| Relationship | 19 | Connection: connecting subject to real life examples | 16 | Agency: sense of efficacy | 17 | Agency: intellectual curiosity | 14 | Agency: identity | 18 | Constraint: failure in relationship | 12 |
| Tools: knowing how | 19 | Connections : connecting subject to student personally | 16 | Agency: identity | 14 | Tools: images + voice | 14 | Agency: sense of efficacy | 17 | Constraint: failure to integrate | 12 |
| Dialogue: tutor prompt | 15 | Connections : identifying relevance | 15 | Connections: connecting subject to real life examples | 12 | Agency: sense of efficacy | 14 | Dialogue : conversation as workspace | 12 | Constraint: communication breakdown | 11 |
| Tools: modeling | 15 | Dialogue: fluency | 15 | Dialogue: feedback loop (on or off track) | 12 | Agency: study strategies | 14 | Dialogue feedback loop (on or off track) | 12 | Agency: sense of efficacy | 11 |
| Tools: providing insights | 15 | Dialogue: feedback loop (on or off track) | 14 | Tools: providing insights | 12 | Dialogue: collaborative | 12 | Dialogue : fluency | 12 | Constraint: aspects of class/ professor/ discipline or major | 9 |
| Relationship: mentoring | 14 | Dialogue: tutor prompt | 14 | Agency | 12 | Dialogue: fluency | 12 | Tools: clarify the task | 12 | Constraint: frustration | 7 |
| Relationship: humor | 14 | Agency: study strategies | 14 | Tools: knowing how | 11 | Agency | 12 | Agency: confidence | 12 | Constraint: limits in knowledge | 7 |
| Tools: example | 14 | Relationship : peer status: acculturate | 12 | Tools: knowing why | 11 | Connections: connecting subject to real life | 11 | Agency: responsibility | 12 | Constraint: not ready and/or willing to learn | 7 |

Using this chart as a starting place, I created a visual organizer to conduct a more in-depth review of each case to take into account the activity system as suggested by my review of the literature. Once the visual was created with these starting categories, I then revisited my observations and notes on each case to add additional elements that stood out for each individual case. A final step was to review insights from narrative memos. Figure 4 is the visual for the college algebra case. The full set can be found in Appendix F. This process formed the basis for my reflections and analysis of the role of disciplinary context for each case.

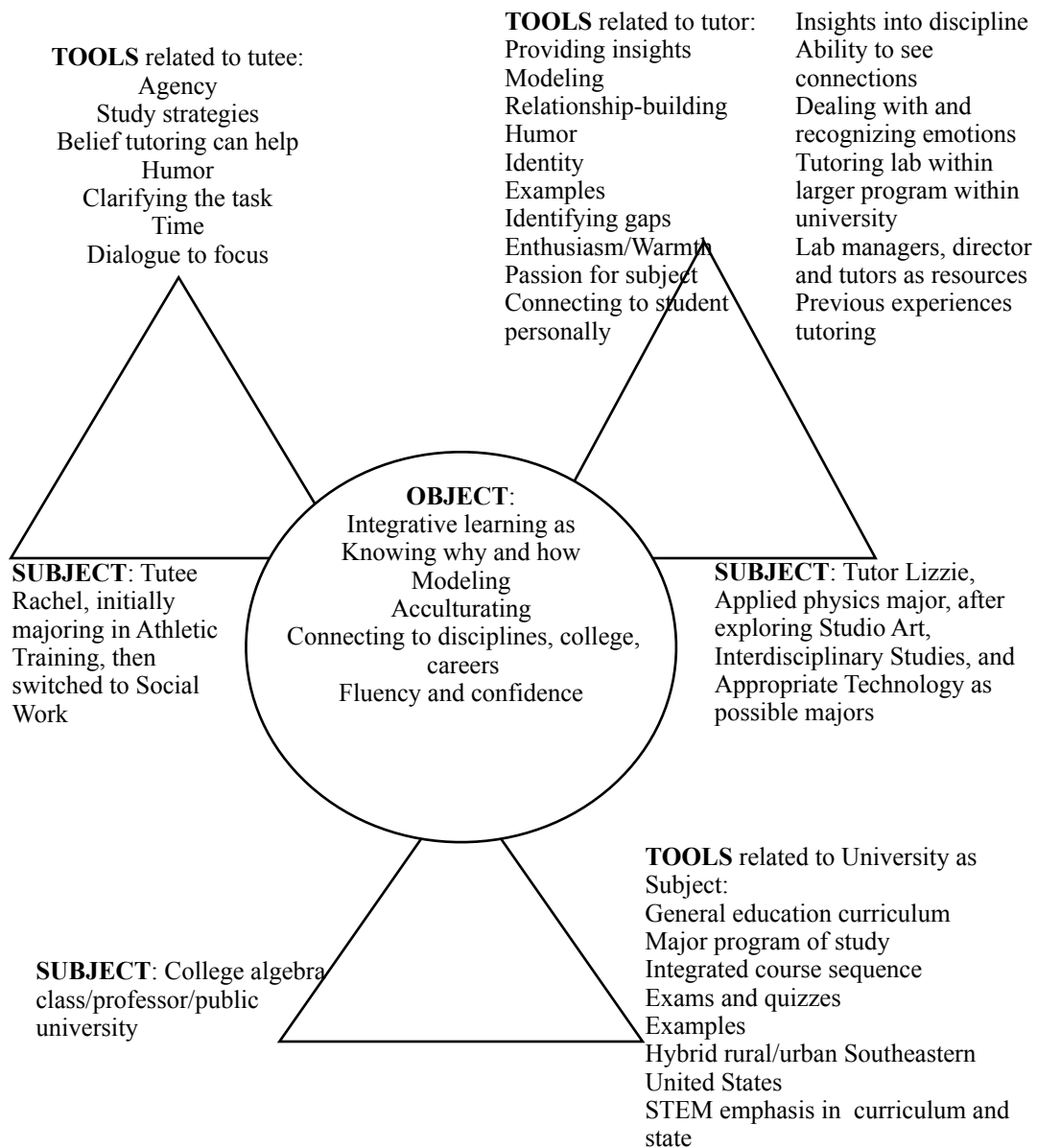


Figure 4. Activity systems analysis of college algebra case. This individual case analysis of a college algebra tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. The nested context analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

A contributing source of analysis for the individual cases that underscored findings related to themes and disciplinary context was a chart comparing what each participant listed as the key concepts discussed in tutoring, sorted in order of ascribed complexity. This chart can be found in Appendix G.

Drawing from the model from Engeström (2001) that provides another lens for analyzing context, I analyzed across the cases to examine what the data revealed about sociocultural context, reviewing, then filtering, the coded excerpts related to tools and constraints. From this analysis, specific patterns arose that allowed me to identify aspects of the overall cultural context based on the tensions within these cases.

In the final phase of analysis, I synthesized these broad findings into specific themes to address my research questions. These themes based on connections and compelling excerpts from the data comprise Chapter 4.

Data triangulation. In order to report my findings, I adapted the matrix proposed by Anfara, Brown, and Maglione (2002) to track how evidence of specific patterns appears in multiple types of data as reported in Table 9 and Table 11.

Trustworthiness

In general, my strong ties to this work meant that I am an advocate for the students and tutoring services, and that role influenced the way I interpreted information. To address the natural biases I brought to this project, I took the following steps:

1. Shared with participants excerpts related to their involvement and invited them to share feedback. Several responded with affirming comments. A few provided a few points of clarification and nuance, and I changed my descriptions accordingly.

2. Asked appropriate readers, including my dissertation committee and learning assistance colleagues, to share feedback on excerpts of my results to identify any aspects that may raise questions for them, and I changed my wording in response to such comments.

3. Embraced my role as lens and filter of this research. Throughout my final report, I aimed to be clear and reflective on how my perspective affected my approach and how I drew these conclusions.

My subjectivities are appropriate to this particular design, since I aim to collaborate with students within a familiar site to reflect together, discuss, and observe critical moments within best practices. In qualitative research, the researcher's subjectivities are indeed the tool for analysis, and my sense of advocacy led me to gather stories for this purpose. My focus, then, was to address my biases by making them visible through reflection and writing and to aim for systematic inquiry. If I am systematic in my approach, my research project falls in line with the National Research Council's (2002) guidelines to "provide a coherent and explicit chain of reasoning," and "disclose research to encourage professional scrutiny and critique" (p. 52). This definition of research provides further support for my efforts to seek out feedback from multiple sources to increase the trustworthiness of this report.

Strengths

A number of strengths were present in this research design. Though backyard research carries a number of ethical and organizational challenges (Glesne, 2011), my positioning in the organization yielded resources as well, including a remarkably high level of access to people and insights to underlying processes that might not otherwise be available. I experienced no actual attrition, and even the participants in the failed tutoring

case still completed all interviews. My knowledge of the unit and credibility within the institution made scheduling observations and contacting participants an easier task than most new researchers face. These close ties fit well with the design of this research project, since I have an insider's awareness of the functioning of academic support services, and my role in the organization closely resembles the role of anyone who might try to transfer insights or findings from this study to their own organizational context. No one implementing tutor training or providing tutoring does so as a complete outsider.

Finally, many of my participants commented that they enjoyed participating in this study, particularly the interviews. I had predicted in designing the study that this process might allow them to gain increased insight into the tutoring and learning process. Indeed, one of the tutors volunteered to aid in tutor training in the subsequent semester based on our conversations, which made him wish to deepen the kinds of training and support available to all tutors. One of the tutees sought me out to discuss her academic goals and strategies in the semester following the study. Our conversations provided an opportunity to reflect on learning and tutoring, which, when done with empathy and appreciation, is a rewarding experience.

Chapter 3 Summary

This chapter detailed the research methods used for this study, including a brief review of the implications of using sociocultural activity theory as my framework. A multiple case study within the time limit of a single academic semester best fit the goals of this study. This chapter included specific reflections and analysis of my role and subjectivities as researcher as well as ethical considerations. I introduced the setting of the

tutoring lab and the selection process of my 12 participants, including a demographic overview and individual descriptions. My primary methods of data collection included observations, interviews, archival data review, and reflective memos. I described at length my codes, coding process, and multiple stages of analysis, as well as my efforts to foster the trustworthiness of this study and its unique strengths.

In the next chapter, I present the overarching themes that synthesize the coding and patterns that best address my research questions. To clarify meaning, I provide excerpts and analysis from the transcriptions and memos. In the final chapter, I provide further discussion and conclusions.

Chapter 4: Results

During the fall semester 2012 within a centralized tutoring lab in a mid-sized Southeastern United States public university, this interpretive study of six tutor-tutee pairs included 36 interviews, 22 observations, and 122 reflective memos. The purpose of this study was to investigate the ways integrative learning took place within one-on-one tutoring relationships and the mediational tools or means that enabled or constrained integrative learning. As explained in Chapter 3, the analysis yielded 116 codes drawn from the data. Chapter 3 provided detailed information on participants and analysis process, including the general codes and categories that emerged. In this chapter, I begin with descriptive data on the tutoring setting, which lay the framework for the sociocultural context of this qualitative study. I then synthesize the major themes that occurred across cases based on the most compelling descriptive data and prominent codes and categories. The first half of this chapter presents the themes that best describe some of the ways integrative learning took place within these tutoring cases. The latter half of this chapter explores the mediational means for integrative learning within these specific cases.

Setting

This qualitative study took place within the unique setting of the tutoring lab that is part of the Learning Assistance Program at Franklin State University. The following

descriptions are drawn from archival review, observations, and reflective memos, and this setting provides a context for the analysis that follows.

Franklin State University. Located in the Southeastern mountains of the United States, Franklin State University is a mid-sized comprehensive public university that averaged 16,000 undergraduates and 1800 graduate students. The full-time student demographics includes 11% ethnic minorities (Student information, 2013). The South, like the United States, can be further divided into urban Southern versus rural Southern, and further into mountain, flatlands, or coastal, in terms of accents, habits, and racial demographics. This mix was reflected in the student population of this public university. The majority of its students were in-state residents, and the few out-of-state students were conscious of paying private school rates and tended to be more assertive in their use of campus services. Franklin dominated a classic university town within a rural mountain region located two hours from the nearest city.

Learning Assistance Program. At Franklin State, the Learning Assistance Program, included tutoring, study skills instruction, and comprehensive programming for specific student groups. Disability services was a separate unit of the university under equal opportunity compliance efforts, though students with disabilities took advantage of tutoring and study skill support services within the Learning Assistance Program. Academic support services in this unit traced back to the first federal Student Support Services (SSS) grant awarded in 1979 to provide specialized advising and tutoring to first-generation, low-income students. Around that time, special services for student athletes began to provide NCAA advising, study halls, and tutoring. These programs served as incubators for tutoring at this

institution, and by August 1984, a dedicated tutoring program provided tutoring to all interested students, rather than limiting support to the SSS students and student athletes. In 1984, the tutoring program began with 30 tutors serving approximately 350 students per semester. The program has grown in demand and outreach ever since, typically hiring more than 100 tutors each semester and serving more than 1,000 students by appointment and doubling that number via drop-in tutoring offerings.

At the time of this study, 11 staff members coordinated advising, classes, study sessions, and mentoring for an estimated 800 advisees who qualified for these specialized services, including identified first-generation students, poverty-level scholarship students, and student athletes. Two full-time and one part-time staff members, including me, provided study skills instruction to any Franklin student who sought these services. Similar to the study skills instruction, tutoring was available to all interested Franklin students. The tutoring lab was coordinated by one full-time tutoring director aided by the full-time technology coordinator who managed the software documentation systems as well as drop-in tutoring services that were housed within various departments across campus.

The tutoring lab. Almost every week throughout the semester, barring a few cancellations or university holidays, the participants met for an average of 50 minutes per week in a large room sliced into a maze of dividers and white boards that allowed each tutoring pair or group to claim a semiprivate space within this shared space. Renovated over a decade ago, the tutoring lab still benefitted from a touch of color thanks to auburn-shaded tables and navy plaid chairs. Rows of long windows and high ceilings brought light and grace to the large room. The left side of the room had been sacrificed for space for the

tutoring director, graduate students, and the head lab manager, all sharing the work of training, hiring and supervision. Between the doorways, a large marble front desk held log-in computers and a sign-up counter where the undergraduate lab managers who are also tutors waited to assist students in signing up for tutoring. Due to the interior designer's vision for this space, newcomers typically paused at one of the two entrances, scanning the room and absorbing various hints and posted signs before concluding that perhaps they should turn and address the undergraduate lab manager sitting behind the marble desk. The lab managers assisted in addressing minor concerns raised by tutors or tutees, and they referred any major problems or unusual requests to the tutoring administrators.

Despite frequent budget cuts referenced in annual reports from this tutoring center and the fact that this model was not necessarily standard at other universities, the director of tutoring maintained what has been historically a commitment at this university to the model of individualized, recurring tutoring by appointment as the most proactive, comprehensive support service for students (Tutoring Director, personal communication, October 5, 2011). Each tutor hired was a peer college student who demonstrated academic achievement in the content area and evidence of positive interpersonal skills. New tutors hired by the first week of classes took part in a large group training session that included technicalities on how to navigate scheduling and payroll as well as introductions to the professional staff. In an accelerated yet collaborative manner, the Director shared insights to make tutors aware of goals and pitfalls. The majority of tutors had little time to seek additional training, such as the optional self-paced series of ten hybrid sessions available for those who wished to complete the accredited College Reading and Learning Association training. On the whole,

comments by the tutors revealed that they are frequently guided by their own ideas about tutoring, based on beliefs about teaching or in a few cases, experiences receiving tutoring. A few of the participant tutors in this study gained insights from interactions with other tutors and lab managers, an informal support system.

This tutoring lab within the Learning Assistance Program at Franklin State University yielded the findings for this multiple case study, including insights related to integrative learning as it occurs within tutoring appointments and the mediational means that enable and constrain such learning.

Research Question One: Integrative Learning Within Tutoring

In proposing this research, my goal was to explore the ways in which integrative learning takes place within one-on-one tutoring appointments in higher education. This question arose based on the general need in the literature for more specific examples of integrative learning in practice and to expand the ways tutoring is conceived discursively. Figure 5 provides a visual representation of the overall themes that emerged.

Across the tutoring cases, integrative learning took place as a learning process and disposition to create relevance by

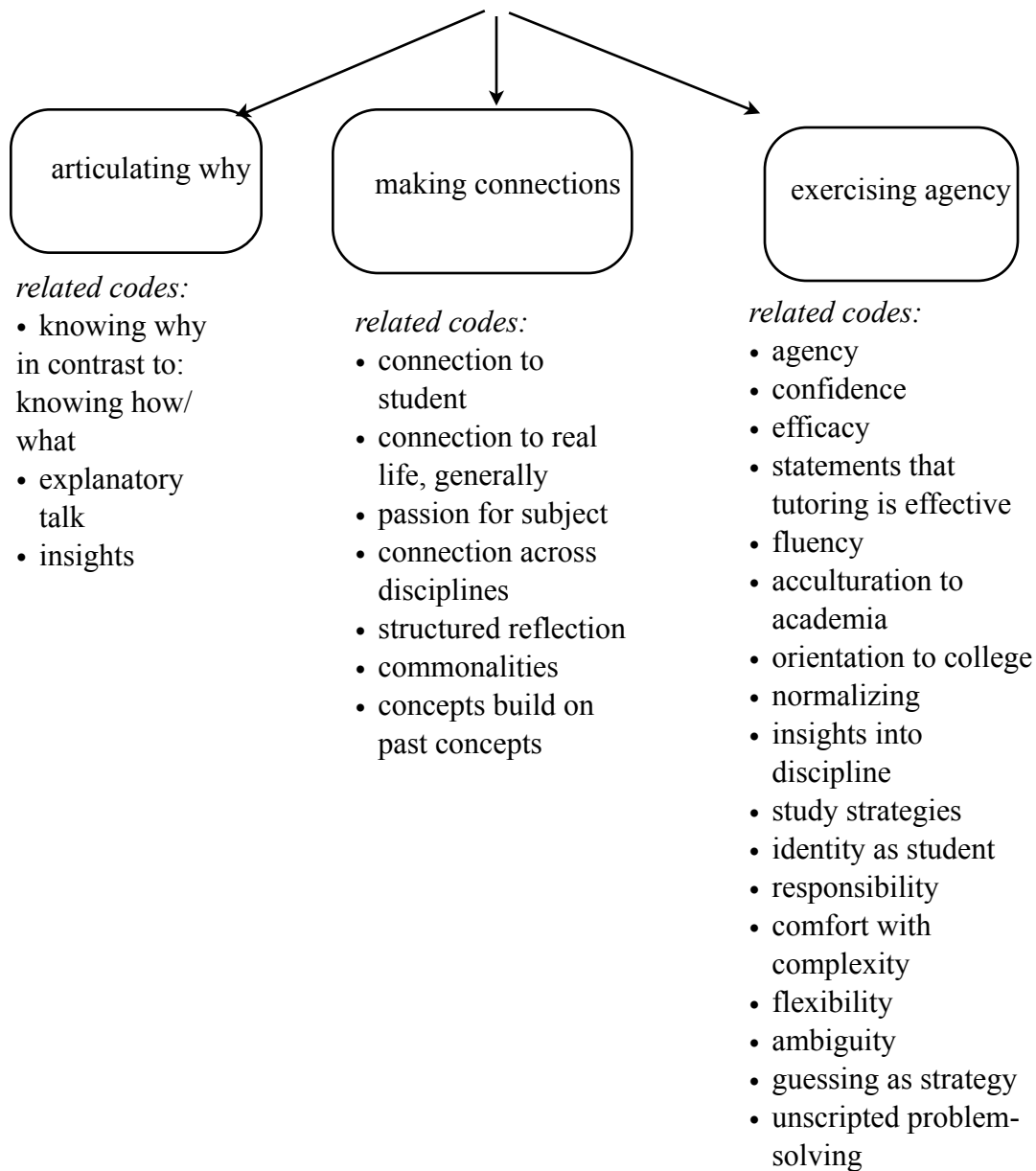


Figure 5. Definition and compelling themes of integrative learning. This graphic highlights the working definition that emerged from this project in which integrative learning is a process to create relevance and the themes that synthesize the most compelling codes.

The following matrix provides an overview of the major findings that address this question including tallies of multiple codes that relate to each theme. This matrix is modeled after the model recommended by Anfara, Brown, and Maglione (2002). In the next section, I will discuss each of these themes.

Table 9

Major patterns for integrative learning as creating relevance

| Overall Pattern | Tally of excerpts from: | | | |
|--|-------------------------|------------------|------------------|-------|
| | Observations | Tutor Interviews | Tutee Interviews | Memos |
| Integrative learning as creating relevance | 54 | 61 | 27 | 3 |
| Articulating why | 68 | 26 | 1* | 5 |
| Making connections | 97 | 96 | 50 | 8 |
| Exercising agency | 273 | 159 | 144 | 49 |

**This pattern emerged prominently in tutor-tutee interactions and in tutor interviews, but was not explicitly addressed within most tutee interviews.*

I begin by broadly defining integrative learning as creating relevance with examples from the data, and then I discuss how integrative learning appeared as a process and disposition. From this base definition, I then unpack the major patterns, in which participants appeared to create relevance by articulating why the topic matters, making connections, and exercising agency.

Integrative learning defined as creating relevance. Uncovering examples of integrative learning was a primary purpose of this project, and this exploration led me to conceive of integrative learning as a process and evolving disposition in which learners are

able to create relevance for the assigned coursework by articulating why the topic matters, making connections, and exercising agency. In interviews, many of the questions designed to uncover interdisciplinary connections yielded the relevance ascribed by the students. For example, when asked about connections between his current classes in our first interview, Psychology Tutor David used the word “relevance,” though it was not a word present in my question. “I would say everything except for music history is very relevant to my clinical work. It all influences my work,” and he proceeded to identify what was useful to him in each class (psychology Tutor David Interview 1, September 10, 2012). Psychology Tutor David’s interviews revealed how intentional he had been as a student to fuse his personal talents and passions with his pursuit of the music therapy degree, so he was likely to think in terms of relevance. This same pattern nonetheless arose consistently in other interviews. Finance Tutor Diana, for example, explained the relevance of her final classes in terms of how they provide different insights “on the finance spectrum” that will aid in her career as an internal auditor (Finance Tutor Diana Interview 1, August 29, 2012). For her, the relevance is based on her career track and passion for finance.

On the other hand, Theatre Tutor Kate was aware that her major in theatre may not lead to such a guaranteed career track, so she developed her own means to make her academic work relevant:

I definitely have ambitions [to perform]. But there’s also the realistic part of me that realizes that . . . the odds are not in my favor that I will be able to make a living off of it. Which is why I definitely want to go to grad school, and if possible get my Ph.D.

because I can do something that I really love and let people pay me to do it. (Theatre Tutor Kate Interview 1, September 11, 2012)

Kate thus emphasized the value of the academic aspects of theatre as a part of a longer term career strategy that might combine performance and academics.

The tutors as more experienced and/or successful students were usually more skilled at identifying relevance, but the tutees also engaged in this effort. First year Biology Tutee Joan used her interest in medicine as an effective tool for generating relevance, listing how each class was “not similar material-wise but concept-wise, and then . . . in English I can write about these experiences” (Biology Tutee Joan Interview 1, September 17, 2012).

Several of the tutees also identified the relevance of what they learned in college in terms of general, transferrable skills. Senior Finance Tutee Cole, for example, felt most empowered by the lessons in self management and time management that he had gained over the years (Finance Tutee Cole Interview 1, August 30, 2012). First year College Algebra Tutee Rachel anticipated similar outcomes. “I have to learn how to do things on my own, so I guess that will help me in the long run” (College Algebra Tutee Rachel, September 5, 2012). College success was relevant to her because she will become more independent. Biology Tutee Joan identified college learning as relevant thanks to intellectual growth: “I feel like I’m using my brain more, accessing parts of my brain that . . . aren’t, that I don’t use in other classes . . . and it helps in other classes or helps in just . . . anything really. You just feel yourself getting brighter” (Biology Tutee Joan Interview 3, October 22, 2012). Biology Tutee Joan added this reflection: “You always hear about DNA and cancer . . . , and now I know what’s happening there” (Biology Tutee Joan Interview 3, October 22, 2012). This example

suggests that for Biology Tutee Joan, understanding complex content carries a value of its own, an inherent relevance thanks to mastery and her awareness of the potential that is now available to her through new knowledge.

In addition to these interview statements on relevance, many of the observed tutoring sessions included efforts by the tutee and tutor to identify the relevance of the subject they were discussing. The theatre tutoring pair provided prominent efforts by both tutor and tutee. Theatre Tutee Thomas, for example, chose to conduct research on a play based on Galileo, finding a way to connect his interest in history with his study of theatre. Historical connections created relevance for Tutee Thomas, and his tutor affirmed this approach as an effective way to approach the assignment (Theatre Tutoring Observation 2, September 21, 2012). In a later session, Theatre Tutor Kate described Bertolt Brecht's *Mother Courage* as an example of epic theatre, and Tutee Thomas jumped in to ask, "What was [this] play setting out to change?" (Theatre Tutoring Observation 3, September 28, 2012). Tutee Thomas thus used the discussion of a literary concept, epic theatre, as a springboard to consider the relevance, in this case the impact and possible agenda of a particular play.

The tutors and tutees reflected on, articulated, and created relevance that could be seen as personal, professional, academic, aesthetic, and internal to the class itself as well as issues that had meaning "beyond the classroom," to use Wells' (2011) description of an outcome of learning (p. 96). The phrasing of my working definition for integrative learning—the learner creates relevance—serves to portray the interaction between the individual and the cultural context. The individual is actively engaged and contributes personally to create an understanding of the value of what is being learned, and at the same time, this

understanding is shaped by the culture. Whatever is considered relevant will reflect or be reflected in the sociocultural context.

Integrative learning as process and disposition. As suggested by the literature in positing integrative learning as disposition, process, and integrated understandings, integrative learning took place within these tutoring cases at times as process and at times as a disposition. Creating relevance can be a learning process to master a desired skill or concept, and similarly, mastering various skills and concepts can lead to an overall disposition in which the learner can then appreciate the relevance and value of a subject. One example that typifies this dual role comes again from a theatre tutoring observation. In this session, Theatre Tutor Kate defined Social Darwinism, which led to the following exchange:

Theatre Tutee Thomas: So I've got to be able to, say I'm reading the play that I suspect is this classification here, I've got to be able to read it and notice that there's a situation going on where the weakest is, something's happening to the weakest, and the strongest is prevailing?

Theatre Tutor Kate: Yeah, and a lot of you know, fantasy stories, you know the pauper becomes the prince.

Tutee Thomas: Right.

Tutor Kate: In these types of stories, that's not considered realistic from a social Darwinist perspective, so that doesn't happen. The poor continue to be poor, and get sick and die off, and the rich continue to get rich. So it's not very Robin Hood-y. I prefer Robin Hood.

Tutee Thomas: Them can be some mean plays.

Tutor Kate: There are quite a few. (Theatre Tutoring Observation 3, September 28, 2012)

In this excerpt, Tutee Thomas worked to make sense of the definition and apply the lens of Social Darwinism to interpret or categorize a play. That is, he sought to find the relevance of Social Darwinism as a means to engage with a play. In this way, relevance serves as a part of his learning process, a tool for learning. At the same time, this topic carried broader relevance in terms of ways to consider class bias in Western culture, of particular significance to Tutee Thomas, a nontraditional student who spoke frequently in our interviews of the challenges he had faced in a working class career path with no opportunities to advance. His sympathies immediately led him to critique this stance as “mean.” Engaging in this analysis of culture and history within theatre has the potential for him to attain a disposition in which he can identify the way a specific play relates to his own life experiences, including insights and tools of empowerment. Multiple moments across cases resembled this excerpt, and in such examples, creating relevance frequently took place as both process and disposition.

Some insight on this dual role of integrative learning can be found in theories provided by rhetorician Wardle. When discussing the goal of transfer in higher education, Wardle (2012) described two kinds of dispositions that affect success—an answer-getting disposition versus a problem-solving disposition. Wardle suggested that some learners limit themselves to finding a specific answer to complete a task, without gaining insight on the process of reaching that answer. A problem-solving disposition, on the other hand, means the learner focuses on the process first, not simply getting the assignment done. Wardle’s

phrasing supports the tensions between process and disposition; integrative learning is about being able to solve problems, particularly in finding value in what one learns, and it also can result in a stance that could be considered an disposition.

In considering the variety of learning taking place within this study, including the varying levels of complexity and accomplishment, the data support the contention that integrative learning is developmental. That is, examples of integrative learning may exist on a spectrum in terms of complexity and accomplishment, which fits well with the rubric provided by the AAC&U, in which a hierarchy of types of integrative learning could be assessed. For example, the rubric lists the ability to identify personal connections as an initial benchmark in contrast to a capstone to “meaningfully synthesize” and “deepen understanding” (Rhodes, 2010, p. 51). While the interviews with both tutors and tutees uncovered moments in which these participants articulated an understanding that might fit with a capstone vision of integrative learning, most of the examples of learning within the tutoring sessions fell within the lower ranges of the AAC&U rubric, perhaps due to the limits of what could be covered or demonstrated within the tutoring conversations, a constraint I attribute to timing rather than to the nature of tutoring itself. In most cases, the tutees needed more experience and successes than took place within this snapshot in time. On the other hand, tutoring provided intensified, accelerated opportunities to gain confidence and experience with the content that lay the groundwork for engaging in more sophisticated mastery of integrative learning.

In contrast to the tutees, the tutors often demonstrated a capstone level in terms of ease in listing possible connections and relevance. For example, Finance Tutor Diana explained that her love of learning flowed into her love of finance:

I constantly enjoy soaking in new information on a daily basis where finance, I do love, I enjoy it, it suits my strengths well, and going into the job that I'll be starting in January for internal audit, it is a constant learning process. (Finance Tutor Diana Interview 2, September 18, 2012)

Consistently in her interviews with me, Tutor Diana was able to describe with fluid and concise language her mastery of the material, suggesting she had reached a capstone level of many of the attributes of integrative learning.

Similarly, this contrast between the level of insight and connections offered by the tutors versus the tutees appeared in the final round of interviews. Each participant was asked to state and sort major class concepts by level of difficulty and also to state the overarching theme of the class (See Appendix G). For example, College Algebra Tutor Lizzie listed specific functions, logarithmic versus exponential, while College Algebra Tutee Rachel only stated functions in general. The history tutor stated themes, while the history tutee listed specific empires. Similarly, the psychology tutor, finance tutor, and theatre tutor listed more global concepts, while their respective tutees tended to identify parts. The only pair whose answers most paralleled one another were the biology tutor and tutee, which fits with their commonalities as biology majors. More dramatic were the differences in how each participant described the overarching theme of the class. The College Algebra Tutor identified movement as a core concept, while the tutee stated “evaluate x , different ways to

find x ” (College Algebra Tutee Rachel Interview 3, October 17, 2012). This example is echoed in the others, in which the tutee described the specific skills needed to succeed, while the tutor spoke in terms of overall themes.

The example of Psychology Tutee Mark perhaps best demonstrates the developmental nature of integrative learning. In our interviews and his sessions with Psychology Tutor David, Tutee Mark often recognized the value of what he was learning, celebrating at times what college could offer him, and thus creating relevance as a learner. He even commented on the irony that he was discussing issues related to metacognition with his tutor, right before meeting with me for interviews that related to metacognition as well, effectively connecting the content of the course with the content of our discussions. Yet his embrace of the relevance of the classes was inconsistent. For example, in the first interview, he shared his desire to feel more enthusiasm for his studies, and he hinted that he was making progress in this respect, gaining a more positive view of his role of student in contrast to his experiences in high school. When I followed up with him on his progress in our final interview, he reflected that,

It’s gotten better, and I can kinda see how I need it, and I can look at it a little bit differently, but it’s still, you’re sitting in a class and then you have to go back and write papers and look at a book and that’s not . . . fun. (Psychology Tutee Mark Interview 3, October 24, 2013)

His growth as a student, his learning, was not a straight diagonal line, but included steps forward and steps backwards. Tutee Mark’s example suggests that the data on integrative learning within tutoring relationships within this project should be viewed as benchmark

progress rather than capstone. Even though a participant might demonstrate integrative learning at one point in the study did not guarantee that he or she sustained that insight in the long term.

Major patterns for creating relevance. Among the patterns and codes to describe integrative learning, relevance took the foreground. As Figure 5 depicts, I identified the following patterns for creating relevance for the assigned coursework by articulating why, making connections, and exercising agency, all attributes of integrative learning within these tutoring cases. I will discuss each of these patterns in the following section.

Creating relevance by articulating why. The level of engagement varied between participants and across disciplines. In math-based classes, for example, tutees were most eager to understand how to solve a problem, such as how to graph a function or calculate time-valued money. In concept-and-theory-based classes, tutees strove to understand conceptual rather than procedural knowledge, such as defining iconic memory or epic theatre, or distinguishing between ancient empires. As the tally of explicit codes for articulating why reveals in Table 9, tutees rarely discuss an explicit need to articulate why, though the Finance Tutor and College Algebra Tutor discussed this aspect of learning at length in our interviews. In the observations and in my reflective memos, the role of knowing why a topic matters emerged repeatedly.

While working through concepts and procedures, the tutors consistently provided glimpses into the why behind each action. By doing so, they provided a support structure that aided in motivation and retention of the material. Being able to state a reason why a subject mattered served to create relevance. Articulating “why” sometimes took place as

understanding the significance of a specific concept. For example, Finance Tutor Diana repeatedly stressed to her tutee and in my interviews that success in finance relied more on knowing why the problem had to be solved in a specific way, rather than just how. “With finance, it’s knowing why,” she confirmed. “You have to wrap your head around these concepts, and then just do the algebra” (Finance Tutor Diana Interview 3, October 23, 2012). On the other hand, College Algebra Tutor Lizzie emphasized knowing why a subject mattered for the future, such as success with future classes, majors, and careers. “What you are learning really matters,” she enjoined in one session. When the tutee did not look convinced, she immediately asked, “What’s your major?” (College Algebra Tutoring Observation 1, September 4, 2012). Each time, she would then use the tutee’s answer as a possible means to illuminate the value of the algebra lessons. In our interviews, she affirmed that most of her students appreciated this support to identify reasons why they might benefit from learning how to solve a function, for example. To succeed on any individual assignment, the tutees might not need to go beyond simple knowledge of how to solve a problem or to recite a definition. Articulating the reasons behind such knowledge, however, appeared to provide the tutee with a transferrable insight—a means to create relevance. In their many explanations, the tutors provided strong and fluent models of ways to articulate why a topic has value.

As the tutor and tutee made sense of the emerging tasks within the tutoring sessions, each tutee engaged with the issue of why in varying ways. Biology Tutee Joan was the most direct, frequently using the words, “What’s the point?” (Biology Tutoring Observation 1, September 20, 2012), as she and her tutor discussed processes and PowerPoint images. On

the other hand, Theatre Tutee Thomas was frequently concerned that he understood the key details based on a general sense of their value to the course, and his final interview revealed that making sense of these details related to his understanding of the value of the course, which was the “interpretation” of the plays (Theatre Tutee Thomas Interview 3, November 2, 2012). As such, he constantly contrasted his understandings of the plays and key vocabulary with the explanations shared by his tutor.

For Finance Tutee Cole, unpacking each problem led to connections with the reasons why, such as using a problem to realize that “you’d be losing money” (Finance Tutoring Observation 3, October 1, 2012). This tutee was the only tutee whose interview naturally yielded an explicit reference to knowing why, when he confirmed the value of these insights in an interview, stating “she helps me with the concept part. If you don’t understand what a concept is, then there’s really no room to grow or of getting the problem right” (Finance Tutee Interview 2, September 19, 2012). Nonetheless, other tutees demonstrated rather than articulated this pattern. For College Algebra Tutee Rachel, the why came down to knowing when to use which formula correctly based on clues in the problem itself. Articulating why in these instances usually hovered close to the content, as the learners applied themselves to the material. Making meaning, though, led them to gain insight into some of the whys behind the skills and concepts.

For Psychology Tutee Mark, articulating why arose in the way he ascribed value to the study of psychology rather than in the explicit interactions with his tutor. That is, making sense of the concepts in tutoring led him to create personal value for himself. In our final interview, he commented that he felt his psychology course should probably be required for

all college students because “it . . . helps with learning and makes you think about things differently and about school differently” (Psychology Tutee Mark Interview 3, October 24, 2012). His engagement with the course, generating examples of each concept with his tutor and on his own, led him to articulate the why behind the course concepts in terms of how it benefitted him as a student. Each time he was able to connect content from the class with real world and personal experiences, Tutee Mark gained a sense of why this content had value to him. In this case, articulating why blends with the process of making connections, which I discuss in the next section.

Creating relevance by making connections. In proposing this study, I drew from the AAC&U’s definitions of integrative learning as connections, in particular creating connections to the student or across disciplines. With this focus in mind as I analyzed the data, I generated the greatest volume of excerpts and codes related to this theme. Further, these examples explicitly address the need for specific examples of integrative learning as connections.

Connection to the student. Connections to the student were most accessible in the data. At times, participants connected the content with what I dubbed real life examples, which could include situations with which the tutee may not have direct experience but views as practical and credible. Asking students to generate examples is a learning strategy well-suited to tutoring, particularly in the social sciences. Psychology Tutor David frequently asked his tutee to share examples, as in this typical exchange:

Tutor David: I mean you know the definition’s here, but what’s your own definition (of dual processing)?

Tutee Mark: . . . like if you're playing a sport and your teammate or somebody says something to you, I mean you can recognize that voice but you can also . . . move physically. (Psychology Tutoring Observation 1, September 12, 2012)

With its focus on human thinking and learning, psychology as a discipline lends itself to this kind of connection. Such connections took a slightly different shape within the finance tutoring. The finance problems were always based in real world examples. Typically Finance Tutor Diana and Tutee Cole discussed, even read aloud, problems that were based on specific activities such as saving for a house or planning for retirement. In addition to these real world connections provided by the course content and business nature of finance, the tutoring discussions provided additional opportunities for connection, such as when Tutor Diana and Tutee Cole laughed about an interest rate in a problem that reflected a better economic outlook than existed at the time of the study. Such interactions made visible the need to pay attention to the real life context in addition to the simulated problems, creating relevance by attending to contradictions.

Such real world connections emerged differently within the biology tutoring sessions. With both tutor and tutee so motivated and inspired by the field, explicit discussion of such connections occurred less frequently, perhaps since the overall value of biology was seen as a given by these two biology majors. Frequently, though, the pair built connections with events on the cellular level, personifying and relating to microscopic events:

Tutor Laurie: Right. Chemically you could . . . if you were trying to change the reaction energy of some reaction that you were doing, then you could heat up your

original reactants and that would change their level of energy and say you would, but biologically you can't do that . . .

Tutee Joan: Heat up a cell.

Tutor Laurie: You denature yourself and die.

They laugh. (Biology Tutoring Observation 2, September 27, 2012)

A later discussion allowed them to make explicit connections between activity on the cellular level and the real life topic of cancer:

Tutee Joan: But what happens when it denatures it?

Tutor Laurie: Our cells have something called telomeres at the end. It's just a bunch of garbage DNA that doesn't really code for anything. And so for each replication, the telomere gets shorter and shorter and shorter. That's also part of what causes aging, these telomeres getting shorter and shorter. Once they get too short, your DNA starts mutating because you're cutting off bases that you actually need. So that represents itself in things like cancer and stuff like that. (Biology Tutoring Observation 4, October 18, 2012)

Although much of their conversations were limited to specific, isolated concepts related to cellular processes, they still took note of the real world connections that enhanced a sense of relevance and value for their work.

In theatre tutoring sessions, the discussion of plays provided real life contexts, since the plays reflected or reacted to historical, cultural, and/or political events. Both Theatre Tutor Kate and Tutee Thomas commented on the value of considering plays in such terms, and Tutee Thomas, in fact, preferred these direct connections with events to discussions of

theatre in isolation. For him, the backdrop of history and politics enabled him to make sense of the variety of plays and trends in theatre. In contrast, History Tutor Jennifer frequently made allusions to the Middle East as a source of real world context for much of the content, though these asides did not appear to resonate with her Tutee Tiana. Most likely, the connections must be recognized and valued by the learner in order to be productive.

While College Algebra Tutor Lizzie emphasized the relevance of the lessons in math, the real life context appeared to be assumed by both tutor and tutee as outside of the study of college algebra. Applied use of what was learned in college algebra was discussed as a goal that would be achieved later on, rather than within the immediate set of problems they discussed and reviewed. Still, Tutor Lizzie frequently used real life objects to aid in explaining a difficult concept, such as using a picture of a cat to represent a variable, or comparing aspects of a math problem to a car.

In addition to real life examples, tutors and tutees frequently made personal connections with the content. First, as exemplified by the psychology case, Tutor David used personal connections as a tutoring and learning tool. In the following example, Tutor David prompted Tutee Mark to relate to a personal experience with a psychological concept:

Tutor David: I'm sure we've all had that incidence of daydreaming in class

Tutee Mark: Yeah.

Tutor David: Especially . . .

Tutee Mark: All the time.

Tutor David: *laughs*. Or most of the time. Well. So it's important to be aware of that not only for just knowledge of psychology but for knowledge of ourselves, you know

like oh, I'm losing consciousness, maybe I should focus a little more. And . . .
neuroscience looks at the different activities of the brain. (Psychology Tutoring
Observation 1, September 19, 2012)

By facilitating personal connections, Tutor David kept Tutee Mark engaged with the subject and then smoothly wove those interactions into further discussion of the topic.

In another example, Psychology Tutor David called on Tutee Mark to share a personal reaction:

Tutor David: I first came to college, I was a bit afraid. Were you a bit afraid coming?

Tutee Mark: Not like afraid, there's a better . . .

Tutor David: A better word for it, nervous?

Tutee Mark: Yeah, I guess overwhelmed.

Tutor David: Overwhelmed. That's a good way to describe the freshman year.

Especially move-in day, that's overwhelming. Yeah. (Psychology Tutoring

Observation 4, October 17, 2012)

At which point David related that very personal and relevant experience back to a more general example of the way children react to being forced to eat Brussels sprouts. In that same session, Tutee Mark also volunteered an example of friends he knew who used steroids, a real life example that they both discussed further in the context of addiction and behavior. This moment was noteworthy because Tutee Mark had now become accustomed to discussing personal examples without being prompted, demonstrating that he had absorbed and internalized the process of making connections in order to learn.

In the case of the psychology pair, the tutor took the lead in identifying connections. By contrast in the theatre case, Tutee Thomas consistently articulated personal connections. Theatre Tutee Thomas appeared to rely on the tutoring dialogue as a tool for such reflections. In one session, Theatre Tutor Kate helped Tutee Thomas review and identify the multiple plot lines in Shakespeare's *A Midsummer Night's Dream*. Tutor Kate explained, "And so Hermia went from being the object of their affection to they both hate her now and want nothing to do with her, so she's very confused," and Tutee Thomas replied, "I would be, too. Going through that cycle" (Theatre tutoring Observation 1, September 14, 2012). Later in their discussion of an allusion to the famous character of Cassandra:

Tutor Kate: And when they took the horse into the city, and they're like, "It's a gift, we'll accept it," she's like, "No, don't, it's a trap, this will be the downfall of the city," and no one believed her. So that's her curse. Can you imagine how frustrating that would be? You know what's going to happen, but no one will believe you and you can't do anything.

Tutee Thomas: No one taking you seriously. I can imagine.

(Theatre tutoring Observation 1, September 14, 2012)

These exchanges were typical for Thomas, a form of active listening, in which he connected personally with the experiences of characters in the plays as a way to make sense of the content.

One version of these personal connections was exemplified within the biology case as a shared passion for the subject. Intellectual curiosity and enthusiasm for a topic flickered in

other observations, but never as strongly as in the tutoring relationship between two biology majors. In this typical example, Tutee Joan expressed her enthusiasm for biology:

Biology Tutee Joan: So what happens if they need to move, to allow things to get in?

Biology Tutor Laurie: They would . . . the cell would probably send an enzyme to delink these two, which is something entirely different.

Tutee Joan: It just freaks me out that these cells are doing that, that's what I like about biology.

Tutor Laurie: *laughs*.

Tutee Joan: It freaks me out because it's like happening in your body.

Tutor Laurie: Right now.

Tutee Joan: Yeah, right now. A jillion times.

(Biology Tutoring Observation 1, September 20, 2012)

Tutoring conversations between two committed majors provided a unique space to connect based on mutual experiences and interests.

In another typical example, Tutor Laurie and Tutee Joan echoed each other's enthusiasm, as in this exchange:

Tutee Joan: Like my mind is blown. . . . That's crazy how that is possible.

Tutor Laurie: Right. Our body is too smart for us.

Tutee Joan: It literally is; like, we should just stop studying it, and...

Tutor Laurie: *laughs*.

(Biology Tutoring Observation 2, September 27, 2012)

In her interviews, Tutor Laurie acknowledged that Tutee Joan's enthusiasm and engagement in tutoring were noticeably different from her experiences tutoring students reluctantly taking biology to meet general requirements.

Finally, the following example from this biology case stood out in a fresh way to me, suggesting that personal connections can exist on an aesthetic level:

Tutee Joan: Yeah...I really like those things.

Tutor Laurie: The ATP things?

Tutee Joan: Yeah.

Tutor Laurie: They're great because they move; they spin around.

Tutee Joan: Really?

Tutor Laurie: Yeah, they spin around.

Tutee Joan: What?

Tutee Laurie: *laughs*. (Biology Tutoring Observation 4, October 18, 2012)

This exchange suggested that connections do not always have to be practical or limited to personal experience; integrative learning as a personal connection could include deeply valuing a subject as a pleasure to know and understand.

Connection across disciplines. Since connecting across disciplines is specifically named as a prominent type of integrative learning in the AAC&U's rubric, collecting descriptive examples of such connections was an explicit goal of this project. Given the subjective nature of qualitative analysis, the fact that this pattern occurred less frequently than others is noteworthy since I deliberately sought to identify such patterns.

Interdisciplinary connections existed, but they did not occur as easily or naturally as other

codes. Nonetheless, I identified three typical types of connections—the tutor connected the topic to other classes, the tutee used past learning to aid in new learning, or the class provided an interdisciplinary theme as a tool for such connections.

Most typically, the tutors peppered in asides of ways the topic related to other classes or disciplines. Psychology Tutor David paused in a discussion of anterograde amnesia to comment, “This term will pop back up if you take anatomy” (Psychology Tutoring Observation 2, October 30, 2012). Similarly, College Algebra Tutor Lizzie always mentioned the way the study of algebra would be useful in later classes or majors, including physics, exercise science, and nursing. Biology Tutee Joan and Tutor Laurie noted such connections frequently, too. Tutor Laurie told Tutee Joan, “If you take human systems physiology, you talk about that (neurons) a lot,” and Tutee Joan replied, “Really? We talked about that in psychology” (Biology Tutoring Observation 1, September 20, 2012). These moments occurred fairly naturally, though most often initiated by the upper-class tutors, which may suggest that one outcome of being engaged in college over a longer period of time is that the learner is more aware of such connections.

The next typical type of interdisciplinary connection took place when some of the tutees volunteered connections to past classes. Biology Tutee Joan, for example, often expressed excitement when a topic from biology, such as solar energy, came up in her chemistry class as well, and she was frequently thankful for taking AP chemistry her senior year of high school because content from that class consistently came up in her college biology class. “I can’t imagine people who never had chemistry trying to understand that concept [biochemistry within the biology class]” (Biology Tutee Joan Interview 3, October

22, 2012). Identifying relevance enhanced Tutee Joan's ability to make the interdisciplinary connections; she could identify the practical application of her chemistry skills as she studied biology.

Theatre Tutee Thomas frequently drew on his knowledge of history to make connections with his theatre studies. For his major project in the class, he chose a play about the life of Galileo, and he explained to his tutor that he was curious to know more about what happened. The connections between history and theatre served to generate interest for Thomas. These examples of interdisciplinary connections also demonstrate the connections that exist within the culture of the university. Tutee Thomas's ability to connect theatre with history and Tutee Joan's ability to connect biology and chemistry serve as a way these academic subjects are relevant to one another within the complex culture of higher education. Identifying relevance helps a learner succeed within this culture by using one subject to make sense of another.

Finally, interdisciplinary themes provided by the classes themselves served as a means to make connections across disciplines. A theme possessing great potential for such connections appeared in the theatre class in which the professor consistently called on students to assess the plays through a feminist lens. In my observations, Theatre Tutee Thomas was willing to make these attempts; he struggled, though, to feel confident that he had interpreted the play correctly. When asked if the feminist theme could serve as a way to make connections, Tutor Kate first laughed, but then she reflected:

I think it helps the students to connect better to the plays because in one of the plays that Thomas read, this woman goes to this cave and . . . at the end of the play she is

claimed by one of the men. Her father says, well, what do you want, and he says, well, I want your daughter as my wife, and the father says, you shall have her, and he just gets her, and they get married. When you read the play, you're like, oh, yeah, okay, but then when you look at it from a feminist perspective, you're like, wait, what? Does she not have a say in this? Then you can start to really think about how messed up it is, and it really shows you the differences in the time period it was written in because nowadays that would not be acceptable in our culture (Theatre Tutor Kate Interview 3, October 24, 2012).

The use of the theme of feminism served as a way to consider historical, theatrical, and cultural connections.

These connections were made more accessible by the way the professor set up the class, too; Theatre Tutor Kate commented that

The professor . . . does a pretty good job of relating plays to real life instances because he doesn't just say, oh, this play is 500 years old, therefore you have to read it; he's like, why should I respect this play? What's in it that is relevant to anybody or to the time?

(Theatre Tutor Kate Interview 3, October 24, 2012)

This example provides evidence of ways interdisciplinary themes provide connections across disciplines and create relevance.

In the next section, I discuss the third major pattern in which learners create relevance by exercising agency, which encompasses a number of supporting patterns from the data.

Creating relevance by exercising agency. Throughout this project, a prominent pattern emerged that I labeled agency. Analysis within activity theory addresses expressions of agency by the subject(s) within a cultural setting (Engeström, 2001, p. 141). Also relevant to the concept of agency is what Bandura (2006) described as the agentic perspective in which “people are self-organizing, proactive, self-regulating, and self-reflecting . . . contributors to their life circumstances not just products of them” (p. 6). Drawing from these insights, I defined agency as those moments when individuals believed they can affect their futures, even in the most challenging of circumstances. Bandura’s (1997) discussion of self-efficacy is particularly salient, particularly the idea that “unless people believe they can produce desired effects by their actions, they have little incentive to act” (pp. 2-3).

I contrasted this sense of agency to the passivity that can be a major constraint to learning; any time the tutee or tutor relied too heavily on the other to take the lead, the conversation became less productive. This element was particularly visible in the failed history tutoring pair in which the tutor pressed the tutee for questions, yet the tutee could not reduce her concerns to specific questions. At the same time, when the tutor launched into a short narrative based on the notes the tutee had brought, the tutee was silent and made little comment. In the psychology and college algebra cases, both tutees preferred to be engaged actively, yet tended to be laconic initially. Their tutors and they overcame this imbalance between tutor and tutee engagement over several sessions, and the final sessions were marked by increased lengths of tutee speech. The psychology tutee and college algebra tutee both stated that tutoring was helpful to them, whereas the history tutee concluded in the end

to drop the class. These cases suggest that actively engaging in learning required both tutor and tutee to be involved.

Wertsch's (1998) theories further illuminate this finding because he emphasized that "focusing on the individual agent [is] severely limited" (p. 21). The fact that tutoring is conducted through dialogue increases the likelihood that both tutor and tutee will be actively involved, but this result is not guaranteed. As Wertsch suggested, multiple influences are at work within an activity setting, including multiple agents and, in particular, mediating tools (p. 25). The tutoring conversations that appeared productive in this study were the ones in which active dialogue and related tools made visible choices and critical concepts, creating the perception of agency. Overall, tutees and tutors exhibited agency in a range of ways, particularly by expressing confidence, acculturating to academia, and taking the lead in the learning process, as I discuss in the following sections.

Agency observed as confidence. Most of the tutors as well as Biology Tutee Joan reported that they chose their majors based on a belief that they were simply "good at" the subject. To feel a sense of confidence provided them the answer to the question of why they should major in a subject. Similarly, College Algebra Tutee Rachel changed her major during the study because she felt she was not "good enough" at the science courses she would need to take, though she never received any failing grades, and Psychology Tutee Mark expressed concern over finding a major because he did not know of any academic subject that came to him easily. In his case, too, he was not at risk of failing any of his classes.

In addition to confidence as a way to justify a major, confidence emerged as an outcome of successful study. College Algebra Tutor Lizzie and Finance Tutor Diana both stressed the need to understand why in order to succeed with the calculations in their subjects. Tutor Lizzie further stressed that “I had to read into everything that I do because the why comes first for me” (College Algebra Tutor Lizzie Interview 3, October 19, 2012). This approach led her to master a particularly complex concept in an upper level physics class. When asked how she will now use that understanding, she responded as follows:

I’ve used it as confidence. *Laughs.* Well, I’ve got an internship coming up over the summer, and everything I’m learning in my physics classes is contributing to more confidence in that, and I’m very nervous about it. Cause it’s new territory. I’ve never had quite a real...I’ve had jobs, you know. But this is like a big girl job, so I’m nervous about it. I guess the material I’ve learned hands down is making me feel more confident and more qualified for the internship. (College Algebra Tutor Lizzie Interview 3, October 19, 2012)

In the same interview, she returns to this concept:

The more classes I take, the more time I spend on my classes, the more I love the major that I have chosen. So yeah, it’s the material, but it’s also the confidence that I’m pointing down this path, and it makes me feel happy.” (College Algebra Tutor Lizzie Interview 3, October 19, 2012)

These comments provide hints of capstone achievements of integrative learning in which a student exhibits confidence with the material and an ease in identifying its value. These kinds of achievements reveal how integrative learning as a disposition is a logical result of a

college education, and success in these areas could provide college students with transferrable insights.

Another example of the role of confidence is demonstrated in this exchange between College Algebra Tutor Lizzie and Tutee Rachel after collaboratively solving a problem more quickly than they expected:

Tutor Lizzie: Wow! I think that was less work than the other one.

Tutee Rachel: Yeah.

Tutor Lizzie: And we were so intimidated by it.

Tutee Rachel: I think I don't like the wording in this book.

Tutor Lizzie: The wording can be very confusing in that book. You should see the one right after it. (College Algebra Tutoring Observation 3, October 5, 2012)

In this excerpt, by making sense of specific vocabulary and applied practice within her tutoring sessions, Tutee Rachel made progress in developing her comfort with the problems. Greater confidence increased her ability to take control of the material.

A related code was fluency, which I defined as comfort and ease with a concept, a developmental stage that visibly supported the learner's ability to exercise agency in engaging with complex subjects. Tutoring supported the development of fluency in multiple ways, and abundant examples of fluency appeared in the data. First, as hinted in the introductory chapter, the observations of tutoring sessions included multiple moments when the tutee mirrored, tentatively, the more assertive gestures and expressions of the tutor. During the initial tutoring sessions, the tutors more frequently reached for the textbooks, and they tended to dominate use of the white boards and markers. When they spoke, many of the

tutors gesticulated for emphasis. In later observed sessions, the tutees engaged more often in similar physical movements.

These visuals underscored the very prominent pattern in which tutees gained more verbal fluency. For example, Finance Tutee Cole struggled in his sessions to master the concepts and language of finance. In this short excerpt, Tutee Cole attempted to put into words what he did and did not understand about a word problem:

Tutee Cole: Well, is there one, like there's an actual rate, and then we like, or the firm puts something in where they want it to be around another certain rate . . .

Tutor Diana: The required rate.

Tutee Cole: Yes.

(Finance Tutoring Observation 2, September 17, 2012).

Tutee Cole did not appear comfortable with these terms, and his tutor was able to supply the correct word quickly and with confidence. In another example, Theatre Tutee Thomas reacted to an event in a play by describing it as “just wrong,” and Tutor Kate provided a fitting analytical term, “misogynistic” (Theatre Tutoring Observation 1, September 14, 2012). In a later session, they worked explicitly to discuss the differences between linear and episodic narratives. In the psychology tutoring sessions, Tutor David and Tutee Mark frequently unpacked vocabulary meaning, so gaining mastery of the words themselves was also necessary.

At the same time, these exchanges served as practice, similar to learning a new language. Almost every tutoring observation included a moment in which a tutee echoed a statement made by the tutor. For example, Finance Tutor Diana and Tutee Cole said the

phrase “time-valued money” in unison at one point, a pivotal concept in finance that Tutee Cole committed himself to rehearse. In theatre tutoring sessions, Tutee Thomas sometimes repeated and expanded on the exact wording of his tutor, simple phrases such as “a Spanish play,” or “the actual setting,” which suggest that his concern was not deciphering word meaning but gaining comfort in discussing the topic. Frequently, the tutors in their explanations provided a model of fluency, such as College Algebra Tutor Lizzie energetically employing terms such as slopes, functions, horizons, and limits, and always connecting those terms with a problem written upon the white board.

This pattern was apparent after my first round of observations, and it was independently confirmed by Finance Tutee Cole. When I asked him to comment on issues addressed by tutoring, he gave the following explanation:

An issue would be, I mean, going in there not knowing any information and then having a tutor that’s actually had the teacher like that, and they’re like fluent, I mean not fluent but they’re, what’s the word, they’re like good at the subject, I guess, and they’ve had the teacher so it makes it easier for me because they can tell me what to focus on versus just looking in the book, you know, by myself where I have no clue. So that’s what I like about it, she kinda points in the right direction. (Finance Tutee Cole Interview 2, September 19, 2012)

Tutee Cole’s explanation has implications not only for the increased confidence that can arise from tutoring, but also for the process of acculturation and the mediational role of dialogue, as I will explain further.

Agency observed as acculturating to academia. In these cases, acculturating to academia emerged as both process and disposition including mentoring, exploring majors, developing an academic identity, and related patterns. This particular aspect of the data best fits with what Lave and Wenger (1991) called legitimate peripheral participation. Table 10 provides an extended example from the data that serves as a helpful starting place to depict what I mean by acculturating to academia within tutoring.

Table 10

Extended example of acculturating to academia

| Transcript | Analytical Comments |
|---|--|
| Psychology Tutee Mark: <i>jumps in</i> —I think Sternberg’s more right than the other two. | Mark rarely volunteered comments in the first session—his willingness to engage at this point suggests progress made, likely thanks to David's habit to find frequent ways to engage Mark in conversation. I would also note that this rich exchange began with the example of Sternberg’s theory on intelligence, which relates to my later discussion of examples as tools for integrative learning. |
| Psychology Tutor David: You think so? What is your justification? | David immediately redirected the topic to Mark, evidence of his skill in prompting dialogue. His word choice, “What is your justification?” provides a model of academic language that I will discuss further. |
| Tutee Mark: I don’t think this is like accurate; I don’t think it’s split up accurately. Tutor David: How would you split it up? | Tutee Mark's language was vague, though their proximity to the textbook examples allows them to speak in a kind of shorthand. David continued the conversation as if he had been clear. |

| Transcript | Analytical Comments |
|--|--|
| <p>Tutee Mark: I don't know, I think he does a good job in like people who are good at remembering, memorizing stuff . . . [they] can be good at multiple ones of these . . . I don't think it is split up quite . . .</p> <p>Tutor David: That way.</p> <p>Tutee Mark: Right</p> <p>Tutor David: That's a good thing to think about as you're studying for this.</p> | <p>David, as always, reinforced the study strategies practiced in the session.</p> |
| <p>Tutee Mark: <i>speaking now at the same time</i>—There's stuff behind why people are good at these things.</p> <p>Tutor David: Ohhh. So I see. Now I'm understanding what you're thinking. So these while . . .</p> <p>Tutee Mark: There's other reasons.</p> <p>Tutor David: . . .that they're good at music or good at spatial. You know you're not good at spatial but you're good at something else. Which tends to make you good at spatial.</p> | <p>Tutor David elaborated on the hints provided by Tutee Mark. Tutor David's comfort in describing these topics in contrast to Tutee Mark's more stilted attempts matches a typical pattern in the tutoring cases.</p> |
| <p>Tutee Mark: Yeah.</p> <p>Tutor David: That's an interesting theory. It sounds a little like you're floating on the realm of Sternberg here. With what's behind that creative intelligence is what's behind spatial or being able to paint.</p> | <p>(Psychology Tutoring Observation 3, October 8, 2012)</p> |

In this excerpt, Tutor David supported Tutee Mark as he attempted to engage in the cultural practices of academic discourse. This conversation would likely seem inappropriate in other contexts, such as a social encounter or a different work site. Tutee Mark's attempts were not polished; Tutor David modeled phrasings and ways to build his argument that might

be more suitable. Tutor David was undeterred by Tutee Mark's beginner status, engaging him eagerly in this kind of exchange as an equal. Tutor David used more elegant language, positioning them in an intellectual conversation and moving away from a nuts and bolts discussion of what to study. Through this dialogue, Tutor David scaffolded agency in Tutee Mark as a thinker, as someone joining the ongoing academic conversation to engage with theory and contrast theory with experience. In this instance, the tutee is called to employ the internal discourse of the university, for what counts as work in this particular context, and the cultural modes used by those most successful in academic settings.

Though Psychology Tutor David stood out as particularly strategic in prompting dialogue and his disciplinary context provided rich resources to do so, this example nonetheless matches and echoes traces of similar supports that emerged in all six tutoring cases. Fitting well within Lave and Wenger's (1991) model of a community of practice within which legitimate peripheral participation can occur, the tutors served as the more adept practitioners. Consistently in this study, the tutors modeled and mentored the tutees in becoming acculturated to the work most valued in the university, which can be most challenging to those who have not yet mastered the language or material. By engaging in tutoring, a new student to the university gains access to an example of a student who is doing well.

The model of how the tutor tackles the work, this acculturation process, also speaks to the process of clarifying the task, a center piece of tutoring that I will discuss further under dialogue as a tool. Clarifying the task is significantly more challenging at the college level, since most classes ask students to engage with complex systems of information and/or skills.

An experienced, successful college student is accomplished at identifying, quickly, where to focus attention. In the lectures, the accomplished student recognizes the concepts that matter most to the professor and the discipline, including the connections between these concepts and similar classes. Successful students know which questions to raise and where to focus. In the theatre case, for example, Tutee Thomas struggled to identify a feminist theme in a play, and as a starting place, he began listing the women in the play and reflecting on their actions. Theatre tutor Kate acknowledged his attempt, but then provided with practiced ease a more complex feminist analysis. Theatre Tutee Thomas in this scenario exercised agency, but he was not yet acculturated to this kind of analysis.

As models, the tutors represent ways to be successful students, including how they express themselves and the ways they gain energy from each topic. The world of academia is reproduced for the tutee by the tutor in their own idiosyncratic ways and in disciplinary-specific ways, which is also in accordance with this culture. These models also offer value in terms of what is missing. The tutors do not complain about the class or its requirements. They may add glimpses of off-topic subjects, but only to add liveliness or build relationship, and they consistently pull the conversation back to focus on the subject. These examples also highlight the value of tutoring as a resource because most of the tutees appeared less likely to speak in a larger class setting, at least not to engage in more advanced academic discourse. The tutoring setting allowed them to jump in with fragments, nods, and hints of what they meant to say.

This acculturating aspect of tutoring also defined the nature of the tutoring relationship. The data from this study have altered my initial conception of the tutoring

relationship that arose from my 2010 pilot study, in which a few participants emphasized the warmth and friendliness of their tutoring relationships. Some of the cases in this study exhibited similar glimmers of such warmth, such as College Algebra Tutor Lizzie's deliberate efforts to get to know her tutee and the easy interactions between Biology Tutor Laurie and her Tutee Joan, united by so many common interests within the major. Yet most of the cases evinced a more professional distance and the conscientious efforts of the tutors to stay on task. Indeed, this business-like approach was a bit disappointing to Theatre Tutee Thomas, a nontraditional student eager to hear a friendly word on a campus where traditional-aged students treated him as if he were invisible, and to History Tutee Tiana, who had seen previous tutors as friends and anticipated the same might happen this semester. The focus on content that shaped the relationships in this case were products of acculturation. In one interview, Tutor David shared his belief that tutors should assume that their tutees would find friends elsewhere. This assumption suggests that finding someone to coach them in the culture of the discipline was not as easily accessible. These efforts to acculturate enabled integrative learning, in which learners gather the snapshots of the life they have experienced thus far and create meaning and relevance within a particular disciplinary context.

Agency observed as taking the lead in the learning process. In each tutoring observation, moments occurred in which the tutee exercised agency by taking the lead—posing questions, making guesses, and engaging with the material without prompting by the tutor. This disposition certainly exists outside of the tutoring relationships, and this study is not designed to reveal causation but to observe patterns. Three of the tutees exhibited these traits from the start, including the more mature nontraditional student Theatre Tutee Thomas,

the motivated major Biology Tutee Joan, and the advanced senior Finance Tutee Cole, each of whom spoke often during the tutoring conversations. To an observer, these attributes appeared to aid their ability to use the tutoring time effectively, in keeping with Chi et al.'s (2001) lengthy study of the impact of tutee engagement.

Also noteworthy is the progression observed with first year students College Algebra Tutee Rachel and Psychology Tutee Mark. Both were more reticent in initial dialogues, yet by the final observation, their involvement had increased significantly. A few examples from the data deserve further analysis. First, the tutors provided insights into the power of tutoring to create agency. Psychology Tutor David described how he coached his students in this way: "If you can read your notes and understand what the concept is, great. If you can't, how are you going to make it so you can understand it when you go back to study it?" (Psychology Tutor David Interview 3, October 25, 2012). In this example, Tutor David described ways the tutee could take control and identify the steps to success. This stance reveals how tutoring has the potential to create agency rather than dependency, in which tutees become aware of strategies for successes within the tutoring session and replicate them independently for individual study. This agentive role fits well with the link made by Huber and Hutchings (2005) between integrative learning and metacognition.

Many of the tutors also set up situations in which the tutees could succeed. Several tutors spoke in particular about moments in tutoring when "something clicks" for the tutee. Finance Tutor Diana reflected on a strategy she developed using columns to help her tutees with finance problems, and the excitement that "it made it more feasible for you to accomplish the problem" (Finance Tutor Diana Interview 3, October 23, 2012). Similarly,

College Algebra Tutor Lizzie described her most successful tutoring sessions as the times when her tutees come in completely stumped, “and I can get them to understand by saying one simple thing, or sometimes it just takes a simple sentence said in the right way, and they hit it” (College Algebra Tutor Lizzie Interview 3, October 19, 2012). In these cases, the tutees needed the tutoring sessions to help them breakthrough, but that breakthrough empowered them. When “something clicks,” the tutees can exercise agency to move forward.

Tutees also expanded their ability to exercise agency through tutoring conversations. For example, Biology Tutee Joan practically led every tutoring session, skillfully supported and encouraged by her tutor. Theatre Tutee Thomas stood out by always asking questions and constantly identifying what he might have misunderstood. A nontraditional student pursuing a new career path and trying to break through economic glass ceilings, Tutee Thomas explained his proactive stance in these terms:

I’ve had a lot of experiences when I’ve been in situations where I’ve not spoken up and kinda let everybody else make the decisions for me and then them situations lotta times they turn, you know the person that took the lead they may be successful for, but me myself, I always find myself coming up on the short end, and been unsuccessful. So I try to get myself more involved with it. Cause I’m trying to make the most of my experience. (Theatre Tutee Thomas Interview 2, September 28, 2012)

Tutee Thomas’s advanced level of agency preexisted the tutoring relationship, yet this space allowed him to gain comfort in posing questions and pursuing academic success. He also had the chance to see his efforts pay off, gaining insights from the conversations as well as

the value of each session helping him stay focused on a class that did not play to his strengths. If integrative learning is both process and disposition, Tutee Thomas' example also points to ways in which agency served as both process and disposition enabling his success as a student.

A final point to consider is the relationship between motivation and agency. Some college students struggle with motivation, unable to see why they should commit so much time and effort to a class, and tutors struggle to motivate them. College Algebra Tutor Lizzie commented that many of the other students she was tutoring "don't care, and I'm trying to get them to care. . . . I can talk about science as much as I want and why things matter, but these kids just want to get through a class to get to the next level" (College Algebra Tutor Lizzie Interview 2, September 21, 2012). The development of agency may provide a source of motivation, similar to the links identified by Bandura (1997) between self-efficacy and increased educational attainment (p. 216). The sense that one's actions have a relevant purpose might lead to action. Productive tutoring led to action and change, such as Theatre Tutee Thomas sorting out the meaning of plays and how to tackle his major assignments, College Algebra Tutee Rachel breaking through on her math problems, Finance Tutee Cole surviving his last battle with his nemesis math, Psychology Tutee Mark using personal examples to make sense of his psychology class, and Biology Tutee Joan staring endlessly at her biology notes and finding new ways to commit time and attention to them. Even History Tutee Tiana, who dropped the class, told me about her plan to tackle history later as a senior, when she would choose a different professor and make certain that the texts would be more accessible.

Research Question Two: Mediational Means for Integrative Learning

My second research question was to identify the mediational tools or means that enable or constrain integrative learning within higher education tutoring. I distilled three major patterns in Figure 6:

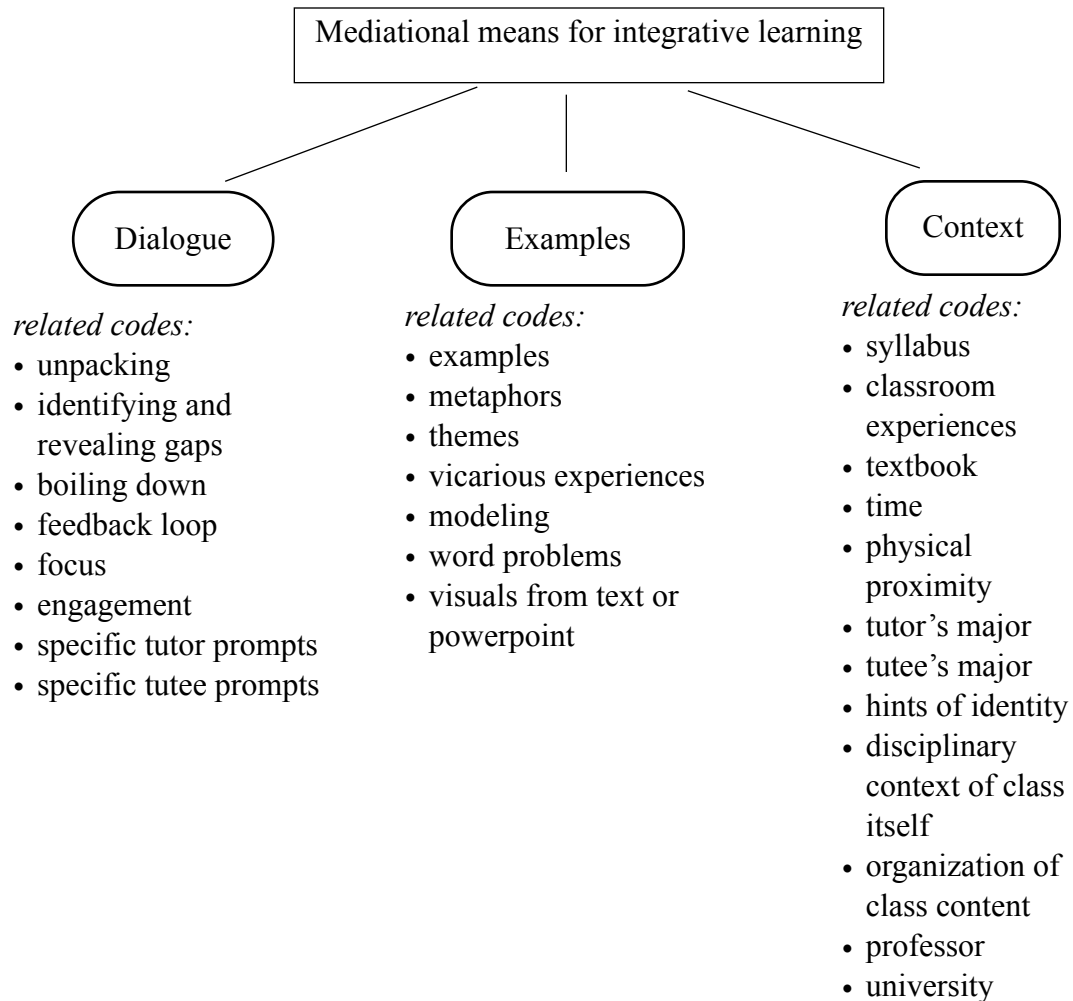


Figure 6. Major patterns for mediational means. Three primary patterns synthesize the major codes related to mediational means for integrative learning. Dialogue allows tutor and tutee to clarify the task, central to the work of tutoring and engendering agency. Examples of concepts and processes discussed in tutoring yielded connections and insights. Context shaped the learning that took place, revealing the cultural context across cases and the disciplinary context of each individual case.

Within activity theory, mediational means are often referred to as tools, including cognitive concepts and physical resources. In observing tutoring sessions, my goal was to notice the array of resources that appeared to aid or interfere with success. The following matrix, as recommended by Anfara, Brown, and Maglione (2002), summarizes the results for the major themes that I will discuss in this section:

Table 11

Data triangulation of major patterns for mediational means

| Overall Patterns | Tally of excerpts from: | | | |
|---|-------------------------|------------------|------------------|-------|
| | Observations | Tutor Interviews | Tutee Interviews | Memos |
| Dialogue enables creation/construction. | | | | |
| Dialogue as a workspace for focus | 51 | 9 | 7 | 2 |
| Specific tutor and tutee prompts | 64 | 4 | 16 | 0 |
| Feedback loop/Clarifying task | 124 | 14 | 10 | 2 |
| Examples enable integrative learning. | 67 | 19 | 4 | 0 |
| Context as mediational influence. | 259 | 128 | 107 | 27 |

Dialogue enables creation/construction process. Dialogue as a mediational mean was telegraphed in every observation. In reviewing codes and identifying the richest excerpts in the data, I found that dialogue provides a workspace for focus, specific prompts spark engagement, and dialogue provides a feedback loop to identify gaps in understanding. In addition to fostering successful learning in general, these strategies aid integrative learning particularly in terms of generating relevance and expanding the ability of the learner to exercise agency.

Dialogue as a workspace for focus. A significant pattern across the observations was how the tutor and tutee used dialogue as a way to focus on the material. Often, the tutor or tutee would talk through the problem. “Okay, this is what is going on,” College Algebra Tutor Lizzie began, and then proceeded to narrate the math problem as she wrote on the board (College Algebra Tutoring Observation 4, October 9, 2012). Language provided access to the work. Theatre Tutee Thomas exemplified the use of language and dialogue to provide access to learning and thinking in action. Just as Tutor Lizzie narrated the problem-solving steps in the above example, Tutee Thomas narrated his thinking so the tutor would have access to it and might aid him in the learning process. In this excerpt, after discussing a subplot in *Midsummer Night’s Dream*, Tutee Thomas stated: “You see the way I interpreted some of this was I thought they was playing a game with . . . intentionally playing a game with the humans . . . , but the way you’re explaining it to me, now I’m finding out it was accidental the whole time” (Theatre tutoring Observation 4, November 2, 2012). Tutee Thomas used the tool of exploratory talk to work through his thinking, review the material, and communicate critical details to his tutor. On the other hand, Biology Tutee Joan tended to guide the entire tutoring sessions, talking aloud as she looked at PowerPoints, sometimes generating questions, and sometimes simply articulating the work as it emerged: “I actually need to get those terms memorized” (Biology Tutoring Observation 2, September 27, 2012). In these cases, dialogue supported focus, as the participants used language to draw attention to specific issues or to think aloud.

Psychology Tutor David deliberately used the give and take of dialogue as a device to keep his tutee engaged. He exercised careful self-discipline to avoid dominating the

conversation, even when his tutee was reticent. Tutor David reported to me that he deliberately paused to ask questions to make sure his student was engaged (Psychology Tutor David Interview 2, October 4, 2012). In a separate interview, Tutee Mark confirmed the power of this strategy, stating that “if he gets me involved more then I focus better. . . . It keeps me like, oh, I better pay attention to what he’s saying” (Psychology Tutee Mark Interview 2, October 3, 2012). In this case, what is said almost matters less than the effort to create interactive exchanges, so that the tutee is supported in focusing on challenging content. Dialogue provides a means to hold a few concepts steady, a way to take control of the material. Gaining control even in these small ways scaffolded agency, part of the process and disposition of integrative learning.

Repeatedly in my analytical notes from observations of tutoring sessions, “workspace” became the best term to describe the dialogues I observed. The interactions between the tutor and tutee brought forth the elements most necessary for success; when both tutor and tutee were fully engaged in the conversation, their words made the work accessible. As Theatre Tutee Thomas commented after Tutor Kate shared her reactions to a play, “Just hearing about it is making me think” (Theatre tutoring Observation 3, September 28, 2012). As a workspace, dialogue allowed students to weave new meanings, connect ideas, and boil down central concepts.

My research provides examples in which tutoring may provide a place for tutees to experiment within the disciplinary context. In reflecting on dialogue as a workspace, I came to envision tutoring as a drafting process in which the learners gain practice in articulating new knowledge or skills. Tutoring conversations may not be the final version that needs to

arise in a evaluative situation, such as a test, paper, or project, but the dialogue provides initial attempts to speak the language of the discipline and gain feedback in order to revise their understanding. Tutoring dialogues thus serve as a drafting process analogous to the writing process.

I return to the concept of fluency, which related to confidence and acculturation, both enabling agency. As discussed earlier, tutor and tutee often appeared to be practicing a new language, echoing one another in employing new concepts and phrasing. For example, Theatre Tutee Thomas navigated new concepts such as Social Darwinism, and Finance Tutee Cole gained comfort with time-valued money and related phrases. Throughout these exchanges, dialogue provided focus and feedback. These are also necessary elements in the drafting process, though the text that is being created is verbal, not written.

Dialogue in tutoring emerges as a workspace that enables active engagement, provides focus and feedback, and supports the practice needed to create fluent renderings of the content. Achieving this level of fluency fits with integrative learning because the students gain the confidence to make critical connections with experience and content, and they exercise agency in how they tackle the material. The case of Tutee Thomas' proactive engagement in the tutoring discussions provided additional nuance, as in this short excerpt as they discuss several theatre terms:

Tutor Kate: Distorted architecture—that's a big thing with expressionistic. . .

Tutee Thomas: (*Jumping in*) What do you mean by distorted architecture? Is that the structure of the play?

Tutor Kate: No, the literal building of the set of the play (Theatre tutoring Observation 3, September 28, 2012).

As an outsider to this field, Thomas constantly had to tackle these terms and make sense of them within the disciplinary context. This example revealed his efforts to translate, since he actually guessed at a more metaphorical meaning for architecture than a pragmatic one. His efforts demonstrate his agency in attending to word meaning. This example also revealed that students must gain comfort in guessing their way into the material. Some of the content tutees learn may be factual or skill-based, but much required interpretation and application. The workspace of the tutoring dialogue, and in particular, the drafting process, allowed tutees to practice this necessary guesswork in order to craft meaning and relevance within each context.

Specific tutor and tutee prompts spark engagement. This project yielded a number of practical prompts that provided a focus or a way to connect with the material as a starting point. Table 12 highlights specific words and prompts that appeared to spark engagement, particularly phrases that might transfer to multiple learning contexts.

Table 12

Examples of specific prompts that sparked engagement

| Goal | Actual prompt(s) |
|---|--|
| Prompt for personal definition | <p>Psychology tutor David: Keep talking. I mean you know the definition's here, but what's your own definition? (Psychology Tutoring Observation 1, September 19, 2012)</p> <p>Finance Tutor Diana prompted the tutee to use the word itself as a clue in order to boil down its meaning: All this discount payback period is? Tell me what you think it is basically, the name of it, if you know what payback period is... what is discount payback period? (Finance Tutoring Observation 2, September 17, 2012)</p> |
| Scaffold | <p>College Lizzie wrote part of the problem on the board, then prompted Rachel: What do you do next? (College Algebra Tutoring Observation 3, October 5, 2012)</p> <p>Finance Tutor Diana posed questions about what clues are in the question to help Tutee Cole tackle the problem, such as in this example: Do we know what our payments are? Or how much they are going to save every year? (Finance Tutoring Observation 1, September 10, 2012)</p> <p>College Algebra Tutor Lizzie: All right, what do you think? You said the right thing; you just have to remember the function and I'll give you the hint if you want me to. (College Algebra Tutoring Observation 4, October 9, 2012)</p> |
| Assess prior knowledge | <p>College Algebra Tutor Lizzie: First of all, tell me what you know about range? (College Algebra Tutoring Observation 1, September 4, 2012)</p> |
| Narrow the focus (typically initiated by tutee) | <p>College Algebra Tutee Rachel stated, "Now I'm still confused." (College Algebra Tutoring Observation 4, October 9, 2012)</p> <p>Finance Tutee Cole asked, "So what gives it away that it's APR?" in order to see hints in question that reveal problem-solving strategies. (Finance Tutoring Observation 1, September 10, 2012)</p> |
| Invitational | <p>Psychology Tutor David used short prompts to invite further comment, such as "Yeah," "Okay," "Go ahead," and "Say a little more about that." (Psychology Tutoring Observation 1, September 19, 2012)</p> |
| Connect to major | <p>College Algebra Tutor Lizzie paused to ask, "What was your major again?" to identify connections with the topic. (College Algebra Tutoring Observation 1, September 4, 2012)</p> |

In several examples, the collaborative nature of these exchanges is revealed by the effectiveness of both tutor and tutee prompts. First time tutors sometimes expect their tutees to arrive at tutoring with a number of questions for the tutor to answer, and sometimes they do. But more often than not, engaging with the work, whether through sample problems or unpacking word meanings, is what leads the tutee and tutor to find questions or problems to solve. Students need to get started so they can recognize what they do not know. Each of these prompts served as simple strategies to spark further action or engagement in the tutoring conversation. The increased engagement provided a means within the tutoring relationship to create relevance, as tutees began to gain access to the material and increased confidence and fluency with the material. In particular, this engagement provides the learners with access to the examples that will aid them in making connections.

Dialogue as a feedback loop. The most prominent pattern was the way tutoring provided a feedback loop between the tutor and tutee in the five successful cases. In every observation, tutor and tutee focused time and attention to uncover what was most salient to discuss or review. By tackling the concepts and problems through discussion, the tutor and tutee were able to identify gaps and strengths. Repeatedly, tutees told their tutors directly if they were confused, a prompt that allowed the tutor and tutee to identify what to discuss next. Repeatedly, the tutors listened to tutees explain a concept, and they would respond with immediate feedback, both positive comments such as, “Exactly,” and constructive or scaffolding comments such as, “Not quite, but I see what you mean” followed by corrective information. The critical work of tutoring is not simply to address content but to identify what is most important, what deserves attention, and what are the specific steps forward.

This aspect of the tutoring dialogue appears to be not only critical to the perception that the tutoring has been effective, but also provides significant scaffolding for integrative learning. Defining any concept as important draws on cultural insights. In keeping with Lave and Wenger's (1991) concept of legitimate peripheral participation, the tutor, the more practiced member of this culture, collaborates with the tutee in creating relevance within the course activities.

Overall, tutoring involved a consistent pattern that I labeled "unpacking." The tutoring conversations allowed the tutor and student to unpack dense concepts in meaningful ways. For example, tutors often joined in the experience of solving the math problem or discussing a reading assignment. Finance Tutor Diana and Tutee Cole read aloud a word problem, then tutor Diana coached him on what to eliminate and strategies to set the problem up. A telling phrase that she used in one session was, "Let's look," a phrase that almost sums up the work of tutoring in which tutor and tutee observe the task shoulder to shoulder (Finance Tutoring Observation 1, September 10, 2012). Indeed, the work becomes visible to tutor and tutee.

This pattern recurred throughout the five productive tutoring pairs. College Algebra Tutor Lizzie and Tutee Rachel jumped quickly onto the most puzzling problems. Biology Tutee Joan and Tutor Laurie stared at the PowerPoint, parsing out the lines and notations to make meaning, followed often by Joan stating phrases such as, "Okay, I think I've got that" (Biology Tutoring Observation 1, September 20, 2012). Theatre Tutee Thomas and Tutor Kate moved scene by scene through *Midsummer Night's Dream*, eliminating uncertainties and misunderstandings, and strengthening Thomas' confidence in the material.

Psychology tutor David and Tutee Mark moved page by page through the psychology textbook chapters, collaboratively mining for key concepts and insights. In these situations, the tutor did not play expert as much as learning partner, an experienced student climbing in to help the tutee make sense of the task. The tasks became visible and achievable, as many of the tutees confirmed in our interviews. They exercised agency to tackle the task and gain a better overall sense of how the course worked and how one concept or task fit with the next.

These discussions to clarify the task define the nature of tutoring conversations. Indeed, the tutoring conversation at its heart is a problem-solving activity. From start to finish, the tutor and tutee speak to one another in order to discover what they need to discuss and for both to understand how this conversation could be beneficial. Further, clarifying the task through dialogue describes how tutoring fits within the larger picture of a university education. Tutoring in higher education exists in tandem with what has taken place in the classroom and the goals and tools provided by the instructor and overall curriculum. Together they offer a system within which the learner can develop integrative learning.

Examples enable integrative learning. As predicted by the review of the literature, examples were powerful mediational means for integrative learning within the cases in this investigation. I use “examples” as a term that also encompasses analogies, metaphors, and themes, all of which served as significant conceptual resources for effective tutoring dialogues. The discussions of examples aided in the process of identifying the task, moving from the abstract to the concrete. Indeed, examples served as the springboard for dialogue from which the tutor and tutee could launch their efforts to make meaning. Examples were

tangible evidence of integrative learning, since they enabled the learner to connect with more complex concepts and increase their facility in working with these concepts, including understanding why the examples could be useful.

Examples offered the tutor and tutee the chance to practice together. In the problem-solving classes, the problems themselves serve as structured examples. In one case, College Algebra Tutor Lizzie prompted Tutee Rachel to “try it out, I’m curious” to see if a natural log would solve the problem (College Algebra Tutoring Observation 4, October 9, 2012). Tutor Lizzie’s prompt exemplified the collaborative feel of these tutoring sessions and suggests how trying out problems provides opportunities to exercise agency. Similarly Finance Tutor Diana scaffolded Tutee Cole’s efforts to take control of finance problems, prompting him to pay close attention to the parts of the problem itself: “That’s the first half of this problem, and then the second half of this problem you’ve got whatever is your present value, you’ve got a payment, you’ve got an interest rate . . . what’s your future value?” (Finance Tutoring Observation 1, September 10, 2012). Tutor Diana’s use of the words “your” and “you’ve” also draw the tutee into the example in an active and more personal role. Further, these excerpts reveal the connection between examples and the previous list of dialogue prompts that spark engagement.

Additionally, engaging with a concrete example often served as a way to break through when facing a challenge. For example, College Algebra Tutor Lizzie spoke with enthusiasm about how analogies helped her solve tough tutoring situations. She had discovered that by discussing cars with tutees, she had a concrete tool to help them make sense of the more abstract concepts of velocity, position, and acceleration. In our first

interview, she described a challenging situation in a past semester in which a tutee had a learning disability and her usual explanations were not effective. Tutor Lizzie reported that she then compared two cars, one with blue seats, and one with green, but both have the same stereo system. Though challenging to the tutor, this strategy provided the breakthrough needed for that tutee. Glimmers of these strategies appeared in the tutoring sessions I observed; when in doubt, Tutor Lizzie would use concrete topics to aid her tutees in connecting abstract rules with more concrete concepts or experiences. At the same time, Lizzie was modeling this approach to her students so that they might be more likely to adopt this strategy or stance for learning, connections as a way to make meaning and exercise agency.

Making connections was one of the three main patterns I identified as a way integrative learning takes place within tutoring; the data also reveal that examples were prominent tools enabling these connections. Psychology Tutor David affirmed that he always tried to identify relevant examples. In addition to sharing his own stories and samples, which he deliberately tried to make lively, tutor David flipped this strategy around to ask his tutee to generate examples of his own. “Often I find when I say what does this word mean? They . . . don’t know. So then . . . let’s have this discussion, let’s figure this word out” (Psychology Tutor David Interview 2, October 4, 2012). Repeatedly in his sessions, I observed Tutor David prompting Tutee Mark to share an example from his own life. Psychology Tutor David modeled the value of creating connections through examples, and increasingly Tutee Mark adopted this learning strategy.

While not always as deliberate as David or colorful as Lizzie, the other tutors relied on examples as a focus point for tutoring dialogues. In the finance tutoring sessions, the problem sets provided by the professor were always based on examples, such as assessing mortgage values or retirement calculations, all relatable situations that allowed the tutor and tutees to ground their discussions of the concepts in examples. In the biology sessions, the PowerPoints served as visual examples of the core concepts being discussed. In theatre, each play served as an example to study, a tool to make sense of the overall history and theories of theatre as a discipline, and unpacking what happened in the story served as a springboard for discussion and enhanced understandings. Repeatedly, the tutoring conversations aided the tutee in making full use of examples provided as part of the course.

In the theatre tutoring sessions, Theatre Tutor Kate consistently connected specific plays to the overall trends or concepts in theatre. In this particular case, the theme of feminism was emphasized by the professor and thus came up often in the tutoring sessions. While feminism as a concept can be complex, the tutoring dialogues often included examples of specific women in the plays as a way to engage in feminist analysis. These examples thus enabled the tutee to make connections involving an interdisciplinary theme, a much-cited type of integrative learning within the literature. The examples enabled the learners to identify relevance because while abstract concepts could appear foreign or distant at times, the examples brought them within reach.

Engeström (2001) and Wells (2002) attend to the role of artifacts in learning within activity theory. In this study, though supported by the materials of textbooks, whiteboards, and syllabi, for example, the examples themselves housed the connections students were able

to make. Wells (2002) suggested that dialogue is “most progressive (Bereiter, 1994) when it is focused on an object that is to be constructed and improved” (p. 46). Again, this finding highlights the tight connection between examples and dialogue, each enabling the other to mediate integrative learning. Finally, Fulwiler’s (1992) sage advice for writing appears salient to these cases: “It’s the details that teach” (p. 191).

Context mediates integrative learning. Finally, context itself is a powerful mediational means for integrative learning in this study. At the start of this chapter, my general observations about the setting are summarized, providing a sense of the overall landscape within which this study took place. For this analysis, I reverse directions, using the data from my interviews and observations to make visible possible influences of the larger cultural context. Activity theory emphasizes the role of the cultural context on learning, and for this across-case analysis, I was guided by Wells’ (2011) application of Engeström’s triangle of competing influences and tensions within an activity setting in creating Figure 7, based on the codes and patterns in this study most relevant to context and integrative learning:

Mediating Means:
 syllabus, course materials, time, space, curriculum
 for major, general education

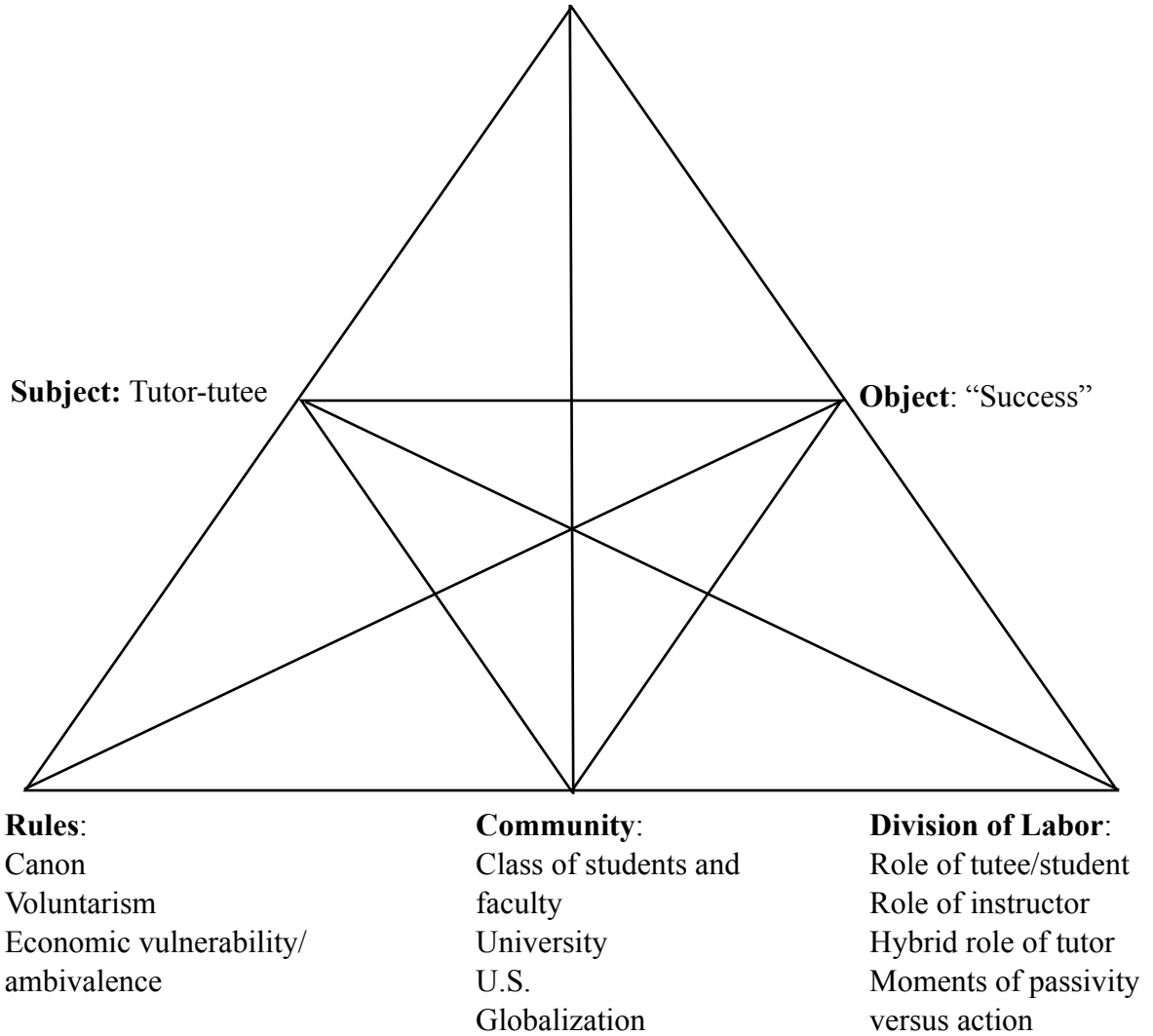


Figure 7. Interacting elements across tutoring cases. This figure shows one model for identifying some of the interacting elements—in particular contradictions and tensions—between the mediating means, subjects, and object (the culturally-ambiguous goal of success), as well as what they reveal in terms of the community, rules (and expectations), and division of labor.

My review of overall patterns in the data revealed the mediational means of physical proximity, course materials, and time that provide hints to societal values. These tools and constraints revealed a consistent need for structure, focus, and the perception of limits; students wanted to believe the task was both achievable and valuable in some way.

Physical proximity, course materials, and time reflect cultural context. Specific tools that afforded and constrained learning provide the basis for insights into cultural context. Frequently visible in the tutoring sessions was the way physical proximity and the combination of voices and images aided learning. Seated side by side, the tutor and student exchanged glances and expressions that aided communication and expanded the possibilities. College Algebra Tutor Lizzie touched the image of a graphed equation on the white board, answering a question in this way,

If you zoom in really far to do it it would just be a straight line, so you take this, you zoom in so close to where that changed next between this x and that x , almost zero, quite almost here so you can see what the behavior is. So it's like finding the slope really really zoomed in. (College Algebra Tutoring Observation 2, September 11, 2012)

Her words made sense to her tutee and observer but are ambiguous out of context. These findings were repeated in most observations. In addition to facilitating communication, the physical presence in the lab appeared to support the ability for both tutor and tutee to focus on the material. Finance Tutee Cole described the lab in similar terms, "I like how you are put off to the side away from other distractions such as people coming in . . . and then the board helps" (Finance Tutee Cole Interview 1, August 30, 2012). Tutoring with its physical

proximity between speakers and combination of visual and verbal tools provides scaffolding to enable tutees to focus. Such focus clarified the task, which enables them to exercise agency, which I have identified as a significant attribute of integrative learning.

Further, the presence or absence of a textbook made a difference in terms of how easily the tutor and tutee could access the materials. History Tutee Tiana, for example, greatly regretted the lack of one primary textbook, which could have served to limit the material and increase her chances of focusing on the content (History Tutee Tiana Interview 3, October 19, 2012). The psychology pair, on the other hand, used the chapters of the textbook to structure their discussions, and Tutor David often set goals accordingly. The same proved true for the college algebra pair, though the focus was primarily on the sample problem sets and the most useful tips within the text. In the biology case, the professor's PowerPoints served a similar purpose, as did the multiple problem sets for the finance pair. These uses of the textbooks (or longing for such an option) make visible a critical finding that learners need such tools to provide guidance and focus. In particular, the textbook, problem sets, and PowerPoints set limits on what must be learned. Rather than restricting learning, the limits appear to enable students to clarify tasks in order to exercise agency.

These aspects of my data on constraints hint of the challenge involved in these learning settings. In one discussion of comedy, the theatre tutor saw that she needed to provide the hint that in a classic comedy, no one will die, and a discussion of feudalism revealed that the history tutee could not recall any prior knowledge of this concept. These gaps suggest the vast potential of what could be learned and discussed. That the tutors think that the concept of comedy or feudalism should have been familiar likely reveals cultural

expectations, remnants of canonical lessons such as those embraced by Hirsch, Kett, and Trefil (1993) and A. Bloom (1987). Yet such canons of what is most important to learn reflect what the dominant culture values. In fact, canons appear to exist as contradictions, succeeding more often in revealing what has been left out rather than successfully containing a common core of knowledge. For example, Hirsch, Jr., Kett, and Trefil (1993) include feudalism and comedy on their list of what Americans should know, but not, as Provenzo (2005) illuminates, the influential gay activist magazine called the *Advocate* or the critical federal program to ameliorate hunger and poverty called Aid for Dependent Children—both significant contributions to American history and culture (pp. 80-81). As Wertsch (1998) pointed out, “the use of a particular mediational means is often based on other factors having to do with historical precedent and with cultural or institutional power and authority” (p. 42). Thus, limits on learning reflect cultural expectations, and as situated learning and constructivist theories suggest, what knowledge is essential tends to depend on context (e.g., Lave & Wenger, 1991; Guba, 1990). As less experienced members within academia, the tutees must learn to focus on what is most valued in this context and at times to overlook a range of alternative sources of insight that are not included in the curriculum.

In this study, tools of proximity, words combined with images, and textbook materials provided limits for the learners to enable them to navigate what is otherwise an ocean of information. The syllabus represents an attempt to provide some limits and shape to the course content for the semester. Additional tools influencing this activity setting come from the university context as a whole, namely the general education program of study and major programs of study, again establishing some limits and shape to what these students might

learn while at this university. These many tools reflect the cultural challenge and tension that prioritizing one piece of information or one skill set over another is guided strongly by sociocultural context, creating both constraints and affordances for the learner seeking to create relevance and exercise agency.

Similarly, a frequent code in analyzing the data was time. Psychology tutor David strategically “includes in every session a time for them to tell me if I’d been unclear” (Psychology Tutor David Interview 2, October 4, 2012), and these patterns were observed in the other tutor prompts, including phrases such as, “Okay, we have about five minutes” (Psychology Tutoring Observation 1, September 12, 2012). Tutees also shared the perception that time was scarce. College algebra Tutee Rachel identified the greatest obstacle for her was “scheduling because I’m really busy” (College Algebra Tutee Rachel Interview 2, September 20, 2012), a sentiment echoed by other tutees, and their tutors often coached them on ways to prepare for tutoring between sessions to make the best use of time. Further, each tutoring conversation contained moments in which the participants reacted in some way to the length of the semester, the timing for breaks and holidays, and even the way quizzes and tests were interspersed throughout the semester. Each of these provided a structure to the work that took place within the tutoring session, orienting themselves around the increased pressure as tests approached, or the periodic breathing spaces provided by the fall break. The timing of the weekly sessions also carried a certain weight since tutors felt best able to help the tutees who came regularly. Time was also linked to feeling overwhelmed as expressed by Theatre Tutee Thomas or Finance Tutee Cole.

Indeed, the price tutees pay for tutoring is one of time; they must give up other pursuits; as Mark reflected, sometimes he might have liked to do something different during the time of the tutoring session (Psychology Tutee Mark Interview 3, October 24, 2012). Time further emerges as a constraint, such as when College Algebra Tutee Rachel had to cancel a session to prepare for a chemistry test, or when Psychology Tutee Mark asked for a shorter session, or Finance Tutee Cole regretted how much time he spent trying to master some of the core problem-solving skills that eluded him.

Time proved most powerful, though, as a tool for focus, when tutors mentioned the time or estimated how much could be discussed in the remaining time. Such prompts create what may be the illusion of a finish line, a trigger to prompt increased focus, since an end is in sight. The constructed nature of the tutoring session itself provides time constraints with the session occurring once a week for 50 minutes, and tutor and tutee arriving and leaving at the same times. The tutee must make choices of what work to complete between tutoring sessions and what questions to prepare. The tutor must collaborate and interact with the tutee to identify how best to use the tutoring session and to set goals for the next session, as well as suggestions of how to use the time in between sessions.

At times, students in this study struggled to focus and stay committed when a task seemed particularly lengthy or challenging. In interviews and during observations, tutees sometimes commented on a sense of fatigue or being overwhelmed. Finance Tutee Cole admitted that he had been at times so discouraged “I just wanted to quit. I don’t know, I just kinda look at the end, and I’m like, December’s almost here, so I just have to keep going that might be what’s pulling me through. No more school books. (*laughs*)” (Finance Tutee

Cole Interview 3, October 17, 2012). Finance Tutor Diana commented on how she gained or lost energy as a tutor depending on how much the tutee came prepared and seemed focused on putting in effort, which she saw in Finance Tutee Cole, but not always with other tutees (Finance Tutor Diana Interview 2, September 18, 2012). Occasionally, the tutoring observation transcriptions included a peppering of sighs, as the tutor or tutee reacted to the prospect of the task before them. Biology Tutee Joan refers at one point to challenges specific to her biology class, but also the larger issue of prioritizing and navigating the learning tasks: “When I get it, it’s fun, but I get something and go on to another subject, and once I get that, I kinda forgot what I just got. It’s just so much [information]” (Biology Tutee Joan Interview 2, October 1, 2012). Competing priorities also play a role, as in the case of History Tutee Tiana, who was distracted and fatigued by a heavy class load plus part-time job commitment. Success with the college assignments required students to overcome feeling fatigued and overwhelmed and to find ways to exercise agency despite conflicting pressures.

Further, a review of the observational data from this study provided physical evidence of conflicting pressures. The tutoring lab, for example, was in parts inviting, with visually pleasing chairs, tables, marble counter, high ceilings, and long windows. Over the years, considerable resources have been invested in this program, including personnel, software, and furniture. On the other hand, marks of wear and tear could be seen on every tutoring pod divider. In a back corner, a tutoring pod could not be used for tutoring due to broken chairs and equipment stored there. The program had outgrown the space, and on busy days, tutors and tutees sometimes left to find a quieter spot elsewhere on campus. Half of the overall unit

was well-lit and well-apportioned; the other half had walls, ceilings, floors, and lighting unchanged for decades. Overall, I saw resources worth celebrating side-by-side with reasons for concern. My review of archival records revealed that the funding has varied, at times expanded to identify and address all kinds of demands, and at others cut to a bare minimum. The physical and financial resources suggest an uneven commitment to this educational resource.

In general, the data suggest study and learning do not take place as spontaneous bursts of interest in the material; they are corralled and controlled, structured through time to enhance focus, a structure that is mirrored in the greater context of the university in the classes that meet two or three times a week, with the expectation of independent work in between classes. Again, this increased focus enables the learners to clarify the task, which appears to enable them to exercise agency in navigating the material, an attribute of integrative learning. In addition, just as the use of the textbook suggested a desire for limits and control of the material, this use of time also reflects a desire for control, to establish a start and finish for learning—a process that in practice may not strictly comply to these desires. Yet the use of time and the textbook both appeared to enhance focus and at least a degree of self-efficacy, both of which appeared to aid the tutees in moving forward.

These findings yielded implications about the unique overall cultural context in terms of the canon, tensions related to the value of higher education, and mainstream American value systems, which I discuss in Chapter 5.

Disciplinary contexts as mediational means. In addition to the patterns that emerged in my cross-case contextual analysis in the previous section, I also analyzed the contextual

activity system of each case (See Appendix F). The prominent codes served as a starting place; I then reviewed my observational notes and memos on these pairs to identify the most prominent patterns in each case. The most notable aspect of context in each case related to disciplinarity, such as the disciplinary culture of the subject tutored, as well as the majors or possible majors of each participant.

Multiple influences affected the potential for integrative learning. In particular, this case-by-case analysis led me to identify three contributing subjects within the activity setting of tutoring: the tutee, the tutor, and the professor/class/university. In every tutoring observation, a significant influence was the professor and/or the class and/or the university as a system, observed through the subjective filter of the tutee's and tutor's perspectives.

Analyzing each case in this manner provided support for the claim that integrative learning will be shaped by its disciplinary context. That is, the way the learner will articulate why a subject matters, the types of connections that may be made, and the way agency will be exhibited will depend on the disciplinary context. Further, these differences likely account for the differing tutoring strategies, such as concrete practice with problems in college algebra or finance versus narrating examples in psychology or theatre. In addition to the influence of the overall disciplinary context, each case made visible that the professor/class/university as subject provided tools and constraints for success. The success and failure of the tutoring session related strongly to the cognitive supports made available by the class.

Disciplinary context of college algebra. The college algebra course counted for the general education requirement under the theme of quantitative literacy; this course was typically taken by students who pursue a STEM (Science, Technology, Engineering, and

Mathematics)-based major, but are not ready for Calculus. These aspects of the disciplinary and institutional context provided easily accessible sources of relevance for the tutor and tutee, since the tutee began the semester with the desire to pursue a major in exercise science, specializing in athletic training. Additional tools were clearly provided by the class in terms of lecture examples, textbook, and developmental sequence of instruction in which each week built on concepts taught during the previous week.

Integrative learning within this context centered on the relationship between knowing how to solve problems and knowing why. For some students, including College Algebra Tutee Rachel and Finance Tutee Cole, math holds pitfalls, gaps, or failings from the past that they cannot quite overcome, and thus using math as a means to understand a concept creates challenges. The value of knowing how was most visible in the college algebra case since the problems discussed primarily asked the students to “solve for x ” rather than solve a word-based scenario. Of course, the ability to solve for x has the potential for relevance and agency. The fact that strategies to solve for x will vary depending on the context requires a learner to be flexible and logical in making appropriate connections between formulas and numbers to solve a problem—math-based integrative learning. Nonetheless, even with the tutor Lizzie’s great passion for the value of math, discussions of math in these philosophical terms did not occur in the tutoring sessions. On the other hand, tutee Rachel had lovely moments where she stated, “Oh, yes, I get that,” and in each case, she had mastered how to solve for x in that particular situation. Being able to articulate why this method served to solve for x was less accessible, but such insights emerged through practice, an innate sense

that if the formula worked in this way and in these situations, that approach is effective to solve the problem—the why behind the how.

Those steps that the tutee automatized did not necessarily match the way problems might appear in real life. The isolated study of college algebra provided the foundation for applying these problem-solving skills in the future, and this isolation could create obstacles for success in math-based classes. College Algebra Tutee Rachel, however, was willing to maintain faith in the long-term relevance, stating, “I think it’s a pretty basic math class, I think I can use it pretty much for anything I would do, [such as calculating] interest and stuff like that,” (College Algebra Tutee Rachel Interview 3, October 17, 2012). On the other hand, Tutee Rachel’s experiences point to another challenge. Students who face obstacles with math often begin to look for ways to avoid rather than overcome them. In Tutee Rachel’s case, even though she was succeeding in her class, she stated that she felt her success did not come easily, and for that reason, she decided to change her major. So recognizing the generic value of college algebra did not lead her to commit to further study in courses that might require math. A long term disposition of integrative learning within the disciplinary context of math may require knowing how and not only an understanding of the value of this knowledge but the perception that one can apply the knowledge successfully to overcome advanced challenges in the future.

Disciplinary context of psychology. This introductory psychology course was required both for majors and as an option within two different general education themes, one labeled The Individual and Society, and the other The Mind. The lecture notes and textbook served as consistent tools within the tutoring sessions, and one observation included a

discussion of the tutee's plans to take advantage of the professor's office hours to discuss a test.

This particular case in which Psychology Tutor David effectively engaged Tutee Mark in generating examples, aided by David's training as a music therapy major and Mark's belief in the efficiency of tutoring, revealed ways that the study of psychology can be made personally relevant, a rich disciplinary context for integrative learning. Almost every topic this pair discussed linked to real life in one way or another. This case also made visible aspects of psychology that can be challenging for a student new to this discipline. First, the course included exposure to a survey of differing theoretical perspectives, an obstacle for any student who might not be comfortable with ambiguity. In this case, the tutor engaged the tutee in considering competing theories of intelligence to identify his own position, thus modeling and supporting the student to consider the lenses provided by each theory. An additional challenge within the field of psychology is to derive meaning from experimental research. Claims are made in terms of what research revealed. Thus in order to understand psychology, students must become comfortable discussing research studies, a thread that appeared frequently in these tutoring sessions. Adjusting to this disciplinary stance was part of the work for a new student in psychology, and integrative learning in psychology may require that the students become more adept at connecting theories, research, and real life examples. Further, by practicing such connections rather than absorbing the content without question, the learning became an active problem-solving process. The tutoring conversations observed in this study, enhanced by the skill of this tutor and the agency of this tutee, suggested that tutoring provided a space to practice making such connections.

Disciplinary context of finance. This pair addressed content from an advanced finance course only required for finance majors and risk management and insurance majors. In fact, Finance Tutor Diana had tutored Tutee Cole in a previous semester, when he took the introductory finance class. Tutor Diana was a successful and committed finance major, who also knew the course and professor well. Thanks to those insights, she could explain why and how the professor set up the class the way he did, and how insights from an earlier finance course contributed to success in this advanced class. As a tutor, Diana modeled strategies to make sense of the concepts and the process. She also modeled focus, turning on like a light switch as soon as the tutoring session began, tuning out everything but the problem. She guided her tutee in ways to ground a problem in its specific financial context and to think not just in terms of how to solve the equation but how it relates to assumptions about financial decision-making.

Tutee Cole's focus in college seemed based more on general career and life success rather than driven by an interest in a particular subject. Though he expressed enthusiasm at times for the value of the projects in his other classes, his sole motivation in the finance class was to earn passing grades and keep his head above water. By our final interview, he was wearied by the effort and losing patience with the lengthy problems that comprised the classwork. In their tutoring sessions, Tutor Diana and Tutee Cole sometimes had to work actively to overcome gaps in communication, but their tutoring dialogues appeared fruitful. Cole made every effort to stay engaged and involved in the session, and he always brought questions and issues to discuss.

Many of the conclusions about integrative learning in college algebra have echoes in this case study of finance tutoring. Finance Tutee Cole struggled with math, and greater automaticity, comfort, and confidence with problem-solving steps would have eased the challenge for him, yet these skills eluded him. Nonetheless, my observations and interviews made clear that finance as a discipline relied on integrative learning in terms of articulating an understanding of why, not how. Tutor Diana confirmed this conclusion in a final interview, stating that “you can have a mortgage loan problem and a retirement problem that are completely worded differently, but you wind up using the exact same set of formulas, so you have to understand the concepts first” (Finance Tutor Diana Interview 3, October 23, 2012). Indeed, real world connections were easily accessible in this disciplinary context.

Unlike the college algebra problems that pursued a rarely defined X , the finance problems were grounded in the work of finance, such as investment planning, debt management, and retirement. Finance offered a fusion of the academic exercises of algebra with the practical work of business and money management. This disciplinary context set some constraints on integrative learning. Tutor Diana and Tutee Cole confirmed that the course never deliberately offered connections across disciplines, and the content was limited to specific demands of finance rather than explicitly pulling together disciplines or theories. Nonetheless, the content of the course revealed itself to be interdisciplinary in terms of asking students to solve problems, to take a problem-solving stance rather than what Wardle (2012) called the answer-getting approach. Success for Tutee Cole in this case drew on multiple interpersonal and time management skills as he sought out assistance from tutor, professor, and classmates to overcome the hurdle of the math itself.

Disciplinary context of biology. This introductory biology course was taken only by biology majors. Tutee Joan had access to additional institutional and disciplinary resources, since her first year seminar was designed for pre-med students, and even included a visit, which she described to her tutor, by upper class biology majors sharing insights and building community. That both Tutee Joan and Tutor Laurie majored in biology provided a highly supportive context for their tutoring sessions, an implied relevance based on the major.

Integrative learning emerged in dramatically different ways in this specific context from those of college algebra, finance, and psychology. The observations revealed, and my interviews with tutee and tutor confirmed, that the learning in this intensive, introductory survey course relied on close interactions with visuals. Tutor Laurie and Tutee Joan repeatedly stared at biological processes on printout or computer screen, reading words and phrases aloud and returning frequently to the image that showed how one step connected with the next. Knowing how, as in solving a math problem, was not the focus. Instead, knowing and seeing what was happening created a framework from which to absorb the myriad concepts. Biology as a disciplinary context, at least within this case, centered on observing what takes place in nature. These observations were replicated by the attention given by tutee and tutor to the representations within the PowerPoints, allowing them to observe virtually what takes place at the cellular level, the cause and effect, the processes that cause energy to move and cells to change. The visual component, the emphasis on process, also suggested to me that biology might best be described as *what is happening*; that is, to speak of a cell without cycles, without motion, without change, is to speak of something dead, and biology is the study of life defined in very specific terms.

For students not as motivated as Tutee Joan, the study of biology could feel too distant from the world they encountered on a daily basis. Tutee Joan stood out thanks to her deep appreciation of the value of understanding the natural world on the microscopic level. Integrative learning in biology as demonstrated by this pair called on the learners to recognize that knowing what is happening matters. This information served as a resource with which to address specific and intensely relevant questions, such as how to cure cancer.

Disciplinary context of theatre. This theatre course is required for theatre majors but also counts as a general education course within the theme “How we tell stories.” Theatre Tutor Kate knew the course, professor, and many of the plays well; she even performed in several plays directed by this professor. Tutor Kate was well-positioned to reinforce key concepts based on that knowledge.

My observations of Tutor Kate and Tutee Thomas’s discussions revealed that the discipline of theatre explored story through dialogue and visuals, including deliberate choices in sets, costumes, and characters in motion. In this particular case, historical insights emerged as a tool for understanding theatre, both the history of theatre and the history of Western culture. Theatre as an academic discipline suggests a possible role of theatre in the learner’s personal life. For example, in one interview, Thomas reflected on how when he was growing up, his family gave him the impression that theatre belonged to a higher socio-economic group. Taking this class led him to consider if attending plays might have a place in his life, particularly the lives of his children. For Tutee Thomas, the relevance of theatre lay primarily in gaining insight into history and the impact of plays on Western culture, as well as the more personal connection to his own life.

Finally, the case of Theatre Tutee Thomas offers a few insights into constraints in terms of how the learner articulates relevance. As explored in other sections of this report, Thomas exhibited a high level of agency and frequently sought to connect with what he was learning. He managed to succeed in his classes, overcome obstacles, and make the most out of his opportunities. Nonetheless, in our final interview, when asked how the theatre class fit into his overall education, he struggled to convince himself of his answer:

Thomas: Let me think on this for a minute. I mean, like I said there is historical, he gives us a historical background on periods of stuff contained within theatre, uh, it's got a research aspect to it where it requires me to do research, and as a teacher I'm probably going to have to do research and stuff, *sighs*. I mean, seriously (*because I laughed when he sighed*) . . . I, really, that is a hard question for me to nail down because . . .

Researcher Duke: That's not the way you feel; it doesn't feel like it fits with your education.

Thomas: To me, on the syllabus it gives some specific aesthetics why this is considered a . . . you know stuff that he's going to be presenting and to me, I don't think we've covered every one of them.

Researcher Duke: But you feel you haven't quite gotten some of that.

Thomas: No, I haven't. I mean that's a hard question to answer because for me, I've not really learned nothing besides doing research, picking a play that I have continually been doing different things on. I mean I can see where some of the assignments, like especially the research, the semester long research project would tie

in to language arts, you know stuff like that but for actually help, preparing us to be a teacher . . . (*shrugs*)

(Theatre Tutee Thomas Interview 3, November 2, 2012)

As proactive as Thomas has been in engaging with this class and mastering the material, he relied heavily on the objectives on the syllabus and explicit lectures to guide him to the relevance of the class overall. Despite numerous moments in observations and interviews that suggest to me that he had articulated why, made connections, and exercised agency within his tutoring discussions, he had not yet created a more lasting sense of relevance related to his career goals.

Disciplinary context of history. This History of World Empires course did not count as a part of the history major, but only for general education credit under the theme of Empire, Colonialism, and Globalization. This tutoring case was a failed one, since the tutee eventually dropped the class and ended tutoring. From the start, History Tutee Tiana could not see any value in the class:

I like all of those classes, but World Empires I didn't choose, I had to take it, so . . . it doesn't interest me. With my other classes, they all relate and flow, and I'm interested in them, so it's much easier for me to do work in those classes. I have all of those classes on the same day, so . . . but my history class World Empires, I have it . . . it's my only class on Mondays and Wednesdays, and I just dread going to it.

(History Tutee Tiana Interview 1, September 12, 2012).

This tutee had a strong sense of agency as a student with clearly articulated career goals and interest in her other courses, and she ascribed the lack of choice in taking this class as a significant challenge.

Overall, my observations of this failed case provided glimpses of possible challenges for tutoring, though the situation was complex enough, and their involvement with each other and this study fleeting enough, that my conclusions are especially tentative. A few possibilities for this failed intervention included the fact that Tutee Tiana may not have had realistic expectations in undertaking such a heavy course and workload. Further, the course materials were difficult to access, and her tutor Jennifer reported that other tutees had shared similar concerns about that same history class. Tutee Tiana's frustration with the subject and her resistance to it, often stating that she was only interested in American history, became a major obstacle. She was willing to try tutoring and meeting with the professor, but there was little evidence that she made any other changes in how she studied or prepared for the class, thus leaving too much of the weight on the tutor, who had no access to the course materials. Although there were positive interactions in both tutoring sessions I observed, signs of communication breakdowns also emerged. Tutee Tiana would fall silent or provide only terse responses. The tutor would make a joke or ask a question that did not connect with Tutee Tiana, and there was a tension in their interactions that was not present when Tutee Tiana met with me for our interviews, likely due to the tutee's frustration with the class and the tutor's frustration that they had no materials to discuss.

Some students, particularly less experienced ones, approach history as an unchanging source of data to be absorbed without question. More advanced students begin to interpret

historical resources through various theoretical stances, an approach I did not witness in my observations. The focus in the sessions I observed was on learning, absorbing, and memorizing the dominant stories of the constructed location of empires. Engaging with these stories is useful, but should also engender questions, such as why? How did we come to know these stories? What was the impact of these empires then, and what is the impact now? Such questions might have provided access to integrative learning in this case, but they never emerged. In the end, Tiana was left with what Wardle (2012) called answer-getting, rather than problem-solving. The absence of the questions that could have been asked echoes the absence of integrative learning in this case, and for many reasons, tutor and tutee lacked the resources and tools that may have enabled them to generate relevance.

In these six case-specific analyses, the examples of integrative learning relied on what each tutee, tutor, and class contributed to each activity setting. These variations fit well with constructivist theory in general, and they also fit with the claim that integrative learning involves creating relevance. Relevance will shift and change within differing contexts. Therefore, a critical finding is that integrative learning will not appear in uniform ways within each unique disciplinary context. Further, these results suggest that tutoring does not happen in isolation. Rather than existing as a supplemental activity to fill in gaps, everything that takes place in the session depended on what occurred in the class. The structure of the class, the way the professor shaped the information through the syllabus, lecture or discussion, and choices of texts all influenced the types of learning possible in the tutoring session, as well as the agency, confidence, personalities, interests, and life experiences brought by tutor and tutee.

Chapter 4 Summary

This chapter provided the most relevant findings from my study. I began with an analysis and description of the setting in general, then addressed my research questions. In response to my first research question, I provided excerpts and synthesized patterns that suggested that integrative learning in this setting took place as a process and disposition in which students create relevance from their assigned coursework by articulating why the content has value, making connections, and exercising agency. In response to my second research question, I identified three major mediational means—dialogue, examples, and context. For each of these major categories, I provided further themes, excerpts, and analysis to provide insight to these broader findings. My discussion of context included an analysis of patterns across cases as well as analysis of the ways the disciplinary context affected each tutoring pair.

In the next chapter, I will discuss these findings by connecting to the research and exploring implications.

Chapter 5: Discussion and Conclusions

This qualitative project investigated integrative learning within tutoring relationships in higher education and the mediational means that emerged within this multiple case study. For this project, six tutor-tutee pairs were interviewed and observed multiple times within the course of the fall semester 2012 to explore integrative learning. The findings suggest that integrative learning in tutoring in higher education takes place as learners create relevance from required coursework by articulating why the content has value, making connections, and exercising agency. In these cases, integrative learning was enabled and constrained by dialogue, examples, and context. The tutoring sessions provided rich data to consider these research questions. Using sociocultural activity systems as an analytical framework allowed me to consider some of the influences, constraints, and affordances within and across cases. The analysis also accentuated the disciplinary context and the limits of what is enabled in a specific setting. In this chapter, I discuss how this study addressed some of the gaps in the literature and limitations. I then propose a model for ways to foster integrative learning suggested by these findings that I compare to the rubric provided by the AAC&U. This model also has implications for tutor training and instruction and provides questions for further research.

Addressing Gaps in the Literature

My review of the literature on integrative learning included multiple reports on best practices and assessment strategies from a variety of institutions of higher learning, yet a repeated theme was the need for more research on this concept (Himbeault Taylor, 2011; Huber & Hutchings, 2005). My project yielded multiple examples of integrative learning within a developmental range of higher education students, as well as suggesting discursive and cultural tools that mediate such learning. Topping (1996) spoke of the dearth of research on higher education tutoring, a situation that appears to have changed little since then. This extensive study of six tutor-tutee cases thus bolsters this research base. Further, Evens and Michael (2006) suggested that tutoring in general was a rich resource for research on learning, and indeed, this study yielded more findings than could be included in this report. Finally, no comparable study appears to exist that applies sociocultural analysis to multiple cases of content area tutoring in higher education. This study addresses this gap and contributes to this form of research.

One particular concern of this project was to provide a richer picture of tutoring as opposed to the typical perspective in which tutoring is envisioned as merely addressing deficits brought by the tutees, frequently implying that the tutees should have gained these skills before starting college. Several aspects of the data contribute to a more nuanced vision. First, this qualitative study provided rich descriptions of the participants, individuals with experiences and agency that do not fit neatly within preconceived notions. For example, the tutors were impressive role models, suggesting the potentially high quality resources available through peer tutoring. Also noteworthy were the tutees, who varied considerably in

their academic experience, motivation, and accomplishments. They shared a desire to succeed in their classes, but they each defined that standard differently. The tutoring activities within these tutoring cases were also varied in complexity and content.

Though each of the tutees faced some challenges in the classes for which they received tutoring, this study depicted the variety of those challenges—from a senior for whom math will always present stumbling blocks to a pre-med freshman in love with her major yet learning how to master the volume of material. Further, analysis of each tutoring case provided evidence that the tutoring sessions are tied to the classroom experiences, and indeed, the successes within the tutoring sessions in fostering integrative learning are closely affected by the affordances and limitations made available by the curricular tools from the class, professor, and university as a whole. Many of the struggles faced by the tutees reflected more than gaps in knowledge, such as competing priorities or insufficient texts, themes, or teaching examples.

A deficit view of tutoring constructs tutoring as strictly remedial in the sense that tutors teach what tutees should already know (Rose, 2003). Tutors at times provided review of developmental concepts, particularly in the college algebra and finance classes, but such support only occurred in terms of skills needed to address class content, well beyond what could be considered remedial. Finally, the tutoring workspace provided a unique opportunity for learners to refine their thinking in ways that would be less possible in a classroom setting. The acculturating influence of a successful academic peer was a resource to the tutees, providing insights, perspectives, and habits beyond the specific course content. In these ways, this project provides snapshots of how tutoring in higher education may offer a rich

learning opportunity tightly connected with the course of study. Further, by including an unsuccessful tutoring case, this project offered nuance as well as the caution that these successful results are not guaranteed. Indeed, each tutoring case benefitted from analysis within specific disciplinary contexts to shed light on what constrained and enabled success and to provide hints of ways the institution might support such learning.

Finally, this study reveals the way tutoring services provide the students accelerated access to legitimate peripheral participation, as discussed by Lave and Wenger (1991). Not only do the tutees address more than educational gaps in tutoring, but also they engage with unique power structures. Lave and Wenger (1991) explained:

Legitimate peripherality is a complex notion, implicated in social structures involving relations of power. As a place in which one moves toward more-intensive participation, peripherality is an empowering position. As a place in which one is kept from participating more fully—often legitimately, from the broader perspective of society at large—it is a disempowering position. Beyond that, legitimate peripherality can be a position at the articulation of related communities. In this sense, it can itself be a source of power or powerlessness, in affording or preventing articulation and interchange among communities of practice. The ambiguous potentialities of legitimate peripherality reflect the concept's pivotal role in providing access to a nexus of relations otherwise not perceived as connected. (p. 36)

This description suggests the complexity within the tutoring relationship. As such, while there may be evidence of deficit and powerlessness in tutoring situations, in which tutor and tutee cannot overcome varying challenges or differences, there is also the potential for power

and progress—a more complex vision of this educational resource than typically occurs in the dominant discourse.

Although the findings from this study are encouraging, the limitations of the investigation must be kept in mind, in addition to strengths. These will be discussed next.

Limitations and Strengths

In considering this project, several limitations exist, balanced by specific strengths. As a multiple case study of six pairs of tutors and tutees for a limited amount of time during one semester on a specific campus, this study is partial in nature, a snapshot of what occurred at this time with these particular students. As such, the conclusions should not be viewed as generalizable but as potentially transferrable. Additionally, some of the tutors and tutees were more advanced in their studies and ability to engage in tutoring and interviews, and others were less, all of which affected what I could observe in this study. Each of the participants perceived the content in ways that might differ from me as the researcher, and these differences might limit what would stand out most prominently in my analysis of the data. These limitations should temper how these findings are considered in other contexts. On the other hand, the turnover of tutees and tutors each semester supports the partialness of this work, which also mirrors changes in faculty in the university. In education, levels of experience and expertise typically fluctuate, so snapshots with tentative conclusions are appropriate as a starting place for programmatic development. The conclusions offered by this study should serve as impressions from which to build, refocus, and inquire further.

Another limitation was the design of this study, which was focused on exploring and understanding the concept of integrative learning as proposed by the AAC&U. As such, this

study did not seek out sources of instability nor did this study seek to interrogate the value of integrative learning, tutoring, or higher education. While I was open to observe and reflect on failures and problems, my goal was to identify best practices, explore potential, and better understand integrative learning without deconstructing it. Some of the literature that I considered hints of student resistance and the need for alternative spaces to hegemonic educational practices. Some of these tensions occasionally surfaced in this study, but the design did not lend itself to explore such concerns in-depth.

An intrinsic limitation of qualitative research is the influence of the researcher as tool for observation and analysis. This study was shaped by my choices of questions and research methods. The researcher as tool in qualitative research is both a strength and weakness; this study came into being thanks to my interests and concerns. In reflecting on such influences on this study, I observed that both the participants and I were ensconced in the higher education setting of Franklin State. As such, we were well-practiced at posing and answering questions, and all of the participants were conscientious in their efforts to answer my questions, including trying to narrow their answers to what they might guess that I most likely wanted to know, much as a student would for a classroom teacher. Thus interviewer and interviewee replicated conventions and culture of higher education. My impression, nonetheless, is that the participants strove to provide genuine responses. Their engagement also is consistent with what might occur in other higher education settings.

In conducting the study and analysis, I took several steps to address these limitations and take advantage of these strengths. First, I grounded my conclusions as much as possible in descriptive data, returning frequently to the data to check, code, and re-code in order to

develop my overall findings. The volume of data as well as the amount of time I spent with the data served as a way to balance the subjectivity of this type of research. In fact, thanks to ongoing review and coding of my transcripts as the study unfolded, I was able to develop follow-up questions in my second and third interviews to refine, confirm, shape, or change my interpretation of the data. My interviews always included the opportunity for participants to provide open-ended comments, and during the recruitment process, I emphasized my desire for them to contribute actively and feel free to question my questions. By reviewing my interview recordings within days of conducting the interviews, I also had the chance to reflect and improve on my interview style, striving to listen more and resist jumping to conclusions. Rather than assuming I knew what a participant meant, this close connection with the data led me to ask them to give examples and verify my understandings. The entire process was aided by the fact that participants were paid for the interviews. Being paid appeared to lead my participants to view the interviews as serious work, and they applied themselves to providing complete answers to my questions. The payment also led them to keep their interview appointments with me; none of them ever missed an appointment, and only three times did any participant ask to reschedule our interviews.

During the course of the study, four of the six tutees were able to provide me with supporting test grades or grade reports that indicated they were succeeding in the class. Because the observations ended a month before the end of the semester, one limitation of the study is that I cannot point to their successful semester grades as corroborating evidence for the impact of tutoring. As a snapshot, this study is limited to what took place while I was engaged with them in the field. Nonetheless, I reviewed their final grades to be sure there

were no strikingly disparate results that might call into question some of my impressions of their experiences in tutoring; all of the grades matched what was observed in their sessions and in the graded work they provided to me for archival review.

This research design is limited to this specific sample of tutors and tutees within this unique context. Each individual engaging in tutoring brings unique qualities to the session, and these participants were unique to this point in time and location, including peaks or ebbs in their personal and academic lives during the semester. As is common for qualitative research, my findings are unlikely to generalize directly to a different site, tutor, or tutee. Nonetheless, the stories that came to light should be recognizable to professionals, tutors, and tutees. My intention is that readers may be able to relate to these stories and adapt lessons to their own contexts.

Conclusions

In this section, I provide a few examples of ways my findings connect with and contribute to existing research and theories.

Tutoring as legitimate peripheral participation within academia. In particular, my data and analysis of the tutoring dialogues between an advanced student and a less experienced student fit well with the literature on legitimate peripheral participation. According to these theories, learning is a “process of enculturation” in which learners copy and practice behaviors within a specific context (Brown, Collins, & Duguid, 1989, p. 34). My findings provide descriptive examples that support this theory. Just as tutoring is often conceived as a means to accelerate instruction, students who receive tutoring benefit from an intensified resource for integrative learning by acculturating to academia. At the same time,

however, my data have implications in terms of the tutors acculturating to the work of the adept practitioner of the professor. By modeling academic language and identifying far more easily the guiding themes and concepts underlying course content, the tutors copy and practice the behaviors of the professors.

Practicing and engaging with academic language are significant accomplishments. In his assessment of new students' attempts to write academic papers, landmark composition theorist Bartholomae (1985) explained that the "student has to learn to speak our language, to speak as we do, to try on the peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing that define the discourse of our community" (p. 134). My analysis of a dialogue between Psychology Tutor David and Tutee Mark in Table 10 reveals the way tutoring dialogues enable learners to transition from newcomer to competent agent.

As I discussed in Chapter 4, one aspect of acculturation to academia is the development of fluency. Tutees embraced the opportunity to employ the new terms they were absorbing. These findings suggest that the language of the tutors enhances the capacity for integrative learning as less experienced students increase competence with academic materials. Further, the role of language and fluency has practical links to vocabulary research in the field of reading, most notably Nagy and Townsend's (2012) discussion of the need for students to develop academic language in context. Mastering the use and meaning of complex vocabulary occurred frequently in these tutoring conversations, and this focus suggests these dialogues aid in vocabulary development, which supports integrative learning through acculturation to academia and expanding opportunities for agency.

Salient to my findings related to vocabulary and acculturation is Gee's (1996) discussion of discourse analysis. He explained that "discourses are ways of being in the world, or forms of life which integrate words, acts, values, attitudes, and social identities, as well as gestures, glances, body positions, and clothes" (p. 127). My study revealed examples in which students were learning to engage successfully with academic discourses by using the academic language in the appropriate way and acculturating to the academic community. Gee's (2005) subsequent discussions of how to engage in discourse analysis suggest further links with my research. For example, one aspect of discourse involves how "we can use language to make certain sign systems and certain forms of knowledge and belief relevant or privileged, or not . . . that is to build privilege or prestige for one sign system or knowledge claim over another" (Gee, 2005, p. 13). This line of reasoning may reveal why aspects of the canon, in addition to the specific academic language, play a mediating role in fostering integrative learning within the university system.

Additionally, Bawarshi's (2003) genre theory relates well to my applied use of sociocultural activity theory for this study. Similar to situated learning theorists, Bawarshi spotlighted the way the social context mediates what occurs; in his examples, the genre itself calls into being what is most likely to be written. The discipline, the class, the tutor's major, the tutee's major, and the specific content that they unpacked affected the learning that took place, enabling and constraining integrative learning within this context. Bawarshi also spoke to the need to be aware of genres and their influence as a way to access them, write within them, and even to resist them. Perhaps one role of the tutor is to interpret and

communicate aspects of the genre of the discipline, in addition to the university culture as a whole.

Nowacek's (2011) research on integrative learning provides additional support for attending to the work of tutoring when she concluded that students had a need for "conversational partners" (p. 137), a chance to discuss with others what they were learning outside the more constrained atmosphere of the classroom. This phrase, conversational partners, suggests the unique role tutors can play in fostering integrative learning. Similarly, Nowacek (2011) identified a need for "pliable discursive spaces" to foster integration (p. 81). In her study, she found that students were more likely to engage in integrative learning if the assignment seemed less restrictive to a specific genre or discipline, a place where they felt they had more license to bring in a variety of concepts.

Developing integrative learning with an expanding sense of task and opportunities to exercise agency appears both more likely and more necessary within higher education. Where K-12 education in the United States tends to address a general core of learning topics, higher education offers a more varied and at times ambiguous range of possibilities. Students face required curriculum, yet they are also called to make sense of these lessons in a way that will aid them as they enter new settings. Success in this changing context fits Wells' (2011) definition of an intelligent person as "not only knowledgeable but is also able to discern what kind of knowledge is needed in a particular situation and to act accordingly" (p. 93). In the case of integrative learning, the college learner masters the required curriculum and creates value from it.

In addition to contributing descriptive data in support of these existing bodies of research, my findings also provided fresh insights in several areas.

The canon as societal context and motive within an academic community. My review of cross-case constraints and tensions as discussed in Chapter 4 revealed a strong need for limits in order to focus and achieve. Both source and outcome of this desire for limits are traditions and culture of the university, in this case, not Franklin State specifically, but rather the unique culture and traditions of academia, which value specific types of learning and discourse. Within the culture of academia, a course of study has been developed that echoes the most current version of the canon—that is, the identification and emphasis of specific concepts, topics, and writings above others. Underlying the canon is the assumption that everyone will agree with these values, and for the most part, to behave as if any bias or underlying value system is invisible (Provenzo, 2005, p. 15). Despite the constraint of possible biases, these requirements serve a role similar to time and the textbook—they create the illusion of limits, a means to focus and clarify the task, laying the groundwork to exercise agency. Making sense of the identified canon, whether a major course of study or general education program, is part of the process of acculturating to academia, a critical means for students to create relevance.

Cultural context of mainstream American value of voluntarism. My review of overall context in Chapter 4 repeatedly highlighted the role of time, which led me to conclude that efficiency and productivity are guiding cultural values in this setting. In order to consider these cultural implications, I identified a concept articulated by sociologist/historian Fischer (2010) that proved to be salient in considering the participants' efforts to

gain control of the tasks by engaging in tutoring conversations. Specifically, in his analysis of American culture and character, Fischer (2010) ascribed the phrase voluntarism or voluntaristic to explain—in part—the way American culture emphasizes the belief that people exist as individuals who can and should become self-reliant. “In a voluntaristic culture, people assume that they control their own fates and are responsible for themselves,” Fischer explained (p. 10). This perception of control relates well to efforts to exercise agency, and perhaps this desire for self-reliance is a powerful cultural expectation that underlies the national focus on integrative learning.

Yet Fischer’s (2010) concept of voluntarism is not limited to self-reliance. He clarifies further that this culture places special value on individuals choosing, rather than being required, to engage in “fellowship” (p. 10). If Fischer’s premise carries weight, tutoring may also be supported by this voluntaristic cultural value when students voluntarily seek out tutoring and are able to join a community of learners, potentially gaining a sense of belonging that will support their academic accomplishments. Indeed, this aspect of voluntarism fits well with concepts of legitimate peripheral participation since there is value for the learner to connect with more advanced members of this community.

Fischer’s (2010)’s concept of voluntarism, folding together the imperative to be self-reliant with the desire to choose to identify and join a community, sheds light on ways tutoring offers a contradictory space. For example, the pressure to be self-reliant in this culture may explain some of the deficit-thinking that casts a shadow on those who seek tutoring because they must rely to some extent on the tutor’s skills and knowledge. At the same time, the learner who voluntarily connects with tutoring in order to improve and gain

greater skills and autonomy is acting in a means that will enable them to gain greater self-reliance. Perhaps this cultural norm influences findings such as Chi et al. (2001) in which tutees had better results when they spoke more often rather than listened; such engagement allows them to take the lead in a culturally-appropriate way, enhancing their sense of accomplishment and fellowship.

Cultural context of ambivalence towards education. The findings related to overall cultural context in Chapter 4 also revealed how participants struggled to stay focused and committed to the required workload, even Biology Tutee Joan, who expressed the most enthusiasm about this first class in her major. These data may provide clues to overall cultural values, specifically that U.S. culture contains intensely conflicting feelings, or ambivalence, towards higher education. Participants provided examples of conditional commitment to higher education; rather than embrace all classes as valuable learning experiences regardless of personal preferences, the students in this study evaluated each class for its value to them on multiple levels. History Tutee Tiana juggled conflicting priorities—classes that fell more in line with her long term career goals and a part-time job, for example. Assessing these conflicting priorities, she dropped the class, stating in a follow-up email to me that she saw “no benefit” in staying in the class. Further, as discussed in Chapter 4, the physical resources within the tutoring program revealed an uneven commitment to this resource. Even the general education curriculum that shaped the studies of many of the participants has been marked by vacillations at this institution and this state. At the institution level, the general education program has been subject to multiple debates and revisions, later put on hold in 2013 because the state legislature considered mandating a

state-wide common general education so that students could transfer between colleges more easily. These zig-zags may be products of conflicts related to identifying a canon, but they may also reflect differing opinions within our culture about the value of a university education.

These uneven commitments to education appear to reflect the ways that in U.S. culture, higher education is sometimes celebrated as a pinnacle achievement, at others, as fraudulent, and sometimes both at the same time (e.g., Bennett & Wilezol, 2013). As a culture, the attitudes towards higher education, and its ancillary, intellectualism, vacillate between intense highs and lows (Rigney, 1991). These cultural tensions may influence directly or indirectly what is taking place within the tutoring lab.

These tensions may also reveal an underlying belief system in the U.S. that no one should be guaranteed employment or success. Though many look to a college education as a path to success, and evidence suggests greater success on average for those with an education, a college degree does not guarantee economic or personal success (Brown & Lauder, 2006). In the past decade marked by economic recessions, this sense of caution may have increased, including both anecdotal and research-based reports that question links between a degree and a high-paying career (Rampell, 2013). Students in this cultural context are likely to feel vulnerable, a concern heightened the year this study took place. During the year of this study, for example, the federal government moved to expand health care options, but the state government took steps to block these expansions, including turning down the opportunity to expand Medicaid and cutting unemployment (Ovaska, 2013; Pugh, 2013). For some of the tutors and tutees entering this lab, these cuts are not distant events. During the

time of this study, students have shared with me how they have discovered that their middle class family was one stroke away from financial ruin, or they mourned the cost of this nation's mental health crisis when a family member committed suicide. Students in this project operated in a cultural context without guarantees of success, so constructing relevance from what they learn becomes a question of survival.

This pressure also calls on the student to be skeptical, questioning the priorities that are offered to them within the university culture. At times, such skepticism is fruitful, in which students seek to be strategic and insightful, such as Tutor Lizzie's reflections on her love of math and the career options available for an engineer. At other times, this skepticism becomes a constraint, in which students limit their options to that which seems safe, practical, and achievable, as reflected in the comments of Tutee Rachel and Tutee Mark as they considered their options. Yet only pursuing training in what appears to be a safe career path may also be risky in this fluctuating global economy. Further, some of the skills that allow someone to succeed in life do not fit simply into any particular program, one of the reasons the AAC&U embraces an outcome as broad as integrative learning (Huber, Hutchings & Gale, 2005).

Students in our society negotiate a certain amount of vulnerability, those coming from financial privilege perhaps less so. Nonetheless, all are under pressure to justify their choices, including in studying academic topics. The three threads of sociocultural context—the role of the canon, the ethic of voluntarism, and ambivalence towards higher education—are tensions that at times complement and at others conflict with one another. These tensions align with Wells' (2011) analysis of motivation:

When an individual is required to be a participant but fails to understand the motive of the activity or does not value its object, he or she may be motivated to participate to the minimum degree necessary to avoid negative consequences or even to choose an alternative form of participation that subverts the motive of the activity. (p. 91)

The culture itself sends mixed messages about the value of higher education, which enables and constrains what occurs within the tutoring sessions. Overall, though, these tensions of the canon, voluntarism, and ambivalence afford and constrain integrative learning because they create the need to make what one learns relevant; each learner must identify the most meaningful tools in any class that can be carried to a new situation and to face a new challenge in an uncertain political economy. The tutoring relationship serves to scaffold this process in which the tutor models focus and provides methods to be successful within this context, including articulating why a subject matters, making connections, and exercising agency.

Cultural influences affect tutee engagement. As discussed in Chapter 2, Chi et al.'s (2001) major research study on tutoring dialogues led me to pay attention to tutee engagement in the dialogue. My data expand on those findings by offering contextualized descriptions of the ways the tutee can be more actively engaged in the dialogue, including specific prompts and tasks that sparked discussion, as in Table 12. This more contextualized, in-depth study of tutoring, however, moved beyond the conversational strategies to explore possible cultural influences that might explain why increased tutee engagement was particularly powerful within tutoring in the United States. Increased tutee engagement provides learners with the sense that they are fulfilling their responsibilities in line with

Fischer's (2010) concept of voluntarism, a powerful American cultural pressure to be autonomous and contribute to the community. Further, these findings made visible the way the specific disciplinary contexts complicate the task for tutors, since prompting tutee engagement will be constrained by the content that is being tutored. For example, in the psychology tutoring case, the content lent itself to the tutor's deliberate efforts to redirect questions to the tutee, asking for examples or ways to put the content in his own words. On the other hand, in the college algebra case, both tutor and tutee—both experienced in these roles—reported to me in our individual interviews that they believed tutoring helped the most when the tutee did more of the talking, including explaining how problems could be solved. Nonetheless, during the initial sessions, the tutor spoke more as she oriented the tutee to core concepts and as they both gained comfort in working together. This observation suggests to me that the goal of asking the tutee to speak more frequently requires scaffolding efforts in order to be productive, particularly with specific tasks.

Tutoring for a specific task contrasted to tutoring to clarify the task. As discussed in Chapter 2, VanLehn's (2011) review of comparable human and computerized one-on-one tutoring for specific STEM-related tasks provided some challenges to the assumed effectiveness of one-on-one tutoring in which the effect of tutoring was not as large as stated by B.S. Bloom (1984). The methodology of such studies based on experimental design naturally contrasts dramatically with my qualitative study, and one difference in particular highlights a significant finding offered by my research. That is, his review deliberately avoided studying tutoring cases "using ill-defined tasks" (VanLehn, 2011, p. 205). In my observations of higher education tutoring cases across multiple content areas, I

consistently found that identifying the task was critical to tutor and tutee. This finding suggest a significant challenge in measuring the effect of tutoring in context compared to tutoring studies that isolate the focus to situations in which tutor and tutee have one clearly identified task to master. My research leads me to suspect that aiding the tutee in navigating the culture of academia and clarifying tasks that are idiosyncratic to the learner, discipline, and overall cultural context may best be achieved by a human tutor, and at the same time, prove difficult to assess. VanLehn (2011) also identified motivation as a likely benefit of human tutoring. My findings related to creating relevance and identifying the task certainly relate to the development of motivation. As students are able to find relevance in what they are learning and the task to complete appears achievable, their motivation is likely to increase, at least as evidenced by the enthusiasm and energy demonstrated by the participants in this study. Thus my research provides descriptive data on distinctive resources accessible through in-person college peer tutoring.

A new model for integrative learning as scaffolded by tutoring dialogues. This study arose from my interest in dialogue in learning, and my review of the literature yielded the expectation that meaningful dialogue must reach a high bar in which meaningful open-ended questions give rise to genuine, stimulating exchanges (Stauffer, 1975; Tharp & Gallimore, 1988; Alexander, 2006; Freire, 1970; Vella, 2008; Baker, Jensen, & Kolb, 2002). Psychology Tutor David described a dialogue that may have met that standard in his work with another tutee:

Since she's interested in it, I can find myself very much engaged in that conversation, and it's a reciprocal relationship, you know, she gets excited so I get excited about the

material because she's excited, and then my excitement fuels more excitement, and then we kinda barrel into fun. (Psychology Tutor David Interview 2, October 4, 2012)

Some of that level of excitement was apparent in my observations of the two biology majors, Tutor Laurie and Tutee Joan. Yet the typical questions or prompts in most sessions were more utilitarian, evoking a sense of a workspace rather than a gathering of philosophers. In the five productive tutoring cases, engagement was nonetheless strong. Based on these examples of dialogue in tutoring, I hypothesize that the open-ended questions that spark lively dialogue are provided by the impetus that led each tutee to sign up for tutoring, the implied questions of how can I succeed in this class? and its parallel, though often unacknowledged, why does this class matter? Answering these two implicit questions may yield integrative learning as the tutees find ways to identify relevance and expand their ability to exercise agency. The level of integrative learning the tutees may attain during the course of tutoring may not reach a capstone level, but as they gain more comfort with the subject, smaller successes are like a tributary feeding into a larger river.

The expectation in the literature is that integrative learning, if cultivated, will result in a skill set or mindset that can be useful in facing new challenges, a way to transfer something of value from the varied educational experiences that compose a college education. My findings offer examples and possible meanings of integrative learning that may aid in identifying what is transferrable. In order to explore and unpack this issue further, I have hypothesized about ways these findings may relate to one another, creating the model in

Figure 8 on the way students engaging in integrative learning progress to a transferrable capstone capacity for integration.

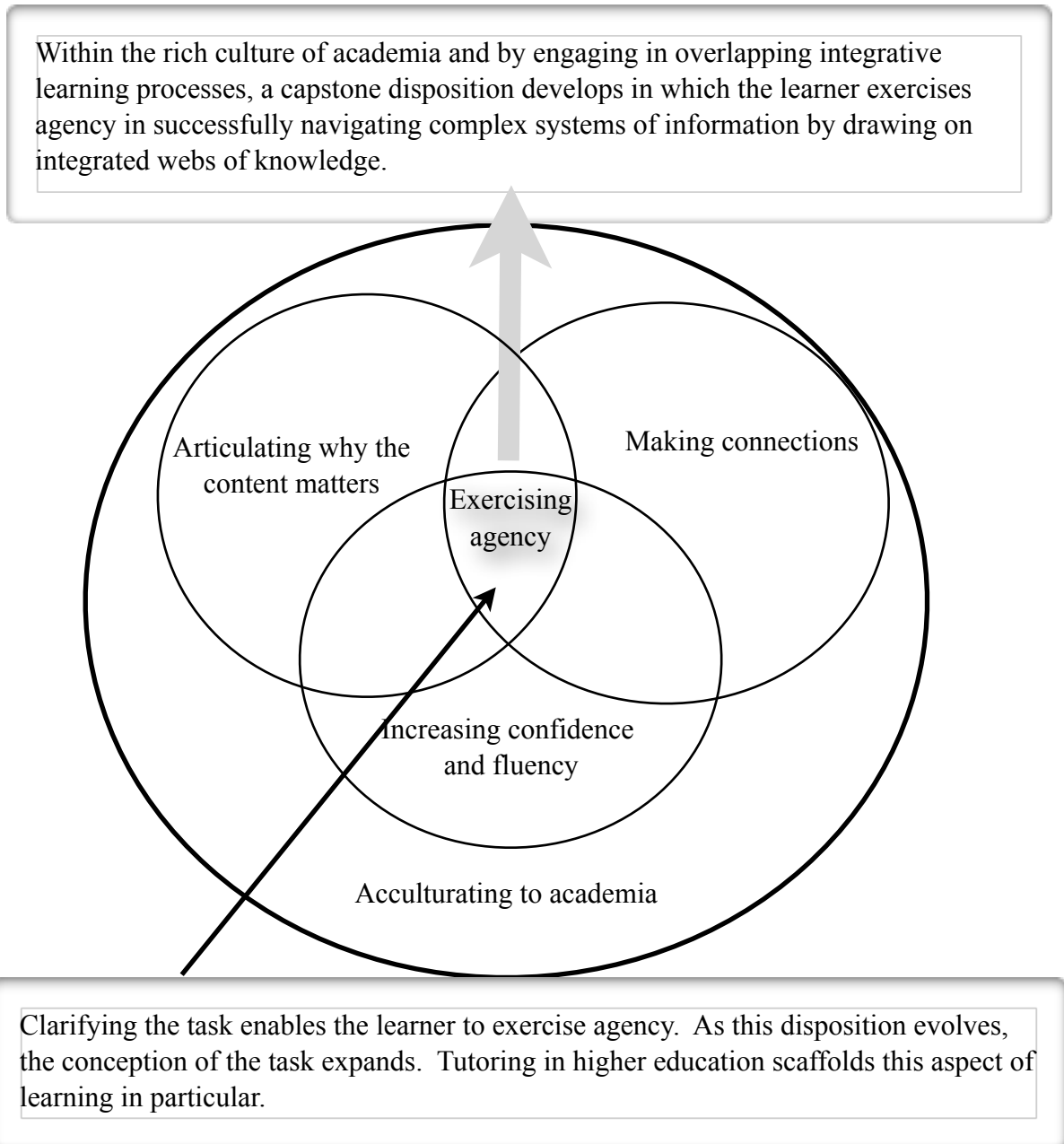


Figure 8. Proposed model of relationships among integrative learning processes. This figure depicts my hypothesis of these relationships.

In Figure 8, I hypothesize about the ways some of my major findings fit together in terms of overlapping learning processes and the development of a capstone disposition. Notably, I pulled one theme related to agency, acculturating to academia, to the outer circle to reflect the way this acculturation process serves as an overall mediating context for learning. Acculturating experiences occur throughout the learner's time in college, within and beyond the classroom, as well as within the tutoring dialogues. Within that overall context, I then depicted the themes of articulating why, making connections, and building confidence and fluency (themes related to agency) as overlapping processes. In this model, I propose that these three aspects of integrative learning support the learners in developing an overall disposition. Learners benefit from articulating why the content matters, gaining confidence and a certain amount of fluency with assigned coursework, and increasing their capacity to make connections, including personal, major-related, career-related, aesthetic, and interdisciplinary.

In the center of this model is exercising agency, which spotlights its role in this overall process and its place as disposition. As Bandura's (1997) research on self-efficacy supports, individuals always exercise some element of agency, and in higher education, attending college and seeking tutoring both indicate agency. So exercising agency takes place on some level within any learning process. In developing this model, I reflected further on the significant work to clarify the task, including the multiple tasks visible in every tutoring conversation, from simple algebra calculations to planning a major research paper or exploring majors. Narrowing the focus to one task is an accomplishment from which to begin learning; expanding what the learner can conceive of as a meaningful and relevant task

occurs over time, particularly as the learner engages in these stages of learning. Indeed, exercising agency in many ways is the process of clarifying the task; when faced with multiple issues, problems, and sets of information, identifying how to move forward is the greatest challenge and the moment within which the individual needs to be enabled to exercise agency.

While exercising agency takes place as a learning process, I also hypothesize that exercising agency in the face of complex systems of information and cultural expectations is the capstone disposition of integrative learning. This capstone achievement is to gain ease in navigating complex and even conflicting sets of information as well as making effective use of integrated webs of knowledge acquired over time. While developing this disposition is an ongoing, lifelong process, I nonetheless identified this comfort and agility with complex systems, particularly to find what is relevant for any purpose, as transferrable. Developing this disposition results from a successful undergraduate experience across multiple disciplines, and examples of students' progress toward this goal were evident within the tutoring cases in this study.

In developing this model, I reflected on some of the likely instructional means to support integrative learning. The foundation of acculturation to academia and clarifying the task is facilitated by experienced mentors, including tutors, professors, and university professionals. Indeed, the value of building relationships with and receiving feedback from academic mentors is well-supported in higher education literature (e.g., Kuh, 2008).

Articulating why could be supported through dialogue and writing assignments. Increasing confidence and fluency arises from successful engagement with the content of the class,

some of which may be assessed through results on assignments as well as observational data. Making connections can be supported through dialogue and writing assignments; one particular strategy can be found in Nowacek's (2011) study that she called the "push assignment," which required students to engage in a new way or draw on new approaches in order to succeed (p. 105). These meaningful learning processes scaffold the development of the learner to achieve the capstone in which they can, with increased ease, navigate complex systems of information, including in new and changing situations and draw on integrated webs of knowledge gained from their engagement with a variety of content areas.

Integrative learning may best be distinguished by its context, in which higher education students encounter a range of complex systems of knowledge both within disciplines and across disciplines from which they must distill insights of value. The active effort to create relevance from this range of material is perhaps the most distinguishing quality of this learning. The complexity of the material studied in higher education increases the challenge for the learner to navigate this information and derive value.

This study began with a review of the AAC&U rubric (see Appendix A) for integrative learning of several key outcomes that included a move from foundational to more sophisticated performance levels. While my model draws from the specific observations of this study and is designed to emphasize methods to scaffold integrative learning, it also aligns well in some ways with the rubric. For example, both identify capstone accomplishments. Making connections is emphasized in both models. Both models describe similar phenomena, though I was drawn to employ different language. For example, two of the five AAC&U capstone outcomes use the phrase "independently," which suggests a high

level of agency, my preferred term. All of the capstone outcomes identified by the AAC&U require the expression of agency in which the learner makes effective use or sets goals effectively drawing from multiple sources of information.

The distinctions between my model and the rubric highlight ways my understanding of integrative learning has been altered by this study, however. My model was based on my findings, not the rubric, and in contrasting the two, I observe that I folded many of the elements in the rubric together. Where there are five strands of learning outcomes in the rubric, my model synthesizes them into one combined model that highlights one capstone disposition. I combine connections to experience and connections to disciplines, and the strand of reflection and self-assessment in the AAC&U's rubric are implicit in my model, because these activities underly all of these processes and disposition.

Another critical difference is my emphasis of the phrase, "creating relevance." Each of the capstone outcomes in the AAC&U rubric would create relevance for the learner. The phrase is perhaps so significant to me because it answers an implicit question more directly—why emphasize the goal of making connections as a part of the overall curriculum? That is, I have occasionally imagined students being asked to make connections between history and literature, a task that they could accomplish perfunctorily and, on the surface, successfully, yet not necessarily take anything of value from that learning experience. The ability to understand, identify, and create relevance from each learning experience is what my model emphasizes.

Despite my occasional use of educational jargon, my model nonetheless has the potential to offer some practical insights to tutor or instructor. In pondering integrative

learning as a value for education, I have watched in my data for evidence of specific strategies that could be applied by those who wish to foster integrative learning. One of the most practical findings, then, was the prompt to ask students why the content matters, or in what way does this content have value? This specific question could support the learner in actively creating relevance and lay the foundation for further development in their ability to exercise agency.

Further, I have hypothesized the understandable concern that could be raised by a tutor or instructor that teaching with an emphasis on integrative learning, when envisioned as interdisciplinary connections in particular, might detract from teaching core skill sets and landmark theories within a specific discipline. My model may serve to clarify how integrative learning can exist within the disciplines as well as across. In particular, I might emphasize the process in which “students increase confidence and fluency.” The successful engagement with core skills and landmark theories support the ongoing development of this overall disposition.

Finally, my model emphasizes what is transferrable as the capstone achievement. That is, the AAC&U rubric suggests a number of capstone achievements. As someone ensconced in academic culture, I see great value in the AAC&U capstone achievements involving connecting to experience, connecting to disciplines, integrated communication, and reflection and self-assessment. Nonetheless, I identify transfer as the outcome most clearly useful outside of academic culture. By immersing in academic culture and creating relevance across multiple personal and disciplinary learning experiences, undergraduates complete their

education with an advanced capacity to exercise agency in navigating complex systems of information, which might allow them to succeed and solve problems in new situations.

Implications

This study of integrative learning within tutoring relationships in higher education yields a number of implications. My model in particular and specific aspects of my data could serve as a means to cultivate integrative learning, an identified goal for higher education.

Tutor training and instruction. My findings suggest that tutoring has the potential to foster aspects of integrative learning while supporting the tutee's success in a specific class. My study provides some insights that could be adapted to train tutors to be more strategic and conscious of strategies that enable integrative learning. In Appendix H, I offer an extended tutor training guide developed from this study that would emphasize the ways tutors could foster integrative learning within content-area tutoring. This guide combines a number of critical findings, including discussions of my working definition of integrative learning, my hypothesized model, and the list of prompts that sparked engagement. As a part of the guide in Appendix H, I identify a few ways tutors aided tutees in clarifying the task, sharing personal examples, and reflecting on relevance and connections with the tutee's major and semester course load. In keeping with Chi et al (2001)'s study and in consonance with existing tutoring methods (e.g., MacDonald, 1994; Shearer, 2012), tutors should continue to be encouraged to increase the amount of time that tutees talk. Some of my cases revealed that increased tutee talk may require scaffolding, in which the tutor models possible

answers, increases the tutee's sense of comfort in the session, and continues to prompt for tutee input.

This study also provided a more nuanced definition of the tutoring relationship. In one interview, Psychology Tutor David criticized tutors he had observed who spent too much time gossiping or trying to be buddies with their tutees, as he described it. Tutor David deliberately used personal insights as learning tools, frequently tying personal experiences back to the content. College Algebra Tutor Lizzie sought to build a sense of camaraderie with her tutee, but she carefully sprinkled such friendly comments or questions into a session that was always focused on course content. All of the tutoring relationships in this study could be described as warm, working relationships. Each had fleeting moments of mentoring, advising or chatting, but the attention of both tutor and tutee was constantly on the material. These findings may be useful for discussions in tutor training sessions of ways to convey friendliness, warmth, and caring to a tutee, while still insuring that the tutoring time is highly productive.

In developing warm yet effective relationships and identifying examples to elicit tutee engagement, tutors might also benefit from training in what has been called culturally relevant pedagogy (e.g., Ladson-Billings, 2001). Connections between this field of research and some of this project's findings related to creating relevance as integrative learning deserve attention.

One further implication was that in this study, the participants benefitted from discussing their work with a professional. Most of the tutors and some of the tutees as their parting comments on this study stated that the conversations led them to think more about

tutoring and learning. One unexpected and rewarding result was that Psychology Tutor David stated that our conversations had been very beneficial to him, and he asked if he might work with me to revise our program's tutor training model. With the blessings of the director of tutoring, David and I indeed met regularly in the semester following the project to review existing training models and to identify possible changes. He also commented during the semester that this work helped him, as a veteran tutor, avoid burnout and re-energize in his work as a tutor. Thus one implication of this study is that aspects of the interviews (see Appendix C) could be incorporated into tutor training, as well as the related implications of action research, in which tutors could be involved more actively in revising tutor training and tutor delivery. Vega-Rhodes (2012) provided similar recommendations for tutor training in higher education. I have therefore integrated aspects of these strategies in my proposed tutor training guide in Appendix H.

Faculty development. Some of the struggles tutees and tutors faced in the tutoring sessions may have implications for course development. Instructors may wish to consider ways to make connections more visible and accessible to students, including the way they structure the syllabus and course materials to support students' success in focusing and identifying clear tasks forward. When students can more easily access the overall themes and purposes that connect the course content, they may be better equipped to articulate why this subject matters, make connections beyond the classroom, and exercise agency. Instructors, like tutors, might facilitate discussions of examples, majors, and personal connections within their classes to scaffold students' efforts to create relevance for themselves. Faculty might benefit from reflecting within the class on the variety of ways individuals may create

relevance for any specific subject, sharing their own processes and rationales and contrasting them with those from differing perspectives. My model in Figure 6 and my tutor training guide in Appendix H could be adapted by instructors. Such strategies merit experimentation to assess the impact.

Some of these strategies may also be of use for academic advisors, whether professional or faculty members. Advisors may wish to pose questions to their advisees to help them consider how the classes they are taking may be relevant to them or to support their advisees in finding value in what they are required to study. Students may benefit from discussions of social influences, such as the concept of the canon, voluntarism, and cultural ambivalence toward education. Several of my interview questions, as summarized in Appendix C, might also be of use to practitioners, including advisors, mentors, and tutors.

Program administrators. This project was designed to contribute to efforts by programs to support integrative learning in higher education. Much of the literature on integrative learning offered general guidelines rather than specific examples. Thus this project identified and categorized examples that occurred within these specific cases. Program administrators may find these examples and my working definition of integrative learning useful to adapt for their own individualized program goals and assessments.

The most compelling implication for evaluation efforts is the fact that integrative learning varied depending on context, always influenced by the tutor, tutee, class, professor, university, and wider culture. These nuances suggest that a qualitative rather than standardized method may be most appropriate for evaluating efforts to support integrative learning. Given the variety and range of possibilities in each context, such evaluation efforts

should be designed to raise awareness of tutors, tutees, and administrators to potential strategies and outcomes within specific contexts rather than to capture uniform results. The above implications for evaluation, tutor training, and course development may all have implications for an administrator who either coordinates or budgets for tutoring in higher education. This study suggests ways in which the work of tutoring supports the overall mission of the university, tightly aligning with classroom curriculum and preparing the students for overall success.

The case of biology tutoring between a tutor and tutee both majoring in biology suggests that this combination might be a rich learning resource, when possible. For example, acculturating to academia was accelerated in this case to include acculturating to the major, including side conversations on what to expect and insights into how the content of this introductory class related to future classes. Further, the shared interest for biology increased the ease and warmth between these two students, and opened the discussion up to shared enthusiasm and joy in learning. While such moments occur in other settings, administrators of tutoring programs may consider strategies to facilitate tutoring between a tutor and tutee committed to the same major. Higher education administrators might further experiment to see if this arrangement is particularly useful for majors with high attrition rates.

One additional programming implication arises from the value placed on our conversations by most of the tutors and tutees. While I cannot speak to the management of tutoring labs in other sites, at Franklin State the tutoring lab director had limited opportunity to engage in conversations with tutors and tutees, given the demands on her time to recruit,

hire, and provide the initial training of tutors, supervise all payroll issues and documentation of sessions, and troubleshoot problems. There was often little time available nor was there an explicit expectation that the director of tutoring serve as a faculty mentor to the tutors and tutees, though the director at Franklin continued to explore ways to increase her availability to tutors and tutees through creative initiatives to manage the administrative load. A program administrator who wishes to foster integrative learning and intentional development of tutors and tutees may need to allocate resources and attention so that such mentoring conversations may be possible.

Further Research

As an exploratory, descriptive project, this study offers a range of opportunities for further research. Given the partialness of this study, additional studies of integrative learning in tutoring could provide support or challenges to the conclusions set forth here. Future studies could depart from the AAC&U as a model or provide needed critique of assumptions that guided this study.

Most notably, however, I concluded by hypothesizing a model for how integrative learning could be developed, which would benefit from further inquiry to refine, adapt, or alter. My working definition of integrative learning could be further studied, expanded, or challenged to address higher education learning experiences both inside and outside of the tutoring lab. Also, my proposed tutor training guide could be applied in practice, yielding fresh insights and areas for revision, including links to culturally-relevant pedagogy.

Transferring some of these findings to classroom practice might yield further areas of study.

Given the emphasis on learning communities in the literature on integrative learning, studies

that explore tutoring for linked classes, service learning classes, and capstone assignments would be worthwhile next steps. The activity setting models might be helpful in presenting findings to practitioners, who might consider the multiple influences on specific tutoring interactions. Future studies working within this framework could explore longer term learning settings or tease out the distinct influences of university, discipline, and specific instructor, all of which were only partially accessible within the scope of this project.

Finally, my analysis yielded 116 codes, far more than could be meaningfully discussed or unpacked in this current report. Not every code deserved attention within the context of the guiding research questions, but almost every code provided insight into tutoring and learning. This data set could serve as a source for secondary research that takes advantage of what could not be addressed within the scope of this research project, including some intriguing threads related to women entering STEM (Science Technology Engineering Math) fields, such as Tutor Lizzie's stories of how majoring in physics and pursuing engineering gained meaning for her, or Tutor Diana's explanation of how working in finance provided intellectual challenges, financial stability, and opportunities to help others, as well as the contrast in which Tutee Rachel decided against a major in exercise science based on her discomfort with math.

As this report suggests, integrative learning occurred as students within tutoring relationships created relevance by articulating why the content matters, making connections, and exercising agency. The critical mediational means included dialogue, examples, and context. These findings contribute to the literature on tutoring and integrative learning, as well as expanding the way tutoring may be perceived. The major themes led to a proposed

model for integrative learning that could be adapted to tutor training and instruction. As an exploratory, qualitative study, this report offers multiple avenues for further research.

In higher education, attending lectures, reading, writing, and engaging in classroom discussions are well-established as contexts for advanced learning. This study offers a glimpse of how tutoring dialogues fit in this picture, accelerating such development in ways that go beyond simply reinforcing content knowledge. In the observations of tutoring in this study, there was a largeness to the experience of being a tutor and tutee. During the initial sessions, both tutor and tutee have reason to be nervous, and both fear coming away frustrated by the sense that nothing has been accomplished. After all, not every tutoring session is guaranteed to succeed. Despite occasional leaks and missed chances, though, the tutoring lab buzzes with energy at peak tutoring hours, and the conversations layer on top of one another. During these pockets of time on a weekly basis, when tutor and tutee meet, connect, and create, integrative learning is in process, as students reach for the highest levels of academic learning and prepare to face future challenges.

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Appendix A: AAC&U Rubric

The following is the full rubric for integrative learning excerpted from Rhodes, 2010, p. 50-51.

INTEGRATIVE LEARNING VALUE RUBRIC

for more information, please contact value@aacu.org

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

Definition

Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus.

Framing Language

Fostering students' abilities to integrate learning—across courses, over time, and between campus and community life—is one of the most important goals and challenges for higher education. Initially, students connect previous learning to new classroom learning. Later, significant knowledge within individual disciplines serves as the foundation, but integrative learning goes beyond academic boundaries. Indeed, integrative experiences often occur as learners address real-world problems, unscripted and sufficiently broad, to require multiple areas of knowledge and multiple modes of inquiry, offering multiple solutions and benefiting from multiple perspectives. Integrative learning also involves internal changes in the learner. These internal changes, which indicate growth as a confident, lifelong learner, include the ability to adapt one's intellectual skills, to contribute in a wide variety of situations, and to understand and develop individual purpose, values and ethics. Developing students' capacities for integrative learning is central to personal success, social responsibility, and civic engagement in today's global society. Students face a rapidly

changing and increasingly connected world where integrative learning becomes not just a benefit . . . but a necessity.

Because integrative learning is about making connections, this learning may not be as evident in traditional academic artifacts such as research papers and academic projects unless the student, for example, is prompted to draw implications for practice. These connections often surface, however, in reflective work, self assessment, or creative endeavors of all kinds. Integrative assignments foster learning between courses or by connecting courses to experientially-based work. Work samples or collections of work that include such artifacts give evidence of integrative learning. Faculty are encouraged to look for evidence that the student connects the learning gained in classroom study to learning gained in real life situations that are related to other learning experiences, extra-curricular activities, or work. Through integrative learning, students pull together their entire experience inside and outside of the formal classroom; thus, artificial barriers between formal study and informal or tacit learning become permeable. Integrative learning, whatever the context or source, builds upon connecting both theory and practice toward a deepened understanding. Assignments to foster such connections and understanding could include, for example, composition papers that focus on topics from biology, economics, or history; mathematics assignments that apply mathematical tools to important issues and require written analysis to explain the implications and limitations of the mathematical treatment, or art history presentations that demonstrate aesthetic connections between selected paintings and novels. In this regard, some majors (e.g., interdisciplinary majors or problem-based field studies) seem to inherently evoke characteristics of integrative learning and result in work samples or collections of work that significantly demonstrate this outcome. However, fields of study that require accumulation of extensive and high-consensus content knowledge (such as accounting, engineering, or chemistry) also involve the kinds of complex and integrative constructions (e.g., ethical dilemmas and social consciousness) that seem to be highlighted so extensively in self reflection in arts and humanities, but they may be embedded in individual performances and less evident. The key in the development of such work samples or collections of work will be in designing structures that include artifacts and reflective writing or feedback that support students' examination of their learning and give evidence that, as graduates, they will extend their integrative abilities into the challenges of personal, professional, and civic life.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Academic knowledge: Disciplinary learning; learning from academic study, texts, etc.
- Content: The information conveyed in the work samples or collections of work.
- Contexts: Actual or simulated situations in which a student demonstrates learning outcomes. New and challenging contexts encourage students to stretch beyond their current frames of reference.

- Co-curriculum: A parallel component of the academic curriculum that is in addition to formal classroom (student government, community service, residence hall activities, student organizations, etc.).
- Experience: Learning that takes place in a setting outside of the formal classroom, such as workplace, service learning site, internship site or another.
- Form: The external frameworks in which information and evidence are presented, ranging from choices for particular work sample or collection of works (such as a research paper, PowerPoint, video recording, etc.) to choices in make-up of the eportfolio.
- Performance: A dynamic and sustained act that brings together knowing and doing (creating a painting, solving an experimental design problem, developing a public relations strategy for a business, etc.); performance makes learning observable.
- Reflection: A meta-cognitive act of examining a performance in order to explore its significance and consequences.
- Self Assessment: Describing, interpreting, and judging a performance based on stated or implied expectations followed by planning for further learning.

Definition

Integrative learning is an understanding and a disposition that a student builds across the curriculum and cocurriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus. *Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.*

| | Capstone 4 | Milestones 3 | Milestones 2 | Benchmark 1 |
|---|--|---|--|---|
| Connections to Experience Connects relevant experience and academic knowledge | Meaningfully synthesizes connections among experiences outside of the formal classroom (including life experiences and academic experiences such as internships and travel abroad) to deepen understanding of fields of study and to broaden own points of view. | Effectively selects and develops examples of life experiences, drawn from a variety of contexts (e.g., family life, artistic participation, civic involvement, work experience), to illuminate concepts/theories/frameworks of fields of study. | Compares life experiences and academic knowledge to infer differences, as well as similarities, and acknowledge perspectives other than own. | Identifies connections between life experiences and those academic texts and ideas perceived as similar and related to own interests. |

| | | | | |
|--|---|---|--|---|
| <p>Connections to Discipline Sees (makes) connections across disciplines, perspectives</p> | <p>Independently creates wholes out of multiple parts (synthesizes) or draws conclusions by combining examples, facts, or theories from more than one field of study or perspective.</p> | <p>Independently connects examples, facts, or theories from more than one field of study or perspective.</p> | <p>When prompted, connects examples, facts, or theories from more than one field of study or perspective.</p> | <p>When prompted, presents examples, facts, or theories from more than one field of study or perspective.</p> |
| <p>Transfer Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations</p> | <p>Adapts and applies, independently, skills, abilities, theories, or methodologies gained in one situation to new situations to solve difficult problems or explore complex issues in original ways.</p> | <p>Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations to solve problems or explore issues.</p> | <p>Uses skills, abilities, theories, or methodologies gained in one situation in a new situation to contribute to understanding of problems or issues.</p> | <p>Uses, in a basic way, skills, abilities, theories, or methodologies gained in one situation in a new situation.</p> |
| <p>Integrated Communication</p> | <p>Fulfills the assignment(s) by choosing a format, language, or graph (or other visual representation) in ways that enhance meaning, making clear the interdependence of language and meaning, thought, and expression.</p> | <p>Fulfills the assignment(s) by choosing a format, language, or graph (or other visual representation) to explicitly connect content and form, demonstrating awareness of purpose and audience.</p> | <p>Fulfills the assignment(s) by choosing a format, language, or graph (or other visual representation) that connects in a basic way what is being communicated (content) with how it is said (form).</p> | <p>Fulfills the assignment(s) (i.e. to produce an essay, a poster, a video, a PowerPoint presentation, etc.) in an appropriate form.</p> |
| <p>Reflection and Self-Assessment Demonstrates a developing sense of self as a learner, building on prior experiences to respond to new and challenging contexts (may be evident in self-assessment, reflective or creative work.</p> | <p>Envisions a future self (and possibly makes plans that build on past experiences) that have occurred across multiple and diverse contexts.</p> | <p>Evaluates changes in own learning over time, recognizing complex contextual factors (e.g., works with ambiguity and risk, deals with frustration, considers ethical frameworks).</p> | <p>Articulates strengths and challenges (within specific performances or events) to increase effectiveness in different contexts (through increased self-awareness).</p> | <p>Describes own performances with general descriptors of success and failure.</p> |

Appendix B: Initial Email Survey to Participants

All responses will be saved in a password-protected file and eventually labeled with pseudonyms to protect your privacy. The original emails with names will be destroyed. The goal of these questions is to get a snapshot of general information about each participant, including interests that may guide your academic choices as well as assessments of academic courses at this point in the semester.

Please feel free to skip any question that you would prefer not to answer.

Name:

Age:

Ethnicity:

Religious affiliation, if any:

Gender:

Hometown:

Name two hobbies or favorite activities:

Name two reasons you enjoy being in college:

Overall GPA:

GPA in major (if chosen):

Major (if chosen):

Other majors you considered but rejected:

List courses you are taking this fall:

At this point, which course is your favorite?

At this point, which course is hardest?

At this point, which course is easiest?

Appendix C: Interview Protocol

For this research project, I conducted three interviews with every participant. The first interview took place as soon as possible after the tutor or student committed to participate in the research project. The second interview took place typically after two observations of tutoring sessions. The final interview took place after I conducted all interviews and observations of the tutoring pair. I analyzed all interview and observations prior to the second and third interviews so that I could add additional follow-up questions, when appropriate.

I treated these questions as a “general interview guide” as described by Patton (2002), in which the guide provides a starting place rather than a limited set of standard questions to follow without deviation. In addition to these scheduled interviews, I conducted follow-up interviews as needed for further clarification or if initiated by participants who may decide further conversations are needed.

In developing these questions, I aimed to create what Spradley (1979) called descriptive questions and to avoid questions that ask why or for meaning (p. 82). Also, I began each interview by reviewing the goals of the study. Unless otherwise indicated, I used the same questions for both tutor and student. I digitally recorded the interview and took just a few light notes on a pad of paper as needed so I could focus my attention on the research participant. I wrote reflective notes immediately following the interview to capture impressions, reactions and concerns.

Interview one

This interview took place as soon as possible after the tutor and student committed to participate in the study.

How is it that you became involved in tutoring?

Please describe a few study strategies that work for you.

What similarities and differences exist between the courses you are taking this semester? How is this combination helpful to you? How is it not?

Tutor: Describe a few ways that you encourage your student to participate actively in the tutoring session.

Student: Describe a few ways in which you participate actively in the tutoring session.

Possible follow-up prompts about any objects or resources that help.

“Looking back over your life, can you tell me about a really powerful learning experience you have had, in or out of school?” (Belenky, Clinchy, Goldberger, & Tarule, 1986, p. 234)

In what ways might this semester of college be an important step in your overall life/career plan? (based on Freeman, 2010, p. 133)

Follow-up questions as appropriate.

Final question: Anything you would like to say that you did not get to say? Perhaps something you have thought about in relation to this study or your experiences in tutoring?

At close of interview one, I asked participants if he or she could take a digital picture of their tutoring work space at the next tutoring session and email a copy to me. If they need to borrow a camera, I offered to make arrangements for one to be available. Although participants indicated willingness to do so, none followed through.

Interview two

This interview took place after the second observation.

Describe a typical tutoring session.

Tell me a few examples of specific tasks you have been able to address in some of your tutoring sessions.

Follow-up: Describe what you and your (tutor/student) did to address these tasks.

Tell me about a concept or skill that you discussed in tutoring that was particularly challenging.

Follow-up: Describe what you and your tutor/student did to address these tasks.

Added: Describe your tutee's (or your) attitude toward this subject. Describe any impact this attitude has on your experiences in tutoring.

Tell me a few things that you and your tutor/student have in common. How did you discover these commonalities?

Tell me a few differences you have observed between you and your tutor/student.

Removed after failing in first few interviews: Describe your relationship with your tutor/student.

On a scale of one to ten, one being very uncomfortable and 10 being very comfortable, rate your sense of feeling at ease when you meet with your tutor/student. Please describe an example to help me understand why you rated the sessions the way you did.

Tell me about an assignment or activity in any class that you are particularly excited about.

Follow-up questions as appropriate, including ones based on the first observation.

Final question: Anything you would like to say that you did not get to say? Perhaps something you have thought about in relation to this study or your experiences in tutoring?

Final interview

This interview took place after all interviews and observations were completed.

Please name any study strategies you have used or discussed during your tutoring sessions this semester.

Tell me about a particularly satisfying tutoring experience this semester.

Tell me about a particularly frustrating tutoring experience this semester.

Added as new way to consider relationship: Describe your tutor/student to me.

Tell me about anything that has surprised you about your tutoring experiences this semester.

List 5-7 topics you have discussed with your tutor. (I record them on index cards then provide the index cards to the students). Now sort the topics in order of complexity. (My thanks to Amy Trawick, 2012, for this suggestion).

Added: Student: Consider what you have learned thus far in the class you are taking now. Can you comment on any overarching themes, issues, or purposes that connect the content so far?

Tutor: Consider what you have discussed in tutoring from this class so far. Can you identify any overarching themes, issues, or purposes that connect the content so far?

Added: Assess how well the professor connects class content to real world examples? To other disciplines? From one class to the next?

Added: Can you explain why this class fits into your overall education? Can you imagine one way you could use something from this class and your experiences with tutoring, that you could use in the world outside of college?

Provide an example of a skill mastered or a concept you understand better now than you did at the start of the semester.

Follow-up prompt: How did you come to understand it better? How have you used that understanding?

Tell me about a time when you learned something in one class and were able to apply it to another class (Give specific example of subjects they are taking this semester if possible).

Added: If possible, tell me about any ways in which you see yourself differently now from when the semester started.

Only if time permitted: Student/tutor: In what ways were you/your student able to use your/his or her strengths as a tool for success in this class?

Only if time permitted: Student/tutor: In what ways were you/your student able to use your/his or her weaknesses as a tool for success in this class?

Follow-up questions as appropriate, including ones based on observations.

Final question: Anything you would like to say that you did not get to say? Perhaps something you have thought about in relation to this study or your experiences in tutoring?

Appendix D: Observation Protocol

Open-ended observations:

Occasionally, at least 3-5 times during the time of the study, I spent thirty minutes in the tutoring lab for open-ended observations of this setting as a whole. These observations would be open-ended, as described by Marshall and Rossman (2011) and Glesne (2011). At such times, I strove to make the familiar unfamiliar, providing the chance for me to take in aspects of this setting that might be missed when I observe my participants in action. During these open-ended observations, I attempted to use multiple senses, that is, not just sight but also sound, touch, smell, and taste, though sound and sight were in the end most salient to my analysis. I also made maps of the setting to consider the physical layout and proxemics of each tutoring session. Glesne (2011) provided this description of proxemics: “how close they stand to another, through their use of space when around others” (p. 69).

Scheduled, focused observations:

I arranged to observe the tutor-tutee pairs four times during the semester, with the exception of the history pair, who ended tutoring after I had completed two observations. These observations fell in line with what Marshall and Rossman (2011) described as focused observation to watch for specific purposes, such as analyzing for themes, observing specific behaviors, etc.

Observation protocol:

Time period: The first observation took place early in the tutoring relationship, preferably as soon as possible after both participants commit to the study. The remaining observations took place after the second interview and before the final interview.

Location of the researcher: I sat at a nearby table where both participants could see me and I could see and hear them clearly. During peak tutoring times in this research setting, the lab can be quite loud, so I sat nearby.

Recording method: With the consent of the participants, I set a small digital sound recorder on the table where they work. In addition to transcribing the sound recorder, I recorded notes in a notebook divided into columns, one side of the page dedicated to descriptive notes and the other for analytic. According to Glesne (2011), descriptive notes are observations that

should aim for accuracy and avoid evaluation or opinion, while analytic notes are my comments, reflections, and reactions to what I observe (p. 73-74). I used a notebook that worked well for sketching purposes, too.

Focus or goals:

At the start of the session, I quickly sketched a map of the layout of the tutoring lab, the location of the participants, and additional notes on proxemics.

During the observation (and later in reviewing the transcript), I watched particularly for:

- Amount of student talk versus tutor talk, including tutor prompts
- evidence of enthusiasm
- aspects of dialogue
- aspects of relationship
- evidence of frustration or discomfort
- interruptions
- any impact of the tutoring setting
- anything unexpected or worth noting

Afterwards, when I analyzed the transcript, I looked in particular for aspects related to these categories or questions:

- open-ended questions
- guiding task
- expression of feelings or emotion
- evidence of caring responses to one another
- use of metaphors or analogies
- common vocabulary or translating tough vocabulary
- reaching consensus on an issue
- Does tutoring provide any structured opportunities for reflection?
- Do student and tutor have to address any kind of contradiction?
- how tutor responds to student errors

Appendix E: Research Summary Statement

I would like to invite you to participate in a research project investigating the ways tutoring relationships may foster integrative learning, in particular through dialogue. I am conducting this study for my dissertation work as a part-time doctoral student at Appalachian State University. I also serve as a full-time professional within the Learning Assistance Program at Franklin State, so I am very interested in supporting quality tutoring dialogues and understanding more about their potential to help students achieve. This project will be of great help to me both in my professional work and my doctoral studies. In selecting individuals to observe and interview, I am seeking out tutor-student pairs in which at least one, either tutor or student, has participated successfully in tutoring in a previous semester.

If you are willing to participate, I will ask you to do the following:

- Complete a short email survey with basic information about yourself, your studies and your interests.
- Take part in three interviews in the course of the semester, each of which will likely take about 30 minutes. I will create a digital recording of our interviews and take a few notes on paper. All such recordings will be labeled and stored with pseudonyms to protect your privacy. I will pay you \$8.00 per completed interview to thank you for the extra time this part of the study will require.
- I will observe and digitally record you during three or, if possible, four tutoring sessions.
- I also invite you to email me any thoughts that occur to you as relevant during the course of this study or to collect other data that may be meaningful in capturing your experiences within a tutoring relationship, such as notes from tutoring sessions, digital photos of some aspect of the tutoring lab, etc.
- I will invite you to share with me examples of graded assignments that relate to the work of your tutoring sessions. Again, all such work would be kept completely confidential.

At the end of this semester or the start of the next, I may contact you to verify details or to ask for your feedback on an event, comment or interpretation of events.

Participating in this study may offer you some benefits in terms of gaining increased insight into the tutoring process. Tutors may find our interviews aid them in their work, and students may find our interviews help them get more out of tutoring and their studies. You may also be glad to have a chance to talk about what you are doing and to know that as a professional employed at Franklin, I may be able to learn from your experiences and help others because of it.

I would be committed to prevent or minimize any risks to you due to this study and I hope we would be able to discuss any concerns or brainstorm ways to make sure everyone is

comfortable. One risk I might predict is that you could feel self-conscious when I observe your tutoring session, so this is something you would need to consider. Also, you may find yourself worrying that you have done or said something wrong during your work or during our interviews. While I appreciate your conscientiousness, I encourage you to relax and act as you normally would. I will learn far more if you can answer questions as reflectively as possible without worrying about finding a "right answer"—you are, after all, the expert on what is happening when you are in a tutoring session.

Please be aware that you can decide not to participate in this study or stop doing it at any time after you have started. If you decide to stop, your decision will have no impact on your ability to be involved with tutoring here at Franklin.

If you have any questions or concerns about this study, you may contact me at dukecj@appstate.edu or (828) 262-3044. You may also contact the following: Dr. Leslie Cook, my dissertation committee chair, at cookls@appstate.edu or 828-262-7301; Jessie Fletcher, Director of University Tutorial Services, fletcherja@appstate.edu or 828-262-6809; or Jean Roberts, Executive Director, Learning Assistance Program, robertsjh@appstate.edu or 828-262-8679.

Appendix F: Overlapping Activity Setting Model Per Case

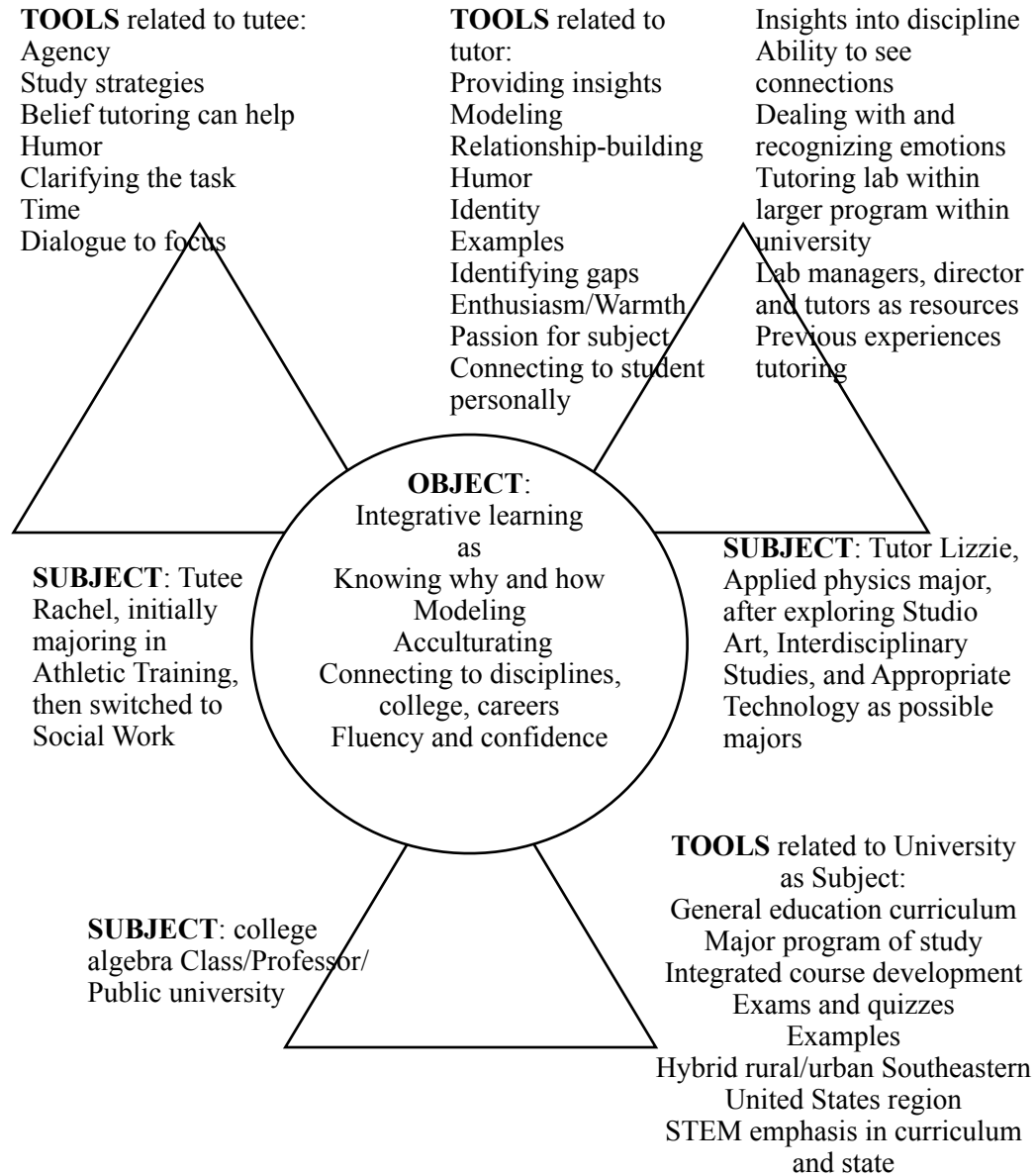


Figure 4. Activity systems analysis of college algebra case. This individual case analysis of a college algebra tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

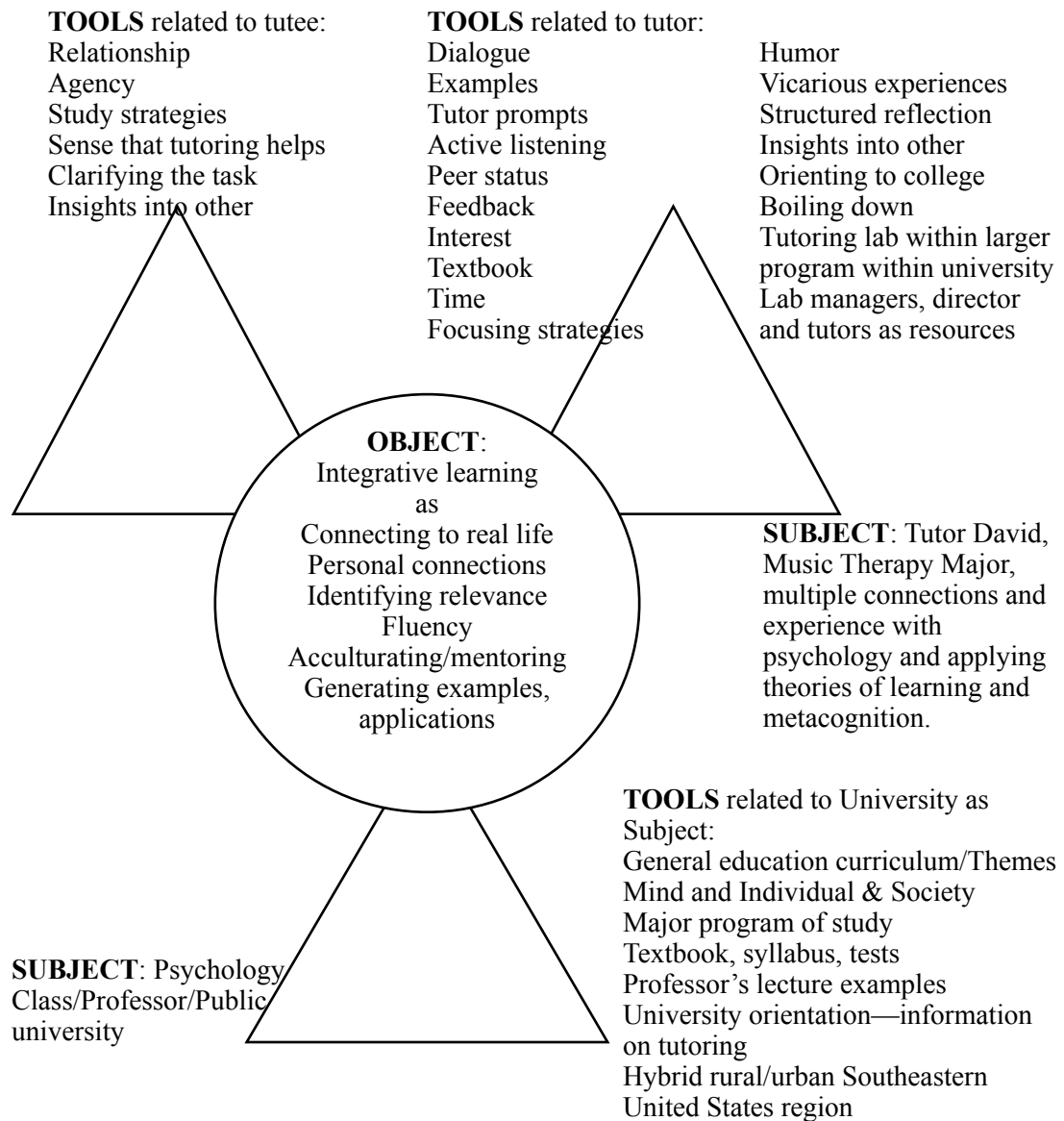


Figure 9. Activity systems analysis of psychology case. This individual case analysis of a psychology tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

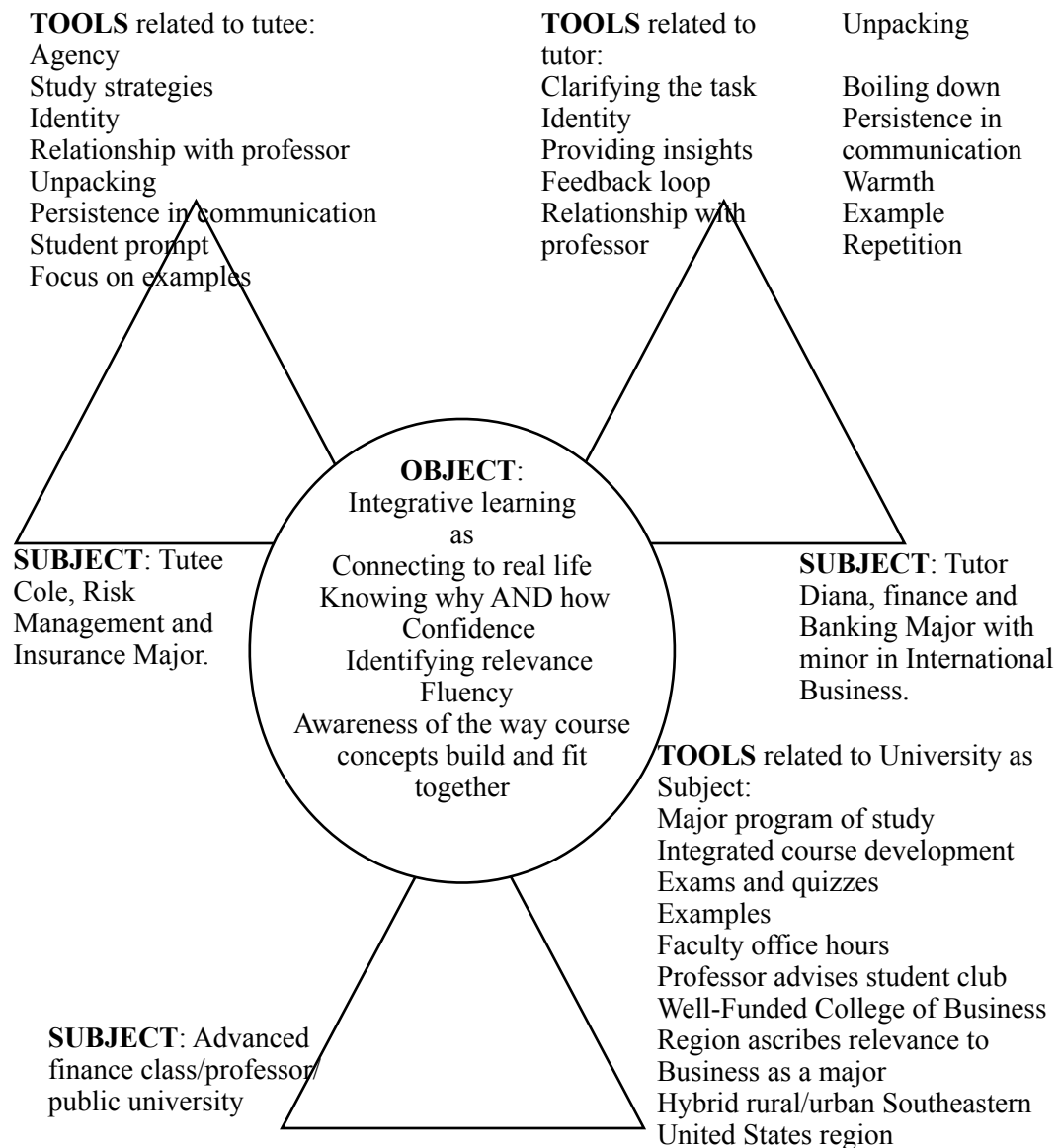


Figure 10. Activity systems analysis of finance case. This individual case analysis of a finance tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

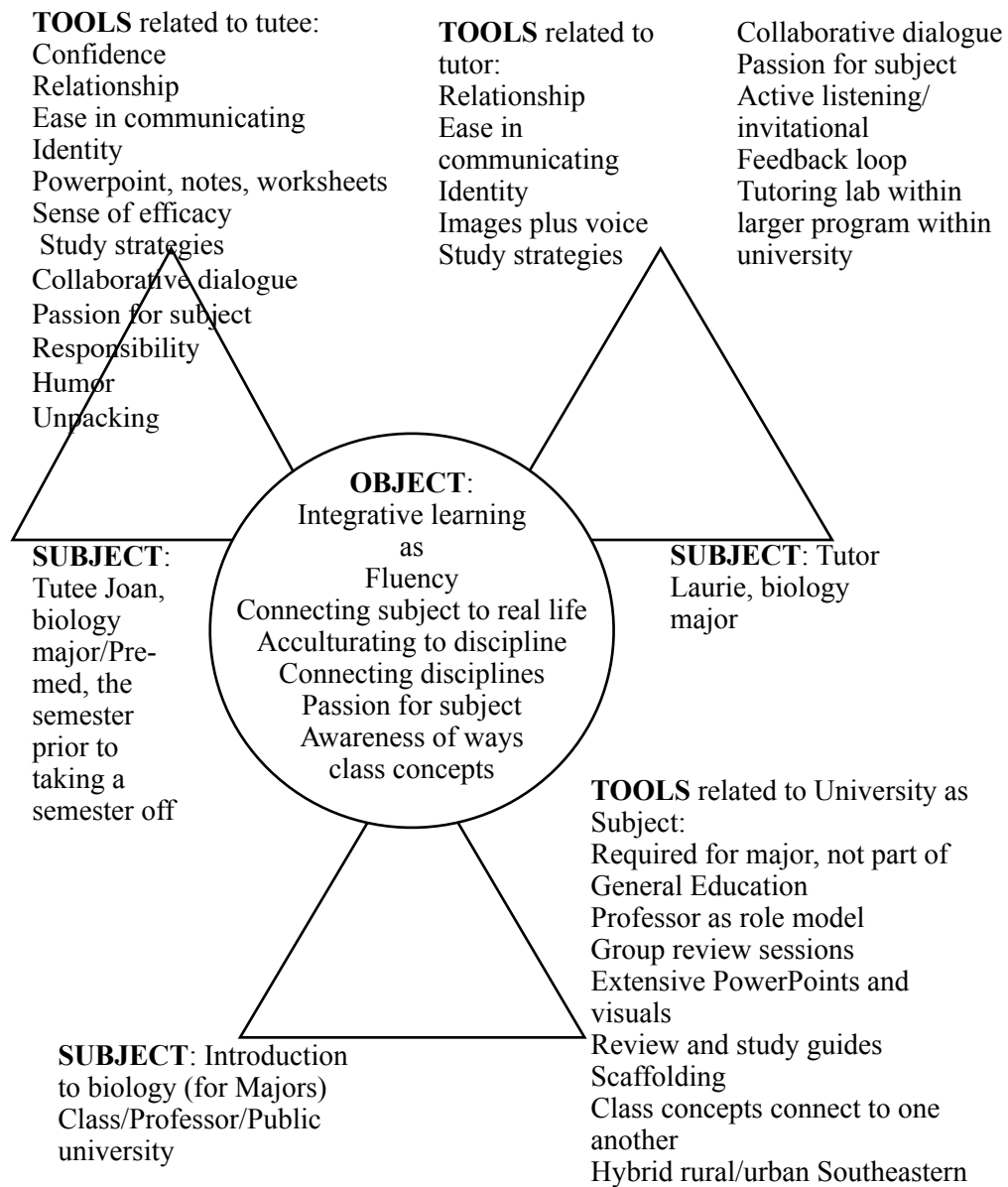


Figure 11. Activity systems analysis of biology case. This individual case analysis of a biology tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

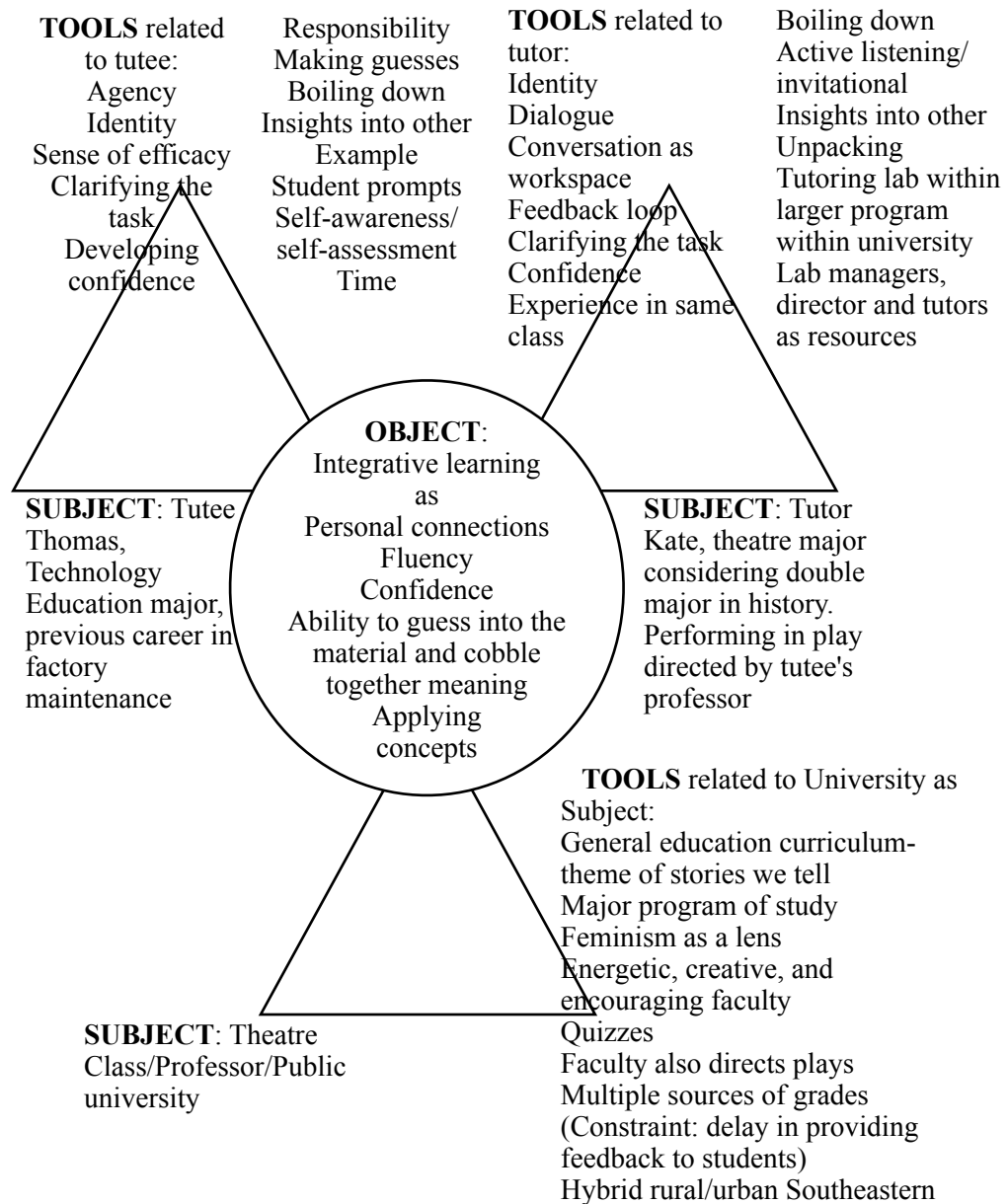


Figure 12. Activity systems analysis of theatre case. This individual case analysis of a theatre tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

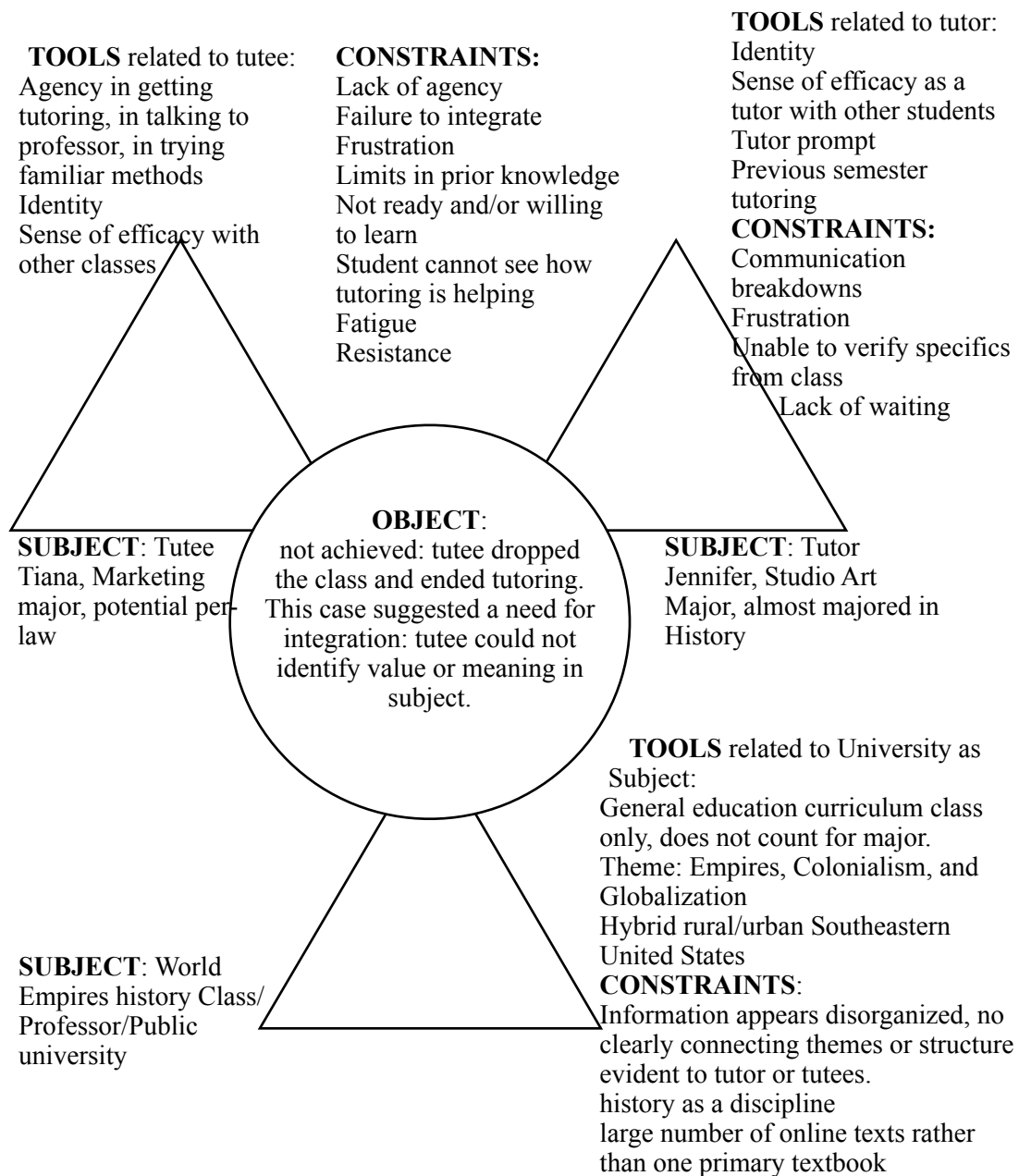


Figure 13. Activity systems analysis of history case. This individual case analysis of a history tutoring pair portrays the overlapping activity systems that enable and constrain integrative learning within this specific case. This analysis revealed additional tools/constraints influencing this case. Unless noted, tools typically enabled specific types of integrative learning, but they also had the potential to create limits.

Appendix G: Rating of Complexity Charts

| | | | | | | |
|------------------|----------------------------------|------------|---|--|---|----------------------|
| | Math tutor | Math tutee | Psych tutor | Psych tutee | Fin tutor | Fin tutee |
| Most complex | logarithmic functions | functions | medicines in psychology | memory | capital budgeting | time-valued money |
| | exponential functions | quadratics | drugs, legal and illegal | physical make-up of the brain | project evaluation criteria | financing capital |
| | polynomials | inverse | forgetting | social aspect of psychology and how we interact | internal and sustainable growth ratios | operating capital |
| | function transforma- tions | logarithms | sexual identity | different areas of study within psychology | financial ratios | working capital |
| | linear transforma- tions | tables | learning | how the outside world affects us psychologic ally | time-valued money | MAKERS |
| Least complex | | | what is psychology and its subsets | | | cash flow |

| | Bio tutor | Bio tutee | Thr tutor | Thr tutee | His tutor | His tutee |
|---------------|---|------------------|-------------------------------------|------------------------------|---|-----------------------|
| Most complex | photosynthesis (tie) | photosynthesis | Greek mythology (tie) | sign recognition (tie) | Every culture affects every other culture | Mongol Empire |
| | aerobic and anaerobic respiration (tie) | biochemistry | dramaturgy (tie) | Aristotle's 6 elements (tie) | Roman empire and its effects on its successors | Roman Empire |
| | DNA replication | cell respiration | breaking down scenes | plots | Distinction between religious and political empires | Roman Catholic empire |
| | thermo-dynamics (would have been higher with different student) | cell membranes | theatre styles | climactic structure | feudalism | Paul and the Bible |
| | parts of the cell | macromolecules | rising and falling action of a play | episodic structure | Islam | Rasheed Al Hasoun |
| Least complex | | | | atmosphere | Carolingian empire | |

Appendix H: Tutor Training Facilitator's Guide

The following questions and prompts could enhance tutor awareness of integrative learning in higher education and strategies to implement within their specific content areas. The facilitator should emphasize that these questions do not necessarily have one right answer, particularly given disciplinary differences. These discussion points could be spread out over several sessions, depending on how long each discussion unfolds. This training model relies on group discussions and reflective journal-writing. Ideally, the facilitator can also be available to the tutors as a faculty mentor throughout their time as tutors.

1. Ask tutors to list in their reflective journals key topics, skills, or vocabulary most likely to come up in their tutoring sessions.
2. Ask tutors to pick one or two and jot down reasons why this topic has value or matters.
3. Ask tutors to share/compare their answers. Do they notice distinctions between disciplines?
4. Ask tutors to brainstorm ways in their journals to prompt tutees to consider why a topic matters. Ask them to share a few answers and then predict how a tutee's answer may differ from theirs. Why might the answers differ?
5. Ask each tutor to comment (or journal then comment) why or how they gained confidence with their subject. Ask them how fluent they feel with the language of the subject they tutor. How did they gain this fluency?
6. Ask tutors if any of their experiences gaining confidence and fluency can be replicated or adapted to tutoring.

*Refer to the extended tutoring conversation below as point of discussion of acculturation and confidence and as an example of ways the tutor can serve as academic mentor and partner.

| Transcript | Analytical Comments |
|--|--|
| <p>Psychology Tutee Mark: <i>jumps in</i>—I think Sternberg’s more right than the other two.</p> | <p>Mark rarely volunteered comments in the first session—his willingness to engage at this point suggests progress made, likely thanks to David's habit to find frequent ways to engage Mark in conversation. I would also note that this rich exchange began with the example of Sternberg’s theory on intelligence, which relates to my later discussion of examples as tools for integrative learning</p> |
| <p>Psychology Tutor David: You think so? What is your justification?</p> | <p>David immediately redirected the topic to Mark, evidence of his skill in prompting dialogue. His word choice, “What is your justification?” provides a model of academic language that I will discuss further</p> |
| <p>Tutee Mark: I don’t think this is like accurate; I don’t think it’s split up accurately. Tutor David: How would you split it up?</p> | <p>Tutee Mark's language was vague, though their proximity to the textbook examples allows them to speak in a kind of shorthand. David continued the conversation as if he had been clear.</p> |
| <p>Tutee Mark: I don’t know, I think he does a good job in like people who are good at remembering, memorizing stuff . . . [they] can be good at multiple ones of these I don’t think it is split up quite . . . Tutor David: That way. Tutee Mark: Right Tutor David: That’s a good thing to think about as you’re studying for this.</p> | <p>David, as always, reinforced the study strategies practiced in the session.</p> |

| Transcript | Analytical Comments |
|---|--|
| <p>Tutee Mark: <i>speaking now at the same time</i>—There’s stuff behind why people are good at these things.</p> <p>Tutor David: Ohhh. So I see. Now I’m understanding what you’re thinking. So these while . . .</p> <p>Tutee Mark: There’s other reasons.</p> <p>Tutor David: . . . that they’re good at music or good at spatial. You know you’re not good at spatial but you’re good at something else. Which tends to make you good at spatial.</p> | <p>Tutor David elaborated on the hints provided by Tutee Mark. Tutor David's comfort in describing these topics in contrast to Tutee Mark's more stilted attempts matches a typical pattern in the tutoring cases.</p> |
| <p>Tutee Mark: Yeah.</p> <p>Tutor David: That’s an interesting theory. It sounds a little like you’re floating on the realm of Sternberg here. With what’s behind that creative intelligence is what’s behind spatial or being able to paint.</p> | <p>(Psychology Tutoring Observation 3, October 8, 2012)</p> |

7. Share that this study found that clarifying the task was a central function of higher education tutoring, and ask tutors to consider the following snapshots of a few ways that tutoring might aid in clarifying the task for the students:

In this session, Theatre tutor Kate defined Social Darwinism, which led to the following exchange:

Theatre Tutee Thomas: So I’ve got to be able to, say I’m reading the play that I suspect is this classification here, I’ve got to be able to read it and notice that there’s a situation going on where the weakest is, something’s happening to the weakest, and the strongest is prevailing?

Theatre Tutor Kate: Yeah, and a lot of you know, fantasy stories, you know the pauper becomes the prince.

After quickly solving a problem together College Algebra Tutor Lizzie: Wow! I think that was less work than the other one.

Tutee Rachel: Yeah.

Tutor Lizzie: And we were so intimidated by it.

Tutee Rachel: I think I don’t like the wording in this book.

Tutor Lizzie: The wording can be very confusing in that book. You should see the one right after it. (College Algebra Tutoring Observation 3, October 5, 2012)

Ask the tutors if these examples match or differ from their experiences or expectations? Ask students to journal and/or discuss how clarifying the task fits with attributes of confidence, fluency, and understanding why a topic they are studying matters.

8. Ask tutors: Why do you think the course you tutor is an important course overall? What led you to believe this?

9. Ask tutors to identify 1-2 topics from their list of key topics. For each of them, brainstorm in their journal:

- A. Any example
- B. A relevant metaphor
- C. A critical text or visual that would aid in understanding this topic
- D. Critical vocabulary related to this topic
- E. Personal example from your own life
- F. A way this topic relates to another discipline or theme

10. Ask the tutors to share any ideas from their journals that they liked. Then ask them to comment on how such examples could be useful in tutoring. Ask them how they might prompt the tutee to discuss one of these examples or to generate one of their own. Compare how this differs depending on discipline tutored. (Finance problems versus psychological concepts, for example).

11. Ask tutors to consider the following example of David and Mark eliciting personal examples as a way to create a friendly atmosphere while using time well.

In the following example, tutor David prompted Tutee Mark to relate to a personal experience with a psychological concept:

Tutor David: I'm sure we've all had that incidence of daydreaming in class

Tutee Mark: Yeah.

Tutor David: Especially...

Tutee Mark: All the time.

Tutor David: *laughs*. Or most of the time. Well. So it's important to be aware of that not only for just knowledge of psychology but for knowledge of ourselves, you know like oh, I'm losing consciousness, maybe I should focus a little more. And... neuroscience looks at the different activities of the brain and looks at you know you can see here in this picture.

What strategies does this example suggest for tutoring in terms of creating a friendly atmosphere and using time well? How else could a tutor integrate getting to know a tutee with fostering learning?

*If needed, suggest these prompts:

-What is your major?

-How does this course connect with your major? (If tutee cannot answer, tutor could follow-up with—“Well, let’s see if we can come up with any. You don’t want to feel this course is a waste of time...”)

-How does or could this course relate to other classes you are taking this semester?

12. Share the following list of prompts that sparked engagement.

| Goal | Actual prompt(s) |
|---|---|
| Prompt for personal definition | Psychology tutor David: Keep talking. I mean you know the definition’s here, but what’s your own definition? (Psychology Tutoring Observation 1, September 19, 2012) Finance Tutor Diana prompted the tutee to use the word itself as a clue in order to boil down its meaning: All this discount payback period is? Tell me what you think it is basically, the name of it, if you know what payback period is... what is discount payback period? (Finance Tutoring Observation 2, September 17, 2012) |
| Scaffold | College Lizzie wrote part of the problem on the board, then prompted Rachel: What do you do next? (College Algebra Tutoring Observation 3, October 5, 2012) Finance Tutor Diana posed questions about what clues are in the question to help Tutee Cole tackle the problem, such as in this example: Do we know what our payments are? Or how much they are going to save every year? (Finance Tutoring Observation 1, September 10, 2012) College Algebra Tutor Lizzie: All right, what do you think? You said the right thing; you just have to remember the function and I’ll give you the hint if you want me to. (College Algebra Tutoring Observation 4, October 9, 2012) |
| Assess prior knowledge | College Algebra Tutor Lizzie: First of all, tell me what you know about range? (College Algebra Tutoring Observation 1, September 4, 2012) |
| Narrow the focus (typically initiated by tutee) | College Algebra Tutee Rachel stated, “Now I’m still confused.” (College Algebra Tutoring Observation 4, October 9, 2012) Finance Tutee Cole asked, “So what gives it away that it’s APR?” in order to see hints in question that reveal problem-solving strategies. (Finance Tutoring Observation 1, September 10, 2012) |
| Invitational | Psychology Tutor David used short prompts to invite further comment, such as “Yeah,” “Okay,” “Go ahead,” and “Say a little more about that.” (Psychology Tutoring Observation 1, September 19, 2012) |
| Connect to major | College Algebra Tutor Lizzie paused to ask, “What was your major again?” to identify connections with the topic. (College Algebra Tutoring Observation 1, September 4, 2012) |

Ask tutors why these prompts might have helped spark discussion. Have you or could you use any? What prompts would you add to this list? Mention that examples spark discussion, too.

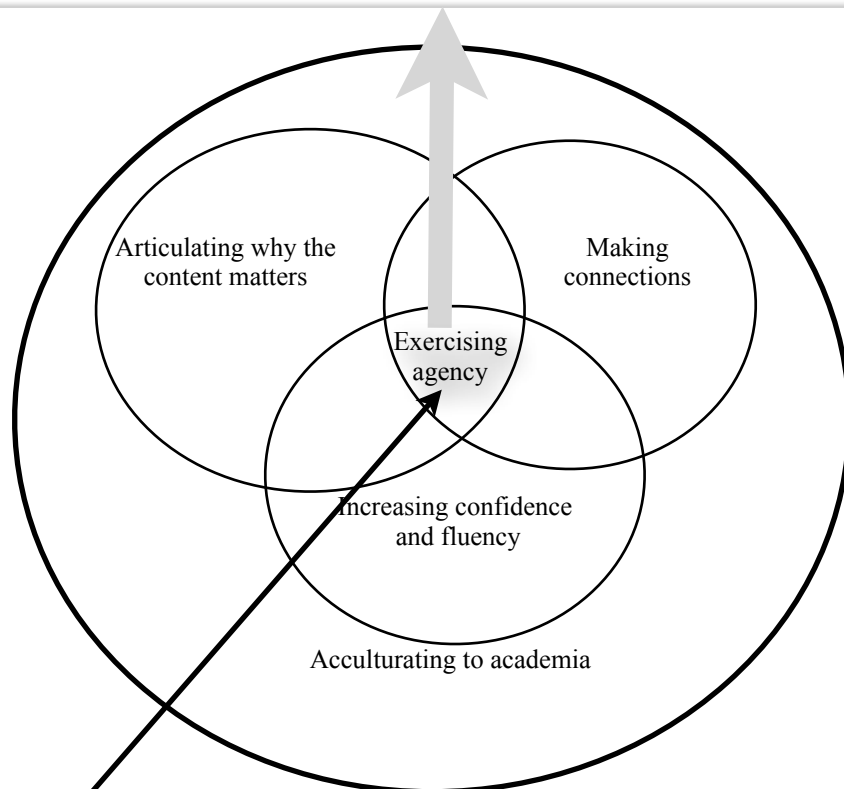
Highlight the need for tutors to scaffold discussion. Ask tutors what they can do to help a tutee speak more often, even when they have not yet mastered core concepts.

Ask tutors why it might be important for the tutee to talk often.

*Facilitator could refer to Chi et al.'s (2001) study of increased outcomes and the way our culture tends to value independence and autonomy; student may feel greater confidence if he or she talks more often.

13. Share model and definition of integrative learning below:

Within the rich culture of academia and by engaging in overlapping integrative learning processes, a capstone disposition develops in which the learner exercises agency in successfully navigating complex systems of information by drawing on integrated webs of knowledge.



Clarifying the task enables the learner to exercise agency. As this disposition evolves, the conception of the task expands. Tutoring in higher education scaffolds this aspect of learning in particular.

Definition: Integrative learning in tutoring relationships in higher education takes place as learners create relevance from required coursework by articulating why the content has value, making connections, and exercising agency.

Ask tutors to comment on the model and how it might fit with the discussion thus far. Encourage tutors to experiment by asking their tutees to reflect periodically on what is relevant in what they are learning, and for tutors to share what they find relevant. Stress that these strategies work best when they are strategically woven into the tutoring session, as tutor and tutee engage with the course content directly.

14. Ask tutors to reflect on the capstone disposition in the model, perhaps asking for examples of how or if they have developed such a disposition. How do they or could they exercise agency in the face of complex systems of information, such as within their major? What helped them reach this point or what is helping?

15. Ask tutors to write a reflection on the following question, and stress that there are no right answers; let this be a point of inquiry for the semester: In what ways could your tutoring sessions address the major concerns of your tutees and still foster their growth in both process and outcomes of integrative learning?

Follow-up periodically with tutors to ask for reflections, examples, or challenges related to this goal.

One follow-up question is to compare clarifying the task at the basic level, as in, what is on the syllabus, or what do we need to know for the test, versus what it means to clarify the task when faced with new contexts, vocabulary, culture, and conflicting information.

Clarifying the task enables students to exercise agency.

Vita

For more than a decade, Cama Duke has served in many capacities in the Learning Assistance Program at Appalachian State University, where she has the title of Director of Learning Skills Services. She has frequently taken on leadership roles for the unit, including developing a five-year strategic plan, developing and implementing assessment plans to address learning as well as program outcomes, and partnering with the tutoring program to support tutor training efforts. As lead grant writer for two funding cycles of the federal Student Support Services grant, Cama helped secure 2.5 million dollars to fund this specialized advising and academic support program for low-income, first-generation college students at Appalachian. She frequently trains and mentors colleagues, graduate students, and undergraduate students, and she has served as a practicum advisor for the Kellogg Institute for the Training and Certification of Developmental Educators. She has had experience teaching students of all ages. In the Learning Assistance Program, Cama has taught and developed a range of college success courses with an emphasis on dialogue, reflection, and applied practice.

Cama earned the Ed.D. in educational leadership with a concentration in composition and rhetoric at Appalachian. She also has a master of arts in reading education from Appalachian and a bachelor of arts in English with a concentration in comparative literature from Haverford College.