

**UNDERSTANDING ACADEMIC EXPECTATION CONSTRUCTION IN  
A HISTORICALLY MARGINALIZED LEARNING COMMUNITY:  
A COMPLEX SYSTEMS APPROACH**

---

A Dissertation  
Submitted to  
the Temple University Graduate Board

---

In Partial Fulfillment  
of the Requirements for the Degree  
DOCTOR OF PHILOSOPHY

---

by  
Jessica Hadid  
December 2024

Examining Committee Members:

Avi Kaplan, Advisory Chair, Psychological Studies in Education

Michael W. Smith, Teaching and Learning

Kristie J. Newton, Teaching and Learning

Wanda M. Brooks, External Reader, Teaching and Learning

## ABSTRACT

Students tend to perform at the academic level expected of them. Although most expectation research has centered investigation of decontextualized teacher-student dyads to understand whether students behaviorally confirm their teacher's expectation, we now know that expectations operate at whole-group or system levels. Since underestimation is more common within historically marginalized learning communities, these student groups can experience comprehensive systems of underestimation at the level of the institution, with lifelong consequences for success and wellbeing. While intervening in such systems is possible (e.g., changing beliefs or practices to ensure over-estimation), it remains difficult because researchers do not yet understand how academic expectations are constructed or what governs the process. This is essential knowledge for generating more equitable expectation systems. Academic expectations constitute a complex and dynamic system. However, methodologies traditionally used to investigate them have collectively assumed otherwise, likely masking the pervasiveness of underestimation in marginalized settings. In this ethnographic case study I examine expectation co-construction in one 11th grade classroom serving marginalized students. Analyzing over seven hours of classroom discourse and fieldnotes across a five week span, participant recall interviews, learning artifacts, and archival data, I investigate three interdependent system facets: teachers' and students' expectation-related discourse; sociocultural inputs operating at multiple levels; and the emerging role identities of teachers and three focal students in relation to expectations. I describe and map an integrated network of 27 emerging expectations, and explain the *how* and *why* of their situated co-construction by members of the learning community. I argue that individuals' awareness of their own contributions to the everyday behaviors, beliefs, and discourse that construct and reproduce underestimated expectations is critical to disrupting such systems. This study offers practitioners and researchers an adaptable methodology to build this awareness and inform subsequent interventions.

*This dissertation, and all that went into it, is dedicated to my family: To my mom and dad, whose unusual and skillful parenting gave me the wherewithal; to my sister, whose consistent belief in my potential (all the way back to our high school days) helped shape my educational endeavors; and to my children, who have been, and will always be the central motivation for my trying to make things better in this beautiful and suffering world.*

## ACKNOWLEDGEMENTS

Completing a dissertation demands a form of self-reconstruction that is, at times, far more challenging than designing, conducting, and writing up the study. One day you feel a reckless confidence in your yet untested capacity to do the work, on another you are paralyzed by self-doubt, and on yet another you encounter the measured and charitable buttressing by one or other of the generous individuals who have agreed (at least for the moment) to help you along. For me, these people have made all the difference. Avi Kaplan, my advisor and mentor, has aided and inspired me in countless ways. I appreciate in particular his kind and altogether human approach to mentorship, his shrewd and clearly delivered revision comments, and his knack for pushing my thinking in new directions. Even in my early days on the project, my PI and informal advisor Michael W. Smith, treated me as a partner and scholar, affording confidence and supporting my identity conception. More often than not I walked away from meetings with Michael having gained a critical piece of knowledge I did not know I was missing, but that he knew I needed. This project owes a deep gratitude as well to the participants of the Quest project—teachers and students alike—who over the years have welcomed me into their community, shared their reflections, and endured the intrusions that are unavoidable in a research endeavor. You have been my champions. The work was also made possible by the financial support of Ernst & Young in Philadelphia, to whom I am likewise grateful. My examining committee members, through their critical inquiries and unique expertise, each played an important role in bettering this research; their time and attention is deeply appreciated. With you all in mind, I will pay it forward. I am profoundly grateful as well to Debra Lynn whose scholarship and shared practice in Iyengar yoga has transformed the way I live in my body and mind. At a crucial time Debra taught me the all-encompassing power of breath, and the importance of harmonizing opposing forces. Finally, thank you to my family. Your support has held me steady, and your belief has shaped my path.

## TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
LIST OF ILLUSTRATIONS.....	xi
CHAPTER	
1. INTRODUCTION.....	1
Academic Expectations are Composite Beliefs Operating Within a System.....	2
Investigating Academic Expectations Necessitates a Complex Systems Approach.....	3
Identity Formation and Expectation Development are Integrated Systems.....	5
Language Mediates Academic Expectation Construction.....	7
The Current Study.....	8
2. REVIEW OF THE LITERATURE.....	10
Academic Expectations and their Effects are Differentially Distributed.....	10
Knowledge of How Expectations are Confirmed Remains Incomplete.....	12
TE Studies Assume a Three-phase Causal Sequence.....	13
(1) Teachers Form Expectations of Students' Likelihood for Success.....	13
(2) Students Perceive the Teacher's Expectation.....	16
(3) Students Enact Behaviors that Confirm or Disconfirm the Expectation.....	18
Less Common Process Models Imply Complexity.....	21

The Accuracy Argument is Founded on Flawed Assumptions.....	22
Assumption 1: Teachers are the Primary Creators of Expectations.....	24
Assumption 2: Teacher Expectations are Stable Entities.....	25
Assumption 3: Expectation Effects are Isolated From One Another.....	28
These Assumptions Misrepresent the System’s Complexity, Obscuring Equity Issues.....	30
Interdependence of Dynamical Components.....	30
Non-linear System Behavior.....	31
Enduring State of Emergence.....	32
Fractal-like Hierarchy.....	33
A Complex Systems Lens Reveals Likelihood of Compounding Effects.....	35
Once Process is Understood, Schools Can Propagate Positive Expectation Effects.....	38
Past Research has Generated Valuable Knowledge, but Consequential Gaps Remain.....	40
To Address Critical Gaps in Understanding, Reconceptualization of AE is Needed.....	42
3. METHODS.....	45
Research Questions.....	45
Research Design and Methodology.....	45
The Cases and their Selection.....	48
The Study Context.....	50
Study Sample.....	53
Data Collection.....	55
Theoretical Framing.....	59
Discursive Psychology.....	59
Dynamic Systems Model of Role Identity (DSMRI).....	61

Data Analysis Procedures.....	63
Transcribing and Becoming Familiar with the Data.....	63
Initial Coding Phase.....	66
Focused Coding Phase.....	69
Applied Coding Phase.....	72
Integrating Data Facets and Establishing Trustworthiness.....	73
Memoing and Jotting.....	73
Negotiating my Positionality.....	74
4. OUTCOMES OF ANALYSIS.....	77
Outcomes Organized by Meaning Facet.....	77
AE-Constituents Accrete Inconspicuously, Mediated by Discourse.....	78
Role Identity Governs Participant Meaning-Making and Actions.....	94
Omar.....	94
Frank.....	98
Haylee.....	103
JH.....	110
Ms. Mahoney.....	114
Sociocultural Control Parameters Afford and Constrain Actions.....	125
Domain Level SCCP.....	127
Classroom Level SCCP.....	128
School Level SCCP.....	130
Community Level SCCP.....	131
District (and beyond) Level SCCP.....	132

Integrated Outcomes.....	133
The Norm for Students’ Late Arrival: An Emergence Narrative.....	136
Adding Layers to Understand the Integrated System.....	141
5. DISCUSSION OF OUTCOMES.....	145
How Does the AE System Identified in the Setting Speak to Extant Literature?.....	148
How Does Discourse Mediate Teachers’ and Students’ Co-construction of Academic Expectations in the Setting?.....	152
How Do Teachers’ and Students’ Role Identities Shape—and Get Shaped By—Academic Expectation in the Setting?.....	156
To What Extent and in What Ways Does the School’s Institutional Culture Inform the Collective Construction of Academic Expectations in the Classroom?.....	160
Implications for Theory.....	163
Implications for Research.....	165
Implications for Practice.....	168
Conclusion.....	170
REFERENCES.....	172
APPENDICES	
A. EMERGING ACADEMIC EXPECTATION TRAJECTORIES.....	180
B: CONTEXTUALIZED NARRATIVE OF DATA GENERATION INTERVAL.....	182
C: <i>THE KITE RUNNER</i> QUIZ.....	191
D: ILLUSTRATED EXAMPLES.....	192

## LIST OF TABLES

Table	Page
1. Amount of Data Collected, by Type.....	57
2. Jefferson Transcription Notation Used in Current Study.....	66
3. Possible Categories of AE-Constituents.....	68
4. AE Under Construction Identified in the Data.....	83
5. Teacher Actions Directly Related to <i>Norm for Students' Late Arrival</i> .....	137

## LIST OF FIGURES

Figure	Page
1. The Dynamic Systems Model of Role Identity.....	43
2. Focused Coding Process Applied to Meaning Facets.....	71
3. Example of Emerging AE Trajectory Over Five-Week Data-Generation Interval.....	86
4. Relations Between Emerging AE in Setting.....	88
5. Sociocultural Control Parameters Observed.....	126
6. A Single Academic Expectation's Emergence, Visualized.....	135
7. Working Model of AE Co-construction in Setting.....	143
8. Thumbnails of High Frequency AE Trajectories.....	180
9. Scanned Copy of <i>The Kite Runner</i> Quiz.....	191

## LIST OF ILLUSTRATIONS

Illustration	Page
1. Extract 1.....	79
2. Extract 2.....	80
3. Extract 3.....	81
4. Extract 4.....	90
5. Extract 5.....	117
6. Extract 6.....	122

## CHAPTER 1

### INTRODUCTION

Academic expectations affect students' classroom performance. They can initiate and reinforce actions, but also impair and undermine them. When students' act in accordance with the expectations they perceive, they are said to "behaviorally confirm" the expectation. The phenomenon (sometimes referred to as a self-fulfilling prophecy; Rosenthal & Jacobson, 1968), may be associated with compounding of negative effects, and reduced student opportunities (Rubie-Davies et al, 2014). Although behavioral confirmation can work for good and ill, studies indicate negative effects are stronger than positive effects (Jussim et al., 1996). Due to a complex system of factors, academic expectations (AE) in historically marginalized communities can be inordinately low (Rodriguez, 2012; Rubie-Davies et al., 2007b). While some studies suggest marginalized students are more vulnerable to expectation effects (Johnston et al., 2019), others suggest the effects in such settings are more potent (Ready & Wright, 2011). While researchers have modeled processes of behavioral confirmation their models have focused on *whether* an effect takes place, revealing little about *how* the process transpires (Johnston et al., 2019). Identifying confirmation moderators (e.g., social class, race/ethnicity; Jussim et al., 1996) and mediators (e.g., academic self-concept; Zhou & Urhrhne, 2013) has often been the focus of investigations. Although decades of expectation research have produced important knowledge, to date researchers have yet a partial understanding of how AE are constructed, and how they render effects. Most research neglects to account for the complexity of participant interactions in expectation construction processes, and implies that teachers are the sole expectation creators (Weinstein, 2008). Nor have researchers yet examined how role identity (e.g, *teacher, student*) influences expectation construction. The current study was driven by a purpose to better understand the processes of AE construction in a learning setting. If practitioners and researchers can "see" the process of AE construction as it transpires they can begin to understand the

mechanisms that afford and constrain the development of negative and positive expectations, and formulate strategies to guide AE development in optimal directions.

### **Academic Expectations are Composite Beliefs Operating Within a System**

As individuals, we regularly construct ideas about what will and will not occur. In academic settings, these ideas are partly founded on perceptions of what has occurred in the past (e.g., *Do students typically arrive to this class on time?*), and perceptions of the individuals implicated in anticipated actions (e.g., *Is this teacher strict or permissive?*). Such perceptions are subject to an array of (often implicit) biases and assumptions. Alongside these ideas exist more broadly held ontological beliefs relevant to the context. These may be deeply entrenched ideas that have “grown roots” over time. For example, one teacher might construe “doing well in school” as turning in the work on time, while another may construe it as expanding one’s conceptual understanding of the subject matter. Such ideas can lay the foundation for academic expectation construction.

In the current study I define academic expectations as *ontological and epistemological assumptions with varying degrees of certainty, complexity, and credibility about future consequences of success in a particular task and situation by particular students' action, held by any member of the collective and as relayed through discourse*. I assume AE to reflect an interdependence between the demands of the context and task, the characteristics of the students, and the emerging relationship of these elements. An AE may apply to a discrete task (e.g., responding to an item on a worksheet), or may apply broadly and across a span of time (e.g., completing a semester in an Honors English class). An AE may regard situated behaviors (e.g., sustained attention to task), or may regard more easily quantifiable actions (e.g., turning in work by its due date). Within any AE system in a given classroom, I assume that expectations will be conveyed differently by different individuals (including but not limited to implicit versus explicit expressions, and intentional versus less conscious expressions), and will be perceived differently by different individuals. I assume these variabilities will also operate as a function of situational

factors. Because AE are contextualized, integrated with personal experiences, and socially constructed over time, they constitute complex emergent phenomena. Paired with their subjectivity, these qualities make AE difficult for researchers to measure and track. It has not been my intention to comprehensively map the entire process of AE construction in a classroom; rather, I have tried to collect and analyze an array of representative moments of AE construction to identify their theoretical underpinnings.

Although AE researchers have prioritized examination of *teacher* expectations, I argue for a broader conceptualization of the construct. While the expectations that teachers hold for their students are critical, centering the teacher in this schema has impacted research trajectories in important ways. First, the suggestion that the most important AE come *from* the teacher imposes what may be an undue burden on teachers. But perhaps more importantly, locating the central expectations within the teacher is likely to underrepresent or unintentionally exclude other important factors (e.g., student beliefs, institutional norms, structural racism) critical to AE construction. The complex interactions inherent to the AE system, and implications for studying them, are examined next.

### **Investigating Academic Expectations Necessitates a Complex Systems Approach**

Complex dynamic systems (CDS) demonstrate behavioral characteristics that make examination of their components less than straightforward. A CDS is an open system, implying interdependence with other systems in its midst. Simultaneously, the CDS is subjected to the affordances and constraints of its own control parameters (e.g., its sociocultural context). Its system components exhibit interdependence with one another, commonly resulting in non-linear behavior marked by a self-organizing property resulting from an ever emerging series of positive and negative feedback effects that both perturb and maintain the system's stability. Although the system may move ever closer to becoming stable, it can never actually accomplish this; instead, it continually emerges. These characteristics make predicting CDS behavior a tenuous endeavor. I submit that AE construction and confirmation processes constitute such a system. Thus,

examining these processes should be approached in ways that accommodate their complex dynamism.

This study takes place in a secondary honors English class set in a large urban high school that serves a historically marginalized community. I assume AE in this setting are responsive to a nested hierarchy of interdependent control parameters. At the outermost level are federal and state policies, followed by district and community level parameters including shared beliefs and social knowledge (Claire & Fiske, 1998), and control parameters at the school level, some of which help make up the institutional culture (e.g., a tracking policy; cell phone policy; Hattie, 2009). Subject domain effects (e.g., performance differences by gender, Timmermans et al., 2018) and class-level effects (e.g., class composition effects; Dompnier et al., 2006) have also been documented by AE studies. Temporal factors have also been shown to have effects on expectation outcomes (e.g., early versus late in the school year; Brophy, 1983). At the individual level, participants' past and current experiences, socioemotional aspect, and personal attributes (e.g., attractiveness; Hattie, 2009) can all play important roles in academic expectation construction and consequences. Each level of this dynamic system of influences is further complicated by the sociohistorical context from which it arises, affording and constraining its potentiality.

While many studies within the AE domain have measured effects of mediating (e.g., students' perceptions of teacher support) and moderating (e.g., school characteristics) factors within this system, there remains a significant need for studies that examine the context-embedded multi-directional processes of AE construction and confirmation (Timmermans et al., 2018). For example, although it is clear that marginalized populations are uniquely vulnerable to negative teacher expectations (Hinnant et al., 2009; Jussim et al., 1996), we know little about how and why these effects occur, a knowledge gap that undermines our ability to guide effects in positive directions. Developing such knowledge implies the need to reconceptualize AE. I argue for a shift from viewing the AE construct as one that primarily

exhibits the properties of simple systems (e.g, linearity of processes), to one that is rooted in the properties of complex dynamism. Understanding AE as a CDS implies the need for a research trajectory that acknowledges and makes strategic use of these properties, aligning theory with methodology to eventually arrive at a deep understanding of AE construction and confirmation processes, including how, why, and under what conditions such processes occur.

In a similar vein, applying a complex systems perspective when reviewing past AE research can generate critical renewed understanding. As noted by Brophy (1983) in his early review of confirmation processes within educational settings, the expectation scholarship has most often examined relations between teacher-student dyads within a circumscribed time and space (Brophy, 1983), which is problematic. Some researchers suggest that student performance in marginalized communities exists within a *system of disadvantage* (Owens, 2022; Rubie-Davies et al., 2006) in which effects compound over time. Besides presenting issues of measurement accuracy (e.g., use of prior year performance as control), neglecting to view the embedded nature of expectations within its larger system has likely served to misrepresent overall findings in a way that effectively veils systemic inequities in education, implying broad social repercussions.

### **Identity Formation and Expectation Development are Integrated Systems**

As an assumption, an AE is an identity-based phenomenon. Assumptions, one might argue, are rooted in an agent's emerging system of beliefs. Those beliefs exist interdependently with the individual's goals, self-perceptions, and action possibilities, all components of their role identity (Kaplan & Garner, 2017). Investigating the inner workings of an AE system therefore necessitates the investigation of teachers' and students' processes of role identity formation. Classroom relationships and interactions are shaped in part by identity negotiation (Swann, 1987); participants' individual and collective identities also help shape the social parameters of the space in important ways. Because actions are identity-informed, participant decision making in the setting (e.g., *Should I focus on this assignment, or continue playing this video game?*) emerges in conjunction with the content, structure, and processes of participants' systems of role

identity (Kaplan & Garner, 2017). In the current study I employed the dynamic systems model of role identity (DSMRI; Kaplan & Garner, 2017) both as a conceptual framework that enables meaning-making in the review of AE literature, and as a methodological framework that enables meaning-making at the empirical level of the current study. The DSMRI stipulates four interrelated categories of identity content: ontological and epistemological beliefs, purpose and goals, self-definitions and perceptions, and perceived action possibilities. Each category also includes the emotions that emerge and interact in regard to that content. I apply DSMRI analysis to examine identity systems of five focal participants. Also, because each collective identity system exists (i.e., the identity system of the whole class) amid a network of control parameters such as institutional policies, these seemingly distal parameters are included in my analysis. For example, when I investigated how participant actions in the classroom reflect the values and ontological beliefs of their broader systems, I explored ways that the institution's discourse patterns are perceived by participants, and subsequently crafted into different action possibilities by the participants (teachers and students alike). I examined how these processes manifest as participant behaviors in the setting, and how they may be affecting focal participants' identity negotiation.

In the current project I sought to map the ongoing AE construction events in conjunction with identity formation processes using the DSMRI framework. In keeping with my theoretical approach, the DSMRI applies a complex systems perspective; it conceives of identity negotiation as contextually situated, non-linear, and emergent. The DSMRI also views identity components as dynamically interdependent with one another. These features accommodate the multi-directional, emergent, and highly contextualized nature of the expectation construction processes in relationship with teachers' and students' identity systems. Further, I integrated my DSMRI analysis with a systematic investigation of classroom discourse.

## **Language Mediates Academic Expectation Construction**

The formation of AE is managed through social interaction. Specifically, written and verbal discourse are primary tools of the process. Therefore, a systematic investigation of discourse in the setting is likely to bring about important insights and clarifications about how the construction process transpires and what informs its various processes. Into the DSMRI framework I integrated the practices of discursive psychology (McMullen, 2021; Wiggins, 2007) to analyze participants' function-oriented talk and text. Discursive psychology is a form of discourse analysis that is particularly concerned with the action that an utterance means to achieve, and less so with the denoted or literal meaning of uttered words. For example, when a teacher asks a student, "Do you think you should give it a proof-read before you turn it in?" the teacher is not expressing curiosity about whether the student thinks a proof-read is needed. Rather, they are suggesting to the student the need for a particular action. Because AE are often conveyed in this indirect manner, the focus on action over representative meaning makes discursive psychology especially suitable for understanding AE construction. Within AE research, such implicit investigative methods have produced more reliable results than explicit methods such as teacher self-reports of expectation (van den Bergh et al., 2010). This is likely because implicit inquiries operate below participants' level of awareness, capturing "automatic" or unorchestrated behaviors, thus circumventing problems related to social desirability bias (Peterson et al., 2016).

Applying discursive psychology to identity investigation is suitable for similar reasons. While teachers' and students' AE processes operate integrally with their identity systems, expressions of these identity systems and their formation processes tend to occur without participants' conscious awareness. Even if individuals or groups possess awareness, such inner processes are often difficult for participants to articulate. Its potential for nuanced observation makes discursive psychology an ideal form of inquiry. Integrating it with the DSMRI enables a

systematic analysis of focal participants' identity formation processes through examination of their action-oriented speech and written expression.

### **The Current Study**

My interest in AE emerged out of several years of teaching secondary English in Title 1 schools. For whatever reason, I tended to hold what others termed “high expectations” for my students' academic performance. I know this because my students told me. Most often (not always), such information was relayed in gratitude, and often in hindsight, with the challenge posed having passed. The resolute message from these students was that holding them to such expectations helped them realize abilities they did not know they possessed, generating pride and a feeling of agency. My sense was that my expectations were not so much “high” as different from what students were used to. In this way my expectations were “overestimated” because they conveyed to students that I believed they could do something in a way they had not before considered doing it. My reputation as a teacher with “high expectations” followed me. Working in different schools with vastly different institutional cultures showed me that academic expectations were evaluated within each culture, but never across them. More often than not, students and teachers immersed in their learning environment accepted without question the expectation standards that seemed to be set within. How, I wondered, did these standards develop, and why were some set clearly below the capabilities of the students they served? Most importantly, why was nothing being done to address such discrepancies? When I began to read the literature on AE I came to appreciate some of the intricacies involved, and I also began to develop ideas to address the issue. However, these approaches were all dependent on practitioners and researchers having some grasp of *how* and *why* AE come to be. The literature had little to say here. Because I was helping to implement an ongoing intervention at a local high school, I began to focus my attention on the expectation culture in that setting, imagining methods to capture the AE construction processes that I was witnessing every day.

In this study I sought to “map” critical and representative moments of AE construction to such an extent that I might identify the theoretical principles informing construction. I examined in depth the collective construction of AE in one English classroom, analyzing classroom discourse to understand how regularly occurring but often overlooked micro-processes in the sociocultural context interact with agent’s role identity development to help construct individual and collective beliefs about academic possibilities. In this ethnographic case study, I aimed both to build procedural knowledge of AE construction in the classroom, and to develop a replicable method for building additional procedural understanding across qualitatively different learning contexts. To this end, the work is driven by the following research questions:

1. How does discourse mediate teachers’ and students’ co-construction of AE in the setting?
2. How do teachers’ and students’ identities shape—and get shaped by—AE in the setting?
3. To what extent and in what ways does the school’s institutional culture inform the collective construction of AE in the classroom?
4. How can the process of mapping AE construction in one setting best be applied in other settings?

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### **Academic Expectations and their Effects are Differentially Distributed**

Research on academic expectations has centered on the self-fulfilling prophecy concept. Thomas and Thomas's (1928) notion that if we define situations as real they are "real in their consequences," was taken up by Merton (1948) in his essay on the topic. Outside of education the self-fulfilling prophecy phenomenon was adopted by social scientists who applied the term "behavioral confirmation" (Swann, 1987; Claire & Fiske, 1998). Terminology aside, this constructionist notion suggests that the beliefs of some individuals (e.g., teachers) *about* other individuals (e.g., students) has the power to confer that believed reality on the other, without intention.

By the second half of the 20th century the self-fulfilling prophecy concept was being applied in education contexts, most notably in the landmark Pygmalion in the Classroom study (Rosenthal & Jacobson, 1968). Involving 255 1st through 6th grade public school students and their teachers, the study manipulated the expectations that teachers held for a group of randomly selected students by providing those teachers with fictional information about the students' superior intellectual potential. Eight months later the randomly selected students whose abilities had been experimentally overestimated, were found to demonstrate significant growth compared to a control group. The Pygmalion study received notable criticism for an array of measurement and analysis issues that challenged the validity of its findings (Thorndike, 1968; Jussim & Harbor, 1996). Along with other early replication attempts, effect sizes of the Pygmalion studies are generally thought to be overestimated (Jussim & Harbor, 2005). Despite the study's shortcomings, teacher expectations (TE) came to be viewed by many as a potential contributor to social inequality in schools (Agirdag, 2018), initiating an extensive and evolving field of inquiry.

Quantifying students' self-fulfillment of TE has been a fraught and complex endeavor with only occasional instances of consensus. Brophy's (1983) narrative review found effects in

typical classrooms to be small, suggesting “high expectations for certain students might raise those students’ test scores on an average of 5%-10%, and low expectations might lower other students’ performance correspondingly” (p. 634). The finding was later corroborated by Jussim and Harbor (2005) in their review of three and a half decades of TE research. Raudenbush’s (1984) review of 18 experimental studies on TE effects also pointed to small effect sizes ( $d = .11$ ) for IQ expectancy, but when these studies were weighted by sample size, effects diminished. Raudenbush’s review did establish that length-of-time of teachers’ contact with a student prior to being given fictitious information on that student’s intellectual potential explained some effect size variation. More recently a meta-analysis by Hattie (2009) found small to medium TE effect sizes of student achievement, depending on situational factors, with fewer than 10% of students reportedly experiencing effects.

Effect sizes have been found to differ as a function of outcome variable measured, population sampled, duration of study, and situational constraints. Whereas initial studies examined expectancy for student IQ, researchers later examined expectancy for other performance measures including students’ effort, classroom behavior, and motivation (Wang et al., 2018). Grade level, group size, disciplinary domain, and the time of year in which data are collected have all been shown to affect student outcomes (Brophy, 1983; Jussim et al., 1996). Importantly, studies also suggest that social class and race-ethnicity moderate effects; more detrimental and more frequent self-fulfilling prophecies are found within stigmatized student populations than within majority population samples (Jussim et al., 1996). Although these differences preclude effect size consensus, there is broad acknowledgement by scholars that TE can and do create self-fulfilling prophecies which help shape student outcomes, and that these effects are more detrimental for stigmatized populations (Jussim & Harbor, 2005).

Although TE can shape student outcomes in negative and positive ways, findings across a wide array of settings suggest that ill effects are more pronounced (Ready & Wright, 2011). For example, van den Bergh et al. (2010) examined 41 teachers and their 1st through 6th grade

students in an ethnically diverse area of the Netherlands to understand how teachers' prejudiced attitudes related to that nation's ethnic achievement gap. In addition to ethnic minority students experiencing negative TE effects, this study also found that teachers' attitudes toward majority population students (i.e., Dutch origin) resulted in those students' more positive outcomes. More recently Szumski and Karwowski (2019), who studied class context across a large sample of middle school math students (n = 1488), found that prevalence of students with disabilities in a classroom negatively affected TE for the entire class. There is also evidence that TE play a role in *maintaining* achievement gaps (Cooper & Good, 1983) and upholding status quo low performance in some settings (Hamilton et al., 1990). And as noted earlier, negative TE are found to have stronger effects than positive expectations (Jussim et al., 1996; Szumski & Karwowski, 2019).

Most TE research has focused on whether, and to what extent, students confirm expectations. Although researchers tend to agree that a "self-fulfilling prophecy," or behavioral confirmation effect takes place in a small percentage of situations, there is less consensus on how and why this occurs. While there is general agreement that stigmatized populations suffer greater negative effects than do majority populations (Ready & Wright, 2011), research has yet to explain the finding. Protecting vulnerable populations from negative AE requires an understanding of the process by which expectations are constructed and disseminated.

### **Knowledge of How Expectations are Confirmed Remains Incomplete**

Although AE scholarship dates back half a century, important areas of inquiry remain limited in scope. In his extensive review of empirical investigations of TE effects Brophy (1983) notes that none of the studies examined *how* teachers arrive at their expectations; he also suggested the process entailed more complexity than previous researchers had supposed. Although research tends to present teachers as the "starting place" of the behavioral confirmation trajectory, there is no research to support this assumption. The generative process of forming AE remains largely unmapped. Whereas some early models of the behavioral confirmation processes

touch on the importance of context, and some acknowledge the complex nature of the process, most models depict behavioral confirmation as decontextualized and linear. Research focused on aspects of the process typically identify mediators using correlational methods like path analysis that assume variables interact according to a predictable (linear) set of behaviors. I question the viability of this approach and point to the consequential knowledge gaps it leaves.

### ***TE Studies Assume a Three-phase Causal Sequence***

Most studies that examine behavioral confirmation processes in educational settings presume the following sequence occurs: (1) Teachers form an expectation about students' likelihood for success; (2) the expectation is perceived by the student; and (3) the student enacts behaviors that align or do not align with the expectation (Urhahne, 2015). If the expectation formed in the first phase was over- or underestimated, there is potential for the student to “fulfill” the teacher’s “prophecy.” Researchers typically use students’ prior performance as a control variable in determining whether behavioral confirmation, or self-fulfillment of the prophecy, occurred. Most models apply a decontextualized lens in which the first phase (teachers’ forming an expectation) occurs in isolation from other factors. Researchers typically employ a dyadic approach in which they investigate multiple cases of one teacher in relation to one student. This aligns with implications of the three-phase sequence suggesting TE effects are unidirectional. Initially demonstrated in a study by Brophy and Good (1970), the dyadic model likely influenced models that followed, helping to shape the broader TE research agenda (Proctor, 1984). In the following subsections I describe each phase in the sequence as it is typically portrayed. Within each phase I present relevant research findings, and identify consequential gaps.

**(1) Teachers Form Expectations of Students’ Likelihood for Success.** Some studies acknowledge this initial expectation develops as a result of important influences, but most do not explore those influences. Studies typically attempt to measure teachers’ differential expectancies for different students in the room based on presence of particular traits (e.g., race-ethnicity, gender, age) as opposed to whole class expectancies (Szumski & Karwowski, 2019). There is

extensive variability across studies with regard to what outcome variable is measured. The majority of TE studies have examined expectations of student achievement outcomes (e.g., IQ, grades, scores on achievement tests), while a smaller contingent have examined students' socio-psychological outcomes (e.g., academic self-concept, motivation), and even fewer have examined expectations for students' classroom and learning behaviors (Wang et al., 2018). On occasions researchers have examined TE for students' future college attendance (see Gregory & Huang, 2013 for example). Overwhelmingly, the unit of analysis in these studies has been the individual student in relation to their teacher.

While most studies measured effects on students' academic achievement, researchers find a variety of factors enter into teachers' forming of achievement expectations, only some of which relate directly to student achievement. Urhahne (2015) found that students' demonstration of motivation and positive emotions helped shape teachers' estimations of high expectation students. Attribution styles also had effects; when students attributed action consequences to themselves (as opposed to an external actor or force), their teacher tended to form higher expectations for them (Zhou & Urhahne, 2013). Previous performance was also a factor in expectation formation. Dompnier and colleagues (2006) used path analysis to understand teachers' initial judgment-making of 636 third grade students in France. Findings suggest teachers formed higher expectations of students when their previous test scores were higher, and when their performance in another discipline was strong (i.e., halo effect); alternatively, when a student had repeated a grade, teacher expectations dropped. Collectively, the diversity of factors found to contribute to expectation formation indicate a level of complexity that researchers have not been able to capture due to constraints of selected methodologies.

Researchers have also examined effects of teacher bias on expectation formation. Bias has been identified as a potential source of ethnic achievement gaps, but documented effects of such instances are minimal to insignificant (Jussim & Harbor, 2005). Some have suggested, however, that use of teacher self-reports instead of implicit measures that circumvent social

desirability bias may play an important role in these findings (Glock & Kovacs, 2013; Peterson et al., 2016; van den Bergh et al., 2010). Self-reports may also be unreliable due to participants' limited self-awareness; some studies suggest teacher judgments of student performance are affected by teachers' implicit attitudes that remain veiled even to those teachers. Such unconscious forms of bias may well contribute to ethnic achievement gaps (Peterson et al., 2016; Wang et al., 2018). Instruments that capture implicit biases remain limited.

Occasionally researchers have examined collective or group influences on expectation formation. Dompnier and colleagues (2015) found a "class context effect" whereby "the higher the class average in a given discipline, the lower the teacher's rating in that discipline" (p. 129). This suggests that teachers form expectations based in part on how a student compares to others in that group. In a classroom of very low performers, for example, a student may be construed as having higher potential than she would garner in a class of higher performers. The inverse also applies. The finding clarifies the critical role that situational factors can play as teachers' form their expectations of individual students. Rubbie-Davies and her team (2007b) also examined whole class effects, identifying them as an important missing link in understanding initial expectation construction.

Hamilton and colleagues (1990) note that teacher stereotypes at the group level can play an important role in this initial stage of the behavior confirmation process. Along similar lines Agirdag (2018) studied the role of "teachability culture" (collective staff beliefs about the degree to which students in that setting can be taught) in students' science achievement. They found that school SES moderated teachability culture, which was significantly related to students' science achievement. Whereas Brophy (1983) noted that "differential treatment of intact groups and classes may well be a much more widespread and powerful mediator of self-fulfilling prophecy effects on student achievement than differential teacher treatment of individual students" (p. 643), the dyadic approach has remained the normative mode of investigation.

In sum, the vast majority of studies investigating the expectation formation phase examine teacher expectancies of individual students' achievement on a test standard to the domain. However, a minority of studies that examined more diverse outcomes demonstrated that expectation formation is a complex and variable process and thus may demand greater alignment between method and theory. Group level effects and the difficulty of effectively capturing data when bias is involved compound this methodological challenge. Research examining the various processes by which AE are constructed and maintained is needed, as is research that explores the sociocultural and sociohistorical contributions to such construction.

**(2) Students Perceive the Teacher's Expectation.** In keeping with their expectations for students, at this stage the teacher is presumed to behave in alignment with the expectation. In dyadic studies, this behavior is thought to be differentiated according to the student with whom the teacher interacts. The differentiated and expectation-aligned treatment is then thought to be perceived by the student, which in turn mediates the student's self-perceptions and other self-related beliefs (Proctor, 1984). Whereas extensive studies have been conducted on the first and third phase of the behavioral confirmation process, this phase has received far less attention by researchers.

Several studies examined factors that mediate students' perceptions of teachers' expectations, and factors that mediate relations between these expectations and students' behavioral confirmation of the expectation. In their review of more than 30 TE studies Harrison & Rosenthal (1986; Rosenthal, 2003) identified four types of teacher-to-student communication that teachers unknowingly reserved for their higher expectation students across the studies: they taught higher expectation students more content, called on them in class more often, provided them more differentiated feedback, and tended to do all of these things with more socioemotional warmth when compared to communication with lower expectation students. Similarly, Brophy (1983) found that teachers provided high-expectation students more praise, and were more accepting of their ideas. More recently Urhahne (2015) used multilevel mediation analysis in

determining that students' perceptions of teacher accessibility mediated relations between TE and student outcomes. In this study low-expectation students found it difficult to build positive relationships with their teachers. These studies suggest that teachers' concrete, moment-to-moment behaviors (informed by their expectations) play a role in how students understand their academic selves in the setting.

Such beliefs help make up students' academic self-concept, an important component of their student identity, with implications for their motivation (Eccles & Wigfield, 1985). Academic self-concept has been identified as a central mediator between TE and achievement outcomes (Benner & Misty, 2007; Eccles & Wigfield, 1985); others have found bi-directional effects of academic self-concept and student achievement in early grades (Guay et al., 2003) and at the secondary level (Marsh & Yeung, 1997). In a study involving 416 fourth grade students in Germany and China, Zhou & Urhahne (2013) documented that whereas the self-concepts of low-expectation students generally matched TE, these students performed as well or better than their high-expectation peers on a standard math assessment. The following year, however, performance of low-expectation students dropped significantly, implying a potential causal link between TE and achievement outcomes, mediated in part by students' constructed competence beliefs. Eccles and Wigfield (1985) suggest that students' self-concept likely mediates their motivation related behaviors, which then affect outcomes. Students' low-expectation profiles have also been associated with less adaptive behavior patterns including attributing success to factors outside of the self, and attributing failure to factors within the self (Zhou & Urhahne, 2013).

In sum, at this stage of the behavioral confirmation process students perceive and respond to teacher actions, which in turn are believed to help shape those students' self-perceptions. Some researchers have identified qualitatively different teacher treatment of high- and low-expectation students including learning content and communication style. While an occasional researcher has attempted to capture student viewpoints, there is a clear need for research at this stage that centers

student voices as a means to gain understanding of the confirmation process by those students doing the confirming and disconfirming. This requires qualitative research, ideally performed by individuals who are also participants in classroom operations.

**(3) Students Enact Behaviors that Confirm or Disconfirm the Expectation.** If the teacher's initial expectation was over- or underestimated, the student at this third stage may enact behaviors that serve ultimately to confirm the erroneous expectation. An accurate expectation precludes categorizing the incident under the "self-fulfilling prophecy" domain, according to terms defined by Jussim & Harbor (2005). Research on this segment of the process most often employs correlational analyses to identify relationships between the TE and student outcome, controlling for students' previous year performance. The majority of TE studies have therefore focused on the strength of the expectation effect over developing an understanding of the processes involved. Although effect sizes can vary by approach, summative reviews suggest they range from small ( $r = .1$  to  $.2$ ; Jussim & Harbor, 2005) to medium ( $d = .43$ ; Hattie, 2009), but disproportionately and negatively affect marginalized populations (Hinnant et al., 2009).

Whereas TE studies initially sought to measure effects on students' IQ, the majority of TE studies conducted over the past three decades have examined more specific forms of student achievement as an outcome variable. Most of these examined literacy and math performance, with a minority focusing on other domains (e.g., social studies, physical education; Wang et al., 2018). The most common variables used to measure domain outcomes are standardized test results. Student grades have also been used, presenting a potential issue; teachers' determination of a student's grade (either end-of-term or assignment grade) often lack objectivity, a threat to validity. Grades are often arrived at by considering an array of factors, some easily quantifiable and others not. This introduces teacher subjectivity, including the possibility that the teacher will confirm their own expectation about a student or group of students' achievement outcomes.

While it is true that most TE studies measure student achievement outcomes, a minority of studies have examined social psychological outcomes, including motivation (e.g., academic

self-concept, degree of involvement with course content, and daily effort and expenditures; Szumski & Karwowski, 2019). Because motivation impels action and behavior with implications for achievement (e.g., study habits, responses to experiences of difficulty), some researchers suggest motivational phenomena are critical components of behavioral confirmation processes (Eccles & Wigfield, 1985; Hornstra et al., 2018; Urhahne, 2015). While elements of motivation are intricately woven into students' experience in the expectation perception phase (e.g., teachers may engage with some students more often than others, and may do so around more relevant and higher level content; Szumski & Karwowski, 2019), students' motivation and cognitive skills may also grow stronger and become integrated co-constituents that drive one another, increasing system complexity.

A study by Hornstra and colleague's (2018) further demonstrates the complex aspects of behavioral confirmation in relation to motivation. The study represents occurrences at all three stages of the behavioral confirmation process, illustrating the lack of distinction between stages and the deeply integrated nature of such processes. Employing self-determination theory, Hornstra and colleagues (2018) found that teacher support for secondary students' competence and relatedness needs were positively associated with those students' motivation, and negatively associated with their amotivation. They also found TE to be significantly correlated with students' self-reported motivation, while student perception of teachers' support for students' psychological needs (e.g., provisions of guidance, encouragement and informational feedback; personal connection-building, being available for emotional support) was found to mediate this process. Although this third stage of behavioral confirmation centers on students' actions, those actions must be examined in the context of previously occurring mediating events that may have supported or thwarted those students' action.

Closely related to examining effects of motivational phenomena on students' expectation confirming behavior, researchers have occasionally examined this third stage using an identity lens. Identity in the current study refers to an individual or group's system of beliefs, goals,

self-definitions, and perceived action possibilities related to their role in the collective construction of AE in the learning setting (Kaplan et al., 2022). In alignment with cultural-historical activity theory (Engeström, 2001), I assume participant systems of role identity to be integrated and emergent elements within the AE activity system under examination; I further assume that this activity system is culturally embedded and is thus inseparable from its context. This embeddedness may necessitate examination of role identities that extend beyond those traditionally associated with the AE system.

As contextually integrated entities, student identity systems (e.g., brother, bass player, soccer star, math person, smart) have important implications for motivating individual and collective actions within their respective learning communities (Kaplan et al., 2012; Master et al., 2016). Reviewing ten years of TE research, Johnston and her colleagues (2019) note the often overlooked notion that aspects of identity negotiation have important downstream effects on students' success, and that TE research "does not always explicitly make this connection to the last step in the expectation process" (p.58). This missed connection may occur in part because most studies examine aspects of identity (e.g., academic self concept; Möller et al, 2009) as an isolated variable instead of a complex system-integrated construct. Swann (1987) applies a more nuanced lens, and in so doing implies the confirmation process is multidirectional; he argues that identity negotiation is one of the processes by which teachers and students both reconcile and manage their independent but often conflicting action agendas. Within daily classroom interactions Swann describes perceivers (i.e., teachers) as attempting to validate their own expectancies through their actions (potentially a form of confirmation), while targets (i.e., students) simultaneously attempt to verify their own self-conceptions through their actions (also a form of confirmation). Swann describes these processes as affecting participants' attention to, memory of, and interpretation of others' communication and feedback (Swann, 1987). These and other identity negotiation processes likely constitute important mechanisms for driving

expectation confirming actions. They also help illustrate the dynamic and multidirectional aspects of such processes.

In sum, most research at this stage of behavioral confirmation analyzes the degree of correlation between the TE and the student's outgoing achievement; effect sizes range from small to medium, with negative effects disproportionately afflicting marginalized students. Some researchers have examined the interrelated contributions of motivation and systems of identity to behavioral confirmation, clarifying both the inherent complexity of confirmation processes and the influential role of motivation and identity within them. There is a clear need for future research that incorporates these related constructs not as variables but as systems that operate within and across the AE activity system.

#### ***Less Common Process Models Imply Complexity***

Although most process models to date assume behavioral confirmation processes proceed according to the causal sequence described above, even early on some models acknowledged and attempted to account for system complexity. Cooper's (1979) model examines how teacher perceptions of control qualitatively affect the feedback they provide students; here, different types of feedback differentially affect the classroom's socioemotional climate. Specifically, low expectation (often underestimated) students receive "interaction controlling" teacher feedback which affects their degree of compliance, while high expectation (often overestimated) students receive teacher feedback that centers on their input of effort, positively affecting their motivation and performance. Outside the realm of education, Darly and Fazio (1980) sought to characterize the "steps" involved in confirmation. Like others, they present a mostly linear process; however, their model accounts for some complexity by describing reciprocity of beliefs held by perceivers (i.e., teachers) and targets (i.e., students), challenging the unidirectionality implied by other models. Brophy's later model (1983) also accounts for a degree of complexity, expanding on the second (student perception) phase of the process. He describes students' interactions with teachers as important influencers within students' perception-forming process. In this view,

student-teacher interactions affect students' subsequent behaviors while reinforcing teachers' previously formed expectations. Although the complexity of behavioral confirmation processes is acknowledged by these and other early researchers, the prevailing conceptualization of the process suggests a collective setting-aside of the complexity issue, with implications that warrant investigation.

In the next section I introduce the oft made declaration that since TE tend to be accurate, there ought to be minimal concern about the so-called self-fulfilling prophecy. I explain how the limited scope of TE research enables this argument, and why its viability should be questioned.

### **The Accuracy Argument is Founded on Flawed Assumptions**

Some analysis suggests expectation effect sizes reported in TE studies are inflated as a result of accuracy oversight (Jussim & Harbor, 2005; Szumski & Karwowski 2019). In their systematic review of three decades of TE literature, Wang and her team (2018) found that only 60% of studies controlled for students' prior academic achievement, making it difficult to separate instances of actual TE effects, and instances in which teachers were simply accurate in their appraisal of student potential. Brophy (1983) rightly points out that "much of the differential treatment of students observable in their classrooms represents appropriate individualization of instruction or response to differential student behavior rather than biased or otherwise inappropriate treatment" (p. 631). Over time, controlling for students' baseline abilities became normative, and was typically achieved by controlling for students' previous year performance. However, while accounting for baseline ability is necessary given the methodology, it is also problematic.

Effectively parsing instances of true expectation effect from expectation accuracy is complicated. Because researchers depend on teachers' self-reporting of expectations, reports are subject to social desirability bias (Glock & Kovacs, 2013; van den Bergh et al., 2010). Accuracy has also been shown to vary as a function of the instrument used to measure student outcomes, and as a function of teachers' knowledge and familiarity with that instrument (Südkamp et al.,

2012). Similarly, researchers have applied different meanings to the expectation construct; while some assess teachers' expectation according to an identified standard (e.g., achievement test), others assess teachers' within-class expectations wherein students are ranked in relation to one another (Urhahne, 2015). And although accuracy has received focus in several TE studies, no criteria have been identified to determine what constitutes accuracy in the context (Südkamp et al., 2012). For example, while Jussim and Harbor (2005) define the construct as the expectation "predicting but not causing student achievement" (p. 138), they sidestep issues around asserting causal claims drawn from correlational data. But none of the issues just mentioned is the central issue calling into question the viability of the accuracy argument.

The most problematic aspect of this argument is a result of viewing dyads as units extricated from their broader context: the accuracy argument masks marginalized students' compounding expectation effects over time. The argument suggests that because teachers are mostly accurate in their expectations of students—even if those expectations are chronically low and institutionally preserved—their expectations are nevertheless "appropriate" and therefore the teachers holding them cannot be participants in bringing about their students' self-fulfillment of the prophesized expectation (Brophy, 1983; Jussim & Harbor, 2005). This argument is sound in one respect: the teachers are not the central problem. But its broader implications are dangerous. It suggests that self-fulfilling prophecies (or the behavioral confirmation of expectations) in schools that serve historically marginalized students are not systematically undermining educational equity.

The primary challenge to the accuracy argument is rooted in the complex dynamism that characterizes both the construct of AE, and the systems from which those expectations emerge. When a complex systems lens is applied to this argument, it is shown to be built upon a foundation of three unsubstantiated assumptions.

### ***Assumption 1: Teachers are the Primary Creators of Expectations***

Given the three-phase causal sequence described previously, a focus on teachers makes logical sense. If the expectation originates in the teacher, as it clearly did in the Pygmalion experiments (Rosenthal and Jacobson, 1968) then the most effective means to address the issue would be to first identify which teachers demonstrate problematic expectations, and then locate the common behavioral thread by which those teachers' expectations are bound. In this vein researchers sought to understand what moderated the construction of an erroneous teacher expectation; their inquiries focused on teachers' bias toward their students. Although several factors unrelated to students' academic ability were found to predict variance in teachers' expectation accuracy (e.g., students' tidiness, attractiveness, and behavioral problems; Urhahne, 2015; teachers' intelligence; Kaiser et al., 2012), much of the research continues to suggest that individual teacher bias is not a dominant force (Jussim et al., 1996). Nevertheless studies consistently conclude that it is more common for teachers of marginalized students to hold negative expectations when compared to teachers of majority population students (Wang et al., 2018).

I argue that these results imply that AE are not located within a single element (i.e., the teacher) in a school system, but instead are enmeshed within a network of interdependent systems. In the same way that a straw man argument directs attention away from some central element of the controversy, the focus on teachers as the potential—though not intentional—perpetrators of educational inequity enabled researchers to inadvertently sidestep a broader possibility: that integrated structures and practices which make up the school's institutional culture may be systematically fostering students' inordinately low expectations at some sites.

Half a century of research pointing specifically to *teacher* expectations demonstrates only minimal exploration of alternative creators or harborers of the expectation construct (Johnston et al., 2019; Timmermans et al., 2018) and these outliers (e.g., Agirdag, 2018; Weinstein, 2008), did

not redirect researchers' foci. AE researchers remain dependent on the dyadic model of investigating the three-phase causal sequence that positions teachers' as the de facto starting place for expectations. The dominance of the dyadic process was likely instrumental in turning researcher attention away from investigating contextual factors that may play important roles in AE construction (e.g., institutional culture). Although some researchers have examined contextual elements such as class composition (Agirdag, 2018; Rubie-Davies et al., 2007a), these contributions have yet to meaningfully change the research trajectory. Locating the AE construct within the teacher has reduced collective concerns that low AE are correlated with students' low SES or membership in a historically marginalized community. The second assumption, discussed next, emerges out of the first.

***Assumption 2: Teacher Expectations are Stable Entities***

This second assumption of the accuracy argument suggests that the expectation (located with the teacher) is stable and therefore not subject to influence of interactions with students or other contextual elements between the time in which the expectation is reported (usually the onset of academic term), and the time in which the students' outcome is measured (usually end of term). This implies a decontextualization of the expectation. Setting aside for the time being the complicating factor of where the teacher's expectation derived from in the first place, the likelihood of the expectation remaining stable across the term is low. Brophy (1983) notes that while the effect of a TE on a student is mediated by that teacher's behavior over the course of the instruction period, the effect is also mediated by the student's reaction to that behavior. Hamilton and colleagues (1990) discuss this interdependence:

It is important to recognize that the terms "perceiver" [i.e., teacher] and "target" [i.e., student] are arbitrarily assigned; each interactant is both a perceiver of the other and a target of the other's expectancies...each has the ability to 'create' the behavior that he or she expects from the other. (p. 52)

In their presentation of a social interaction model to explain the self-fulfilling prophecy, Darly and Fazio (1980) described this relationship between perceiver and target as "symmetric in

nature” (i.e., each interactant constructs expectancies and perceptions of the other) but also acknowledged an important lack of symmetry in the positional power between teachers and students (p. 868). Although AE do not reside solely within the teacher, and although there are clearly dynamic and reciprocating relations that occur in the construction and dissemination of AE, the position of authority held by a teacher likely lends their expectation a more potent role in the interactive process of expectation negotiation (Claire & Fiske, 1998). Nevertheless, AE are most likely negotiated continuously throughout the school year, which undermines their stability.

Even as some researchers recognize the socially interactive aspects of AE construction, the processes are neither widely studied nor well understood. Wang et al.’s (2018) extensive review (n = 142) yielded only four studies that examined student behavior as a mediating factor of expectation effects. These studies focused on *whether* a TE effect had occurred, but did not explore *how* teacher-to-student interactions affected the process. Madon and colleagues (2001) examined the simultaneous occurrence of self-fulfilling prophecy and self-verification processes, demonstrating their co-occurrence over the school year. Teacher beliefs at the onset of the year were associated with student academic self-concept later in the school year, while students’ ability at onset correlated to teacher beliefs at end of year. One explanation for this relationship is self-verification theory which posits that targets both seek information that aligns with their self-concept, and enact behaviors likely to bring forth such information. Madon et al. (2001) point to the likely occurrence of a “convergence of perceptions” in response to these mutually influential and co-occurring processes. The convergence involves negotiation to arrive at a “middle ground” in which “perceivers’ and targets’ final perceptions are less extreme than were their initial perceptions” (p.1221). Swann (1987) also discusses this negotiation process. He describes targets’ creation of “opportunity structures,” or features of their social reality that “foster the survival of their self-views” (p. 1039). Swann argues this is a collective process carried out by all players in the setting. The interactive processes described by these researchers

make it difficult to imagine a teacher's expectation of a student in September remaining stable through the following May.

The stability assumption also implies that a TE constitutes an event that occurs in a circumscribed moment of time. This is demonstrated by the prevailing approach researchers use to collect TE data. At the onset of the school year researchers typically collect teachers' self reported data in one of three ways: teachers complete a questionnaire in which they rate their students on an array of expectation measures (see Timmermans, 2016 and Hornstra, 2018 for examples); teachers provide a single estimate of the score each student will achieve on a designated test (see Urhahne, 2015 for an example); or teachers estimate the number of correct answers each student will achieve on a designated test (see Zhou & Urhahne, 2013 for an example). In each case the reporting strategy captures a snapshot of the teacher's beliefs within an isolated moment even though research consistently suggests those beliefs change over time as a function of social interactions (Swann, 1987; Rubie-Davies et al., 2014).

The predominant research practices in the first few decades of TE research may have limited the action possibilities of scholars in ways that brought about conformity to earlier established methods. For example, researchers conducting naturalistic studies may have initially designed their classroom-situated studies according to templates of laboratory-situated investigations. In such studies researchers used "expectancy induction" processes in which participant teachers were given randomly assigned invented student test scores (or comparable data) as a means to contrive a teacher expectation (Raudenbush, 1984). In this situation the expectancy induction *did* constitute an isolated moment. This conception of a "moment-in-time" expectation—valid in a laboratory setting—may thus have inadvertently been applied to a less valid setting. As with the social decontextualization described above, this temporal decontextualization may have advanced as an acceptable practice in part as a means to accommodate the dominant methodological expectations.

Considering the research described here it is easy to imagine that students and teachers in a typical classroom will meaningfully impact one another's expectation profiles over time. Alternatively, it is difficult to imagine those teachers and students engaging daily while *not* significantly affecting one another's notion of expectations. Yet most TE research has proceeded as if this were the case, implicitly suggesting that TE are stable entities.

***Assumption 3: Expectation Effects are Isolated From One Another***

While the first two assumptions dealt with the expectation itself, the third involves the effects of those expectations. This assumption suggests that effects of TE on students neither accrete over time in meaningful ways, nor interact with one another dynamically in ways that give rise to more complex compounded effects. The assumption of isolated effects is demonstrated throughout the TE research in its adherence to the dyadic investigative approach described earlier. The consequences of this assumption are demonstrated in a review of research on TE effects by Jussim and Harbor (2005). The authors contend that TE predict student achievement primarily *because* they are accurate, ultimately declaring that "self-fulfilling prophecies in the classroom do exist, but they are generally small, fragile, and fleeting" (p. 151). I call into question the methodology used to arrive at these claims, and suggest that conceptualizing TE effects as system-embedded would point to critically different findings.

Although Jussim and Harbor (2005) reserve a notable portion of their review to demonstrating construct validity within the accuracy argument (e.g., they address such issues as the omitted variable problem, and ultimately characterize TE research as collectively overestimating students' behavioral confirmation) they examine no issues that emerge from the assumption of isolated effects. In the rare instance that previous performance is not a product of systemic effects, this is appropriate. However, in a situation where a student experiences multiple years of chronic low expectations (an issue that tends to afflict public schools serving historically marginalized communities through systemic stereotyping; Hamilton et al., 1990), they are likely to begin exhibiting what Claire and Fiske (1998) call "cross-situational consistency," which

stabilizes over time and often causes teachers to perceive the the conditioned student behavior as a disposition or trait (p. 221). In this way, student behavior compelled by systemic expectation mechanisms becomes a control variable used to account for the very situation that produced it. Because it will only measure the dyadic effect in isolation, the circularity of this practice will ultimately serve to mask the compounding effects of low expectations experienced by marginalized students. The resulting description of “accurate” to represent TE for this and countless other students in similar situations tells a false and consequential story. While there are numerous other examples that demonstrate the importance of context (including temporal context) when assessing AE and their effects, this example clarifies better than any other the consequences of the accuracy argument for educational equity.

Both Swann (1987) and Claire and Fiske (1998) discuss the complementary constructs of circumscribed accuracy and global accuracy as each relate to behavioral confirmation. The constructs refer respectively to an upclose or “zoomed in” point of viewing, versus a scaled out point of viewing. In the scenario described above the teacher might have described the student’s potential with global accuracy, when the situation may instead have called for the application of a circumscribed accuracy lens. The distinction underscores the tension between what exists currently, and what *might* have existed given different treatment or circumstances (i.e., what might have transpired had this student been met with a consistent overestimation of ability instead of an underestimation?). In situations that feature systemic stereotypic effects Claire and Fiske (1998) call for an extended period of study to “account for the nature of targets’ experience with stereotypes” (p. 221). In situations that call for a global lens, applying a circumscribed accuracy lens to a teacher’s expectation for a student could be viewed as a false characterization due to that student’s (perhaps untested) potential for change given different conditions or treatment. Thus, contextual factors regarding an expectation must be considered when deciding which accuracy lens is most appropriate. Such lenses have implications for the veracity of the expectation.

Students who experience systemic low expectations that informed their previous performance scores cannot effectively be assessed using the dyadic process typically employed. Nevertheless, current understanding of behavioral confirmation effect sizes were arrived at through such processes.

### **These Assumptions Misrepresent the System’s Complexity, Obscuring Equity Issues**

Collectively, the assumptions just described indicate a misconstrual of the AE construct. I maintain that the construct of AE comprises a system that continually evolves as a function of other contingent systems. These range from contrived systems like content standards and curricula, to more generative systems like institutional culture, to sociopolitical systems rooted in historical power structures such as systems of stereotypes. If researchers assume that AE reside in the teacher alone, that AE are essentially stable, and that their effects on students exist in isolation from one another, it follows that they do not conceive of AE as a complex system. Instead, their assumptions suggest they understand AE to be a “component dominant system,” a construct that Hilpert and Marchand (2018) describe as made from components whose role within the system is stable in valence and direction “across time and context” which indicate predictable interaction pathways (p. 2). In this section I provide evidence that helps locate AE within the complex dynamic system arena. These “interaction dominant” systems are identifiable by their interdependence of dynamical components, an effective balance between randomness and order often demonstrated by non-linear system behavior, their enduring state of emergence, and their place within a fractal-like hierarchy (p. 2, Hilpert & Marchand, 2018). Next, I demonstrate the alignment between the AE system and the known characteristics of complex dynamic systems.

#### ***Interdependence of Dynamical Components***

Among the plentiful components of the AE system are children and teachers, undeniably dynamic entities. Children present differently both from moment-to-moment, and developmentally over time. For example, there is evidence suggesting that expectation effects are stronger for older children (Jussim, 2012), possibly because their perception accuracy is more

developed (Weinstein et al., 1987). Other research has sought to understand how teachers' characteristics affect their relations with students. Li and Rubie-Davies (2018) found that differing levels of teacher self-efficacy and teachers' experiences with past students were important factors in explaining those teachers' academic expectations of current students. An unforeseeable array of factors and events contribute to the interrelationships of system constituents. These include within-system events such as a student-to-student conflict, and events originating outside the system such as a recent change in a parent's work schedule. At a basic level, as the number of potential interactant partners in a classroom setting increases, so does the level of complexity within that system increase. This is a gross oversimplification. The components that make up an AE system are not limited to the *people* in the system; the system also includes a myriad of other dynamic components including the various roles inhabited by the individuals involved, language and other mediating tools and the things made from them, formal and informal rules of behavior, and the goals and purposes that drive the system (Engeström, 2001). Like the system itself, these components exist in a state of continuous construction, partly as a function of their interdependencies and dynamism.

### ***Non-linear System Behavior***

Quantitative modeling in AE research assumes variables respond to one another according to a linear progression that enables prediction of interaction outcomes. However, instead of simply being a function of inner-variable characteristics, the behavior of components (represented as variables) in a complex system depend both on the affordances and constraints of the context from which they emerge, and depend on their ongoing (and sometimes random) interactions with other components in that context. Therefore, effectively predicting variable behavior is likely not possible.

While complex systems may appear orderly, the nonlinear behavior of their components can both give rise to, and emerge from a degree of undetected randomness and the potential for feedback loops. Imagine a classroom that typically exhibits low academic motivation; today,

however, one student demonstrates high task motivation because the topic piques their interest. In the class of 32 students, the effect of the single students reverberates in a significant but unpredictable manner, causing unprecedented classwide engagement. An array of dynamically interacting factors may help explain the event: the social currency held by the single student, several other students' low sense of belonging and task-efficacy, the absence of one student who usually engages others with a deck of cards, the presence of a new student who asks a lot of questions, and the teacher's hand-off approach to the lesson due to a personal distraction. Most of these variables would not be included in a path model. Most would also not be observed by a researcher employing a path model. Yet, to a well positioned observer the data may tell an important story about how the interaction of AE held by different individuals (who play different, often complementary roles in the system) affected student behavior in the situation. In complex systems relevant data are not always easy to anticipate or detect due in part to their non-linearity.

### *Enduring State of Emergence*

A clear example of emergent system behavior is the instability of the TE described in assumption #2 above. Simply, emergence refers to the constant state of change that characterizes complex systems and their component behaviors. Complex systems—including the system of AE construction and dissemination—are self-organizing; they are always moving toward stasis. But due to feedback from interaction of dynamic elements which themselves often exhibit degrees of randomness, and paired with effects from broader contextual factors or outer control parameters, the system never reaches stasis. Instead it exists in fluctuating states of dynamic stability, responding to internal and external system inputs with variable levels of resilience as a means to course-correct and ultimately self-preserve (Abraham et al., 1990). It is not surprising then, that complex dynamic systems do not lend themselves to linear behavior.

The non-linearity of system behavior means that an interaction with a system element—notwithstanding that element's apparent strength or relevant size—may have large or small effects on the whole system (as the single-student example above demonstrated), and these

will likely evade prediction and make tracking down the origin of that effect a complex endeavor. However, if researchers develop knowledge of the system and its primary elements it is possible to influence the system's general tendencies to affect foreseeable change in an intended direction. For example, while a regression model could not accurately predict the effect that a motivational intervention might have on each student in the class, it would be possible to determine student needs by systematically observing them over time using a triangulation of methods, and to then devise and implement an effective theory-driven intervention that moves the class, collectively, into a more motivated state. Because a system's previous state is integral to the creation of its successive states (Kaplan, et al., 2012), this new "more motivated state" would in turn affect the future motivational profile of the class. As a complex system, the AE system exists in a state of continuous construction.

### ***Fractal-like Hierarchy***

A behavior exhibited by many complex systems is growth governed by a particular power law that enables structural replication at increasing or decreasing scale, resulting in fractals or structural expansion characterized by self-similarity (Guastello & Liebovitch, 2009). In social systems, fractals are not just structural in the physical sense, but also manifest in governing principles of the system across different levels. For example, at the classroom level an observer might note students' employing strategies to use their phones during class time in the face of a classroom policy that forbids this. Students may keep their phones out of the teachers' line of sight, using phones from their laps, or concealing them behind a laptop screen. The act involves acknowledgment of the rule, paired with achieving a strategic balance between rule compliance and defiance such that the student retains the potential to deny the act. At the schoolwide level, an observer might note teachers employing an altogether similar strategy in their management of student phone use in the face of a schoolwide policy requiring them to report such instances of use. Specifically, a teacher may acknowledge the rule (approach a student who using a phone and whispering "Please put your phone away"); they may then achieve an effective balance among

their compliance with, and defiance of, this policy by making two more quiet requests for the student to stop using the phone, but ultimately not following through on those requests in any meaningful way. Each rule is both developed at, and imposed from, a system level that holds relative power, and effectively undermines the autonomy of those subjected to it. This demonstrates a fractal-like replication across levels of the system.

Every complex (or interaction dependent system) exists as an element of other systems. This logic goes in both directions. The AE system in a single classroom is both an element that helps make up numerous other intersecting and interdependent systems (e.g., the institution's expectation environment→ the administrative culture at the school), *and* the AE system is simultaneously *made up of* numerous other, often interdependent, systems (e.g., the individual identity system of each student and teacher in the class→ the array of role identities within each individual's larger identity system). The resulting non-linear dynamism helps clarify an issue inherent in the examination of acontextual dyads or interactant partners. Specifically, because each student-teacher dyad (operating as a system) exists interdependently with the lot of other dyads in the class, exists interdependently with the array of larger systems to which it belongs (e.g., institution's expectation environment), and exists interdependently with the smaller systems of which it is composed (e.g., the nested hierarchy of identities to which each teacher and student belong), measuring single variables in a single dyad necessarily assumes such system interdependence does not exist. A teacher's self-reported beliefs about their students' abilities are viewed as disconnected from the institution's entrenched culture of expectations. A student's level of reading motivation is viewed as disconnected from the four years of scripted curriculum his teachers were required to deliver, as well as disconnected from that teacher's degree and quality of motivation, knowledge, and skill to teach reading. The fractal-like hierarchy of complex systems makes clear that antecedents to behavior do not form spontaneously, but as a function of the larger systems with which they are involved. While a student's prior year

performance may provide an accurate measure of the student's current academic ability, it utterly fails to accurately reflect the systemic experience that led to the student's current state of ability.

### **A Complex Systems Lens Reveals Likelihood of Compounding Effects**

Examining AE effects from a component dominant lens that focuses on teacher-student dyads has failed to provide an accurate depiction of how marginalized students come to achieve at systematically lower levels than majority population students. Some researchers have begun to apply alternative lenses by examining expectancy effects at the whole class and whole school level. In the earlier referred to "class context effect" (Dompnier et al., 2006) teachers rated students attending classes low in average achievement as having greater relative potential than they rated students attending classes that performed at higher average levels. This suggests that teachers use average class performance as a comparison metric, potentially resulting in high ability students perceiving an artificially low "ceiling" of learning achievement when they are placed in ability-diverse but overall low-performing classes. In a longitudinal study involving 1488 Polish middle school students, Szumski & Karwowski (2019) found that higher TE at the whole class level was positively associated with improved achievement at the individual student level. They also found an "assimilation effect" in which the inclusion of low expectancy students in average expectancy classes served to lower TE at the whole class level. This study also identified a positive association between higher whole class TE and higher whole class average SES. Agirdad (2018) examined whole school composition (i.e., SES and ethnic composition) in relation to what he termed "teachability culture," or a site's collective teacher beliefs about students' "capacities and willingness" to learn at 66 primary schools across three urban regions of Belgium (p. 266). He identified a school's teachability culture as an important mediator between school SES and student achievement. Proctor (1984) developed a school improvement model in which school climate informed TE, while student achievement informed teachers' attitudes across the school. In this schematic student characteristics were said to help construct the schoolwide learning climate. However, it seems Proctor did not publish any studies testing his model.

Collectively, these studies help illustrate a claim made by physicist and complexity scientist Bernard Ricca that complex systems metabolize their environments such that effects continually feed back into those environments (Ricca, 2020).

Rubie-Davies and her colleagues (2006; 2007a; 2007b; 2010) conducted a series of studies comparing the differential practices and effects of high and low expectations teachers at the classroom level. Their work, focusing on early grade students in New Zealand, employed a range of different tools (e.g., questionnaire, observation, interview) to understand mechanisms driving whole-class expectation effects. Their research found significant qualitative differences in teachers' beliefs and practices across high- and low-expectation classrooms. High expectation teachers offered more opportunities for students to explore ideas, regularly provided learning-centered feedback, linked new concepts to students' prior knowledge, and more often modified lessons to students' specific needs; alternatively, low-expectation teachers centered instruction and feedback on procedural content (Rubie-Davies et al., 2007a). Across the school year high expectation classes made gains beyond those logically anticipated, while low expectation classes made only minimal progress. These and similar findings in related studies by the Rubie-Davies team demonstrate what Claire and Fiske (1998) have called "systematically different expectancies" that likely emerge as a function of dynamical system components interacting (p. 222). While the exact trajectories of such components cannot be predicted, they demonstrate patterns that offer insights into possible mechanisms and behavioral levers.

Claire and Fiske (1998) argue that system-level stereotyping is a central mechanism of concern within behavioral confirmation processes. Their book chapter exploring the role of social interactions and group-level processes, critiques the normative individualist approach to investigating behavioral confirmation and notes the problematic nature of using students' previous year performance measures to calculate effects in situations where previous performance is a result of "others' stereotyped expectancies" (p. 221). While numerous studies have evaluated teacher bias in the classroom (Jussim et al., 1996), most have examined dyads that are temporally

and environmentally decontextualized. Within TE literature, studies that examine systemic stereotypes at the whole class or whole school level are few. Helping to fill this gap, Tenenbaum and Ruck (2007) conducted four meta-analyses to understand the extent to which teachers' perceptions and expectations of their students are connected to those students' race-ethnicity. They selected articles that examined teacher' beliefs, referral patterns, and speech related tasks (e.g., praise, affirmation, questioning). Three of the four meta-analyses revealed teachers' preferential treatment of European American students in relation to their African American and Latino counterparts. While effect sizes were small, they point to systematic differences in student treatment across racial lines.

Hamilton and colleagues (1990) studied effects of such stereotypes on students' information processing. They define a stereotype as an evolving "cognitive structure containing the perceiver's knowledge and beliefs about a social group and its members," (p. 36, Hamilton et al., 1990). These researchers suggest that stereotypes produce cognitive confirmation whereby the perceiver's interpretation and encoding of expectancy information is biased toward the stereotype (which they assume is applied at the group level), as are the perceiver's information retrieval processes. Hamilton and colleagues note that stereotypic beliefs can become "accurate" when they give rise to group behaviors that align with expectancies and undermine member perceptions of change possibilities. In this way behavioral confirmation processes systematically preserve status quo beliefs about groups (i.e., a class of students at a school that serves historically marginalized students), or, in the researchers' words "contribute to the persistence of stereotypes, the conviction with which they are held, and their resistance to change" (p. 55, Hamilton et al., 1990). Thus, the maintenance of the stereotype undercuts the ability of a dyadic-style investigation to accurately capture a potential expectation effect. Combined with findings that teacher expectancy effects disproportionately impact disenfranchised students (Hinnant et al., 2009; McKown & Weinstein, 2008; Wang et al., 2018), these processes of stereotype maintenance imply that inequity is woven into and perpetuated by the school system. Using

complex systems terminology, such maintenance might be considered an attractor state (Guastello & Liebovitch, 2009).

The majority of expectation research has focused on teachers' differential treatment of individuals within a single classroom; half a century ago Brophy (1983; 1985) called for a different approach: examining the differential treatment of intact groups. While that did not occur at the scale it might have, there is now sufficient evidence pointing to systemic inequity to warrant scalable mitigation efforts. The studies reviewed next operate in that vein.

### **Once Process is Understood, Schools Can Propagate Positive Expectation Effects**

If, as research suggests (Jussim & Harbor, 2005), behavioral confirmation processes have greater effects within stigmatized populations, there is a clear imperative to ensure the expectations these populations encounter are over- or at least accurate estimations. This is not the reality for many learning institutions that serve historically marginalized communities (Ready & Wright, 2011). What would need to change to systematically propagate positive AE in marginalized settings that currently—and likely unknowingly—propagate negative expectations? Merton (1948) applies to this problem the “Thomas Theorem” which suggests transforming underestimations into overestimations (or even accurate estimations) involves the perceiver defining the situation anew through an authentic questioning of the assumptions that led to their original definition of the situation. But this solution, already seemingly difficult, may be more so. Merton’s solution views the perceiver to be an individual (i.e., a teacher); when the perceiver is instead conceived of as a system, the task of extinguishing a set of yet unrecognized false assumptions that the system itself created approaches onerous. Nevertheless, harnessing AE to better student outcomes has documented potential. Some research has shown particularly strong behavioral confirmation effects in situations of intentional overestimation (Madon et al., 1997). But while system change is often incremental, it also demands periodic attendance to the whole.

In their systems approach to understanding behavioral confirmation, Claire and Fiske (1998) identified two approaches for effectively intervening in systemic underestimations. The

first, like Merton's solution, involves replacing the negative (or under-) estimation with a positive (over-) estimation. They explain that a primary "determinant" of how readily a systemic stereotype will render effects is "the frequency and proportion of the stereotypic contact that the target receives" (p. 223). This suggests that any application of counter-influences to the stereotype (i.e., the propagation of positive expectancies over negative ones) must be paired with the simultaneous reduction, in frequency and proportion, of the perhaps broader and often concealed expressions of related stereotypes. As the auxiliary and primary stereotypic content to which students are exposed is lessened and replaced, Claire and Fiske suggest the additional content will provide students with a new "repertoire of behaviors to regard as possible" (p.222), supporting changes in self-perceptions and identity.

The second intervention approach offered by Claire and Fiske (1998) suggests integrating these intra-student operations to develop students' awareness of the stereotypic processes to which they are subjected. Some researchers have demonstrated the potential of this strategy (Hilton & Darley, 1985). However, Claire and Fiske argue that disconfirmation is supported by awareness development only when students view themselves as full members of the stereotyped group. For example, a student who does not identify with the dominant race-ethnicities that make up the school community (but still attends that school) is less likely to benefit from awareness bolstering even though they likely experience the same forms of systemic expectations effects as those who do identify with the dominant race-ethnicity in that community. Intersecting identities can further complicate this issue. Another problem inherent to this second strategy is that discussing collective forces of oppression is emotionally costly and is not likely to be effective if sense-of-safety in the setting is not already in place. Hamilton and colleagues (1990) suggest students' degree of certainty regarding their self-concept may have protective effects that enable avoiding confirmation behaviors.

Although a whole system approach is likely required to generate enduring change in school wide AE trajectories, the teacher role is also critical. In her review of 19 TE interventions

to support student achievement, de Boer (2018) named teacher support for the intervention as a central component of intervention success. Brophy (1983) noted that building teachers' awareness of stereotypic behaviors and expressions within their site is an important outcome of such interventions. Others have pointed to the need to develop teachers' sense of agency to exert cognitive control over such expressions (Peterson et al., 2016; Hamilton et al., 2019). Weinstein (2008), who developed a set of six domains for expectancy expression within an institution (e.g., curriculum, student grouping, evaluation, motivation strategies, student agency, and climate of relationships), calls for researchers to collaborate in participatory processes with teachers to generate willingness and agency toward expectation change. Researchers have also found some success in integrating interventions into teachers' long term professional development opportunities (Rubie-Davies et al., 2015).

Proportional to studies that comprise the bulk of the TE literature (which focus on *whether* behavioral confirmation occurred), studies that address issues of systemic low expectations and how to mitigate them are despairingly small in number. This may be due to researchers' collective lack of understanding around how and why AE develop (Johnston et al., 2019).

### **Past Research has Generated Valuable Knowledge, but Consequential Gaps Remain**

AE research over the past half a century has been shaped by use of quantitative methodologies which lack capabilities to explain how and why the complex processes that make up AE confirmation occur (Johnston et al. 2019). Instead investigations emphasize whether and to what extent behavioral confirmation occurs. This has left researchers with limited knowledge of how and under what conditions AE shape classroom behaviors and student outcomes, and what avenues exist for ensuring such effects do not systematically harm already marginalized populations.

The long trajectory of AE research began with experimental investigations in laboratory settings (Rosenthal & Jacobson, 1968; Raudenbush, 1984), but soon gave way to naturalistic

studies employing correlational analysis (Südkamp et al., 2012). While these designs could not definitively detect cause, researchers used time differentials to imply cause. Early correlational studies relied on simple regression methods to explain variance, but later incorporated more sophisticated analyses (e.g., hierarchical linear models) to examine multilevel effects. However, these newer methods still relied on assumptions of independence, were fraught with issues such as potential for omitted variables (Madon et al, 1997), and had no means to account for social desirability bias in self-reports (Glock & Kovacs, 2013; van den Bergh et al., 2010). While some past AE studies have not held up to the scrutiny of modern practice, most reviews and meta-analyses suggest that TE have small to medium effect sizes, but vary depending on the situation (Hattie, 2009; Johnston et al., 2019; Wang et al., 2018). While some researchers have translated this figure to suggest less than 10% of students experience behavioral confirmation (Jussim & Harbor, 2005), I suggest the percentage is foreseeably larger given the systemic nature of underestimated AE in many learning communities, paired with the subsequent masking of system-embedded effects due to use of methodologies that cannot detect effects when they are thus embedded. For example, use of students' previous year performance as a control variable in dyadic behavioral confirmation calculations likely masks the presence of effects in countless studies. However, I do not offer a solution to the effect size issue. Instead, I argue for an approach to investigating behavioral confirmation that uses methodologies better aligned with the complex dynamical nature of the AE phenomenon.

Numerous researchers have pointed to the persistent knowledge gaps around AE (Swann, 1985; Timmermans et al., 2018). How are they formed? How do they change over time, and to what effect? And how do other systems and processes interdependent with the AE activity system affect their persistence and their behavioral confirmation across different settings? The answers to these questions can inform the design of future educational experiences to help construct more positive AE, recasting behavioral confirmation in many communities as a force for good. However, this work requires understanding how AE develop, how and why they change over

time, and how and under what conditions confirmation is enacted. Our minimal understanding of AE construction processes constitutes a critical gap in knowledge.

Related to this gap is a need for increased theoretical knowledge connecting behavioral confirmation processes to motivational processes. While they necessarily involve one another (i.e., behavioral confirmation presupposes individuals choosing to enact or withstand behaviors), the construct of motivation has only occasionally been investigated in conjunction with AE inquiries (Brophy, 1983; Urhahne, 2015; Wang et al., 2018; Zhou & Urhahne, 2013). More often, isolated elements related to motivation (e.g., academic self-concept), or occasionally, processes interdependent with motivation (e.g., identity) have been studied. However, instead of being investigated as complex and interdependent phenomena, these motivational processes have often been interpreted as isolated data points used to generate a correlation coefficient. Because motivational phenomena are likely central to AE processes, their effective absence from the literature contributes to an important theoretical knowledge gap.

These knowledge gaps demand investigations that use methodologies different from those which have typically been employed. The AE activity system cannot be effectively understood when its processes are treated as stable and temporally and situationally decontextualized data points. Investigating the processes involved in constructing and confirming AE calls for a theoretical shift wherein previous frames AE as collectively constructed through dynamic processes that emerge from rich and equally dynamic contexts across time. In the final section of this review I conceptualize this shift using the Dynamic Systems Model of Role Identity (DSMRI) as my theoretical framing.

### **To Address Critical Gaps in Understanding, Reconceptualization of AE is Needed**

The study of AE—whether the construction or confirmation of the academic expectation—is the study of actions. Action emerges as a function of role identity. The simplicity of these words belie the complexity of the concept. An individual has various identities that are dynamically related to one another, and so in a regular state of flux. A confluence of factors in a

particular setting may enhance the salience of one’s “defiant” identity while simultaneously suppressing the salience of their “honors student” identity. The multitude of often nested and interdependent identities manifest by an individual comprise a complex dynamic system. In any given space or community there exist both the individual identity systems of each actor, and an ever emerging system of collective identity composed of groups of actors and their interdependent and emergent identities. Integral to these interrelated and multi-level identity systems in a learning setting is the AE activity system. To facilitate meaning-making amid such system complexity, there is a need for a theoretical structure that lends order.

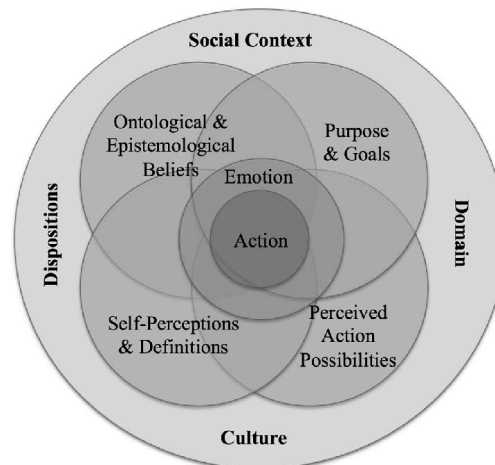


Figure 1. The Dynamic Systems Model of Role Identity. (Kaplan & Garner, 2017)

Therefore, in the current study I examine student and teacher actions through the lens of identity using the DSMRI (Kaplan & Garner, 2017; see Figure 1). As a theoretical framework, the DSMRI conceives of identity as composed of interdependent components (e.g., beliefs, goals, self-definitions, perceived action possibilities) and the emotions associated with these components. These dynamically interacting components are further informed by, and in turn may also inform, the system’s control parameters existing at higher (e.g., institutional culture of the school) and lower (e.g., a student’s individual dispositions) system levels. In the model the system is depicted as having a permeable outer membrane to represent its open nature, or the potential for other systems (e.g., family systems, systems of stereotyping, systems of federal and state

education policy) to act upon it, and sometimes, it upon them. Importantly, DSMRI analysis is anchored in actions enacted in relation to the situated identity systems of focus.

I have centered my investigation on the identity systems of three purposively selected students and their teachers wherein the specified unit-of-analysis is the student-and-teacher-in-context. This focus aligns with the unit-of-analysis most common in the literature reviewed, effectively bounds my analysis to ensure appropriateness for a single researcher, and perhaps of greatest consequence, centers much needed student voice in the narrative about how AE are constructed and (dis)confirmed. Such analysis necessarily involves occasional examining collective identities in the setting, but centers primarily on the salient and situated identity formation of focal participants in relation to AE processes.

The DSMRI conceives of such identities to comprise the following interdependent elements: ontological and epistemological beliefs (e.g., *Does it matter if I finish this assignment or can I just turn it in like this? Will my teacher even notice the unfinished part?*); purpose and goals (e.g., *Why am I reading this article? Will this help me in 12th grade?*); self-definitions and perceptions (e.g., *Am I smart? Do my classmates think I'm Smart?*); and perceived action possibilities (e.g., *Can I attend college? What are the ways I can get out of doing this work right now?*). Analysis of these identities involves a systematic codifying of the interrelated role identities within a system, the emergent structure they exhibit (e.g., within one student's role identity, is their goal to become a successful entrepreneur aligned with their belief that developing strong writing skills is unimportant?), and processes they undergo (e.g., is the individual's *writer* role identity becoming more integrated with her role identity as *tough girl who no one can mess with*, and what might account for this?) in relation to the actors' situated AE-related actions. Because language mediates AE processes, DSMRI analysis of AE related phenomena will center on participants' discourse as it relates to the AE processes. By investigating the construction and (dis)confirmation of situated AE using a DSMRI structure oriented to discourse, I establish a requisite degree of order for a systematic analysis in service to my research questions.

## CHAPTER 3

### METHODS

Through ethnographic investigation of integrated and system-embedded processes in a North Philadelphia 11th grade honors English classroom, I sought to answer the following:

#### Research Questions

1. How does discourse mediate teachers' and students' co-construction of AE in the setting?
2. How do teachers' and students' identities shape—and get shaped by—AE in the setting?
3. To what extent and in what ways does the school's institutional culture inform the collective construction of AE in the classroom?
4. How can the process of mapping AE construction in one setting best be applied in other settings?

#### Research Design and Methodology

Within the scope of the current study I aim to understand two interrelated processes: teachers' and students' co-construction of AE in the learning setting, and teachers' and students' negotiation of their role identity. The resulting framework developed over the course of this project facilitates a systematic mapping process that practitioners and researchers can adapt to their own settings.

Noting the complexity of my phenomena of interest, I selected a qualitative inquiry approach that would generate rich descriptions of participants' lived experience, while also reflecting their intricate and situated nature (Hong & Cross Francis, 2020). Applying an exploratory approach, I conducted an ethnographic case study in an 11th grade classroom over a five-week period within the 2023-2024 school year. Given my social constructionist epistemology wherein I assume knowledge to be situated, emergent, and constructed through discursive (and other social) processes, I paid particular attention to talk and text as a central mediator of these processes. I prioritized discourse that constitutes “automatic” or more implicit messaging (i.e.,

in-the-moment conversation) over discourse that allows an actor more control over how their utterance is perceived by others. My intentions in doing so were both to avoid problems of social desirability bias (Glock & Kovacs, 2016), and to address what I perceive to be an urgent issue: actors unknowingly, and with profound regularity, conveying AE messaging while engaged in talk. Analysis therefore focused far more on transcripts, fieldnotes, and stimulated recall interviews than it focused on more planned forms of discourse such as the written curriculum. In alignment with my epistemological assumptions I used the DSMRI (Kaplan & Garner, 2017) as a conceptual framing tool to understand dynamic interactions between AE construction and identity development processes. I also employed the DSMRI as a theoretical framework for analyzing participants' identity negotiation and development. Into my DSMRI-informed analysis I integrated the principles and practices of discursive psychology (DP; Wiggins, 2017), a form of discourse analysis that emerged from constructionist ideas.

In an attempt to align method and theory (Hiplert & Marchand, 2018), I located my approach in a complex systems ontology. Because the systems under investigation (AE construction, identity negotiation), and the various systems into which these are embedded (school, community, district), all exhibit *interaction dominant* constitutions (Richardson, et al., 2014), I assume relationships between system components (e.g., individuals, emotions, cultural norms, learning tools) tend toward interdependence, and thus manifest nonlinear behaviors (Hiplert & Marchand, 2018). Complex systems are dominated by interactions characterized both by the functions of their various parts *and* by the interaction tendencies of these parts; further enhancing complexity, these interactions can vary in connection strength and in the feedback patterns they initiate (Kaplan et al., 2012). Microprocesses at the component level (e.g., student interactions) can give rise to novel macro-level behaviors (e.g., creation of a new policy), which in turn can further inform subsequent microprocesses (Hiplert & Marchand, 2018). While such feedback loops may be anticipated broadly, they cannot be statistically predicted because the

variables within such systems cannot be analyzed effectively when isolated from their interdependent counterparts. Instead, parts of an interaction dominant system must be studied as integrated parts of the system whole. This involves (1) the investigation of system and component change over time, and (2) investigation of manifest behaviors at multiple levels within the system, and across systems (Hilpert & Marchand, 2018). To date, most teacher expectations (TE) research has applied a unidirectional lens that locates AE in the teacher, who then passes the expectation to the student. Most TE research has investigated contextually and temporally isolated teacher-student dyads, a design that does not account for compounding expectation effects over time. Alternatively, applying an ethnographic approach enables a holistic representation of target phenomena that account for its contextualized positionality (LeCompte & Preissle, 1993). These considerations informed my selection of an ethnographic case study design that centered two teachers and three focal students in one secondary classroom.

Because the terms ethnography and case study are used differently by different researchers, it is necessary to explicate my intended usage. Creswell and Poth (2018) suggest ethnography attempts to “determine how the culture works, rather than to either develop an in depth understanding of a single case, or explore an issue or problem using the case as a specific illustration” (p. 96). While I sought to understand *how a culture works*, I also sought to employ the case as an illustration of a process. I therefore use the term ‘ethnographic’ to modify my use of the term ‘case study’, indicating *in what vein* I conducted my inquiries. Ethnographers construct “holistic descriptions of a phenomena in its context” (Tsui, 2012, p. 384), employing observation and interview from the standpoint of a participant-in-the-setting. An ethnographer’s ability to effectively move between emic and etic points of view is particularly important when analyzing and interpreting discourse, a process that is aided by the ethnographer’s thick description and deep understanding of the context (Tsui, 2012). My familiarity with the setting, my role as a practitioner in the setting, and my intentions to understand the decisions and actions of participants from their own viewpoints all position me to engage as an ethnographer. However,

there is also a practical concern around time that goes beyond simply completing my dissertation within a reasonable window. One intention of this project is to develop a framework that others might use to understand—and so be in the position to positively change—AE in learning settings. The methodological process must therefore be manageable by a teacher engaged in full time work. While bounding the case to a five-week window cannot capture the richness and nuance that a true ethnography would, the utility offered by a more bounded design is a worthwhile trade. My results demonstrate the sufficiency of this timeframe to generate ample opportunities for mapping central processes of AE construction in the setting.

This study was designed to accommodate an array of challenges common to investigating complex systems. Specifically, I selected ethnographic case study design because it affords an effective framework for developing in-depth understanding of AE co-construction and identity negotiation in several ways. First, as alluded to earlier, the approach allowed me to examine phenomena from multiple perspectives (e.g., micro and macro; emic and etic), accounting for its dynamic and often emergent behaviors. Second, the design enabled me to assemble thick descriptions that played a crucial role in my ability to construct and illustrate defensible claims by grounding them in unequivocal and contextualized (within sociocultural, historical, and political contexts) detail. Third, ethnographic case study enabled a collaborative form of inquiry in which participants (e.g., students, classroom teacher) often constructed knowledge alongside me, reducing common researcher-participant barriers, and potentially allowing for a more authentic research condition. Finally, the approach is inherently exploratory (Tsui, 2012), which suits the open-ended nature of my research questions, and allowed me to examine emergent and unforeseen aspects of the phenomena.

### ***The Cases and their Selection***

Within the context of the ethnographic approach, I specified one case: a single class period of an 11th grade honors English course taking place in one classroom at a local public high

school that serves a historically marginalized community over a primary data generation interval of five weeks during the school's Fall term. My intention was to develop an in-depth understanding of how the integrated systems of AE construction and identity development occurred in each case, and how each interacted with the other. Although I examined the class as a system, I centered five focal participants within that system. Whereas Creswell and Poth (2018) categorize case study as a methodology, I applied Stake's (2005) framing of the construct: a method for defining what is being studied, and as a means to bound the data. The classroom I examined was part of an ongoing intervention designed to promote college readiness and persistence.

Selection of focal students was carried out in close collaboration with the classroom teacher of record. A primary intention guiding selection was to diversify the manifestation of the target phenomenon: the co-construction of AE at the unit-of-analysis of the teacher-and-student-in-context. We first identified all consenting students in the class, and then narrowed the pool by applying the following criteria: 1) focal students must have attended at least 70% of past classes (a rate that balances the practical need to collect data with the need to represent class engagement as it actually manifests in the setting); 2) focal students must demonstrate willingness to participate (i.e., they contribute to class discussion at least occasionally; they complete work at least occasionally, and they engage with teachers at a one-on-one level at least occasionally); 3) in relation to one another, focal students must represent different engagement orientations (e.g., mastery versus performance orientation); and 4) focal students must represent demographic diversity. It is important to note these inclusion criteria have the potential to omit important voices involved in AE operations. To minimize effects of such omission, I included in my analysis notable instances of AE processes involving consenting students who attended less often and engaged less frequently than stipulated by inclusion criteria. Centering students within this research helps fill a critical gap in scholarly understanding of AE

processes. Documenting student perceptions and meaning-making of expectation utterances, paired with exploration of how such experiences help shape academic identities remains an understudied line of inquiry (Johnston et al., 2019; Tenenbaum & Ruck, 2007).

Selection of focal teachers in the classroom was constrained by the smaller number of teacher participants, but was also purposive. Of the four individuals who occupied teacher roles, only three were present with regularity over the five-week period (my first criterion), and only two engaged in regular instruction of focal students during the five-week period (my second criterion). Participant selection here was thus straightforward.

### ***The Study Context***

This current study was embedded in a larger ongoing intervention, the Quest Program (names of program and participants are pseudonyms) at a large public high school. Now in its 10th year, and in collaboration with participating teachers at the school, Quest continues to develop and implement reading, writing, and math curricula that prepare minoritized students for college coursework. Quest ultimately seeks to increase participating students' likelihood of meeting and persevering through the challenges of a post secondary degree program. This study centers AE construction in an opt-in 11th grade honors English course hosted by the Quest Program. Quest courses are designed to develop students' analytical reading and argumentative writing skills while also attending to their socioemotional development. Units of study undertaken during the primary data collection period included a curricular unit guided by the essential question "To what extent am I responsible to others?" Incorporated into this unit are biweekly journal activities which I designed to further aid students in negotiating their emerging identities as students and individuals in the world. The class was officially taught by the district teacher-of-record (a focal participant). Other members of the learning community and intervention also participated in instruction; these include the project investigator for Quest, his

research assistant who is myself (a focal participant), and a pre-service teacher associated with a local university.

Set in a working class neighborhood of a large city in the Mid Atlantic United States, the school is housed in a four story (including above-ground basement), early 20th century masonry building of Gothic Revival style. There is also a portion of the building built in the later 20th century; due to discovery of asbestos throughout the older building portions, school operations are now limited to the more modern wing, while 9th graders are housed at another site altogether. The building is set within a series of residential blocks, with a small business district and public transportation hub within a five-minute walk, and two locally owned “bodegas” (small deli/grocery stores) within a half-block distance. All students enter the building by first passing through a “jobsite office” style of trailer that houses a metal detection system. The trailer is staffed by three to four individuals who observe and attend to students as they place their belongings onto the conveyor and step through a detection gateway. Often this sets off a series of beeps, and a staff member asks the student to raise their arms and walk through again. Other times the student is asked to make certain adjustments (e.g., remove a belt, unpack the contents of a backpack) before passing through again. As students exit the trailer they pass through a chainlink fence containment area (also staffed), and then move through the doorway into the stairwell of the school building at basement level. Here there is another staff member monitoring students as they scan their badges to record attendance. From here many students go straight to the cafeteria to get breakfast, which they often bring with them to class. Other students convene in the hallways to socialize, or go to their first period classes.

Ms. Mahoney’s classroom is temporarily located at the basement level. The room is small, but entirely sufficient for the small class size of the section observed. Desks are arranged in a rectangle that follows the borders of the classroom walls, with one opened corner. Students in the class section observed tend to sit on the outside of the rectangle, although they are also free to

sit on the inside (as is done in other course sections). There is a window on one wall that looks out to the sidewalk; since the room is at basement level the sidewalk appears elevated. There is a small window-installed air conditioning unit in the upper portion of the window, and the entire window is covered with a heavy-gauge metal security grate. There is a small whiteboard on wheels against one wall, and an interactive “Smart Board,” also on wheels, against another wall. Ms. Mahoney’s desk is set diagonally in one corner, and two small teacher-style desks are also diagonally placed in two other corners. The room has Fall themed accent decorations (these are changed to holiday and winter themes in December), some domain-specific posters, and some more motivation-themed posters. There is also a “word wall” featuring color coded lists of words, and a designated section where student work is displayed. Another teacher who “floats” from classroom to classroom keeps a large wheeled cart in the entry area of the room, and retrieves it each morning. In the second half of the data generation interval a cabinet of laptop computers also came to live in the classroom (it had inadvertently been sent to the 9th grade site during summer, and was finally located and returned in November). The school provides all students with a Chromebook computer which they keep for the entire school year. (If a student forgets their computer, or if it is not functioning properly, the students also have access to the Quest computers housed in the cart mentioned above). Students access, work on, and turn in most of their assignments through the Google Classroom platform. Often during class there is a large orange extension cord running across the floor due to the limited electrical outlets which students must access when their computer requires charging.

Although there are thirteen students enrolled in the observed section of the course, the first 30 minutes of class are often only attended by three or four students, with others arriving throughout the 90 minute block. Most of the content is taught by Ms. Mahoney, but I facilitate a bi-weekly journal activity. Often present in the room is a pre-service teacher being mentored by Ms. Mahoney. The pre-service teacher and I regularly interact with students throughout a class

period (e.g., offer one-on-one task support and feedback), while Ms. Mahoney provides the majority of the direct instruction.

More generally, the school offers students an array of opportunities as part of, and in addition to their academic pursuits. Programs include JROTC, the arts (e.g., music, drama, ceramics), and Career and Technical education pathways (e.g., culinary arts, hospitality and tourism, aviation). Another important aspect of the school's culture is its robust athletic program with at least five sport options each season from the standard soccer and basketball, to the less typical bowling and badminton. Sports reportedly play an important role in many Quest students' daily school experiences.

Located in a historically marginalized area of the city, and primarily serving students within this catchment zone, the school's 2023-2024 enrollment was 861, a 65 student decrease from the previous year. Of enrolled students 6% had individualized education plans, 28% were English Learner designated, and 100% were identified as economically disadvantaged (CEP rate). Across enrolled students, 47% identified as Hispanic/Latino, 40% identified as African American, 6% identified as White, 5% identified as mixed race, and 2% identified as Asian. Per most recent (2021-2022) records on the District's website, 20% of students tested in the school were designated proficient in ELA, and 2% of students tested in the school were designated proficient in math.

### ***Study Sample***

The Quest project hosted four ELA courses in the 2023-2024 academic year. As the research assistant for the ELA portion of this project, and given my significant familiarity with the context (this is my fourth year in the position), I chose to conduct my study within one of these classes. I selected one of the two 11th grade classes for a number of reasons. The five-week data collection window occurred during the height of college application season; this prompted me to select an 11th grade section to avoid any potential interaction effects between application

efforts and normative student engagement. Of the two 11th grade sections I selected the one presenting as most typical with regard to attendance levels and distribution of engagement approaches. Finally, on a practical level, I selected the 11th grade section that had a higher number of consenting students, enabling a broader pool for focal student selection and more options for supplementary data collection that might represent voices of less engaged learners. The selected 11th grade section serves 13 students two to three days per week in 90 minute segments, and occurs at the first period of the school day.

Study participants included all consenting and assenting students ( $n = 8$ ; 62%) in the class, and all consenting individuals ( $n = 3$ ; 75%) acting as teachers in the class. There were 13 rostered students, and, at various times during the designated five-week period, there were four teachers engaged with the students. While data collection centered on focal participants, data also include contributions from other consenting participants. Focal students included Haylee, an 11th grade female student who identifies as Latin American/Dominican; Omar, an 11th grade male student who identifies as Black; Frank, an 11th grade male student who identifies as African American, Hispanic, and Native American; Ms. Mahoney, an experienced secondary educator, a preservice teacher from a local university, and myself (JH), a secondary educator and researcher who also acted as the research assistant for the Quest project. All three teachers identify as White. Recruitment of participants was integrated with recruitment for ongoing Quest evaluation research. All students in the class were invited to participate. Students were made aware that their participation in this study was optional, and that a decision to join could be withdrawn at any time throughout the study. All consenting students and their parents/guardians, and all participating teachers agreed to audio recording and transcription of their speech. Only data from consenting students and teachers was examined. Consent and assent forms were distributed to all eligible participants in the class. Students were given points for returning their forms, and significant efforts were made to convey to students that these points would be given whether they check the “yes” option (to participate in the study) or the “no” option (to abstain from the study). Because

this research concerns human subjects, approval was sought and obtained from the institutional review boards at Temple University (protocol #22310) and the School District of Philadelphia (study #2022-10-1053).

### ***Data Collection***

Under the auspices of the Quest Program, but with attention paid to the needs of this dissertation study, both Temple University's Institutional Review Board and the School District of Philadelphia's Research Review Committee granted approval to collect the forms of data listed below:

1. Observer fieldnotes. These are detailed accounts of classroom interactions and events taken weekly during portions of the 2023-2024 academic year, and taken in each of five observations during the primary data generation interval. They utilize an observation protocol that includes regular timestamps, a visual representation of where participants are situated within the room (and any subsequent movement), class period, date, content covered, list of educators present, and contextual information (e.g., "First day back after week off"). Notes include a running log of events, reporting of specific participant actions (e.g., "Jerome and D'Shawn are engaging in back-and-forth with Ms. Mahoney about their responses to Scale A"), and notes on any interruptions to the class (e.g., "Loud video begins in classroom next door; student talk now difficult to hear"). Sometimes I include direct quotes from participants. Fieldnotes apply a participant-observer perspective, and although I sought to capture a comprehensive account of occurrences, during some segments (e.g., when I was actively teaching), the notes summarize occurrences that transpired in previous moments. Depending on circumstances, notes are hand-written or digital; all notes were digitized and cleaned the same day to ensure fresh recall for editing. Fieldnotes provide both a broad context for understanding the audio recorded data sets and learning artifacts, and contribute to thick descriptions of the

sociocultural setting. They also document information not captured by audio recordings (e.g., students' use of phones or other devices).

2. Audio recordings of classroom discourse: Recordings were created one time per week over the five-week window; each captures a complete 90 minute class period. Content includes teachers' direct task instruction; whole class discussion; and student-to-student, student-to-teacher, and teacher-to-teacher verbal engagement. In an event where a non-consented student contributes, that contribution is excluded from the recording and transcript, and replaced with a general description to bridge the narrative. All recordings are transcribed. When paired with their coordinating observer fieldnotes, transcriptions of classroom discourse constitute a large segment of my primary data set.
3. Stimulated recall interviews (SRI). In these brief impromptu exchanges recording by cell phone, I engage participants with prompts about a recent event or observed phenomenon in the setting. If the recalled event occurred during the same class period in which the STI occurs, I describe my perception of it to the interviewee by memory. For more distal events I read an excerpt from fieldnotes or transcript to prompt interviewee's memory. Recall interviews are designed to capture detailed first-person interpretations of events including instances of participants' meaning-making, and their cognitions around this process. They also serve to expand my understanding of the participant perspective.
4. Learning artifacts. These consist primarily of assignments (or portions of them) and students' responses to assignments (e.g., Journal Activities). They may also include learning scaffolds. Most often artifacts are digital by origin (accessed through the Google Classroom interface), but also included are photographs of poster-style notes created by student groups and photographs of learning scaffolds (e.g., an essay outline drafted by the teacher on the whiteboard).
5. Archival data. To situate the classroom experience in the broader context of the school and its district I examine archival data such as that available on the school or district's

website (e.g., the school’s Teacher Handbook) and other publicly available materials that provide information relevant to understanding the intentions, actions, and collective culture of the school and its district.

Table 1. *Amount of Data Collected, by Type*

Data Type	Description of Amount and Sort
Observer fieldnotes	5 sets representing each observation during the primary data generation interval (total of 4756 words); additional sets taken at other intervals for contextualizing
Audio recordings of classroom discourse	442 classtime minutes, recorded and transcribed, representing 5 complete class periods
Stimulated recall interviews	19 interviews with students (1-6 minutes long); 5 interviews with teacher of record (5-32 minutes long)
Learning artifacts	9-10 journal responses per focal student (total of 29); 4 Quest assignment documents; student responses to Quest assignments and scores earned; 3 Kite Runner content quizzes; photograph of teacher-written scaffold on whiteboard
Archival data	Staff Handbook; Student & Parent Handbook; Student Attendance Protocol; Marking Guidelines; Climate & Safety Handbook; school website; District website
Memos and jottings	6000+ words of memo; 75-110 individual jottings (8 to 127 words per)

I situated my primary data generation within one of four curricular units intended to map onto each quarterly term. The unit featured in the five-week data generation interval commenced the week prior to my collection of primary data, and ended at the mid-unit assessment. Data generation aligned with the onset of the second of four terms in the school’s academic calendar. These curricular and time demarcations for data generation are design choices. The course curricula align, where possible, with term changes in part because school terms tend to progress along an arc. Per a pilot study conducted the previous school year, the initial phase of this arc is marked by an increase both in participants’ positive regard for the work of school, and in their energy output; midway along the arc there is often an energy lull and reduction in positive affect; as the end-of-term approaches there is often an energy surge paired with an anticipatory mood

and optimistic tone. The final leg of this journey has traditionally been marked by an apathetic student mood, but this is not exhibited by all students. While the five-week designation will not allow for the arc of a full academic term, the bounded unit of time does follow class operations from the onset of a term, and up to the week before the winter holiday. In many ways the holiday bifurcates the term such that each portion simulates a complete arc wherein students seem to perceive the winter break as a de facto end-of-term. Collecting data over this 5-week period was intended to generate data representative of the various moods and stages that characterize the systems' comparatively normative change over time. I collected a full class period (90 minutes) of data one day per week for five weeks, affording comprehensive analysis of the full timespan, while also enabling deep engagement with selective sequences that demonstrate rich and illustrative moments of AE construction.

In the spirit of an ethnographic approach, I also engaged in participant-observations and collection of select supplementary data (i.e., observation fieldnotes and SRI) outside the bounds of the five-week interval of primary data generation. That data collected prior to the five-week interval enabled me to identify potential areas of focus and phenomena of interest, and provided a rich archive of contextualizing material. That data collected after the five-week interval served my processes of (dis)confirmation of observed patterns (engaged in once case assertions had been made), and offered opportunities to engage participants with inquiries targeting phenomena that were emerging from my ongoing analysis.

Based on a pilot study conducted in the previous school year, I anticipated the 5-week period to manifest classroom interactions that featured teachers' and students' continual and reciprocating transmittals and perceptions of AE-information of four types: task engagement information, achievement goals information, information about what is valued in the setting, and information conveying student levels of academic competence. The projection was accurate. Over the five-week interval a rich meaning-making process transpired, mediated by participants' talk and text. This included teachers' delivery of instruction, students' response to instruction,

teachers' feedback to students' output, student-to-student interactions, teacher-to-teacher interactions, and researcher-solicited participant responses (i.e., stimulated recall interviews). These instances varied in temporal relationship (e.g., discussing a task the student is working on in the moment versus discussing a task that will be turned in next week), in number of participants involved (e.g., one-on-one versus teacher to whole class discourse), in modality (e.g., instruction delivered in writing as part of an assignment versus instruction delivered verbally), and in level of formality (e.g., an impromptu back-and-forth between teacher and student before class versus teacher's instructions on a mandated district assessment).

### ***Theoretical Framing***

My approach to analyzing this extensive data corpus was guided by a theoretical framework that integrates two conceptual “tool kits” for meaning-making: discursive psychology (DP) and the Dynamic Systems Model of Role Identity (DSMRI). My integration of these “ways of understanding” informed both my research design and my analysis procedures. Each is compatible with my social constructionist perspective, and with the complex systems ontology that shapes my assumptions (Hilpert & Marchand, 2018). Although each is described separately below, my use of the frameworks is integrated.

**Discursive Psychology.** Discourse is a primary medium through which AE are negotiated and constructed. Discourse is also an important medium for negotiating role identity. This suggests that analysis of talk and text is a logical pathway for understanding these processes. While many forms of discourse analysis exist, several aspects of DP make it particularly well suited to my project. DP views language as performative, and is thus primarily concerned with the actions that discourse accomplishes in the social world. It helps answer questions about how people use talk and text to “construct versions of reality” (McMullen, 2021, p. 7). For example, DP practitioners identify discursive devices (e.g., hedging, minimisation, affect display, detail versus vagueness) to understand the situated *functions* of talk and text including “the interplay

between social actions and psychological constructs” (Wiggins, 2017, p. 121). Principles and practice of DP also align with my unit-of-analysis, the student-and-teacher-in-the-(nested)context. Although DP can be applied at micro and macro system levels (McMullen, 2021), it is not used to analyze the thoughts, feelings, and behaviors of individuals. Instead, it is used to examine *what people are accomplishing socially*, and the particular ways that language mediates these actions. In this study I seek to understand how AE are co-constructed in the setting, how the focal participants negotiate their role identity in relation to those construction processes, and what implications such processes have for one another. In my use of DP I focus my gaze on these social processes, rather than on the individuals enacting them.

Finally, DP is well aligned with my epistemological and ontological stance. A primary assumption of the DP perspective is that discourse is both *constructed* and *constructive*. This suggests that the products of discourse—including AE—are dynamic and continuously emerging. DP also views discourse as situated, implying the need to incorporate context into one’s analysis. Wiggins (2017) stipulates three facets of this principle. First, discourse takes place within an *interactional context* (i.e., the classroom, which elicits different language use than would a church or grocery store) involving different, and often emergent, positionality across speakers. Next, discourse occurs within a *rhetorical framework* (i.e., the task of writing a formal essay versus a journal response) in which some forms of reality are constructed and prioritized over others. Lastly, discourse operates along a *turn-taking sequence* that permeates everyday speech (e.g., a given utterance is preceded by, and followed by another utterance), imbuing it with meanings that are often tacit. Building my analysis schema around DP principles and practices grounded my process in the investigation of how talk and text were used by participants to enact social maneuvers in processes of AE construction. While some forms of DP stipulate specific analytic processes, I devised an adaptive procedure (described briefly in the Data Analysis Procedures section) that integrates DP and DSMRI applications.

**Dynamic Systems Model of Role Identity (DSMRI).** Developed around the assumptions of a complex systems model, the DSMRI (Kaplan & Garner, 2017) is a metatheoretical framework that integrates psychosocial, social psychological, and sociocultural perspectives to analyze identity formation and change over time. As noted earlier, the framework conceives of identity development as situated, non-linear, and emergent. Also as noted earlier, the DSMRI conceives of role identity systems as constituting four dynamical components (beliefs, self-perceptions, goals, and perceived action possibilities, all in relation to the role), and emotions and information connected to these components. An individual's self-perceptions, for example, may include mature for my age, introverted, athletic, not a risk-taker. These self-perceptions move in and out of salience in response to internal and external influences (e.g., the task at hand, relationships with others nearby, the actor's sense of belonging in the setting). Continual interplay within and across these components and their associated emotions, and influence from the identity system's control parameters (culture, social context, domain, and personal dispositions) ensure the system is always in a state of relative fluctuation. However, system behavior (involving iterations of positive and negative feedback loops) tends to move one's identity system toward states of apparent balance called "attractors." Attractors may conduce toward adaptive identities and wellbeing, or toward stable but maladaptive identities and states of being. The system also experiences "repeller states" or periods of tension and lack of stability that may prompt identity development processes. Although an identity system does not operate according to deterministic or causal forces, it can be responsive to even small changes within its control parameters (e.g., the nature of the activity, material conditions and their affordances or constraints). While it would be an overstatement to suggest a system's control parameters act as behavioral levers that guide actions (effects tend to be indirect, and are enmeshed within a complex system of interrelated and often subtle effects), it is accurate to suggest that change to a system's control parameters can reverberate across the system, with the potential for important widespread impacts. If the system is well understood it is also possible to anticipate a general

direction of system movement in response to changing a parameter. Action is the anchoring entity of the identity system, per DSMRI conceptualization. The actor of an identity system has agency to affect their own identity formation; such agency is theorized to increase as an actor's system of related role identities and their components become more integrated, aligned, and harmonic (Kaplan & Garner, 2017). So far, for illustrative purposes, I have described an identity system that is isolated from other such systems. This is antithetical to the complex systems perspective held by the DSMRI.

The framework suggests systems of identity are nested within other such systems, and simultaneously serve as nests for other interrelated systems. Kaplan and Garner (2017) suggest that within identity systems this structural feature of self-similarity, common to most complex dynamic systems, manifests horizontally and vertically across different units-of-analysis. Importantly, this fractal type of expansion occurs both structurally and with regard to guiding principles of the system (e.g., high or low levels of autonomy may be observed at the administrative, teacher, and student level). Within a single collective role identity system—for example, a community of learners in an ELA classroom—the individual constituents' identity systems (i.e., students' and teachers') can be viewed as elements that comprise the collective system. In turn, each of those individual elements/systems (e.g., a single student's identity system) is composed of more localized identity systems (e.g., the students academic identity, social identity, and so forth), and each of those localized identity systems is composed of yet more focused identities. These examples represent hierarchical (or vertical) self-similarity. Horizontal self-similarity also occurs. Examples here are similar structures and processes across the collective identity systems within the four classes I propose to examine in this study. At other levels of the system horizontal fractal structuring may be seen in the various individual students' identity systems across a single class and be seen across a series of classes (e.g., the identity of *model student* may replicate across a single class, and across multiple classes), or in the broad collective identity systems of different schools across a district (e.g., the collective identities of

both *award winning school*, and *low performing school*). These structures do not abide by perfect symmetry, and often exhibit an organizational “messiness” in their varying degree of overlap. The fractal nature of identity systems should not be treated as predictive, and nor does this aspect of identity systems convey that a construct will manifest at a collective level in the same way that it manifests at an individual level (Fisher et al., 2018). However, when viewed holistically, fractal features can aid analysts in understanding important aspects of system behavior.

Through the application of the DSMRI framework I investigated the emergence of AE at the unit-of-analysis of the student-and-teacher-in-the-(nested)context. The embedded nature of this focal unit necessitated the broadening of my investigative lens to examine the influence of other systems on the focal AE construction system. This is in keeping with DSMRI analysis procedures (Kaplan & Garner, 2022), and in this case was accomplished in part by integrating DSMRI analysis processes with those stipulated by DP. In the Procedures section below I describe how this integration manifested within my data analysis approach.

### **Data Analysis Procedures**

Systematic examination and subsequent meaning-making of my data occurred in stages. The initial processes (e.g., transcribing) overlapped with the five-week data generation interval while the final stages (e.g., integrating the meaning facets) overlapped with my process of writing up findings. My process included three distinct phases of coding and extensive reflection throughout (e.g., memoing and jotting). Aspects of the data analysis process help answer the fourth research question, *How can the process of mapping AE construction in one setting best be applied in other settings?*

#### ***Transcribing and Becoming Familiar with the Data***

The process of transcribing audio recorded data is both a practical necessity and a theoretical endeavor involving consequential decisions. Transcription of the five 90 minute class periods observed and the subsequent SRI conducted was therefore not a neutral process, but one

bound up in my assumptions and prior knowledge about AE and their co-construction (Wiggins, 2017). In this way, transcription is a critical part of analysis wherein the researcher determines what content holds relevance (e.g., Should a sidebar teacher-conversation about needed changes to an upcoming assignment be included in the transcript, or should it instead be bridged with a short summary?). The researcher also makes decisions about how to represent the recorded content. Will the transcript be a strictly orthographic record, or will it also include contextual notes (e.g., “Stated more loudly; now addressing whole class”). A transcriber’s use of grammatical structures, conventions, and symbols to represent such features as pauses, overlapping speech, emphasis, rising pitch, and more are also theoretical choices with implications for meaning-making.

My transcription process was aided in part by artificial intelligence software (Otter). Primarily, this aided in the provision of automatic timestamping of the utterances and general formatting. For class period recordings this software was far less helpful in capturing what was actually said, likely because voices were often difficult to hear due to background noises (e.g, the heater’s fan), simultaneous talk, and the wide variety of participants speaking. For SRI use of software was largely effective. For class period recordings the software-provided transcript was largely rewritten within the provided formatting. For SRI, extensive revision was also required. I sought to create transcripts that included all verbalized content from consenting individuals and contextual notes relevant to an outside reader’s ability to visualize and make sense of the narrative. Instead of adhering to standard grammatical conventions (e.g., periods as a sentence) I tried to represent elements of prosody (e.g., rate, volume, tone, pitch of speech), features like long and short pauses, onomatopoeic utterances (e.g., uh-huh), and words as they were actually spoken (e.g., “wanna” instead of “want to”). This attempt to capture and authentically represent what transpired in the recorded session is informed by my belief that details matter in discourse. While much of what is accomplished by speech is conveyed implicitly and interpreted at different levels

of consciousness, small details such as the register a teacher uses to address a student can help shape that student's perception of the utterance, and thus their meaning-making.

Discursive psychologists often make use of a style of transcription called the Jefferson (2004) system. This extensive set of notations helps the practitioner interpret micro features of speech (and sometimes text). Transcribing using this system is both time intensive, and can render the transcript more difficult to read for general purposes. Such transcription however, does enable a fine grain analysis that supports my intentions in several instances. As suggested by McMullen (2021), I used a "light" version of the Jefferson transcription system for selected text segments which I identified as providing exemplary sequences of talk between participants, and as part of my process of (dis)confirming, developing, or supporting case assertions. Because such sequences involve more than one speaker and tended to be longer than other included excerpts, it is my belief that they warrant closer inspection of speech details. Because the Jefferson transcriptions also include line numbers, the format better facilitated the written analyses offered. Alternatively, I do employ some elements of the Jefferson system (e.g., use of :: to note elongation of word sound as in "She sa::id she was gonna. . . ri::ght?") within my routine transcribing of classroom discourse, but these elements are removed when I quote a short segment of such text from a single speaker. Table 2 displays the notations I employed in my use of the Jefferson transcription style.

I also sought to become intimately familiar with my data before beginning to code. This was facilitated in large part by the transcribing itself, which requires such processes as listening to a segment, scrolling back to re-listen for a difficult-to-hear phrase, documenting the phrase, scrolling back again to confirm who is speaking, and so forth. However, the process offers a particularly fragmented form of familiarity. McMullen (2021) makes a case for reading and/or listening to your entire data corpus without any form of coding or active analysis such that you let the data "wash over you" as a means to experience it as a fused whole.

Table 2. *Jefferson Transcription Notations Used in Current Study*

Symbol	Example	Description
(.)	text (.) text	Short, untimed pause
()	(3)	Timed pause measured in seconds
—	<u>text</u>	Emphasis through volume and/or pitch
↑	↑↑text	Onset of pitch shift, rising
↓	↓text	Onset of pitch shift, descending
::	te:xt	Stretching out of preceding sound
°	°text°	Utterance is noticeably softer than surrounding talk
><	>text<	Utterance is speeded up compared to surrounding talk
<>	<text>	Utterance is slowed down compared to surrounding talk
::	te::xt	Prolongation of the immediately prior sound
T	TEXT	Upper case indicates especially loud sounds relative to surrounding talk
—	text—	Utterance is cut off
(( ))	((text))	Indicates transcribers descriptions

*Note:* Notations selected from larger notation glossary (Jefferson, 2004)

Finally, in preparing the data corpus for coding, I removed data representing any non-consented participant. This often involved inserting “bridges” in the form of over-generalized summaries of what transpired in the removed text such that the narrative would not be interrupted.

### ***Initial Coding Phase***

While there is no definitive research that describes how AE develop, hypothesized processes describing how students come to behaviorally confirm their teachers’ expectations offer insights into possible processes. Behavioral confirmation is theorized to begin with the teacher forming an expectation based on some input (e.g., student’s previous performance, demonstrated levels of motivation and emotion; Dompnier et al., 2006; Urhahne, 2015); next, the teacher enacts behaviors that convey that expectation to the student; the student perceives the expectations and engages in confirming or disconfirming behavior. One model suggests this is partly determined by how aligned the expectation is with the student’s self-image (Daryl & Fazio, 1980). According to this model, if the teacher observes the student’s confirming behavior, they tend to interpret it as attributable to the student’s disposition, which causes them to confirm their original expectation.

On the other hand, if the teacher observes the student's *disconfirming* behavior, they tend to attribute it to situational factors, causing them *not* to confirm the original expectation (at least, not until multiple such incidents have transpired to negate the situational attribution (Brophy, 1983; Darley & Fazio, 1980). These theoretical models feature an ongoing process of students and teachers transmitting and perceiving various forms of AE information. Although the models center processes of behavioral confirmation, I suggest that acts of confirming and disconfirming expectations, often at micro levels, are important building blocks of salient and persistent AE developing in the setting. Therefore, in my initial coding of transcripts, I examined these processes to understand their constituent parts.

In keeping with Saldana's (2008) description of initial coding, I used an open-ended approach. I explored the dataset to understand how discourse was being used in the classroom with regard to AE, and analyzed its structure. After moving through each of the five transcripts in this way I determined and then confirmed that within instances where discourse included AE-information-related utterances, an utterance always fell within two categories: transmittals or perceptions of AE-information. Transmittals include (but are not limited to) instances in which a participant delivers, conveys, or describes AE-information. Perceptions include (but are not limited to) instances in which a participant indicates observing, interpreting, or comprehending AE information. Next, I examined the two categories more deeply in an attempt to understand their composition. Still in a somewhat open-ended mode of coding, but guided by my goal to identify compositional structure, I moved through each transcript again to identify the nature of the AE-information being transmitted or perceived, eventually identifying four possible categories that either a transmittal or perception would fit within: Task engagement information, values and beliefs information, self- or class-conduct information, and academic competence information. Descriptions and examples of these are shown in Table 3. In all instances of AE-information being transmitted or perceived, information fit within one of the four categories.

Table 3. *Possible Categories of AE-Constituents*

Type of AE-information	Description	Example content
Task Engagement (TskEn)	Information around the details of students' expected task engagement	
Procedural expectation information	Procedural expectation information: Suggests what students will do in their engagement with the task	Instruction to paraphrase or quote text directly; Instruction to turn in assignment by certain date
Achievement goal information	Achievement goals information: Suggests whether a mastery or performance approach is expected.	Indication to attend to completion of task over effort, or process of learning
Level of independence information	Level of expected independence information: Suggests the degree of support a student is expected (or expects) to use in carrying out task.	Indications that text will be read collectively versus independently
Conduct information		
Self-conduct information (Sif-Cndt)	Information around the way students or teachers conduct themselves at the individual level with regard to learning experiences (including at home); often leads to the making of what is "normative" in the setting at the individual level	Expectations around use headphones during back-and-forth; opening and logging-in to Google Classroom upon arrival; completion of past due work at home
Class-conduct information (Cls-Cndt)	Information about the way students conduct themselves in the classroom, and relevant to learning experiences; often leads to the making of what is "normative" in the setting at the group level	Expectations around arriving on time; stepping into the hallway to chat with friends; contributing to group conversation during back-and-forth
Values and beliefs information (Values)	Information that conveys what is valued and/or believed in the setting	Value of task completion over value for effort put forth
Academic competence information (AC-info)	Information that conveys one's perceived or actual competency for a task, or more generally (can be transmitted from student to student, student to teacher, or teacher to student).	May regard ability and/or possession of knowledge, or may regard something more general such as an acquired skill-level. Often presented as a student's capacity to engage in a task.

I further determined that each transmittal or perception performed a function with regard to the development of one or more “AE under construction” in the setting (these often present as norms, and can also be conceived of as attractor states within the AE activity system). Specifically, my initial coding identified four possible functions of an utterance: developing a nascent expectation/norm (initiating, becoming, solidifying, adding to), sustaining an already developed expectation/norm (condoning, satisfying, accepting, actively overlooking), verifying the expectation/norm to a participant (inquiring after, confirming, checking, reiterating), and resisting the expectation/norm’s sustainment or development (critiquing, evaluating, reframing, circumventing).

To these utterances of AE-information (whether transmittals or perceptions) I give the name *AE-constituent* because I understand them to be building blocks that potentiate a “fully formed” AE. It is important to note that the notion of a “fully formed” AE is only theoretical. All AE exist in a state of flux; even when an AE appears to exhibit stability in the setting, it always has the potential to become more or less salient and persistent over time, under different circumstances, and for different participants. Nevertheless, while AE exhibit this variability, it is possible to identify the general trajectory of the expectation or norm’s development over the course of the dataset, and to identify important moments in that trajectory for a later fine grained examination that integrates analysis of the additional meaning facets. Next, I describe these facets and how they featured in subsequent coding phases.

### ***Focused Coding Phase***

Analysis procedures at this juncture were informed in part by DP practices described by Wiggins (2017), and by processes stipulated in the DSMRI manual (Kaplan & Garner, 2022), and in response my developing theoretical knowledge of AE phenomena. Fieldnotes, transcripts of full classes, and students’ journal activity (JA) responses were all examined initially. Secondary

data (stimulated recall interviews, learning artifacts, archival data) were brought in during the latter portion of this coding phase. Focused coding was divided into three meaning facets:

- AE-constituents: text that in any way describes or depicts the dynamic constituents of AE construction. These are transmittals and perceptions of AE-information (e.g., a teacher noting the timeframe in which she expects a task to be completed; a teacher's description of qualitative aspects of work she hoping student will produce; a student conveying struggle with an academic task; a student conveying to another student what they perceive to be the instructions for a task, etc.). Constituents may feature student or teacher utterances, or may consist of written text constructed by curriculum writers. In this meaning facet my unit of coding within the primary data corpus consisted of an utterance (or, in fieldnotes, a description of an action) by a single participant which transmits or expresses perception of one type of AE-information. These range from one line of text, to several. If the transmittal or expressed perception occurs repeatedly in back-to-back succession within a compressed period of time (but each incident conveyed the same AE-information), I coded it as a single incident instead of several.
- Role identity (RI) information: text that describes or depicts the *content* (beliefs, goals, self-perceptions, perceived action possibilities in the role), *structure* (e.g., the degree of mis/alignment of content elements), and *processes* (evidence of change in the system over time such as the individual engaging in identity exploration by describing their hoped for future self as a college student). In the RI facet my unit of coding within the primary data corpus was the reflection of one RI within an individual's system of roles. I double coded if the text indicated more than one component (e.g., a goal and a belief) within that role. In the students JA such a unit of coding tended to be 1-3 lines of text in response to a prompt. When coding transcripts and fieldnotes units were sometimes longer, reaching paragraph length at times.

- Sociocultural control parameter: text that in any way describes or depicts the classroom culture, whole school culture, community culture, or culture within the district (and beyond), or any aspect of the situation that is clearly contributing to the building of such culture. Culture is defined here as: indications of “ways of being” in the setting as demonstrated by behaviors, material characteristics, and intellectual and attitudinal features observable in the setting (e.g., excessive noise in the hallway; administrators conducting a phone check; the arrangement of desks in the classroom, etc.). In this meaning facet my unit of coding consisted of text that indicated the operation of one sociocultural control parameter; this might be accomplished in a single clause, or might take up several lines of text.

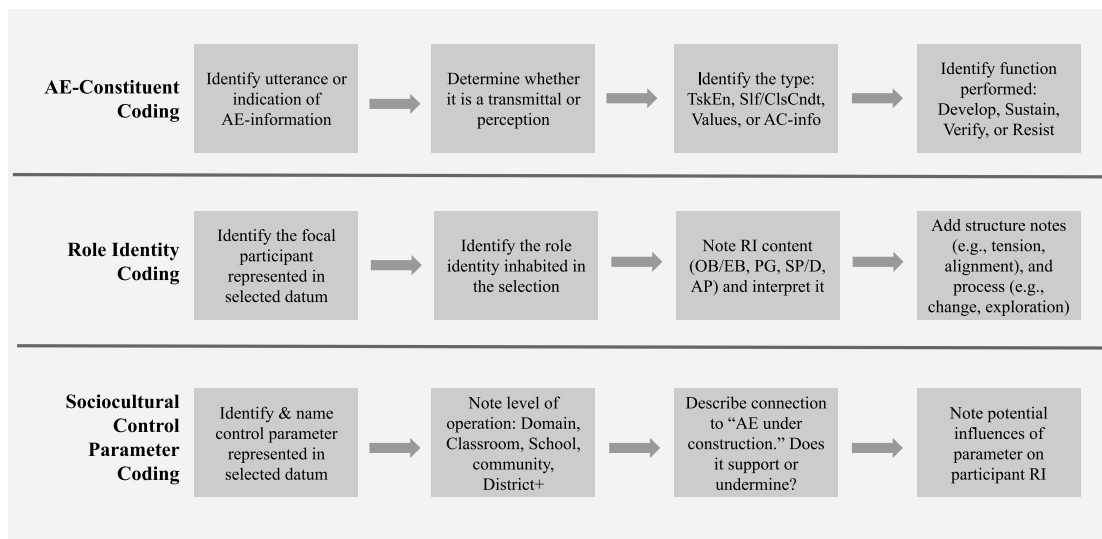


Figure 2. Focused Coding Process Applied to Meaning Facets

First, I created three clean copies of each dataset, designating one to be coded through the lens of each meaning facet. I conducted all coding for one facet (across all designated data) before moving to the next to ensure a consistent process. Coding of each facet began with systematically identifying and highlighting all instances where text included content relevant to that meaning facet, given the research questions. This visual indicator resulting from this pre-coding move

helped to eliminate distracting “noise” during the actual coding process, and enabled a more efficient subsequent coding experience, facilitating the immersion-in-task that focused coding demands. An abbreviated visual representation of the coding process for each meaning facet appears in Figure 2. This is a zoomed in representation that depicts the process applied to each relevant datum identified within the meaning facet.

Viewed from a wider lens, this process involved notable recursivity and coding overlap. For example, if I created a code in a latter portion (e.g., the fourth or fifth observation) of the five-week data span I returned to earlier transcripts and fieldnotes to scan for that code. My reasoning was that the later representation (which prompted me to create the code) may have simply been more prominent, and until I had named it, might easily have been missed in its more subtle manifestation earlier in the data span. Naming of codes also evolved over the course of coding the five-week dataset. I sometimes returned to the earlier observation records to revise a code name in alignment with a later more stabilized version. Overlap also occurred. I sometimes labeled a datum with one overarching code, and then nested other codes (attributed to segments within that datum) inside it, creating a small system of codes. Other times I related a code from one meaning facet to a code in another, foreshadowing a later process of integration. Upon completing coding for one meaning facet I engaged in an iterative process of summarizing to eventually arrive at a “bird’s eyes” view of the data. After each summary was complete and I had achieved a temporal distance from the data, I returned to each dataset once more to systematically review my coding given the now settled list of codes for that facet. I revised each summary accordingly.

### ***Applied Coding Phase***

With each meaning facet re-coded using refined coding schemes, and outcomes culled and recorded (i.e., emerging AE organized into table, participants’ RI profiles fully fleshed out and summarized, and a SCCP organized by level of operation), I began testing my findings. For

example, within the AE-constituent facet I sought to define each identified emerging AE and then tested the definition against examples until the definition captured the essence of that AE. This process involved further revising of my identified list of emerging AE, and some merging. Similar processes were carried out for each meaning facet. Also in this phase I began to create visual representations of the data. This process facilitated further testing of assertions and phenomena conceptualization. Finally, in this phase I selected data excerpts for deeper analysis and began applying practices of DP at a deeper level, including increasing the data grain size by transcribing the selections using a light version of the Jefferson method (see Table 2, p. 68). This process helped me transition to integrating findings across meaning facets.

### ***Integrating Data Facets and Establishing Trustworthiness***

At this stage of the analysis process I began to identify patterns and themes across meaning facets, different observation events, and different system levels. Simultaneously, with case assertions becoming more solid, I began triangulating primary data with my additional data sources (stimulated recall interviews, archival data, artifacts), and conducted systematic searches for disconfirming evidence. McMullen (2021) suggests seeking out data segments that “nuance, complicate, or even contradict the supposedly clear exemplars” as a way to challenge and ultimately enrich one’s argument (p.39). At previously determined junctures throughout my analysis process I asked knowledgeable others (those familiar with the theoretical framework or the setting) to conduct data audits to ensure trustworthiness of process. I also asked a colleague in another domain, but one with extensive experience in qualitative coding, to review my process in full for two of the five observation data sets. These measures each resulted in small revisions or course corrections.

### ***Memoing and Jotting***

During all stages of data collection and analysis I engaged in jottings and memoing (Miles et al., 2020). Jottings ranged from a marginal note made while compiling observational

fieldnotes, to a sentence appended to a code while transcribing, to a handwritten series of thought fragments scrawled on a notecard in the middle of the night. Their contents ranged from emotional responses to a classroom event, to a question that emerged while coding, to a sudden idea about how to visually represent a finding. Memos were similar to jottings, but tended to involve a more organized and extended form of thinking. I often created memos using the audio recorder on my phone as I waited for a bus or cycled home from a fieldwork session. Memoing was equally common during data processing and analysis. In these instances I documented the memos on a cloud document, often returning to them as my ideas developed further over time. Memo tended to include such content as projections of how to move forward in the coming stages of analysis, exploratory journaling about topical assumptions and other beliefs, inquiries about why something in the field seemed to be transpiring in a particular way, ideas about how to connect an emerging finding to the literature, and ideas about how to incorporate focal data sequences in my written report. All memos were dated and longer ones were given descriptive titles. Audio recorded memos were transcribed and stored digitally as text files. Jottings and memos served as data documenting my data collection and analysis processes, and facilitated regular reflections throughout my research process.

### *Negotiating my Positionality*

In any research endeavor there are alignments and misalignments with regard to the cultural context, and between the researcher and those individuals selected to provide data for the inquiry. I made attempts to consider these (mis)alignments at the various stages of my investigation because I assume they inform both my decision making (from research design to presentation of results) and meaning-making (from my interpretation of a single datum to findings more generally). As noted previously, I approach inquiry from a social constructionist epistemology that views meaning as constructed through interactions with other beings, objects, and phenomena. In his explanation of constructionism Michael Crotty (1998) describes the

objectivity and subjectivity of meanings to be “indissolubly bound up with each other” (48). Similarly, he points to the ongoing negotiated balance between subjectivist and individualist perspectives in social constructionism. My epistemological stance aligns with these viewpoints. However, methodologies adopted in much of the AE research (e.g., dyadic studies of teacher and student intended to determine degree of student’s behavioral confirmation of an isolated AE) often align with it poorly. Similarly, the predominant epistemology guiding instructional practice at my own research setting tends not to adhere to constructionist pedagogies. In combination, I have many times experienced the sense of being a malefic intruder either at my research site, or more generally, as a researcher of AE. An emotional inclination to counter these feelings has at times led me to overcorrect, while at other times I have managed the low sense of belonging with greater integrity and was able to simply set it aside for later processing. Overcorrection in the classroom setting manifested in different ways; at times I enacted practices that aligned more with the teacher of record in the classroom (Ms.Mahoney) instead of going about a teaching task as I normally would. In the context of analyzing data (a situation featuring less social complexity, and so perhaps a greater ability to apply forethought) I was able to better manage this perceived misalignment. For example, during a focused coding session of a transcript I noted my growing frustration as I engaged with a disconcerting interaction between participants. In this setting I had time to step back and process the emotion, explore its origin, and note its potential to influence my coding process. Instead of overcorrecting as a form of mitigation, I was able to get on the other side of the emotion by taking the time to understand it.

A potentially more salient misalignment is critical to address. I am a middle aged educated White woman teaching and conducting research in a school whose student body is 6% White. That I am conducting research which casts Black and Brown students as among my “study participants” demands an unusual degree of sensitivity in how I conduct myself. Also relevant is that the class’s teacher of record (also a study participant), a temporary pre-service teacher that

sometimes engaged with the class, and the Quest project principal investigator all are also White. While we work hard to represent the students' social identities through the literature, audio-visual materials, and subject matter that we select in the curriculum, as a researcher I must also find ways to navigate my own gap in knowledge and experience which inevitably affects the ways I understand and interact with my students. In any student-teacher relationship there is a power dynamic that the teacher must navigate. Adding the role of White researcher to that identity intensifies the urgency and responsibility to do so. I make a conscious effort to engage in practices that enable my students' development of a strong and positive sense of self-worth. Although I may attempt this in a variety of ways, I know that only some will be perceived by students as such. For example, in my design of journal activities I attempt to position students as experts in the examination and exploration of themselves. In doing so I try to signal the importance of their own voices, and enable their agentic self-development as young adults learning to chart their own pathways. However, when the necessary sense of safety is not established with a student, a journal prompt may instead be viewed as a hostile intrusion into their privacy. The process therefore requires ongoing reflexivity. I must examine my process in light of how it is perceived by others, and let that learning inform the way I engage in the challenge going forward. Gaps in alignment, and in cultural and experiential knowledge are likely to result in "blind spots" for a researcher. The researcher's task is thus to seek out the development and persistence of those gaps, to dig into those gaps in a regular examination of their effects on research practices, and to ultimately learn ways to manage the effects.

## CHAPTER 4

### OUTCOMES OF ANALYSIS

This study examined the integrated and discourse-mediated processes of AE co-construction and role identity development over a five-week period within one 11th grade honors English class in a large public high school in the Mid Atlantic United States. The investigation centered the unit-of-analysis of student-and-teacher-in-the-(nested)context, homing in on the situated affairs of two focal teachers and three focal students. I collected and transcribed audio recordings of one full class period each week, and paired each with a set of ethnographic fieldnotes created during the observation. To this dataset I added students' journal responses, stimulated recall interviews with participants, learning artifacts and archival data. Informed by the theoretical framing of the DSMRI and the principles and practices of discursive psychology, I developed and implemented a set of coding processes for each of three meaning facets: AE-constituents, participants' role identity development, and sociocultural control parameters. In Appendix B I provide a narrative account of what transpired over the five weekly observations; that overview of the experience weaves together emic and etic perspectives, and offers additional context to anchor my analysis of discourse extracts. In the following sections I present summarized findings for each meaning facet, followed by an overview of integrated findings across meaning facets.

#### **Outcomes Organized by Meaning Facet**

In this study I conceived of AE as *ontological and epistemological assumptions with varying degrees of certainty, complexity, and credibility about future consequences of success in a particular task and situation by particular students' action, held by any member of the collective and as relayed through discourse*. I assumed AE to comprise an ever emerging network of distinct but interdependent expectancies held by different actors. My initial focused coding of transcripts and fieldnotes deepened my understanding of the theoretical principles underlying AE

construction. While some aspects of this knowledge might well have been assumed by any observant participant in the classroom, empirical evidence from that data indicate that AE are continually being constructed by students and teachers in the setting, that the emerging role identities of these individuals play important roles in that process, and that AE construction is subject to varying degrees of affordances and constraints by sociocultural control parameters at all levels of the system. Although the three subsections that follow describe meaning-facet outcomes as if they were separated from one other, this is a distortion. Therefore, the final subsection of the chapter provides one way to view the outcomes as an integrated whole.

### ***AE-Constituents Accrete Inconspicuously, Mediated by Discourse***

AE are continually being constructed by students and teachers in the setting as they engage through talk and text, and nonverbally. An often imperceptible, slowly compounding process of transmitting and perceiving AE information (concerning task engagement, self- and class-conduct, values/beliefs, and academic competence), individuals in the learning setting collectively shaped an emerging network of assumptions around how students attain academic success in the setting. The emerging AE presented in this section offer a snapshot of the five-week data generation interval. While some of the AE represented in this snapshot may be durable over time, others are likely to undergo daily change. While the network of AE presented here is specific to the classroom setting observed, the procedures applied are accessible to practitioners and researchers interested in better understanding such systems in their own settings.

First, it is important to demonstrate the role that transmittals (i.e., delivering, conveying, describing) and perceptions (i.e., observing, interpreting, comprehending) of AE information can play in the construction of norms and expectations in the setting. The exchange in Extract 1 below occurred during the week 1 observation. Students are transitioning from completing their journal activity to taking their first reading quiz of the school year. It features thirteen

short-answer and multiple choice questions about content in *The Kite Runner*; a novel they are expected to be reading at home.

### Extract 1

- 1 **MM:** ...if you could just put the letter out there (2) so like if number one is A (.) just put  
2 'A'– you could circle it, but also put 'A' out here in the (.) margin >so that I can just< go  
3 down and grade them (2) okay?  
4 **OMAR:** °I'm not gon' lie Miss° I never even looked at the cover.  
5 **MM:** You didn't look at the book? O↑kay, well (2) >GIT it out< and start lookin'.  
6 **JH:** I appreciate the honesty, Omar.  
7 **MM:** Yes, thank you for your honest uh ((laughs and does not finish the thought)) (4)  
8 Does anybody in here still need to give consent forms in?

(Week 1 transcript; represented using Jefferson symbols)

#### Illustration 1. Extract 1

In lines 1-3, Ms. Mahoney (referred to as MM) hands quizzes to students and explains how she would like them to format their responses. Her instructions transmit various forms of AE information, the most straightforward of which provides procedural task engagement information. Omar's response in line 4 indicates he also perceives the instruction as an indication that he and his classmates will be able to demonstrate academic competence around the book's content; he transmits back his lack of competence for this task. Ms. Mahoney's response in the first portion of line 5 verifies that she perceived Omar's AE information. In the second part of the line her rising pitch when uttering "Okay, well" followed by a pause, comes across as a verbal wince, possibly verifying to Omar that she perceived the competence deficit he just expressed. In the final part of line 5, Ms. Mahoney increases her speed of talk and adjusts her tone. Now she is using a more colloquial register and a curt tone to transmit procedural task engagement information. She expects Omar to open his copy of *The Kite Runner* and get to work. In line 6, I (JH) transmit values information to Omar. This move (pointing out a virtuous quality that Omar just exhibited)

may have undercut or diluted the original message of disappointment transmitted by Ms. Mahoney's verbal wince and curt tone, which, in line 7 gives ways to a possibly sarcastic expression of levity. This could transmit AE information to Omar that causes him to reassess the severity of the earlier "get to work" transmittal. In line 8 Ms. Mahoney signals that the topic of Omar not doing the reading is now closed. However, the norm for students not doing the reading in preparation for their quiz has been initiated into development. While exchanges like that in Extract 1 may occur between a small number of individuals, their effects can expand across the learning community. Each time an AE under construction is sustained (i.e., accepted; not resisted) the perceived action possibilities of even peripheral observers is adjusted. In this way, what initially appears to be an immaterial exchange becomes a building block of a norm that is gaining traction across the setting through an almost-invisible process of compounding influence.

Extract 2 occurs during the third week of data generation; here Ms. Mahoney discovers the extent to which the class is not doing the reading in preparation for their (second) *Kite Runner* quiz. The extract occurs 25 minutes into the period. The seven students in attendance are all quietly flipping through their copies of the book in search of answers to quiz questions. Ms. Mahoney has just finished setting up a late arriving student with her quiz, and now (in line 1 of Extract 2) she poses a question to all the students in the class.

### **Extract 2**

- 1 **MM:** So there's nobody (.) telling me they're shocked about what happened yet?
- 2 **STUDENT:** Hmm?
- 3 **MM:** Which tells me you didn't (1) read ((quiet laughter from a student)). Does anybody
- 4 ((last two words uttered with faint laughter)) know what happened yet? (3) Oh ma:::an. (7)
- 5 [One student] yesterday was like, 'I'm bored at home. So I'm reading. I'm already done up
- 6 to chapter 12. and . . lalalala and this is a great book' and I'm like, '↑↑Oooh, I'm glad you're
- 7 liking it (2) At least you're ↑reading it.'

(Week 3 transcript; represented using Jefferson symbols)

Illustration 2. Extract 2

To contextualize, the assigned reading includes an important and disturbing event. Ms. Mahoney’s expression in line 1 suggests her perception that students lack task competence, as they did not read the text in advance of the quiz. Her inquiry as to whether they are shocked is a proxy to determine how far along they have read. Students appear confused by her question, verifying her perception. In line 2 a student voices that verification. In line 3, Ms. Mahoney lets students in on her assessment tactic. The laughter, first from a student, then uttered faintly by Ms. Mahoney as well, may attenuate any uncomfortableness felt by the actors. In lines 3 and 4, Ms. Mahoney again verifies her perception, offering students an opportunity to correct her perception, and then, at the end of line 4 she expresses her disappointment candidly with the drawing out of “oh man.” In lines 5-6 she tells the story of a student in another class who *is* reading the book and is enjoying it. The offering of this counter-example may be an attempt to keep students’ non-reading behavior from being perceived as normative. However, at the end of line 6 and into line 7 she transmits AE information that—in making light of students not doing their reading and treating it with a non-serious but also sarcastic tone (“*At least you’re reading it*”)—seems to simultaneously minimize the shortfall while also reprimanding students for it, sustaining and then resisting the emerging norm for *Not reading before quiz*.

### Extract 3

- 1 **MM:** Okay so next time I'm giving 30 or 35 minutes to take the quiz (3) whatever you
- 2 don't have ↑done (3) ↓will just be marked incorrect. ((next utterance in a mock strained
- 3 voice)) ↓↓You ne:::ed to start re::ad::ing (4) Toda::y you need to start reading (62)
- 4 Anybody get to the shocking part yet?
- 5 **STUDENTS:** ((no response))
- 6 **MM:** ((to a student who recently arrived)) You need some page numbers or you good?
- 7 **STUDENT:** Yeah I do.

(Week 3 transcript; represented using Jefferson symbols)

Illustration 3. Extract 3

Thirty minutes later Ms. Mahoney resists more definitively the developing norm when she suggests constraining the timeframe offered for quiz completion. At this juncture (Extract 3) students have been working on the quiz for one hour. Lines 1-2 transmits to students procedural task engagement information for the quiz that will occur two weeks from now. In line 3 Ms. Mahoney verifies her perception that students did not read in preparation for their quiz, likely solidifying this as a future action possibility for some. After ceasing speech for a full minute, in line 4 she checks in again to see if, in the last 30 minutes, any students have reached the disturbing plot element referred to earlier. This transmittal verifies her expectation that students will progress through the reading. Students' collective lack of response may transmit confirmation to others that not doing the reading is normative. Alternatively, the lack of response could signal students' determined focus on the text as they work to meet Ms. Mahoney's expectation to continue reading. In line 6, Ms. Mahoney helps a recently arrived student by offering page numbers on which answers to the questions can be found. This may transmit to the student a perceived deficit in academic competence, or it may transmit task engagement information suggesting that completion of the assignment is prioritized and valued over the student's learning. The utterance in line 6 helps demonstrate the dynamic structure of these interrelated beliefs and emerging assumptions, many of which inform and help shape one another.

As demonstrated, students and teachers in this learning setting are continually (and often unknowingly) transmitting and perceiving AE information that develops, sustains, verifies and resists the establishment of norms and expectations. I argue that such processes occur in all learning settings. Using the analysis processes described in the previous chapter, I identified a series of AE that were in various states of emergence over the five-week data generation interval. These are presented in Table 4, each with a representative example. Within each category the emerging AE are ordered from highest to lowest frequency of occurrence in the data (i.e., incidents of being developed, sustained, verified, or resisted).

Table 4. *AE Under Construction Identified in the Data*

AE Under Construction	Representative Example of Developing/Sustaining Action
Task Engagement Norms/Expectations	
<b>Teacher does meaning-making for students (low ind.)</b>	“...you know, 'booted out' has a connotation of like, ‘I kicked you out’...if I said um 'removed,' or uh...some other...kinder word, then maybe we would say, well, this author is gonna, I don't know, maybe give us both sides of the coin here, but ‘booted out?’ He's obviously making a judgment about what Mark Zuckerberg did.” (MM week 4 transcript)
<b>Assignment completion prioritized over deeper learning (ach. goals)</b>	“MM is in the middle of giving students page numbers, one for each question on the quiz.” (week 5 fieldnotes)
<b>Teacher step-by-steps students through assignment (low ind.)</b>	"So in that box, you don't have to write even a whole sentence, just label the dream that you are gonna be working . . .give it a title. And then when you've done that, move down to the scale . . and figure out where you would mark yourself on the scale; where would you say this dream falls? Closer to impossible or closer to very achievable?" (JH, week 4 transcript)
<b>Teacher walks student up to answer (low ind.)</b>	"Frank very quietly seeks help on his quiz. MB grabs his book and begins skimming it, looking for something. Rico waits patiently. MM points to a place in the book and Frank gets back to work." (week 2 fieldnotes)
Norm for reading texts collectively (low ind.)	"So I'm gonna read the first section up to scale A and then I'll ask somebody else to read for scale B." (MM, week 3 transcript)
Students expected to have document opened (procedural)	"So I just pushed out journal activity three to you all. Let's take a look. . . it's called ‘Perceived Barriers.’" (JH, week 1 transcript)
Students expected to include reciprocity in written response (procedural)	"Do not forget to establish reciprocity when you begin your essay. How do we establish reciprocity?" (MM, week 5 transcript)
Teacher verbally unpacks written instruction (low ind.)	“So that leads us to the question... <i>Who was José most responsible to?</i> which is the ranking activity right below the scale. [reads aloud] ‘ <i>Think about what Jose's responsibilities are in this situation. Rank them from what you see as his most important responsibility to his least important.</i> ’ So, is he most responsible to himself, his music, his family, or Joaquin? So once you do the scale, and put your mark and give me a ‘what makes you say so’ then go down and rank based on how you marked it.
Students expected to align claim, data, warrant (procedural)	"...because remember, your data and . claim are connected by the warrant, so they have to match. Okay?" (MM, week 2 transcript)

Table 4. (continued)

AE Under Construction	Representative Example of Developing/Sustaining Action
Self-Conduct Norms/Expectations	
<b>Norm for students' late arrival</b>	"Hi, Frank. We're doing Journal Activity 4 when you get settled." (JH, week 4 transcript)
<b>Norm for not reading in preparation for quiz</b>	In response to Omar confessing – just before the quiz – that he has not yet opened <i>The Kite Runner</i> : "You didn't look at the book? Okay, well get it out and start lookin'!" (MM, week 1 transcript)
Expectations of low student responsibility	"Okay so do you want me to hold onto your quizzes so that you can finish next week rather than take them home?" (MM, week 1 transcript)
Once work completed, other engagements accepted	"[A student who already turned in the assignment] is fixing her hair and makeup using a little mirror she pulled from her purse." (Week 2 fieldnotes)
Class-Conduct Norms/Expectations	
<b>Adaptable due date</b>	"So what I'm gonna do is allow you to take this quiz home, finish it, bring it back to me on—what's today?—on Friday." (MM, week 3 transcript)
<b>Norm for back-and-forth engagement with teacher</b>	"Uh, Rose, you had Joaquin [ranked] as number three. Why do you think? You think he didn't have as much responsibility to Joaquin for what reason?" (MM, week 4 transcript)
<b>Student norm for dual-engagement during back-and-forth</b>	"Haylee has her book (on Kindle) open, laying across her keyboard [she seems to have no problem keeping up with the work and reading too. She is typically the first to turn in an assignment]." (week 4 fieldnotes)
<b>Norm for student use of phone/devices</b>	"One student is engaged in the class conversation. [another student] is on her phone. Frank's phone is now plugged into his earbuds, which are in his ears. Other students wear listening devices too. Some seem distanced from the class activity which is further evidenced by their misunderstandings of the text." (week 4 fieldnotes)
Teacher holds student accountable for content	"...so maybe you might wanna think about your rankings...because you have... if you have Joaquin ranked as number four, that means you think he had the least amount of responsibility to Joaquin as compared to his family, his music and himself. Okay, so you might wanna think about that." (MM, week 4 transcript)
Norm for student "checking out" during class	"[A student] is now sleeping, head on desk." (week 1 fieldnotes)
Norm for students giving over-general response	MM asks student specific questions about what she marked her scale as she did. The student replies: "You know, like friends get separated sometimes."

Table 4. (continued)

AE Under Construction	Representative Example of Developing/Sustaining Action
	Class-Conduct Norms/Expectations (continued)
Sitting-in-rectangle implications	“[Two more students] arrive. MM shuts the door and then comes to sit in the rectangle. She asks about the game tonight, then goes into directions for the rest of EQ 2.2.” (week 2 fieldnotes)
Shutting-the-door implications	"MM has closed the door, which seems to be a sign / thing that she does when the “real work” of school is expected to begin, like a signal that class is now starting officially." (week 1 fieldnotes)
	Conveyance of Values Held in Setting
<b>Value for student wellbeing</b>	“Have a great day everybody. . good luck with that knee of yours dearie [to Omar] alright? Careful. . .” (week 5 transcript)
<b>Value for grades</b>	“I know it's cold but sleeping through your quiz is not gonna help your grade.” (MM, week 3 transcript)
Value for students’ opinion	“So, if um Zuckerberg goes back and does something to Saverin...is that okay? I'm not saying it is or it isn't. I'm just wondering...” (MM, week 4 transcript)
Value for correct answer over effort/process	MM gives student the answer to a quiz question: "The gift I shall give you. . .'cause I can't find it. I know it's in there somewhere. . . .Number four is ‘ <i>Owning anything American</i> ’." (MM, week 3 transcript)
	Conveyance of Academic Competence Beliefs
Negative AC perceived/transmitted	MM: “So Haylee, have you been reading the book? Do you like it? Whadya think so far of Hassan and Amir?” Haylee: “I'm kind of confused.” (week 1 transcript)
Positive AC perceived/transmitted	[As she reads aloud the student’s voice seems to question her own pronunciation; MM reassures her] Mnhmn [with a pleasant slightly high tone]" (week 4 transcript)

*Note:* Within category (e.g., Conveyance of Values Held in Setting) items are ordered from highest to lowest observance frequency. Bold text indicates an emerging AE’s prominence. Visual trajectories of bolded AE appear in Appendix A. Items in Task Engagement category specify type in parentheses (procedural, achievement goals, independence level).

The bolded AE in Table 4 are most prominent with regard to frequency, and are therefore each depicted visually (see Figure 3 below) to illustrate their development trajectory over the five-week interval. Trajectories are modeled after a line graph, with data points for each week’s



emergence across the timeframe observed. Viewing a thumbnail set (see Appendix A) of such graphs can aid further investigation in various ways. For example, it is possible to use a trajectory like that shown in Figure 3 as the base-image for further mapping the week-by-week influences of agents' RI in conjunction with SCCP influences on the AE's emergence over time. An illustration of this approach is shown in the final section of this chapter. Understanding the story of a "keystone" AE's emergence can provide practitioners and researchers support in identifying leverage points in a school or classroom's AE system. A set of thumbnail trajectories depicting an array of AEs' stability fluctuation over various observations can also help identify points of system leverage.

It is also important to view the network of emerging AE in relation to one another. While there are many ways one might approach examining these relationships (e.g., a researcher might focus on the clear distinctions made between teacher actions and expected student actions), I have chosen to avoid parsing system elements by type, and instead attempted to understand how the elements interact with one another. As noted, a network of AE in a learning setting constitutes a complex dynamic system. Within such a system are elements of greater and lesser prominence, indicated, in this case by frequency of representation in the data. Although I removed from my results the most infrequently occurring AE, I retained those occurring with moderate-to-somewhat rare frequency because I assume less frequently occurring elements likely also perform a system role. Retaining a less frequently occurring system element in a diagram, for example, may help the viewer identify potential gaps or places of need in the system. In the conceptual diagram shown in Figure 4, I attempted to represent relationships of (often mutual) influence among elements. The diagram does not make causal claims but instead illustrates supportive relations between emerging AE in the setting. It is not exhaustive (i.e., relationships may exist where no line is shown), but depicts those relations which readily presented in the data.

The diagram demonstrates the system's complex dynamism and reveals an important observation in the system's behavior: There is an overall directional energy from top of diagram



to bottom of diagram wherein the more broad and conceptual beliefs help shape the more concrete, action-oriented beliefs. For example, a teacher's positive academic competence perception (top row of diagram) supports the norm for dual-engagement (third row of diagram), whereas the opposite is not true. However, there is also bidirectionality between some system elements (as indicated by bold connection lines), suggesting construction can also move from the specific to the general. An example of this is seen in the bottom row where the AE, *Student expected to have document open*, helps support *Student norm for dual-engagement* (third row from top). Similarly, *Norm for dual engagement* supports the more specific norm for *Teacher step-by-stepping students through an assignment* (fourth row from top).

Each connecting line in the diagram represents a claim that one AE's construction or maintenance is supported by another in the system. These relationships offer an additional opportunity for practitioners and researchers to identify points of leverage or potential points at which the system might effectively be perturbed. The exchange between teacher and students in Extract 4 helps demonstrate this interdependent nature of emerging AE depicted in the diagram. The extract is a short exchange of utterances that demonstrate *Positive AC perceived/transmitted* (top row of diagram), which support a set of utterances demonstrating *Norm for back-and-forth-engagement* session; the session then enables the AE *Teacher step-by-steps students through assignment*, which subsequently supports *Teacher walks students up to answer*. For continuity, the scenario depicted occurred during the same observation represented in the previous three extracts. In Extract 4 students have just transitioned from working on their *Kite Runner* quizzes to working on their EQ2.3 assignment; it features a pointed article about former football player and fallen US soldier, Pat Tillman. Ms. Mahoney (referred to in the transcript as MM) asks students to recall the article they read last week (also about Tillman), which conveys a distinctly different message than the one they are about to read.

#### Extract 4

- 1 **MM:** S:o >tell me about Pat Tillman< ↑↑who was he again↑↑ (4) Pat Tillman? Remember  
2 (1) we read about him last week?  
3 **STUDENT:** I think he was an NFL player  
4 **MM:** Yes (.) he was an NFL player and ↑what did he do after nine-eleven↑  
5 **STUDENT:** ((phrased as a question)) °He went to the Army°  
6 **MM:** He >went in the Army< a::nd (1) u::m became a special forces (2) so he was sent  
7 to the most dangerous places ((elaborates a bit)) (2) <<and then u::m>>  
8 **FRANK:** He died.  
9 **MM:** He died (1) right (1) how did he die Frank (1) ↑do you remember↑  
10 **STUDENT:** ((phrased as a question)) °on a mission°  
11 **MM:** Say it again? ((student repeats)) >On a mission< yep (1) but was it b:y u:m (2)  
12 **STUDENT:** ((phrased as a question)) °A fire°  
13 **MM:** >Friendly fire< yes (2) what that means is (1) he was <accidentally killed> by another  
14 American soldier during that battle ((elaborates briefly))  
15 **MM:** So (2) in our original (.) article, <what would you sa::y> (2) the author thought of  
16 Tillman? (3) That that we should admire him (1) or we sho:uld >think he's foolish< (2)  
17 What was th:::e general u::h tone of that article?  
18 **FRANK:** That he was really like (1) ↑↑admirable  
19 **MM:** That it was admirable (1) that h:e (1) you know (1) was trying t:::o >fight for his  
20 country< ((proceeds to introduce the article to the students, and then reads a few  
21 paragraphs of the article, finishing with the following)) “*he'd lose. In this self critical and*  
22 *capable nation, nothing but knee jerk 'he's a hero' response is to be expected.*” ((interrupts  
23 her own reading to ask students the following)) What does that mean knee jerk (2) So a  
24 ↑↑knee jerk↑↑ (4) s:o what does it mean to give a knee-jerk reaction to something (5) So  
25 wha- (1) that's kind of referring to-- before you even think you've made the reaction >>Oh  
26 (.) the guy's a hero<< before you even think about it. So a knee jerk reaction is a  
27 reaction--  
28 **STUDENT:** ((said in a monotone as if to convey annoyance)) Automatic response  
29 **MM:** Automatic reaction (2) without really (1) giving it much thought (1) Okay? So he's  
30 saying >that's what everybody in America is gonna give< (1) this knee jerk reaction that  
31 he's a hero ((resumes reading the article aloud)) “*I've been mystified at the absolute*  
32 *nonsense of being in 'awe' of Tillman's 'sacrifice'--*” ((stops reading and addresses  
33 students)) You see all those (1) quotation marks? Whaddy think that means (2)  
34 Haylee?  
35 **HAYLEE:** ((very soft spoken)) He's being sarcast-- ((is cut off by MM's overlapping  
36 speech))  
37 **MM:** ↓↓sarcasm↓↓ yeah, it's almost like if you're talking to somebody and you're like ‘*oh*  
38 *yeah- he's a* ((makes quotes with fingers)) hero’ (1) ↑↑you know↑↑ (2) U:::mm ((resumes  
39 reading aloud for another paragraph and then, after reading a cynical segment, says the  
40 following)) ↑↑The dude is↑↑ (2) ticked off↓↓ (1) why do you think he (3) I mean (2) to me  
41 it almost seems like--

42 **OMAR:** He jealous  
 43 **MM:** ↑↑ye:::ah he's jealous↑↑ like ((mimicking baby voice) ‘Oh, this guy's gettin’ all this  
 44 attention (1) woo woo.’ ↑↑you know↑↑ it's like he's havin’ a little temper tantrum or  
 45 something (1) ↓↓it's weird↓↓ (3) anyway, so Scale A says “Based on this introduction, the  
 46 author of this article believes that Tillman was brave or foolish?” Put your mark on your  
 47 scale and gimme a ‘what makes you say so’ (1) There's a lot a stuff in there you could  
 48 choose from (50) <<You could pick a qu::ote (1) you could talk about the use of the  
 49 ↑↑quotation↑↑ marks and what he puts in quotation marks (2) you could you could talk  
 50 about the tone of his uh language>>

(Week 3 transcript; represented using Jefferson symbols)

Illustration 4. Extract 4

In line 3 a student tentatively transmits they have the knowledge being requested (*Positive AC transmitted*) around the past reading; Ms. Mahoney verifies the competence and then asks for more information in line 4. Again the student transmits a tentative competence for the material (line 5), which she again verifies in line 6. Next, Ms. Mahoney provides more of the backstory to prompt students’ recollection (lines 6-7), but slows her speech notably at the end, as if cueing students to finish her sentence. She is both assessing their level of AC for the content, and building a foundation for reading this next text. Theoretically, each time Ms. Mahoney verifies a positive AC utterance she affirms the speaker’s sense of competence for the task and increases other students’ sense that they may be called on, promoting their attentiveness. In this way the transmittals and perceptions of positive AC support and makes more viable the back-and-forth engagement session (*Norm for back-and-forth engagement*).

At a certain point, however, the session transitions into a demonstration of the emerging norm, *Teacher step-by-steps students through assignment*, inadvertently supporting a more passive form of student engagement. The negative AC transmitted and perceived in lines 9-12 (Ms. Mahoney asks how Tillman died and receives a response suggesting the student misunderstood the term “friendly fire” in the previous article) may have played a role in the transition. Lack of engagement from other students in the room may have transmitted additional

messages of negative AC. Frank's transmittal of positive AC information in line 18 may therefore be less salient for Ms. Mahoney than the negative AC transmittals. This offers one explanation for the attention she gives to ensuring students' effective comprehension of the *knee jerk* idiom (lines 22-31).

Continuing to read the article aloud to the students, Ms. Mahoney pauses to point out the author's use of quotation marks to signify disdain for what they perceive to be the public's collective response to Tillman's death. In lines 34-36 she selects Haylee to interpret this author move; based on similar instances across the data generation interval I argue that her selection of Haylee is strategic and aims to ensure provision of accurate data that other students can then use in their responses to the upcoming semantic differential scale. Thus, this may be the first instance of this extract in which we observe the emerging AE, *Teacher walks students up to answer*, which is here being supported by *Teacher step-by-steps students through assignment* (from above, and the *Norm for reading texts collectively* to the left in the diagram). Alternatively, this outcome may simply be an added benefit of a more random student selection process. In lines 45-46 Ms. Mahoney presents students with the semantic differential scale they are to respond to. Beginning in line 47, and on into the final lines of the extract, Ms. Mahoney directs students to different options of what they might include (i.e., "you could talk about the use of quotation marks and what he put in quotation marks") as evidence for their claim, which is now a bygone conclusion. An assessment of the eleven student responses submitted for Scale A reveals that seven of them built their answers directly around the content suggested to them in lines 47-50; these are exemplified by the following response by one of the seven:

*I say this because the author is talking about Tilman in a very sarcastic tone, using lots of quotations. He makes it clear that he doesn't believe that Tilman deserves to be praised. He's being very harsh and it seems as though he's envious or angry.*

Two of the remaining responses were original and quite effective; the other two offered no evidence and instead made overly broad claims.

It is important to note that whereas the relationships of influence represented by the diagram in Figure 4 are shown using lines, tracing influence along a series of multiple emerging AE, as was just demonstrated above, is not a demonstration of a linear chain of events. Much of what occurs in a scenario such as that in Extract 4 does so *at the same time*, in recursive fashion, or with deep overlap. Other times there may be a linear shape to a system of occurrences (this is likely the exception instead of the rule). Importantly, the interdependencies are themselves constructive. Just as repeated acts of sustaining an AE (depicted in the Figure 3 trajectory) help an AE gain traction, so may the indirect forms of buttressing by interdependence.

Some limitations of the diagram should be made clear. As indicated earlier, the diagram represents a snapshot in time. While some relationships depicted may well endure, the picture also represents relationships that may have been situated in a novel set of circumstances. There are also some aspects of relations between emerging AE that are not captured by the diagram. Importantly, the diagram shows relationships of support, yet in some isolated but potentially important cases, relationships of notable tension between emerging AE in the setting are also evident. Specifically, there is evidence to suggest that *Value for grades* and *Value for student wellbeing* work against one another in some situations; a similar case can be made for *Norm for back-and-forth engagement* and *Student norm for dual-engagement*. Although it may seem counterintuitive, “dead ends” in the diagram should not be overlooked because they may offer important insights. For example, the isolation of *Value for students’ opinion* likely suggests the value gets minimal traction, which could have implications for developing students’ sense of purpose and personal agency in the learning setting. Finally, the diagram in Figure 4 looks at emerging AE in the setting in relative isolation. To understand the *how* and *why* behind their emergence, we must also examine their relation to participants’ systems of role identity, and to the sociocultural control parameters operating in the setting.

### ***Role Identity Governs Participant Meaning-Making and Actions***

The emerging role identity systems of teachers and students played important roles in AE construction in the setting. Since a person's salient RI in a situation informs their actions in the role, including what meanings they construe (Kaplan & Garner, 2017), I employed the DSMRI framework to analyze the content, structure and processes of focal participants' RI systems. In this section I summarize findings for each participant using narrative examples that inform how the participant experiences and contributes to the emerging AE activity system in the setting. Some of the selected quotes from students' JA include simple grammatical edits to ensure clarity. The summaries herein are brief but representative of the participant's larger RI system. The significant variation in narrative length reflects variation in the data generated by that participant. For example, Haylee's narrative is notably longer than her peers' because she attended all five days observed, spoke more often during class than her peers, and produced more writing in her reflective journals. Ms. Mahoney's narrative is the longest because her voice features in the vast majority of the transcripts, and she was more forthcoming in stimulated recall interviews responses when compared to student responses. Throughout this manuscript, only focal students and teachers are referred to using their pseudonym while others are simply referred to using the general label of student, or other appropriate description; this is done to enable readers' ability to distinguish focal participants from their counterparts.

**Omar.** Data examined to understand Omar's role identity system include his responses to the journal activities, fieldnotes and transcripts from the five-week data generation interval, and stimulated recall interviews conducted during classtime. In addition to Omar's most salient RI of *student*, several additional roles emerged including: *athlete (football player)*, *son*, *person of faith*, *Black*, *big brother/cousin*, "*couch potato*" (past RI), *grandfather* (future RI), and *person-in-the-world*. Additionally, in one journal activity that prompted exploration of two different RI experiencing tension, Omar referred to a "*chill*" *self* (driven toward peace and

acceptance) and a “*hot*” *self* (driven toward excitement and risk-taking). Overall, his RI systems feature integration of *athlete* and *student* role, and tensions between ontological beliefs that he should be afforded autonomy and the dearth of action possibilities that offer it. Omar demonstrates creative strategies to navigate these tensions.

Although Omar expresses the ontological belief that school is important for his future, his journal writing often expresses negative emotions about his school experiences. Common themes include his perceptions of experiencing restrictions to his freedom, epistemological lack of trust, self-perception of experiencing a lack of intellectual challenge, and low levels of academic motivation. Here, for example, he discusses his morning experience: “*It is mentally taxing to wake up early every day and go into a building to participate in tasks fully against my will*” (JA6). In addition to believing his personal autonomy is constrained by the institution, Omar also expresses the ontological belief that the school is failing to offer action possibilities conducive to his learning. In JA6 he is asked how his needs might be better met by teachers. He writes, “*Too many times I find myself not paying attention in a class, not because I'm distracted or have a low attention span, but because my teacher is teaching badly...talking so much that they over-explain the new material.*” He also describes grading practices as lacking transparency and fairness, suggesting epistemological skepticism about the school’s practices. But Omar also allows that his school may be helping him develop some important skills, that he feels somewhat at home in the setting, and describes succeeding in school as fulfilling an important purpose by moving him closer to his goals for financial success later on. Omar often indicates the ontological belief that he is not working to his potential in school; in JA7 he alludes to holding a goal of improving his approach in spite of his internal struggle to do so: “*I need to work harder but I've been burnt out so it's hard to get back into that hardworking mindset.*” In the Journal Survey he describes himself as “*an uninterested student*” but also “*an ambitious young man,*” suggesting he experiences differential motivation across in his *student* role and broader *person-in-the-world* roles. Even as Omar regularly expresses displeasure with school, he maintains high grades (final

numeric score in the course was 94%). He attends class regularly, turns in his assignments, and often seeks verification that his responses on assignments are up to par before turning them in, all behaviors that suggest an attentiveness to academic success. These selected action possibilities align with his distal goal of playing football for University of Alabama.

Although Omar expresses motivation challenges, it may be that his motivation profile during the five-week interval is high in relation to his past motivational experience. He describes becoming an athlete (an event within the scope of his high school experience) as catalyzing his transition from a past RI that he describes as “*couch potato*,” to being a more motivated student and person. In JA4 Omar notes that football offered him purpose; likely this period of identity transfer helped facilitate an important shift wherein he began to earn high grades in the face of his general distaste for school: “*I don’t remember what was my purpose before I found football. I couldn’t do without it.*” In several other instances he also expresses his love for the sport and what it has done for him. Although he reports not having the requisite “*elite*” skills to play D1 in college, he retains a goal to do so, even as he expresses the epistemological belief that this may not be realistic; he also notes having “*a few back-up career plans*” (JA4). Even if Omar is not able to play at D1 level, he commits to his goal of pursuing football until he is “*around 30.*” Integration between Omar’s *athlete* and *student* RI seems to play an important part in his perseverance in school, a daily experience he describes as demanding a certain resolution of mind: “*I think the mental fortitude I gained in my previous years is the only reason I’m able to come in every day*” (JA6). But other structural tensions pose challenges. One that Omar mentions in JA5 is an ongoing contest between his roles of “*chill*” and “*hot*” selves. He explores this lack of integration by imagining the conflicted roles in his future self:

*I see the me who wants to be relaxed and chilling, and the me who wants to be a part of the action. The me who wants to chill, his ultimate goal is to have a cabin home and be able to wake up whenever and drink tea while looking at a lake through his window. The me who wants the action, his ultimate goal is to tell his grandchildren exciting stories of his life.*

Omar describes playing football as nourishing “*the hot one*” whereas he nourishes the *chill* RI “*by not reacting to tomfoolery,*” suggesting that developing inward awareness and control of his responses to outward events is a strategy that he consciously selects and nurtures.

On a more granular level, Omar’s system of RI exhibits tensions between specific components. Most notable is the poor alignment between his ontological belief that as a young adult he should be afforded a degree of autonomy, and the available action possibilities which rarely afford this autonomy. In response to a task in JA1 Omar writes a letter to his younger brother and cousins to whom he feels a particular allegiance. The letter is addressed to the older version of these young beings, upon their entrance into high school. He describes to them some of the ways of being in this new time and place: “*You are older now. You all are at the age where you can make your own decisions.*” But his current perceptions of himself existing in that time and place of which he spoke, are that he is *not* at liberty to make his own decisions. This is exemplified in a stimulated recall interview conducted after the primary data generation interval. Asked to elaborate on his characterization of school as “*mentally taxing,*” he explained that “*it’s like we’re in some kind of lock up sometimes...we get checked on the way in, we get scanned, monitored. Everything we do in here is overseen by somebody, somebody standing over us*” (he goes on to explain that the student restrooms remain locked during the day so students are required to ask a climate control officer to grant their entrance; SRI-6). In the letter to his younger brother and cousins as they embark on high school, Omar advised, “*Do not let anybody make you do anything you don’t believe is logical*” (JA1). This advice seems to harken back to the strategy he mentioned of controlling his responses in the face of “*tomfoolery,*” and to his deployment of “*mental fortitude*” discussed in the context of enduring the challenges of daily high school attendance.

Even as Omar struggles to reconcile his felt lack of autonomy in the setting, he finds action possibilities (employing these strategies and fortitude) which allow him to adhere to the advice he gives these young charges. In JA8 and JA9 he makes moves that simultaneously allow

him to earn a full score for the work *and* enable him to remain in charge (i.e., ensure nobody is making him do something he believes to be illogical). First, in response to a prompt that asks him to describe an experience to support a previous claim, he writes: “...*you don't read this do you? If you don't, why should I pretend like I'm doing the work?*” Similarly, in the next journal when he is asked to examine how he approaches the different types of goals (which he has just described) differently, his response is: “*Ayy bruh, ngl [not gonna lie] I don't like thinking about my feelings...good thing y'all don't read this*” (JA9). In these instances Omar leverages the classroom norm (which he clearly seems to have identified), *Norm for assignment completion prioritized over deeper learning*. In this way he both retains his autonomy, and succeeds academically (he received a full score for the assignment), while avoiding what he seems to regard as a task with little or no utility value. Perhaps selecting such action possibilities helps Omar retain the ontological belief that he is in fact charting his own course, even in the face of perceiving daily constraints to his sense of autonomy. As Omar earns the high grades needed to support his distal goal of playing football for a major university, he also demonstrates some of the ways that AE in the setting conduce toward students' focus on performance goals over mastery goals.

**Frank.** Data consulted to examine Frank's role identity systems include his responses to the journal activities, fieldnotes paired with transcripts, and stimulated recall interviews conducted during classtime. The most prominent RI that emerged from these sources were those of *athlete* (and *member of the basketball community*) and *student*. Additional RI observed were *big brother*, *optimist*, *pessimist*, *person-in-the-world*, and *future self*. Like Omar, Frank's *athlete* and *student* RI appear to be integrated in some ways, each providing some support to the other. Sometimes his absolutist-like epistemological beliefs exist in tension with what may be a resistance to self-reflection (but also might be a tactic to retain privacy). Other times Frank expresses an ontological reverence for the inner-workings of the mind, and a penchant for self-reflection.

Frank's most prominent goal across this dataset is securing a basketball scholarship and eventually playing in a professional capacity. He also points to "*back-up career*" plans (most often pointing to kinesiology). These potential pathways would require postsecondary education of some kind, a factor that likely plays into the integration of his *athlete* and *student* roles. In JA8 Frank is asked to what degree he feels that school is "for him"; he responds that he feels it is very much for him, noting his ontological belief that "*...its for me because it's vital to my path of success which is pro basketball,*" making clear his cognizance of the connection. His awareness is further demonstrated by the attention he often gives to academic success while in class. Fieldnotes and transcripts show selected action possibilities such as seeking verification for answers to quiz questions in weeks 2 and 3, and engaging in the back-and-forth discussion with Ms. Mahoney around the text during week 3. While these behaviors do not necessarily connote deep academic engagement, they do surpass the engagement levels of several others in the class, and rise above what is required. While it may be reasonable to assume that these behaviors are motivated by Frank's goal to attend college on athletic scholarship, or to pursue postsecondary education goals in pursuit of a career in kinesiology, a critical observer might also characterize the efforts as minimal, pointing to Frank's enactment of action possibilities like his daily late arrival to class (between 29 and 43 minutes during the data generation interval) and his regular dual-engagement (most often with his phone) during class activities. However, when applying a student-in-the-setting point of view, the actions can be seen as normative behaviors, likely rendering their misalignment with Frank's postsecondary goals less evident to him than they might be to an outside researcher or to a student in a different learning environment (this "invisibility" of unique cultural features may also extend to teachers and administrators in the setting).

In several instances Frank expresses an ontological belief that perseverance and dedication are the primary determinants of success, and that these are what will ultimately lead him to the future he seeks. His frequent reiteration of this belief, paired with a discernible

resistance to explore and reflect on details around this goal pursuit point to a structural tension worth examining. In JA4 he describes the need to be “*locked in*” to one’s dreams as the primary mode for realizing them, explaining that “*it just takes lots of hard work, dedication, and time.*” In another journal he adds to this ontological belief: “*I feel as though nothing can knock me off the current path I’m on*” (JA8), and then describes how his emotions act as drivers for the goal-pursuit. When asked what single thing he might do to make playing professional ball more likely for him, he replies simply, “*Just work harder and stay focused*” (JA3), and when asked if he had any steps in place for moving toward the goal he replies, “*The steps are being consistent, working hard, and staying focused and diligent. They are not in order because they all coincide with each other to lead in a result of success*” (JA9). In the second sentence of this response Frank alludes to the notion that these abstract ways of being lack important criteria that would qualify them as “steps” (e.g., concrete, measurable), and seems to offer an explanation when he describes their interrelated nature. The explanation holds true (the ways of being *are* in complex relationship with one another), but the explanation functions as strawman logic because the interrelated nature of these ways of being is not where the answer falls short. It may be that Frank does not point to action steps because he does not readily perceive any action possibilities for moving toward this goal. His demonstrated resistance (i.e., his repeated provision of generalizations when asked for specifics) to exploring action possibilities as steps, paired with the strong emotions he associates with this goal suggest tension exists here.

One way Frank seems to be navigating this tension is by managing his self-perceptions. In some instances his written expressions suggest he holds self-perceptions of being among the extraordinary with regard to his endurance capacities. In JA3, for example, he explains why he categorizes his hoped-for accomplishments (i.e., to play basketball professionally and to become a famous model or artist) as dreams. He explains, “*I put them in such a category because people don't see them as regular lifestyles or normal dreams...they seem so difficult to achieve and people like myself believe that we can accomplish and face such challenges.*” This representation

suggests a self-perception that he has a kind of agency beyond that which is normative. In JA7 he is asked to consider a situation in his current life where he believes he needs to get out of his “comfort zone”; his response is that “*there isn’t one,*” possibly suggesting a sense of invulnerability that bolsters his confidence in the face of uncertainties about charting a pathway to his goal.

Frank may also be navigating tensions between his goals for the future, and the dearth of action possibilities toward that goal, by establishing a conceptual distance between different aspects of himself. In JA5 he depicts faculties of his mind as seemingly operating independent of his larger self; in the excerpt below he explains how he tries to “feed” his optimistic and pessimistic selves as equally as he can so that one does not take control of the other:

*I feel as though if you feed one more than the other it is unbalanced. Everything in life revolves around balance, if I were to feed one more than the other I would possibly get over confident and not stay humble, or fall down a dark path of not being confident or having a positive outlook on anything at all.*

The excerpt demonstrates what is likely productive self-reflection that may well be enabled by Frank separating himself from the workings of his “*pessimistic*” and “*optimistic*” minds, perhaps as a means to view these processes divorced from the complication of their accompanying emotions. Again, in JA9 he implies the ontological belief that his mind possesses something akin to its own agency; here he responds to a prompt asking him to name an anticipated obstacle in his goal pursuit: “*One obstacle I think would come up during my path is my mind. As an athlete it’s hard to not be discouraged when something doesn’t go as you planned.*” He suggests here that a core part of himself (his mind) will likely stand in the way of his own intended path towards his goal. This profound self-reflection further indicates a distancing, but in this case the strategy may work to undermine Frank’s general sense of efficacy. He is likening his mind (that which is used to self-reflect) to a potential threat that he may need to avoid during his goal pursuit. Although Frank’s expressions often imply an ontological belief that values personal growth and development (“*I’d say it’s [getting out of one’s comfort zone] a good thing because it plays a role*

*in growth and development*,“ JA7), never in the data does he outwardly include processes of reflection as part of the growth process.

There are also times, however, when Frank spontaneously engages in moments of self-reflection. In JA 5 he notes, “*I often struggle to see things all the way through*” (the self-observation was not prompted, but came embedded in a response to another prompt). In this statement he courageously owns a shortcoming in somewhat concrete terms, contrasting what seems to be his more common practice of applying generalized descriptions. This observation demands an important consideration: Frank may demonstrate the resistance observed and discussed earlier (wherein he offers surface level general descriptions) in the context of being asked direct questions by individuals positioned in authoritative roles. Perhaps left to his own devices, out of view of researchers, Frank reflects readily and deeply. In other words, it could be that Frank does not care to share his perceived action possibilities for pursuing a professional basketball scholarship and therefore generalizes as a means to protect his private thoughts. While this possibility presents a natural limitation of such studies, it bears mentioning here because there is at least some evidence that the phenomenon may have played a role in the collection of data employed to understand Frank’s RI system.

Overall, Frank’s associated *student* role features less prominently in the data than does his *athlete* role. He discusses challenges of executive function in school-related activities, but ultimately views them through a lens of ontological optimism; in some instances he signals his sense of agency regarding these challenges. In JA1 Frank describes his attentional issues and his struggles to effectively manage competing responsibilities: “*Just remaining focused is the hardest, but also time management since we are athletes.*” In the same journal, as part of a letter to his little brother upon his brother’s projected and hypothetical entrance into high school, Frank shares some action possibilities: “*Some tips are manage school, sports, and after school stuff time wise...it will save you lots of stress. I had to learn it the hard way.*” Even as he points to the difficulty of the experience, he also frames it as a lesson learned, suggesting he found value in the

endeavor. In JA6 Frank offers some ontological insight into how and why these challenges may have emerged. He cites both his lack of interest in the topics covered and the lack of intellectual challenge offered by daily tasks. Yet when asked if these challenges might have long-term value for him he responds, “*I believe so because it made me learn I have to do things I don't enjoy as much*” (JA6); the expression demonstrates Frank constructing value from what might otherwise be interpreted as meaningless exertion. The act is a hallmark of his *optimism* RI, a particularly adaptive facet of his RI system. He gives voice to this phenomenon in JA5: “*I'd say the optimistic self gets more of my attention [compared to the pessimistic self] because I'm constantly working on something good whether it is my sport or school.*” This expression implies Frank experiences a degree of agency as both student and athlete. Ultimately, his *athlete* role (and associated goals) seems to undergird the efforts he exerts in his *student* role.

**Haylee.** As with the other student participants, data consulted to examine Haylee’s RI system included her responses to journal activities, fieldnotes paired with transcripts, and stimulated recall interviews conducted during class periods. In Haylee’s case I also included a response she provided in an EQ document. RI that emerged in these datasets include an overarching role of *person-in-the-world* (encompassing RI of *Dominican American, friend, reader, and learner*), two highly integrated *student* RI (*high school student*, with *performer-in-musicals* and *Advanced Placement student* nested inside; and *future college student*, with the RI of *future surgeon and owner of private practice* closely associated), and an array of family oriented RI (*daughter, stepdaughter, member of family*). Perhaps only because she is more open and prolific in her journal writing and in her daily class contributions than her participant peers, Haylee’s RI system presents as comparatively fleshed out, affording more extensive analysis. It also features a stronger degree of role integration by comparison to her peers’ RI systems. The central tensions identified among Haylee’s RI plays out between her long term goals

and the limited action possibilities to support those goals, afforded by the school. Notable integration among future and current RI helps her negotiate these tensions effectively.

Within the data generation interval Haylee's *person-in-the-world* RI existed in varying relationship with all other observed roles. Partly because it is of a more general nature than the others, this role operates as a "backdrop" for the larger lot. In the Journal Survey Haylee broadly describes herself as "*a good person*" (while acknowledging the cliché), and self-defines as proud Dominican American, noting that while belonging to this ethnoracial community positions her as a minority, she does not view it as "*something that makes achieving things more difficult*" (Journal Survey). Nested within this *person-in-the-world* role is Haylee's RI of *friend*, a role that shows signs of being integrated with her student roles (*high school* and *future college student*). For example, in a letter to her younger sister (upon her sister's projected entrance into high school, an exercise within JA1), Haylee shares her ontological beliefs about the potential role of social interactions in school success. She advises her sister to manage her relationships with both caution and strategy, keeping in mind how they might affect her future:

*You also shouldn't get involved with the wrong crowd, don't let people persuade you to do things you know are not right... You should also have good relationships with your teachers and peers as you can always ask them for help. Doing things after school, whether it's doing a sport or joining drumline, it's the easiest way to make friends.*

These beliefs about social connections harmonize with the future goals Haylee discusses most often: to attend college, then medical school, and ultimately to become a surgeon. However, some tension in these relations are seen in JA5 when she examines her tendency to prioritize her goals. Here she explores how her drive for academic success can compete with her valuing of a relationship:

*I also wonder how far I would go to be the best. For example, currently my class rank is 1 and [the rank of] one of my friend's is 2. Sometimes we help each other with assignments...I wonder if when it comes down to who is going to be valedictorian will I stop helping her or will she stop helping me? I wonder if when it comes down to it would I sacrifice my relationships to be successful?*

The determination observable in the above excerpt is both fundamental to Haylee's *person-in-the-world* and *student* roles, while it seems to exist in tension with her RI as *friend*.

Also nested within Haylee's *person-in-the-world* RI are the roles of *reader* and *learner*, each demonstrating integration with her *student* roles. During class Haylee can often be found reading a novel on her Kindle, shrouded (as is the common classroom practice with phones) by the raised screen of her laptop computer. She reads for pleasure whenever classtime affords. For example, during the week 2 observation I documented Haylee reading her Kindle for 45 minutes after turning in the assignment for which that class time was earmarked; while many action possibilities were available to her at this time, she selected reading. When asked what tasks she finds challenging in her English class (JA6) she responds, "*reading novels on my own*" (referring here to novels assigned to the class). Haylee explains how she does not "*like starting another book before I'm done reading the one that I've already started.*" Using *The Kite Runner* as an example, she explains that forgetting to read the assigned chapters occurred often "*because I was reading [another book] on my Kindle.*" While this and similar situations may present a tension between her *reader* and *student* RI, it is a tension she both recognizes and seems to optimize. Here she explains how navigating the tension may be leading to her development of time management skills: "[H]aving to read on my own for this class and having my own books that I read for my own pleasure really helps me develop how I manage my time" (JA6). She goes on to describe the particular value this will have when she is studying medicine. It is an instance in which Haylee actively integrates her *reader* and *future student* roles. Like many of her peers, Haylee also dual-engages with her device during regular back-and-forth discussions with Ms. Mahoney. I see this in both the week 3 and week 4 observations. In my week 4 fieldnotes, for example, I write: "*Haylee has her book (on Kindle) open, laying across her keyboard – she seems to have no problem keeping up with the work and reading too.*" This bears out in the transcript as she never misses a beat; they document her moving nimbly between her own novel and the text under examination, reading aloud when asked, sharing her responses to the semantic differential

scales when asked, and responding appropriately to more spontaneous cold calls from Ms. Mahoney. Although the collective effect of her own modeling of dual-engagement with her device may play an important part in normalizing the behavior for her peers, for her it might also be an adaptive strategy enabling her to challenge her cognitive agility (whereas she might otherwise struggle to remain engaged). The example demonstrates Haylee's effective integration of her *reader* and *student* RI.

Her *learner* RI is similarly integrated. Haylee speaks of her "*desire to understand*" things and describes how she "*always want[s] to know more,*" indicating her mastery orientation and internalized motivation to learn (JA8). Simply put, in JA 8 she writes "*I love to learn.*" In JA7 she also describes a growth-oriented mindset which likely contributes to the robustness of her *learner* role in school and other situations. Here Haylee describes her experience taking part in school musicals:

*The times I've messed up whether it was during a dance or a song I think 'when we do it again tomorrow what could I have done to better prepare myself?' I go through dances and do an extra vocal warm up outside the ones we do as a group.*

The excerpt displays Haylee's self-perception as resilient, and shows her clearly identified action possibilities for self-development, with concrete strategies as action possibilities operating as rungs on the ladder. In another example she explores a desire to improve her public speaking skills, explaining that when she must engage in such activity at school she attempts to present first to get it out of the way because it makes her so nervous. In JA7 she frames her learning of public speaking as also serving a broader purpose, likely helping motivate her action and their connection to other RI: "*One of the many benefits of improving my public speaking is advocating for myself which is something I have a lot of trouble with.*" Haylee has set an intention to work on a skill which she believes she lacks, and has tied the act to another self-perceived area for growth. This helps integrate her *learner* and *student* roles.

In relationship with this array of *person-in-the-world* roles are Haylee's *future college student* RI; each is well integrated within the other, and with her more distal role of *future surgeon*. In her *student* roles Haylee perceives herself to be "*a thinker*" (Journal Survey), resilient, someone who loves math, and a high achiever both academically and in extracurricular arenas (e.g., she sits on the School Advisory Council). Nevertheless, the goals she sets for herself occasionally introduce certain anxieties around her ability to meet them. She plans to attend college directly following high school (ideally Yale, but she notes the institution's ~5% acceptance rate, and actively envisions alternative options). After earning her bachelor's degree Haylee plans to attend medical school, with a current long-term goal of opening her own surgery practice.

Some of the perceived action possibilities Haylee points to align well with these goals, while others may present tensions. As discussed earlier, Haylee sees opportunities at her school for developing time management skills that will serve her as a college student. She also identifies action possibilities to both develop transferable competencies and engage in the learning community in ways that expand her future action possibilities. As she anticipates applying to colleges, Haylee carefully considers the value of her extracurricular endeavors; she mentions the array of action possibilities around music at her school: "*I've done the musical all three years I've been here. I'm in the band and play the french horn. I'm in choir. I take piano and voice lessons through the school*" (JA8). She also sits on the School Advisory Council, an elected position that sets Haylee alongside family-member stakeholders of the school, administrators and other school staff, and community members as they work collaboratively toward school improvement. She points out the broad array of action possibilities for students at her school ("*Whether you want to play basketball or join the crocheting club there's something for everyone*"), and explains her perception of belonging and relevance: "*I feel like teachers really support me in wanting to learn more*" (JA8). Haylee demonstrates her own sense of agency to tap situations that can expand her future action possibilities and potential for growth.

However, tensions also exist between the action possibilities she perceives in her school, and her clearly outlined goals. In JA6 she is asked how the challenges she faces at school might transfer more effectively to the things she wants to develop in herself in the long term. She points in her response to the absence of potentially formative academic experiences for a future college student:

*Something that I feel would really help me in the long run is being able to study effectively. I've only ever studied once and that was for the Biology [state assessment] and studying is a big part of being a medical student. This school year I'm taking AP U.S History and I know I have to study for the AP test but I don't know where to start. Also, I would really like to write a research essay.*

These startling gaps in afford action possibilities may have consequences for Haylee's competitive potential when she enters a college environment. In a stimulated recall interview conducted the day before her Advanced Placement test in U.S. history, Haylee demonstrated again the limited set of action possibilities he perceives with regard to studying. She explains her approach: "*I'm just writing all these notes down to then read them—because I read a lot so I thought maybe that would be a good way to do it*" (SRI-12). I probe further into Haylee's past study experiences, and she expands:

*I feel like—like when I'm tested on things—it's like something we just learned so I always remember what we just learned; then I forget it the next week...But like, I think that you can't just memorize, you have to actually like, understand the things that you're learning about.*

Her thoughts imply epistemological doubt that these experiences will prepare her for what she is likely to face as a postsecondary student. While she does not dwell on these doubts, they remain evident in different ways throughout the dataset. But in their midst she also has planned a series of concrete steps to tackle the first leg of her intended journey, *getting* to college:

*I plan to use this summer to go on college visits and pre-write my college app essay to hopefully have a teacher give feedback on when I come back to school in September. When school starts I plan to finalize my list of schools and ask for recommendation letters. By December I plan to hopefully have finished applying to all of the schools on my list. (JA9)*

These are action possibilities Haylee has constructed, a move that enables, and is enabled by, the integration of her *high school student* and *future college student* RI, and their integration with her array of *person-in-the-world* roles.

Although Haylee's interrelated family RI (e.g., *daughter, sister, stepdaughter*) appear somewhat integrated with her *student* roles, they also present distinct tensions around her goal pursuits. In a ranking activity within JA2 she suggests that her *daughter* and *sister* roles are more representative of who she is than are her *student* roles. During the back-and-forth conversation about the *The J & J Boys* narrative (week 4 transcript), Haylee expresses empathy for the story's main character after he betrays his friend to pursue a cherished goal: "*I understand that Jose wanted to make his parents proud... 'cause I wanna make my parents proud.*" But that desire to garner pride can also feel overwhelming for Haylee. In JA1, having been asked to name struggles experienced in high school, she offers: "*Worrying you're not doing enough to get into your dream college. Knocking yourself down when you get anything below an 'A'. Worrying you're not participating enough.*" In JA3 she further details these epistemological doubts: "*I worry that whatever I decide to write about [in her college application essay] won't be enough... what If I didn't do enough extracurricular activities... what if I fail the MCAT exam...*" Relations between these doubts (epistemological and ontological beliefs) and her postsecondary goals become particularly strained in certain situations. In JA5 Haylee explains that her doubts become more salient when discussing her intentions with family:

*When we are talking about my plans for the future my doubtful side makes an appearance. I always think what if my plans don't work out and I disappoint them. An example is when they ask me where do I want to go for college and my answer has been Yale for the past two years, but what if I don't get accepted or don't get a scholarship and can't afford to go?*

These tensions are likely related to the high value Haylee places on making her family proud. But it is also possible that the tensions emerge from a more generalized sense of precarity connected with her family. In JA9 she talks about her perceived need to get a job before her senior year of

high school because she knows “*how expensive senior year is*” and does not want that burden to fall on her mother. In JA1 she described a complicated power struggle between her father and stepmother that generates her concern for the long-term viability of her relationship with her six-year-old sister, who is caught in the throes of the conflict. She explained the feared possible result: she would not have opportunities to see her sister on a regular basis, rendering their adult relationship negligible. While insights into Haylee’s family life are limited, each is an indication that life at home is not as secure as she would like it to be. Instead of offering a solid foundation on which to fall back should her plans falter, occupying her various *family* RI may generate an increased sense of pressure to succeed in her goal pursuits. As she imagines her upcoming final year of high school Haylee writes in JA9: “*It’s going to require me to stay focused on the finish line and to know when to take a break so that I can produce quality work and I don’t stress myself out.*” The statement is representative of Haylee’s effective negotiation of her future and current RI; it also demonstrates her forethought and planning-ahead tendencies, her sense of agency, and her self-awareness. These behaviors and mindsets may help Haylee respond constructively to the gaps she identified within her action possibilities in school (e.g., lack of experience studying and writing a research paper).

**JH.** Data consulted to examine my own RI system included fieldnotes and transcripts from the primary data generation interval, and my own jottings and memos made throughout the data collection and data analysis periods. Because this section represents my own RI system I rely less on quotes from the data to represent my findings, and more on descriptions of occurrences as I interpret them. The most salient RI to emerge from the data were *researcher*, *teacher*, and *JA person*; roles of *visitor*, *colleague* and *doctoral student* were also evident. I found structural relations between my three dominant roles to exhibit integration at times, with the role of *JA person* acting as an important intermediary. However, clear tensions, largely anchored by lack of

harmony between ontological beliefs and perceived action possibilities, were often evident within my *researcher* role.

In the classroom setting my *teacher*, *researcher*, and *JA person* roles come in and out of salience regularly, mostly as a function of the activity I am engaged with, and sometimes simply as a function of what comes to mind. For example, in the week 5 observation when Ms. Mahoney is out of the classroom for a meeting, there is a moment when the hallway noise becomes untenable; without deliberation I get up to close the classroom door. It is an action possibility that I perceive only because I am—in Ms. Mahoney’s absence—embodying my *teacher* RI more fully; I feel it is now *my* responsibility (i.e., a goal) to ensure the environment is suitable for students to work. Had Ms. Mahoney been present during the noise escalation, my *visitor* RI would have been more salient and I would likely have waited for her cue before closing the door. There are times, however, when a RI becomes salient simply as a function of what comes to mind. During the week 1 and week 4 observations, I walk students through JA. Here I embody both my *teacher* and *JA person* RI, but my *researcher* RI leads when an event triggers a research-related thought. When students arrive late and I am faced with the decision of how much scaffolding to offer them with regard to parts of the activity they have just missed, my *researcher* RI is immediately salient and I begin to assess my own action possibilities in relation to the building of norms (i.e., AE) around students’ late arrival. How, I wonder, can I best ensure the students are equipped to do the missed work without inadvertently supporting the late-arrival norm?

Occupying this *researcher* role generates more anxiety than I experience in the other roles. In comparison to my strong sense of confidence and belonging when embodying the *teacher* and *JA person* roles, as salience shifts to my *researcher* role (specifically, *independent researcher collecting dissertation data*) I tend to experience a reduced sense of confidence and belonging, increasing my anxiety. This response is likely related to tensions between my ontological beliefs about teaching, learning, and student agency (held as *teacher*, *JA person*, and

*researcher*), and the action possibilities I perceive as available for expressing and in some cases subduing those beliefs. In all three roles I hold the belief that 11th grade students, *especially* those that have experienced marginalization, need to develop a sense of learning agency (as a means toward finding their own version of success beyond school), and that for this to occur they need to believe that their learning activities have value and meaning. I therefore believe it to be the responsibility of the learning institution, and those who work within it, to support students in their construction of that value and meaning. However, per my estimation the institution inadvertently undermines that potential for large sectors of the student population by demonstrating a systemic low value for learning tasks, for students' own meaning-making processes, and for students' agency in general. Although I do not want to, I come to perceive myself as an adversary of the institution that I am investigating, a situation that presents an ethical challenge while also undermining my sense of belonging. I am a novice researcher with a tentative sense of confidence in the role; I am investigating a learning institution that I feel is not doing right by its students. I thus struggle to find action possibilities that enable me to uphold my beliefs with integrity, while not engaging in judgments that denigrate the efforts and practices of those within the institution. Given this tension, I tend to proceed as if the "ways of being" for educators in the setting are "business as usual" for me. I act as though I do not notice, and am not concerned by the regular demonstration of underestimating students' academic potential in the setting. To outwardly express such noticing and concern would be inappropriate. However, to harbor these opinions causes an increase in my anxiety, rendering effective navigation of the tensions even less likely.

One morning, for example, it becomes evident that students are completing their *Kite Runner* quizzes by using their phones and computers to search for answers. To me, it is an indication that the quiz may not be fulfilling what I assume to be Ms. Mahoney's objectives for it: holding students accountable for reading, and helping students construct self-relevance in their reading. I decide to share my observation with Ms. Mahoney after students leave that day; I imagine we will discuss possible redesigns for the quiz that better meet her objectives. However,

when the time arrives I see no way to broach the subject and I do not bring up the topic, becoming complicit in cultivating a learning environment that I object to. This and similar situations contribute to my self-perception of lacking integrity both as a researcher and a colleague. I write in a memo drafted while transcribing data: *“It’s like here I am, an enemy of the state, but, in order to critically examine the state, I have to actually become the state, and then I’m this imposter, not even worthy of trust”* (JH transcription memo, 11/20/23). Although I am being overdramatic in the excerpt, it effectively demonstrates a dilemma that remains central for me throughout the project wherein my perceived action possibilities in the situation align poorly with my deeply held beliefs about teaching, learning, and student agency. I continually put these beliefs aside in order to perform my role in the way I think it is “supposed to be” performed, undermining my own sense of integrity. However, acting in alignment with my beliefs would also (through a different pathway) undermine my sense of integrity in the role. I fail to identify any action possibilities that align with my beliefs. While I remain aware of the dilemma throughout the project, I make no notable progress in negotiating it. I note in a memo during the fourth week of data collection, *“I continue to be disappointed by my lack of professionalism—how do researchers navigate this?”* (JH transcription memo, 12/7/23).

While I am the research assistant for an intervention that strives to mitigate systemic issues that undermine educational opportunities for students, the only action possibilities I perceive for myself are those that result in my contributing to those very issues of limited educational opportunity. As underestimated AE are constructed in the setting, I am supporting the process. In several instances throughout the five-week dataset I actively sustain the emergence of norms (e.g., *Norm for students’ late arrival; Teacher unpacks written instructions*) that I have identified as detrimental to students’ sense of responsibility and agency as learners. However, this experience also provides important insight into the situational constraints that teachers experience when faced with a powerful institutional culture that does not align with their own system of values and beliefs. In this small way I have at least constructed a sense of purpose in the struggle.

**Ms. Mahoney.** Data consulted to examine Ms. Mahoney's RI system included fieldnotes, transcripts, stimulated recall interviews conducted in and outside of classtime, and scoring of student work. Unsurprisingly, her *teacher* RI emerged as dominant, with additional (some of them nested) roles of *English teacher*, *Quest partner*, *nurturer*, *union site representative*, *colleague*, and *Eagles fan* also coming into play on different occasions. While these roles often demonstrated harmony, relevant tensions were noted with the content in Ms. Mahoney's *teacher* and *nurturer* roles. In particular, throughout the data generation interval she negotiated tensions between her performance oriented and mastery oriented teacher goals.

Ms. Mahoney perceives herself an experienced high school English teacher who has a “*pretty good rapport*” with her students (SRI-3). As the designated teacher for the English portion of the Quest program, she perceives herself to have grown her skills notably over the years, offering the example of honing her feedback-giving skills such that she now offers students “*very specific feedback...productive feedback*” as a regular practice instead of the more general feedback that she tended to give previously (SRI-8). Her multiple roles at the site (e.g., site representative for her union chapter; mentor for pre-service teachers) means she is “*pulled in different directions*” but is “*a teacher first*” (SRI-3). Ms. Mahoney also self-defines as a hardened Eagles fan; during football season she is often observed debating with students her team's preeminence, likely a practice that builds important connections with students.

Two goals emerged as central within Ms. Mahoney's RI system: her goal for students to succeed academically, and her goal for students to have a sense of wellbeing in her classroom and beyond, with the former presenting more prominently in the data. Since academic success is largely defined by grades (by the institution and by Ms. Mahoney, if only by default) the goal for student success is often framed as a goal for students to receive acceptable grades, a performance orientation. Notably less often in the data the goal for student success is framed around the quality of students' learning, a mastery orientation. Instead of treating these as two separate goals I often refer to the broader title of “goal for student success” because I believe this is the way Ms.

Mahoney frames it for herself. Thus, the more general term may operate as a kind of euphemism that allows her to work within the seemingly immutable assessment system which prioritizes performance orientation, a control parameter operating at school and district (and beyond) levels. Distinctions between grade-success and learning-success seem to move in and out of salience for Ms. Mahoney, even as they remain a largely conflated construct (i.e., her own awareness of the distinction was not observed, although I assume it exists). At times throughout the data generation interval Ms. Mahoney's drive to meet her goal for students' success presents tensions with other goals, and in relation to ontological beliefs, perceived action possibilities, and actions themselves.

Presentation of the performance oriented success goal is both more prominent than, and exists in a state of conflict with, its sister presentation, the learning or mastery oriented goal. I will demonstrate this phenomenon through an examination of Ms. Mahoney's treatment of the reading quizzes on *The Kite Runner*, the book the class was assigned to read outside of class time. The quiz consists of 13 discrete answer questions on chapter 1-5 content (see Appendix C). In the week 1 observation Ms. Mahoney gives students their first reading quiz and affords them an hour of the class time for completion. When the period comes to a close and most students are not yet finished, she offers them options to either take the quiz home or leave their partially completed quiz in her care. She also promises them more class time for quiz completion when they next meet. During that next meeting students are given 45 minutes for completion. When one student is still not done, Ms. Mahoney offers to let him take the quiz home again. The events described so far suggest her desire for students to succeed academically; no clear indication of a performance or mastery orientation is yet evidenced in her behavior.

During the week 3 observation Ms. Mahoney gives her students their second reading quiz on the novel, affording them one hour of designated class time to complete it. As students work she becomes aware that few (if any) students have done the reading in preparation for the quiz; she devises and shares with students her plan for avoiding such a situation in the future: "...*next time I'm giving 30 or 35 minutes to take the quiz. Whatever you don't have done will just be*

*marked incorrect...*” (week 3 transcript). One reason for assigning the quiz appears to be to ensure students read the book, which is thematically connected to the essential question driving the current curricular unit. The decision to constrain allotted quiz time may suggest an attempt to nudge students’ reading process along, vaguely suggesting a mastery orientation. Fifteen minutes later, however, when Frank asks for help on a quiz question, Ms. Mahoney tells him and the rest of the class the answer, explaining, “‘*cause I can’t find it. I know it’s in there somewhere*”; this suggests a more salient performance orientation. Ms. Mahoney lacks optimal action possibilities for helping Frank meet the mastery goal, and she reverts to the default orientation held in the setting: for students to succeed through earning acceptable grades.

Two weeks later, during the week 5 observation, it is time for the next quiz on *The Kite Runner*. She gives one hour of classtime, going well beyond the promised limit. Likely she expands the time affordance because only four students are present during the first 30 minutes of that hour, and she wants students to have a fair chance of completion. Also during this second quiz she systematically and overtly offers students page numbers on which to find each quiz question (e.g., “...*number four is on page 117; number eight, page 127; number nine, page 133...*” (week 5 transcript), another clear indicator of performance goal orientation. At the end of hour one Ms. Mahoney does not collect the quizzes but introduces the next EQ assignment, telling students: “*So even if you’re still working on the quiz, if you could, you know, put that aside for just a sec—you know—a few minutes and let’s take a look at EQ 2.5, the mid-unit essay*” (week 5 transcript). My fieldnotes indicate that several students work on their quiz straight through the back-and-forth discussion on EQ 2.5 and through the end of the period, at which point Ms. Mahoney does collect all the quizzes. The action possibility to provide page numbers likely suggests to students a particular way of moving through the activity: instead of students reading the chapters and answering the questions as they come upon each answer (questions are chronologically ordered, enabling this), this scaffold implies students should instead skip reading text that falls *between* questions, streamlining completion while potentially sacrificing

opportunities for students to build meaningful connections, including those between the narrative and the essential question of the unit. Across these quiz-related events Ms. Mahoney's performance goal orientation overshadows any original intentions of learning or mastery oriented goals. It should be noted here that original intentions for reading quizzes are unknown to me. It is possible the intention indicated tensions between Ms. Mahoney's *Quest partner* role (and associated goals) and her *English teacher* role (and the traditional goals therein). However, data within the collection interval did not offer insights into these possible tensions.

### Extract 5

- 1 **MM:** So when you think about this particular author's claim (3) ↑↑she gives it right there  
2 in—at the end (5) °al↑right° (2) >so you have to< deci::de (2) if you agree with her claim  
3 (2) somewhat (3) not at all (2) all the way (2) and why (2) ((the next words are stated with  
4 exaggerated enunciation)) Do not forget to establish reciprocity when you begin your  
5 essay (3) How do we (.) establish reciprocity ((calls on a student)) do you remember?  
6 ((student shakes head)) No ((calls on another student)) how do you establish reciprocity  
7 (1) Let's say Ms. Hadid is going to read your response but she didn't read the article  
8 **Student:** Oh um (3) you gotta talk about how (2) yo:u >came up with< what you're sayin'?  
9 **MM:** Right. So ↑↑how do we ↓do that? What do we identify in the beginning of our essay?  
10 **Student:** ((tentative tone)) °Um::m (3) the article?°  
11 **MM:** > The name of the article< a::nd?  
12 **Student:** And then, how you came to read it?  
13 **MM:** How you came to read it (2) the author (3) So '*In my English Class we read an*  
14 *article called dadadadada by doodlydoodlydo which discussed—*' and ↑↑then you could  
15 write the claim. Okay don't forget to do that (1) it's really important because >if  
16 somebody comes up and reads your essay< and you just say ((uses silly voice)) '*Rick*  
17 *Ross is a bad guy*' they're gonna be like ↓'*where is this coming from?* ↓'*What article*  
18 *are they referring to?*' (2) Okay? So we're gonna work on this (2) if you finished your  
19 quiz you can start it now (1) we'll continue working on it on Friday (2) but I wanted  
20 you to be aware (1) this is a mid-unit assessment ↑so it means what? (2) what kind of  
21 a grade is it?  
22 **Haylee:** Test grade.

(Week 5 transcript; represented using Jefferson symbols)

Illustration 5. Extract 5

Throughout the dataset there are instances that suggest Ms. Mahoney holds an ontological belief that mastery orientations are beneficial, but these instances are interwoven with demonstrations of her affordances for performance orientations, suggesting a tension between mastery beliefs and perceived action possibilities to offer mastery opportunities to students in the setting. Extract 5 (above) demonstrates an interweaving of the value for learning (i.e., mastery) with a more grade-directed conception of success. The scene in this extract extends chronologically from the scene in the last example. Ms. Mahoney has recently asked the student to shift their attention from their quiz to the mid-unit assessment (EQ 2.5); here she has just finished reading aloud to the class the short article featured in the assignment. After reading the final line Ms. Mahoney points out to students exactly where (within the 630 word article) the author's argument can be found (lines 1-2); she then pauses and says "*Alright?*" perhaps attempting to ensure students make note of this important piece of information (the first order of business in the mid-unit essay the students are charged with writing asks them to state the author's central argument). In lines 2-3 she reiterates the students' next task (to take a position on the argument offered). Finally, in lines 4-5 she reminds students to include what the Quest curriculum refers to as *reciprocity*. While each of these moves indicates the salience of the performance oriented goal, the first one is perhaps the most significant because it is the part of the task that (without Ms. Mahoney's cue in lines 1-2) demands the most cognitive rigor; students must evaluate the text as a whole and determine the central argument. The author packages her claim succinctly in the final lines of the article, but she does not do it in an obvious way. The reader must still engage in meaning-making to grasp that this is the heart of her argument. Perhaps Ms. Mahoney believed the potential for students to misrepresent the main argument in their own essays was relatively high; given these epistemological doubts around students' academic competence for the task, and paired with her quest to see her students succeed, she selected action possibilities (i.e., telling students where to find the author's succinctly stated argument) that ensured students' grades on this mid-unit assessment would not be jeopardized.

However, Ms. Mahoney also facilitates students' meaning-making in line 7 when she guides them to recall and understand the reason for including reciprocity in their essays. In lines 8-13 she walks a student through describing reciprocity (instead of simply describing it herself) and in lines 13-18 she attempts to develop students' understanding of *the why* around this curricular convention. These moves all indicate salience of a mastery orientation. But in lines 19-21 she directs students to focus on grades, returning to the performance orientation. While at times it seems as if both goal orientations can exist harmoniously with one another in this task, with regard to AE these teacher moves elicit qualitatively different student behaviors with qualitatively different outcomes (e.g., the grade-success goal helps to construct such AE as *Value for correct answer over effort/process*), resulting in friction between the performance and mastery approach.

Ms. Mahoney's goal for students to succeed (in both its presentations) is also in relationship with her overarching goal for students to have wellbeing in her classroom and beyond. Permeating the dataset, this goal is anchored in part by Ms. Mahoney's ontological belief that students tend to engage more readily with academic tasks when they feel a connection to their teacher. In a stimulated recall interview I ask Ms. Mahoney about strategies to help students sustain their attention and effort during challenging activities. After pointing out and then setting aside the manifest notion that "*our kids are motivated by grades*" she notes the importance of the student's connection to their teacher in helping maintain task motivation: "[I]f they're invested in the teacher, you know, and they want the teacher to, like if they wanted us to feel like they're really putting in an effort, if they cared what we thought" they would be more likely to prevail in the task (SRI-JA). This belief aligns well with many of the relationship-supporting behaviors that Ms. Mahoney enacts over the data generation interval. For example, in both the week 1 and week 3 observations she takes time to chat with a student from another period who stops in socially during classtime; in the week 2 observation she engages students with light-hearted banter about an upcoming football game: "*Who's winning tonight? The Eagles or Kansas City? The Eagles?*"

*Very good answer...*”; and in that same period, having stepped out to take a phone call while I engaged students in a journal activity, she returns and immediately notices and greets the two students who arrived in her absence. Her strong connection with students develops in part because she ensures that they feel seen. She also empathizes with students regularly. When students demonstrate anxiety or pain, Ms. Mahoney’s nurturer RI is immediately salient, expressing sympathy and warmth in subtle but affirming ways that do not draw attention to the students’ emotions, but quietly acknowledges them. For example, during the week 1 observation a student arrives almost an hour late, flustered and upset by an event that occurred on her way to school (which she describes to her friends as she settles into her seat). When her friend tells her she needs to get the quiz from across the room, Ms. Mahoney asks softly as she approaches the student, quiz in hand, *“You have a stressful morning? I got it for you babe.”* In the week 5 observation when Omar arrives with a recently injured knee, Ms. Mahoney makes a motherly fuss over it, urging the resistant Omar to visit a doctor. Her care for students, and her desire for them to have a sense of wellbeing, features prominently in her RI system. However, because students’ wellbeing is also tied up in their securing of academic success, an inconspicuous tension often emerges between these two overarching goals, particularly in relation to the action possibilities that support them.

It seems likely that Ms. Mahoney’s desire to support students’ wellbeing also drives her tendency to enact action possibilities that support performance oriented grade-success over their more mastery oriented learning-success. Because grade-success (which is easy to measure) is often used as a proxy for learning-success (more difficult to measure), both by institutions and by individuals (e.g., parents), it has proximal and distal connections to students’ wellbeing. Operating at multiple levels, the prevailing ontological belief that grade-success is more important than learning-success acts as a powerful control parameter that generally guides Ms. Mahoney’s everyday navigation of action possibilities. Two moments in a stimulated recall interview help demonstrate this. In the first, Ms. Mahoney has just described to me how several

students have not been coming to class, but have nevertheless (since the work is given through Google Classroom) been completing their assignments. She expresses her frustration around their lack of contribution to the learning community, and then explains how a related frustration exists among teachers at the school: “...*it has been under discussion in our PLCs [professional learning communities] as teachers that there is no accountability for students*”; she goes on to explain how the PLCs have, with administration, devised a plans that ensures greater student accountability around grading, but she then expresses uncertainty that administrators will accept the results when the grading deadline arrives: “*Now, it will be interesting to see if they actually allow the amount of failures that are going to be the consequence of this policy*” (SRI-policy). Ms. Mahoney is implying that, per her belief, (at least some) administrators would move students’ grades into the passing category even when those grades are overtly disconnected from those students’ work. This indicates an institutional culture with a strong performance goal orientation that may be difficult to withstand for teachers immersed in the setting. Further along in the same interview she describes how the teachers have been pressured by administration to “*pass, or find ways to help kids pass that are coming late—ELL [English language learner] students specifically—that are coming late but are here in the building other times of the day*” (SRI-policy). She expresses her resistance to this pressure, and then explains the rationale from the administration’s point of view, as she imagines it. She begins by assuming the voice of such an administrator:

“Well, we’re not giving these kids a passing grade—a 60—so that they can go to Yale; we’re giving them a 60 so that they can get a diploma, so that they can get a reasonably decent job after high school.” *And [they argue] that these kids, if they don’t graduate, will never return to get a diploma, which will negatively impact their ability to make money.*

In a general sense, the institution’s overarching goals for student success and wellbeing (as described by Ms. Mahoney) align with those she herself holds. This alignment likely makes some of her action possibilities for goal fulfillment more salient than others, favoring those which

prioritize grade-success over learning-success in the service of student wellbeing (e.g., walking students directly up to an answer or intended response). For higher performing students, however, actions undergirding such goals are likely to undermine postsecondary learning opportunities and wellbeing over the long term, introducing tensions between goals for success and perceived action possibilities.

Ms. Mahoney's selection of action possibilities that undergird student success goals may also be framed by her ontological beliefs about students' motivational inclinations and academic competence (AC). As noted, she believes students are motivated by grades and their personal connection to their teacher. In addition she also demonstrates a belief that students are more motivated to complete a task when it requires less cognitive effort. This manifests in actions like

#### Extract 6

- 1 **MM:** S::o u::m >in Scale C it says< 'The author feels that Tillman's life should be  
2 either a cause for celebration or a solemn lesson.' If it was a lesson ↑↑what would it  
3 be a lesson (1) ↑↑of?  
4 **FIRST STUDENT:** U::m (2) uh maybe 'Don't waste your time putting your life on  
5 the line'?'  
6 **MM:** Okay, don't waste your time (2) okay (3) you know (.) stay safe (.) be lucrative.  
7 Is he talking in any way shape or form about responsibility?  
8 **FIRST STUDENT:** Uh (2) °I don't think he is°  
9 **MM:** You don't think so? (4) Because (1) is he saying >you know< 'This guy shouldn't  
10 have gone (1) he had a responsibility to stay alive for his parents. This guy shouldn't  
11 shouldn't have gone. He had a responsibility t::o, ummmm (2) you know, play for his  
12 team' or whatever. So ↑↑he's not really even saying what he should have done. He's just  
13 saying what he shouldn't have done.  
14 **SECOND STUDENT:** He depressed.  
15 **MM:** Yeah, possibly. S::o (2) <I mean> (5) he certainly isn't celebrating the guy's  
16 life ↑↑right (1) °mark your scale and put a 'What makes you say so'° there (1) and  
17 <that'll be> (2) it f:or to::day u:m >make sure you have that< so we can discuss it  
18 o::n Fri::day and then we'll continue with this.

(Week 3 transcript; represented using Jefferson symbols)

Illustration 6. Extract 6

offering students page numbers on which to find answers to quiz questions, and, for example, in her decision to read aloud to students the article featured in the mid-unit assessment (EQ2.5) instead of leaving that task to the individual. Some of Ms. Mahoney's strategies also demonstrate a belief that students exhibit gaps in their AC. For example, she commonly pauses when reading aloud of an article to explain terms or concepts, and to re-tell large sections of text using simplified language. These AC beliefs, paired with the enduring goals for students to achieve grade-success, likely mediate selection of action possibilities like those demonstrated in Ms. Mahoney's utterance in lines 15-16 of Extract 6 (above). Here the class is working their way through the semantic differential scales in assignment EQ 2.3 by way of back-and-forth discussion. Haylee has just read aloud two paragraphs of the featured article (an editorial criticizing the upholding of Pat Tillman as a war hero after his death while serving in Afghanistan). Prior to the extract, Ms. Mahoney offered students her interpretation of important points made in the passage. In the first two lines of Extract 6 she presents the scale with "cause for celebration" on one end and "a solemn lesson" on the other. Then she scaffolds a thought process for the students ("If it was a lesson what would it be a lesson of?"). In lines 4-5 the first student offers her thoughts; Ms. Mahoney positively acknowledges them in line 6, and presses further in line 7 as she connects the narrative to the unit's essential question (To what extent am I responsible to others?). The same student responds in line 8, but this time in a softer voice and using language that conveys low confidence regarding her contribution. Perceiving the student's gap in AC, and possibly inferring a similar gap in other students' silence, in lines 9-13 Ms. Mahoney builds student understanding by elaborating on her previous question and moving toward an answer. In line 14 the second student, seemingly in response to the elaboration, offers an opinion that lacks a solid connection to Ms. Mahoney's narrative thread. She gives the student a neutral response. It is likely that by this juncture she has determined there is a wider gap in AC that she would like, and that time is running short. In lines 15-16 she unambiguously provides students the correct response to Scale C: "He certainly isn't celebrating the guy's life," and

reminds them to mark their scales and provide evidence. In the last two lines she closes out the activity. The extract shows Ms. Mahoney's intention to help students construct meaning, but as she perceives evidence that students are struggling, and as time runs short, she seems to fall back on strategies that will ensure students' fulfillment of performance oriented goals over their learning mastery. The extract illustrates tensions at the confluence of different goals orientations, the action possibilities available for supporting them, and ontological beliefs about students' motivational inclinations and their task-related competence.

Throughout the dataset there are clear indications (e.g., the first portion of Extract 6) that Ms. Mahoney believes effective learning involves students constructing their own knowledge, and that she can scaffold such processes (e.g., use of strategic questioning during a back-and-forth session). But there are also clear indications (e.g., lines 15-16 of Extract 6) that she believes students' completion of the assignment (i.e., earning a passing score) matters more. This tension permeates the dataset, with important implications for the construction of goal orientations and AE in the setting. Ms. Mahoney's RI as a teacher in the cultural activity system of the classroom affords her consequential decision opportunities that (given her position) may disproportionately influence co-constructive processes in the setting. These include the design (i.e., nature of the questions) and implementation (i.e., open book, provision of page numbers, time given for completion) of the reading quizzes, implementation of the EQ assignments (e.g., the decision to read aloud to students the mid-unit assessment and front load critical information); scoring strategies, and daily pacing. Her decisions are framed by her system of interdependent role identities. However, that system is also framed by sociocultural control parameters at multiple system levels. It is to these that we now turn.

Although participants' RI systems in this section were each described as independent of one another, it is important to point out that each system is in fact embedded within an emerging collective RI system at the whole-class level. Thus, each individual's system exists in dynamic relationship with the RI systems of all others in the space. These system interactions are central to

the processes of AE construction in the setting. Further, the class's collective RI system, and the individuals' RI systems are also in dynamic relationship with—and continually being shaped by—sociocultural control parameters at various levels.

### ***Sociocultural Control Parameters Afford and Constrain Actions***

Both the development of one's RI system and the collective construction of AE in a learning setting occur amid a network of control parameters that help make up what we generally think of as "culture." In the current study I conceive of culture as indications of "ways of being" in a space as demonstrated by behaviors, material characteristics, and the intellectual and attitudinal features observable in that space. Participants who occupy the space are thus *of* the space, while simultaneously, the space is *of* them. This co-constructive nature implies the emergent systems indicating normative "ways of being" in a space can be intentionally subjected to directional pressure as a means toward system change. Thus, understanding what types of "control" a parameter (or set of parameters) might wrest in a given situation can help researchers and practitioners gain agency over critical AE construction processes and their evolving outcomes. Therefore, in this section I report and describe the sociocultural control parameters (SCCP) identified across fieldnotes and transcripts representing the five-week data generation interval. Readers will note that some SCCP identified here are also represented as emerging AE (e.g., *Norm for collective reading of a text*). Indeed, AE often become part of the fabric that constitutes the institutional culture of a learning setting. Why then are not all of the emerging AE identified in Table 4 represented also as SCCP in this section? Whether or not an AE is considered a SCCP in this study depends on the situation in which it was observed. I only coded an emerging AE as a SCCP when it exerted an observable pressure on participant behavior. However, it should not be assumed that emerging AE not coded as SCCP are benign. The data generation interval was limited, and should not be viewed as a comprehensive representation of each AE's influence on the system. The primary data in this study presents a framed portrait with the understanding that relevant content may well exist outside of the framed area. Because SCCP

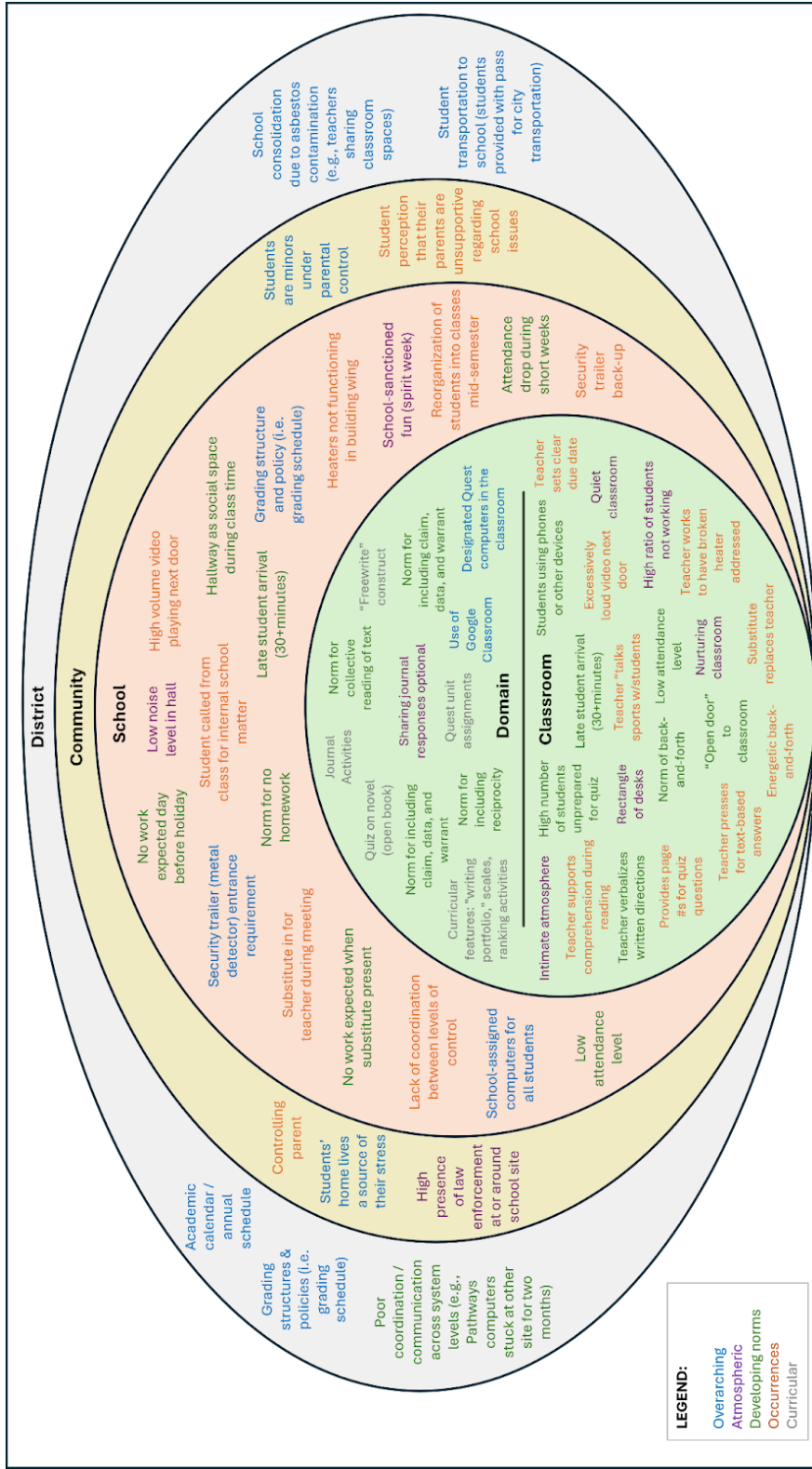


Figure 5. Sociocultural Control Parameters Observed. When a SCCP was observed to operate at more than one level and the representation was ostensibly equal between levels it appears in both spheres; if it was observed to operate at one level far more than another, it only appears in that sphere.

operate at multiple system levels—some of which are well within the agentic reach of participants and others operating beyond this reach—it can be helpful to view the observed SCCP organized into their respective levels. I observed parameters at domain, classroom, school, community, and district (and beyond) levels, with some SCCP operating across levels. A brief description of SCCP at each level follows. A comprehensive visual representation of parameters organized by level appears in Figure 5.

**Domain Level SCCP.** In the domain of English class observed control parameters include modes by which work is completed, assessment design, learning scaffolds, and the various conventions (e.g., *Norm for including reciprocity*) within each of these frameworks. Students engaged in most of their work through an online platform (i.e., *Use of Google Classroom*) via their school assigned laptop computers (the Quest initiative also provides a class set of reserve computers). One exception were the bi-weekly reading quizzes, which were given in paper-pencil format. Quizzes assessed student comprehension of *The Kite Runner*, a novel the students were assigned to read at home. Each quiz presented 13 multiple choice and short-answer questions, and was implemented in open-book format. Completion time expectations (and conventions around completion) remained in flux during the data generation interval. Bi-weekly Journal Activities (JA) involved students reflecting through an informal writing practice (i.e., *Freewrite construct*) in response to identity-related prompts that mapped thematically to their broader English curriculum. The primary Quest curriculum implemented during the data generation interval included one inquiry unit (of a 4 unit collection) featuring the essential question *To what extent am I responsible to others?*, with the first half of the unit being implemented during data collection. Assignments (i.e., *Quest unit assignments*) within the unit included such scaffolds as semantic differential scales, ranking activities, and paragraph frames. Each assignment related to one or more central text (i.e., news or academic article, fictional narrative, poem) which aligned to the essential question. In each assignment students were guided

by conventions such as *The norm for including reciprocity* and their attendance to the Toulmin method of argumentation (i.e., *Norm for including claim, data, and warrant*). Students completed their assignments on their own documents within Google Classroom, and were typically supported by a back-and-forth session led by Ms. Mahoney. Such sessions involved the reading aloud and verbal elaboration of written instructions, the reading aloud of texts by Ms. Mahoney and willing students, and students responding to prompts (e.g., their response to a semantic differential scale) in writing and sharing their responses. Other times students worked quietly to complete assignments for which a back-and-forth session has already been held. Specific SCCP observed at the domain level appear in Figure 5.

**Classroom Level SCCP.** Control parameters observed at the classroom level include those that help shape the general atmosphere felt in the space, elements of students' and teachers' classroom conduct, and factors indirectly influencing the classroom's atmosphere and conduct like noise and temperature issues.

The somewhat small classroom featured student desks arranged in a rectangle with an opening at one corner that allowed students to sit in- or outside of the arrangement as each preferred. If students were engaged with independent work Ms. Mahoney sat at her own desk which faced this rectangle; I sat in various places within the rectangle. There exists a well established nurturing atmosphere in Ms. Mahoney's classroom (i.e., *Nurturing classroom*) including her convivial manner of engaging with students such as joking with them (e.g., debating whether "her Eagles" will prevail this year). In absence of any structured activity (e.g., back-and-forth discussion session), the classroom tended toward quietness over the data generation interval. Usually only two to four students were present during the first twenty minutes of class, with students arriving periodically throughout the period and into the final 15 minutes; attendance was thus often low for a large portion of the period, with a piecemeal increase over the 90 minute block. From time to time a student who did not belong to the class entered the room to socialize with another student (or on occasion with Ms. Mahoney); other

times a student in the class went out to the hallway to socialize with someone passing by or who summoned them from the doorway. The phenomenon is represented by the SCCP “*Open door*” to classroom. It was common for students to engage with phones and other personal devices (e.g., tablet), and many wore earbuds or headphones throughout class. Although there was commonly a high number of students disengaged from classwork (i.e., *High number of students not working*), at times there was an active back-and-forth session led by Ms. Mahoney (i.e., *Energetic back-and-forth*). Signaling the beginning of a back-and-forth session, Ms. Mahoney usually moved from her own desk to sit within the rectangle of student desks. The class read texts aloud in a collective manner, with Ms. Mahoney commonly interjecting to explain terms or concepts. When the assignment featured instructions (e.g., for a writing portfolio) she verbally unpacked the instructions for the students and gave examples. She often invited students to share their responses to the assignment inquiries (e.g., a semantic differential scale), using a cold-call style. If a student’s answer failed to demonstrate adherence to the curricular norms (e.g., to connect data, claim and warrant) she sometimes held them to account by pressing for an adjustment (i.e., *Teacher presses for text-based answer*), holding them to account. Many responses received her praise as well. I facilitated the JA, and tended to adhere to the convention of verbally unpacking the instruction for the students. An exception to the *Norm for collective reading of text* was students’ intended reading of *The Kite Runner*, which was assigned to be read outside of class, but was largely not. Significant portions of the class time were therefore given to students’ completion of quizzes. This was scaffolded by Ms. Mahoney commonly offering students page numbers on which each quiz question could be found, resulting in students searching for piecemeal answers to the quiz questions in lieu of reading it as an intact narrative.

On occasion there are classroom-level interruptions to the day-to-day operations that are not in Ms. Mahoney’s purview of control. For example, an excessively loud video often played in the nextdoor classroom during portions of the period. In the week 3 observation the heater was not working in our wing of the building which resulted in a difficult working environment (this

was a three-day ordeal during a December cold spell). Ms. Mahoney therefore spent portions of the class period communicating with other teachers in other parts of the building to document and eventually resolve the issue. During the week 5 observation Ms. Mahoney was pulled out of class for a meeting and a substitute was instated. On several occasions during the data generation interval, and for a variety of reasons, students were also called out of class by teachers or other school personnel (e.g., a counselor). While each of these events has important impacts on the daily operations of the class—and therefore have effects on AE construction—they are each outside of teacher control.

**School Level SCCP.** At the school level control parameters observed over the five-week interval include relatively stable factors like policies that recede into the background, planned and unplanned school events and occurrences, and an array of norms that have notable traction at whole-school level.

Among the more stable factors are policies that guide grading (e.g., weighting of grade categories; requirements around reporting), the school's provision of a laptop computer to all students, and—this school year—the consolidation of school operations to a small portion of the building (with 9th grade at a separate location altogether) due to the ongoing issue of asbestos contamination. Also observed were planned events like spirit week (i.e., *School-sanctioned fun*), which involved students attiring themselves according to a daily theme and competing for class representation in numbers. Class time was devoted to taking pictures to document the number of students in the class that were wearing pink. A somewhat typical mid-school-year reorganization of students into new classes occurred resulting in which the period under observation for this study lost one student and gained another. During one observation Ms. Mahoney was pulled out of class to attend a 45 meeting and a substitute teacher took her place, triggering certain norms (i.e., *No work expected when substitute present*). There were also daily instances in which a student was pulled from the class and sent elsewhere in the school (e.g, a counselor's office).

Unplanned occurrences observed include regular back-ups at the security trailer, the heater's malfunction during the week 3 observation, and instances in which there is poor coordination between school entities (i.e., the Quest computers were inadvertently sent to 9th grade site with their whereabouts remaining unknown to Quest teachers for the first two months of the school year). Such occurrences were coded as the SCCP *Lack of coordination between levels of control*.

School level control parameters also include several norms in various stages of development. Most broadly, low levels of student attendance and not doing schoolwork at home (i.e., *Norm for no homework*) appeared normalized in the setting; the former increased in salience over shortened holiday weeks (e.g., Thanksgiving week). Relatedly, teachers' demonstrated and expressed the notion that fewer attending students will engage in their classwork on a class day that precedes a holiday (i.e., the Wednesday before Thanksgiving), and thus game-like activities are planned. During more typical weeks the late arrival of students (i.e., upwards of 30 minutes) appeared to be a well established norm and was clearly although perhaps inadvertently being supported by the school's tardy policy. Finally, throughout the data collection interval the hallway was treated by students and some personnel as a social space during class time. Alternatively, there were also times in my observation when the hallway is notably quiet.

**Community Level SCCP.** Control parameters at the community level were rarely observed; when they were they most often emerged as a function of students' or Ms. Mahoney's conveyance of perceptions of students' homelife. Often the ideas conveyed were abstract, lacking specificity. In some instances students communicated their perception that life at home involved enduring a notable amount of stress. A student shared that her parents do not provide support for her school engagement. Students also acknowledged indirectly that they are minors, and that their parents are ultimately the decision-makers in their lives. An additional observation of control parameters at the community level occurred when Ms. Mahoney and I discussed one student's circumstances at home involving what Ms. Mahoney described as a particularly controlling

parent. The situation put Ms. Mahoney in a difficult position: the school holds her accountable for contacting parents when a student is not meeting proficiency; in this case she felt that doing so put this student in a vulnerable and potentially harmful position. One other notable control parameter observed during the data collection was the common presence of law enforcement near the school setting.

**District (and beyond) Level SCCP.** At this level control parameters often go unnoticed due to their broad nature. They also may be perceived as somewhat immutable because they exist far beyond the agentic reach of those inside the classroom. Two important control parameters that emerged from the data include the annual academic calendar and matters of student transportation. The academic calendar guides such parameters as the organization of school days into quarters, the school's grading schedule, and holiday scheduling. With regard to transportation, only students designated as having special needs are eligible for school bus transport. All other students are given transpasses for the local bus and subway system. This affects students' ability to arrive on time (e.g., city buses often run behind schedule), and therefore may affect teachers' decisions of how to handle late arrival of students (e.g., treat tardies as more acceptable since students may lack control over them).

Other control parameters observed at district level are also represented at other levels of operation (in Figure 5 these are shown at both levels). For example, while the grading structure and policy is largely governed by what is decided at district level, some decisions in this category are also made at or in conjunction with school level operations. Within this combined responsibility space, several occurrences act as control parameters that have impacts of AE construction in the classroom. These include the aforementioned consolidation of the school into a condensed wing of the school building due to presence of asbestos. Consolidation has resulted in some teachers sharing spaces (i.e., Ms. Mahoney shares space with two other teachers at different times of the day), and reduced classroom size (e.g., Ms. Mahoney's classroom was

originally part of a larger room but a dividing wall was constructed during consolidation), and the general lack of cohesion as a learning community (i.e., the 9th grade students are completely disconnected physically from the school). Other SCCP that straddle levels are building issues such as the heater malfunction, and ongoing malfunctions at the security trailer.

The visual representation of SCCP (Figure 5) observed in the primary data set shows both level of operation and type of parameter. *Overarching* parameters (e.g., *Academic calendar and schedule*) are the most broad in scope and can often be the most invisible. *Atmospheric* parameters (e.g., *Quiet classroom*) are often fleeting in nature and describe such qualities as mood or sound profile in the space. *Developing norms* (e.g., *Teacher verbalizes written directions*) depict ways of being in the space; these may fluctuate in salience over the observed period; many are also represented as emerging AE. *Occurrence* parameters (e.g., *Substitute in for teacher*) are often single events, but may also be repeated; however, their repetition was not observed to build over time as was observed in *Developing norms*. Finally, *Curricular* parameters (“*Freewrite*” *construct*) are those that intentionally establish a particular norm of practice in the context of a learning task. The smaller number of parameters observed at the outer system levels (i.e., district) relative to those observed closer to classroom levels does not represent the actual number of SCCP acting upon AE construction processes, but instead represents those that were observed at the classroom level. The ratio likely reflects the greater visibility and observability of SCCP at the level of observation. Visual depictions like those in Figure 5 can help facilitate researcher and practitioner understanding around the how and why of AE construction in a given situation, and might be used as a tool for planning the intentional *reconstruction* of already in place AE.

### **Integrated Outcomes**

Investigation of the three integrated facets—discourse enacted AE constituents, RI influence, and the affordances and constraints from SCCP—supports my assumption that the processes of AE construction within a learning setting constitute a complex dynamic system.

Although other researchers and practitioners may conceive of the system's meaning facets differently, they would likely still arrive at a binding notion: each facet of AE construction dynamically helps shape the other facets. It is thus essential that the study of AE construction examine the facets of influence *as an integrated system*. While the researcher or practitioner "takes apart" the process to better understand it, they must also put it back together to develop whole-system knowledge; in this section I describe one way to approach the effort. Next, I discuss adding layers of meaning through the consultation of additional data. I end the chapter by presenting a working model of the system I observed in the research setting. Additional studies are needed to determine whether the model generalizes to processes of AE construction across settings.

In the previous sections I examined the meaning facets "taken apart." One way to begin putting them together again is to observe their integrated functioning anchored to a single (but perceived to be critical) AE's emergence over the data generation interval. Using an emerging AE's trajectory diagram (e.g., Figure 3; and see others in Appendix A) as a base, the researcher or practitioner can (1) connect the actual discourse events in fieldnotes and transcripts to the D, S, V, and R on the diagram, (2) identify each event's more specific functions with regard to either developing, sustaining, verifying, or resisting the AE's emergence (3) select high frequency (or otherwise important) specific functions, and (4) tell the story of those functional events over the data generation period. Telling the story of discourse enactments that result in an AE constituent becoming an AE in its own right involves interpreting participant actions using DSMRI analysis, assessing the influence of the various SCCP's affordances and constraints, and accounting for the interrelated influence of other emerging AE in the setting. As an example I will examine the emerging AE, *Norm for students' late arrival*.

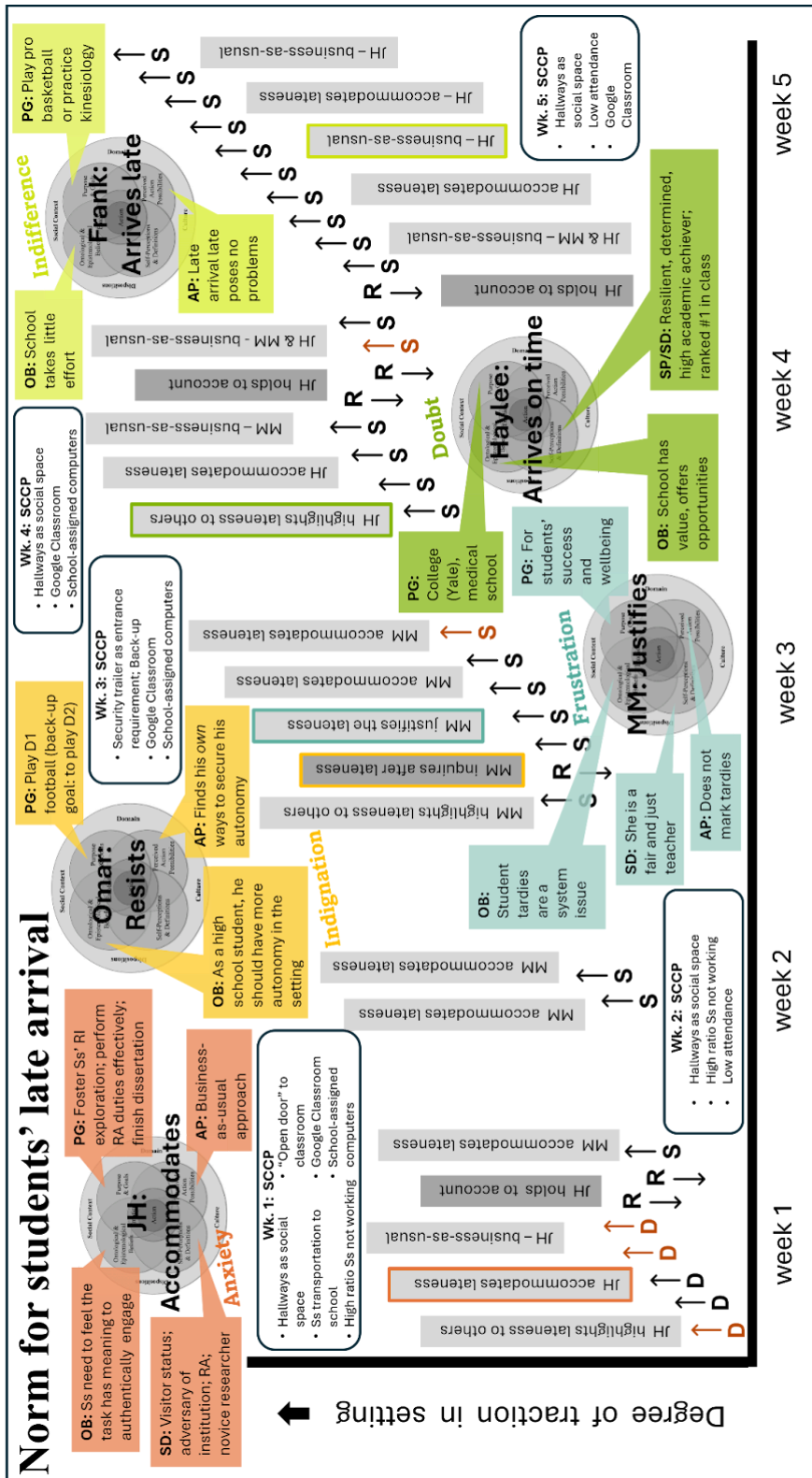


Figure 6. A Single Academic Expectation's Emergence, Visualized. Participant RI system representations are adjacent to the actions (represented by S, D, R, and more specifically by text in gray strips) to which they pertain. Black AE constituent moment data points (D, S, R) depict moments identified in the transcripts, while red data points depict moments identified in the fieldnotes. Ss refers to "student/s"; OB refers to ontological belief; PG refers to purpose and goal; SD/SP refers to self-definition/perception; AP refers to perceived action possibilities.

### ***The Norm for Students' Late Arrival: An Emergence Narrative***

Over the five-week data generation interval teachers and students make an array of different moves (primarily through discourse but occasionally through nonverbal means) that help develop, sustain and resist the emergence of *Norm for students' late arrival* (the documented emergence of this AE does not include instances of verification). Teacher actions contributing to the AE's overall emergence include: treating the late arrival as business-as-usual, accommodating it, highlighting it, justifying it, inquiring about it, and holding students accountable for it (see examples and description, Table 5). The first four actions listed help to normalize the behavior (shown in lighter gray strips in Figure 6), while the latter two resist it (shown in darker gray strips in Figure 6). Accommodating and treating the tardiness as business-as-usual were enacted with notably greater frequency than the others. Acts of resistance were infrequent. The visual shows an illustrative action made by each participant, and notes relevant RI influences including tension-indicating emotions (e.g., frustration, indignation). Pertinent SCCP identified in weekly transcripts and fieldnotes are also noted. For brevity, I center this narrative on two self-enacted examples, demonstrated in the week 1 observation. I apply a DSMRI lens to understand my decision-making influences, including the diverse array of SCCP depicted in Figure 5.

In the first thirty minutes of class during the week 1 observation I am walking students through JA3. Only three students (including Omar and Haylee) are present. When a fourth student arrives midway through the JA, I accommodate their lateness by catching them up on what they missed: “*So we're working on journal activity three; go ahead and read the directions. We're down into the second box. Start with the first box, see if you have any questions, and I'll check in with you in a minute*” (Transcript, week 1). While this is an understandable response for a teacher—primarily motivated by a proximal goal for the student to succeed at the task—as a researcher I also hold the ontological beliefs that such occurrences, when enacted frequently, help

to normalize students' late arrival, and that students' regular and significantly late arrivals

Table 5. *Teacher Actions Directly Related to Norm for Students' Late Arrival*

Specific function of Enacted Discourse	Description and General Function	Example From Dataset
Accommodates lateness	Acknowledges student's lateness by offering information that ensures opportunity to catch up on tasks missed. Sustains the norm.	" <i>Okay, so what we're doing here is finishing up the writing portfolio for 2.2 with all the stuff on the board...</i> " (MM; week 2 transcript)
Treats as business-as-usual	Acknowledges student's arrival, often by greeting, with no acknowledgement of lateness. Sustains the norm.	" <i>Good morning. How are you?</i> " (JH; week 5 transcript)
Highlights lateness to others	Points out the lateness of students <i>not</i> present to those that <i>are</i> present. Sustains the norm.	" <i>Eleven minutes into class; only three students present; I've let them know we are doing a journal activity but that I'm waiting a bit for others to arrive</i> " (JH; week 1 fieldnotes)
Holds to account for lateness	Acknowledges student's lateness and points to negative consequence. Resists the norm's development.	" <i>We are working on, um, journal activity number four; You'll probably have to do it for homework because we're just about finished</i> " (JH; week 4 transcript)
Inquires after lateness	Attempt to understand student's late arrival by asking about it. Resists the norm's development.	" <i>Is there a long line outside or something?</i> " (MM, referring to security trailer; week 3 transcript)
Justifies the lateness	Provides justification for student's late arrival. Sustains the norm.	" <i>Is there still a long line out there to get in? I won't mark anyone late yet</i> " (MM, week 3 transcript)

*Note:* Teacher actions ordered from most to least frequently occurring across fieldnotes and transcript.

contribute to a generalized and systemic underestimation of AE in the setting. In this instance I accommodate the student's lateness, nevertheless, selecting the action possibility that directly conflicts with my beliefs. One explanation may be that, in that moment, my beliefs are not yet supported by evidence. This epistemological lack of conviction combines with my weighing of goals. I have a goal for the student to succeed at the task; I have a goal for the education system to

give each student, especially those experiencing marginalization, a just shot at achieving their version of success. Meeting the proximal goal may undermine (at least theoretically) the distal goal, putting them in tension. The proximal goal is easy to meet; the distal goal is difficult to meet, and is based on a yet unsupported assumption. With my researcher RI currently salient, my own self-perceptions of being a “visitor” in the classroom and a novice at conducting research come to the fore and help to generate my reduced sense of confidence, likely guiding me select the safer (proximal) goal that aligns well with the normative ways of being in the setting.

The accommodation operates on a curricular level as well. The current version of the JA in the scene above is the result of a curricular compromise I made to accommodate students’ regular late arrival to class. I initially designed JA to be interactive discussions supported by intervals of students responding to targeted prompts through freewrites; however, by the time of data collection for this study the JA design had essentially come to resemble a worksheet. To make JA accessible to students *whether or not* that student was in attendance, I found it necessary to fundamentally change the activity from one in which I delivered task instructions as an embedded feature of the interactive conversation, to one in which the tasks became numbered steps written into a necessarily detailed “JA worksheet.” I believe this adapted format results in less meaningful and less engaging JA experiences for students. In its current format the activity lacks an allure of the unknown (an element I believe to be critical in holding student interest) as the twists and turns of content and inquiry have given way to a numbered set of tasks that often elicit student behaviors which conduce toward construction of the emerging AE, *Assignment completion prioritized over deeper learning*.

While my curricular accommodation of the *Norm for students’ late arrival* is driven in part by my own goal to foster students’ RI exploration (i.e., to render the activity accessible to all students, rather than only those present), the action possibilities I perceived were constrained by my self-perception of being a novice researcher who lacks expertise, and by my sense of being a visitor in the setting. Similar to my accommodation move above, in this case too the general sense

of anxiety felt in conjunction with these self-perceptions likely informed my selection of a safe action possibility. I chose the path of least resistance to the control parameters: adapt the JA to students' late arrival by modeling it after the other assignments in the setting, a format that did not lend itself effectively to students' authentic RI exploration. Given my ontological belief that students need to feel a learning task is meaningful (including interesting) for authentic engagement to occur, the business-as-usual action possibility I selected was clearly misaligned. In a general sense, my actions exacerbated RI tensions and complicated my intention (i.e., goal) to perform my research assistantship duties effectively.

My selected action possibility, and those which it mirrored, likely developed in part as a response to school and district level SCCP such as *Low attendance level* and *Student transportation to school*, respectively. The transportation parameter, noted in the week 1 transcript, is particularly salient in this case. Aside from a small selection of students with special needs, students do not travel to the site on school buses; instead they are given a transpass that allows them to ride public transportation for free within certain timeframes. Due to common bus delays (and a limited subway system), this is often not a reliable option for students. For example, during the data collection interval I often traveled to the site by city bus (alongside two students enrolled in the class observed for this study). On one of the three occasions our bus encountered delays and arrived twenty minutes after its intended arrival time. The occurrence is common. Additionally, public transportation in the area of the school's location is fraught with safety issues. Just weeks after the data collection interval, for example, there was a series of youth related shootings targeting passengers disembarking at bus stops, including a deadly mass shooting. In the same timeframe a deadly shooting occurred at the transit hub just blocks from the school. These conditions likely impact students' transportation choices. During the week 1 observation, for example, two students arrived noting the traffic delays they encountered, suggesting in part that they had sought private transportation options. Awareness of transportation issues for students has undoubtedly informed the way teachers in the school (including myself) conceive of

and respond to students' late arrival. It is therefore logical to assume teachers' awareness of the issues described here (operating as part of the District level SCCP *Student transportation to school*) results in greater tolerance for late arrivals. Even as I make attempts to hold students accountable for their late arrivals in certain instances, my overwhelming response is to find ways for students to succeed in spite of the behavior (i.e., accommodate it). While the action serves the student in the moment, the cumulative effects of such acts help frame students' perception of arriving late as normative.

Also featured in the week 1 transcript are the SCCP *Hallway as a social space* (operating at school level), and "*Open door*" to classroom (operating at the classroom level). The latter often works in conjunction with the former, although they are governed by different levels of the system. As I am explaining to students one aspect of JA3 the transcript notes, "*the hallway noise interrupts my speech*"; at this point in the period the classroom door is closed, implying the volume of the interruption is high. This somewhat common occurrence may act as a reminder to students in the classroom that *instead* of being in their respective classrooms, many of their peers are in the hallways socializing. The regularity of this occurrence may expand students' perceived future action possibilities to include socializing in the hallways for portions of first period, rather than coming directly to class. At times, and even when the door is closed, a student who is not enrolled in the class will come into the classroom to engage socially. Often this is a student who is enrolled in another of Ms. Mahoney's classes, so has rapport with her. While the visitor is rarely behaviorally disruptive, the occurrence may enhance students' sense that not being in one's first period class is acceptable student behavior in the setting, potentially expanding their action possibilities around future late arrival.

The curricular accommodation example illustrates an important feature of the AE system. As teacher actions like accommodating students' late arrival accumulate (i.e., AE constituents compound), helping construct norms for that behavior in the setting, the AE may eventually come to acquire the function of SCCP, governing teachers' action possibilities in the setting. I believe

the *Norm for students' late arrival* has reached this point. As the narrative demonstrates, AE construction is less an orchestrated process than it is a series of often obscured, interrelated processes that receive various levels of influence from person-centered to the district (and beyond) level. While teachers possess a degree of leverage over AE construction in their classrooms, their leverage is often constrained by control parameters operating beyond their sphere of influence. Teachers negotiate these SCCP in conjunction with their own RI negotiation.

An AE's emergence narrative is best understood as an interdependent and dynamic element in a larger ecosystem of other emerging AE, as shown in Figure 4. For example, the emerging AE *Value for grades* and *Expectations of low student responsibility* can easily be identified in the week 1 portion of the narrative. Therefore, to complete the visual narrative in Figure 6, were there room, it would be appropriate to add size-reduced versions of the visual narrative for each emerging AE that is dynamically interacting with *Norm for students' late arrival*, thus presenting an emergence narrative that begins to reflect the multi-level complexity of the system.

### ***Adding Layers to Understand the Integrated System***

Constructing a “big picture perspective” (albeit one limited to the scope of a single AE's emergence) as done above can prompt identification of potential data omissions and gaps in understanding. For example, while developing my first iteration of Figure 6 I quickly noticed the absence of two SCCP that I assumed contributed to the emergence of *Norm for students' late arrival*: students' *Use of Google Classroom* (domain level) and *School-assigned computers for all students* (school level). Returning to the data to investigate, I found the control parameters had in fact evaded my detection. Likely this was due in part to their overarching nature which caused them to recede into the background more significantly than other SCCP. An important combined function of *Use of Google Classroom* and *School-assigned computers for all students* is that they enable students to easily complete work whether or not the students come to class. A moment in the week 1 transcript demonstrates this: Two students arrive shortly after we have transitioned

from the JA to the *Kite Runner* quiz and I tell them, “*Just now we finished journal activity three...can you guys do that later today or for homework?*” Although in this instance I point out to students what they have missed, there is rarely a need for them to collect materials, or even connect with their teacher around the missed work because all of their assigned work appears in the Google Classroom feed; they are then able to complete it on their school assigned laptop from home, or during another class (based on stimulated recall interviews, the latter is far more common). A moment in the week 2 transcript presents another example of these SCCPs’ affordances: Twenty minutes into the period a late student arrives. Ms. Mahoney updates her on the class’s current undertaking and then explains, “*So I think you already turned yours in but we’re just giving them a little extra time to finish the writing portfolio.*” A stimulated recall interview later reveals that the student was able to work ahead and turn in EQ2.2 during the previous class meeting, before it was due. In the morning of this observation she looked at her Google Classroom to verify the class was still working on that document. In her words, “*I knew I was ahead and you all are just goin’ slow. I’m like, why even come in? But I mean, I did. I did make it in*” (SRI-attendance, HL). In this example the student’s early completion of her assignment justified in her mind the act of arriving to class late that morning, as she was able to verify from afar that her class was still engaged with work she had completed. Although providing students with laptop computers and furnishing the vast majority of their work on Google Classroom has numerous benefits, they may also be part of the calculus that helps shape students’ late arrival action possibilities. Building the visual narrative in Figure 6 prompted my own reassessment of this and other related control parameters in the AE system.

A visual that integrates the three meaning facets can also help reveal gaps in practitioner and researcher understanding that can then be addressed through subsequent stimulated recall interviews and consultation of archival or other supplementary data. For example, when I initially constructed the image in rough sketch form it helped me realize I needed information on the policies guiding students’ late arrival; this prompted my exploration of the “Student and Parent

Handbook” and the “Staff Handbook” (both available on the school’s website). When my examination revealed no information whatsoever on a tardy policy, I conducted stimulated recall interview with Ms. Mahoney to learn more about how the school handled late arrivals. I shared with her a set of transcripts with late arrivals highlighted and asked her to walk me through how an administrator would view the data, and what role the school’s policy might be playing. In this way I learned that a student’s late arrivals are counted in minutes. Once a student’s accumulation of late minutes reaches 90 in one particular class, the minutes convert to an unexcused absence for that class. Eventually, the student’s late minutes can accrue to a full day’s worth of minutes, and become an absence altogether. If unexcused by a parent, ten such absences prompt a referral to Truancy Court. Short of this far off consequence, there is little to deter a student from late arrival. In the words of Ms. Mahoney, *“It doesn't really mean a whole lot, because they're [administrators] just happy that they came to school at all”* (SRI-policy). It therefore appears that

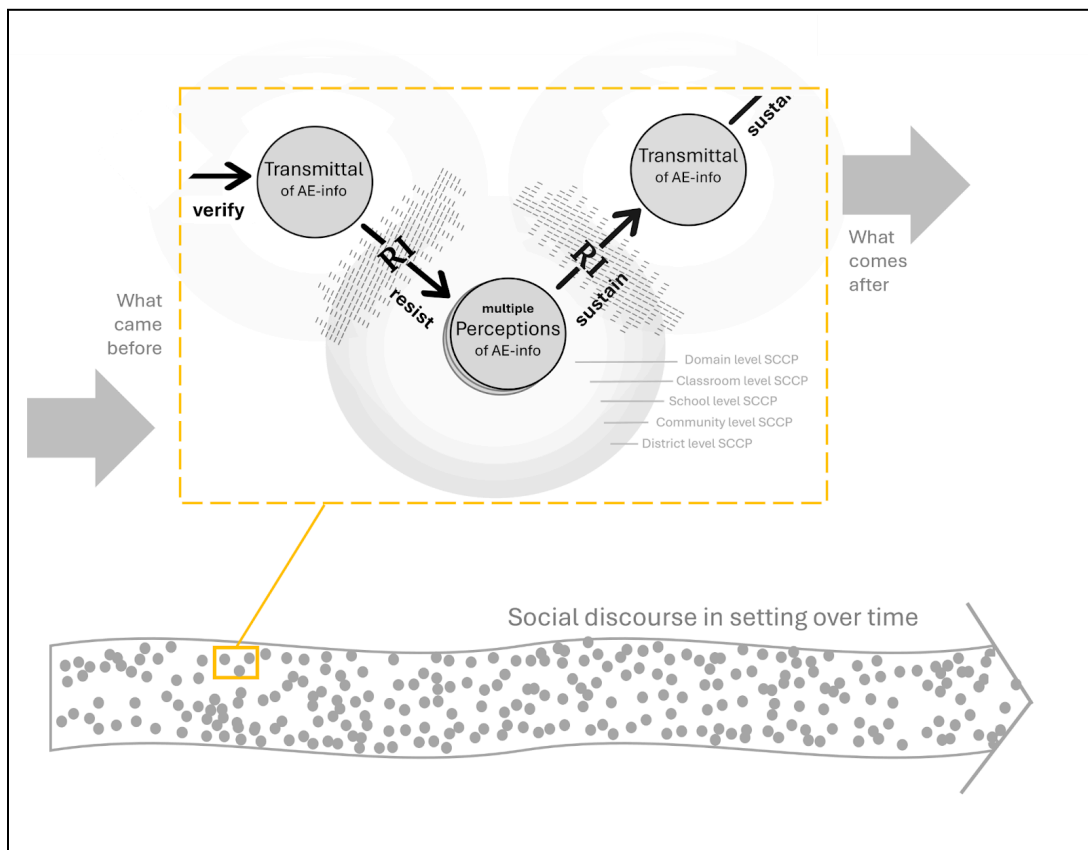


Figure 7. Working Model of AE Co-construction in Setting

the school's response to students' late arrival is a particularly affording SCCP with regard to the emerging AE *Norm for students' late arrival*.

Other means exist for integrating the three meaning facets examined in this study. The approach presented here is an early attempt, and will be further developed in subsequent studies. The current approach is limited by reader comprehensibility needs and spatial constraints, but nevertheless has some value for developing system understanding. In the current chapter and previous chapter combined, I sought to answer the research question: *How can the process of mapping AE construction in one setting best be applied in other settings?* A final response to that question is a working draft of a theoretical model (Figure 7) for understanding AE construction. The model represents the system observed in this study, and may generalize to other learning settings. Next, I interpret the results of this study in relation to the research questions and in reference to the model below.

## CHAPTER 5

### DISCUSSION OF OUTCOMES

This study sought to understand AE construction through a process rooted in a constructionist epistemology. Constructionism integrates subjectivity and objectivity, a notion that Crotty (1998) suggests is echoed in philosopher Franz Brentano's idea of *intentionality* (wherein the latin root for *intend—tendere*—indicates a “directing oneself toward” rather than the common meaning associated with purpose). Crotty notes: “When the mind becomes conscious of something, when it ‘knows’ something, it reaches out to, and into, that object...Consciousness is directed towards the object; the object is shaped by consciousness” (p. 44). The phenomenon helps describe how the AE in a learning setting are partly constructed within the multiple minds of those perceiving the expectation. One or multiple students perceive another student's late arrival as acceptable self-conduct in the setting. The perception, repeated, becomes an entity, a “rule” that describes to the students how to be in the setting. Now in its “entity state” (i.e., an object) it garners students' consciousness, and grows. Crotty explains that the phenomenon extends beyond the cerebral. “In existentialist terms,” he writes, “intentionality is a radical interdependence of subject and world” (p. 45). Emerging AE in a learning setting are products of this interdependence. Through ongoing, often repeated social interactions between participants, informed in part by those participants' emerging RI and in part by multiple levels of SCCP (that *include* AE), AE in the setting move into and out of salience for different students, helping, ultimately, to shape their learning outcomes and downstream success opportunities.

Traditionally, researchers studying AE have centered temporally and situationally decontextualized dyads in their investigations (Weinsteins, 2008), an approach that overlooks the interdependence of subject and world of which Crotty speaks. While some researchers have begun examining contextual factors such as school's collective socioeconomic make-up (Ready & Wright, 2011), and some researchers have begun applying longitudinal approaches to

understand accumulating effects (Hinnant et al., 2009; Szumski & Karwowski, 2019; Rubie-Davies et al., 2014), predominant approaches to understanding AE continue to treat complex phenomena as variables that can effectively be removed from their continually emerging situations. And while researchers have begun to examine relations among complex factors, their approaches tend not to investigate why and how those relationships emerge and persist. In particular, AE research has largely overlooked relationships that consider group AE effects and potential of AE effects to compound over time. The current study sought to chart a course that begins to address these gaps.

Aligned with that effort but outside of the education domain is the work of Claire and Fiske (1998) who examine behavioral confirmation from a systemic perspective. They argue that the significance of behavioral confirmation can only be understood by examining its effects over time, and across interaction events. Critiquing the predominant methodologies applied in the education sector, they suggest caution in drawing behavioral confirmation conclusions: “One must question the validity of considering an individual's current personality or level of ability to be fated and fixed, especially when behavior was shaped by negative, group-based treatment” (p. 222). They argue that, over time, ongoing and recurring treatments (e.g., the AE *Teacher does the meaning-making for students*) which take place at whole group level, result in students internalizing certain behaviors (e.g., *Norm for students “checking out” during class*); those behaviors then come to be viewed collectively as stable and trait-like group characteristics. These emerging beliefs (i.e., AE in the current study) are group level beliefs and may therefore be especially difficult to detect by agents immersed in the setting (i.e., students and teachers).

The current study sought to understand participants’ collective construction of AE in dynamic relation with the context in one first period English class. In selecting and analyzing data I foregrounded what Glock and Kovacks (2016) call “automatic” (i.e., more implicit, often even to the speaker) messaging over more controlled discourse such as that found in curricular materials. While a deep examination of messaging within assignment materials would likely

prove rich and generate important insights, in the current study I opted to focus on understanding processes of AE construction which hold the greatest potential to enact system change. In that effort I emphasize in this initial study those behaviors most difficult to identify within ourselves (automat utterances), in hope that this will transfer to those behaviors less difficult to identify (e.g., conveying positive AE in writing of assignments). The findings in this study are framed by teachers' and students' contextualized RI. Specifically, they are governed by teachers' construed responsibility regarding students' school related experiences (e.g., that they learn, feel cared for, conduct themselves appropriately), and by students' notions of what it means to be a student in this particular school and classroom.

Figure 7 describes, in generalized terms, the collective construction of AE as it was observed in the research setting. The AE activity system was found to constitute a continuous and ever changing "current" (i.e., moving always forward) of social and deeply contextualized discourse between students and teachers. Zooming in to view the small but collectively influential building blocks of an AE (i.e., AE constituents) as they interact, it becomes clear that these are fundamentally transmittals and perceptions of AE information (i.e., information around task engagement, self- and class-conduct, values in the setting, and academic competence). Each transmittal or perception in the system performs a function with regard to the emerging AE, developing, sustaining, verifying, or resisting it. Notably, while transmittals of AE information tend to be singular, perceptions of AE information often occur in plurality, increasing their power and the likelihood that participants will internalize them. Each enactment is governed by the transmitter or perciever's RI system and by multiple levels of SCCP (including other AE) shown by the concentric gray rings. In turn, students' and teachers' RI and the SCCP in play are also shaped by the emerging AE system. Any moment or series of moments in this activity system exists in relationship with what came before it (i.e., moments before; years before), and what comes after it. In the next sections of this chapter I demonstrate the ways in which the model helps answer the research questions.

## **How Does the AE System Identified in the Setting Speak to Extant Literature?**

While my findings do not map directly to past expectation research—I focus on AE construction (and use qualitative methods to do so) while past studies center behavioral confirmation and its effects—it is possible to compare outcomes in relative terms. Besides making determinations about degrees and rates of students' behavioral confirmation of their teachers' expectations, the extant literature focuses on effects that AE have on student outcomes. In their systematic review of the expectation literature Wang and her colleagues (2018) organize these outcome effects into three categories: academic achievement outcomes, behavioral outcomes, and social-psychological outcomes. I organize and speak to findings according to these categories, beginning with achievement effects.

Over several decades research has found teachers' AE to be positively related to students' achievement level measured by such things as course grades or standardized test results (Archambault et al., 2012), high school graduation rate (Becker, 2013), and college matriculation (Gregory and Huang, 2013). When the outcome is a grade (for the course or for an individual assignment), my research findings generally contradict this result. Transmissions and perceptions indicating students' low academic competence were far more frequent (72% of total) than were transmissions and perceptions indicating positive academic competence. While students in the setting receive these and other messages suggesting low AE, they were afforded mostly As and Bs for the course, sometimes with minimal effort. This may be because scoring of work is often based on compliance to procedural expectations (e.g., *Students expected to include reciprocity in written response*) which tend to be laid out in step-by-step fashion, and which often demand minimal cognitive effort. Feedback, while offered during the back-and-forth discussions and when a student outwardly seeks it, is rarely provided on students' assignment documents. Scoring therefore involves assessing for completeness rather than giving attention to qualitative aspects of a submitted assignment.

Research has also found that teachers' implicit prejudiced attitudes predict student performance (van den Bergh et al., 2010; Peterson et al., 2016), a trend that Wang and colleagues (2018) argue contributes to the ethnic achievement gap. While I cannot speak to prediction, my findings suggest teachers' implicit prejudice at the group level likely plays a role in construction and maintenance of several AE including: *Norm for adaptable due dates*, *Norm for dual-engagement during back-and-forth*, *Norm for late arrival*, *Norm for not reading before the quiz*, *Teacher walks students up to answer*, *Teacher does the meaning making*, and *Low academic competence transmittal/perception*. However, it should also be pointed out that my findings suggest teachers' implicit prejudices are part of a cultural phenomenon within the institution; they are socially constructed beliefs that tend to be perpetuated by teachers' immersion in the context.

In the category of behavioral effects of AE on students' outcomes, research has found that low expectation schools are more likely to deal with issues of student misconduct (e.g., watching a video during class, chronic late arrival; Demanet & Van Houtte, 2012), that having a high expectation teacher was predictive of students high levels of engagement (Hornstra et al., 2018), and that high expectation students demonstrated more time on task during the class period (Tyler & Boelter, 2008). With regard to students' misconduct, emerging AE like *Norm for dual-engagement during back-and-forth*, *Norm for checking out during classtime*, and *Norm for students using phones or other devices* are all representations of this finding. Dual-engagement was most commonly cited over the five weeks of observation and also relates directly to the student's level of engagement. While my research cannot speak to prediction, it does appear that a general underestimation of students' academic potential in the setting may be connected to their limited forms of engagement. This is indicated by such emerging AE as *Adaptable due dates*, *Norm for not reading before quiz*, *Teacher walks students up to answer*, and *Teacher does the meaning-making*.

With regard to socio-psychological effects of AE on students' outcomes, researchers found self-efficacy (Tyler & Boelter, 2008), academic self-concept (Szumski & Karwowski,

2019; Upadyaya & Eccles, 2015; Urhahne et al., 2011), and self-expectations were positively related with their teachers' AE. Messages conveying negative academic competence (72% of AC transmittals) to students likely undermines their self-efficacy and academic self-concept. For some students this is likely also to be true for such AE as *Teacher does the meaning-making*, *Teacher step-by-steps students through assignment*, and *Teacher walks student up to answer*. Perpetuation of AE in which students demonstrate disengaged behaviors (e.g., *Norm for students' use of phones/devices*; *Norm for late arrival*; *Norm for student "checking out" during class*) also may undermine students' development of sense of efficacy and strong self-concept of academic ability. Motivation and goal orientation are also points of concern. Urhahne (2015) found teacher behaviors mediated relations between their assessment of student performance and students' motivation and related emotions. The AE system observed in the research setting more often undermined than supported students' motivation. While there is some potential for the system supporting mastery orientations (e.g., *Value for Ss' opinion*; *Values for Ss' WB*; *Norm for back-and-forth engagement*; *Norm for Ts holding Ss accountable for content*), there is far more support for students' performance orientation (e.g., *Value for grades*; *Value for correct answer over effort/process*; *Teacher step-by-steps*; *Teacher walks Ss up to answer*; *Teacher does the meaning-making*).

It is also possible to examine the system of 27 emerging AE identified in relation to previous findings by applying a more systematic and evaluative approach. Using observational data and students' self-reported perceptions via a thirty-item survey (the Teacher Treatment Inventory), Weinstein (2002; 2008) arrived at six characteristics that were consistently associated with high-expectation classrooms: challenging but appropriate curriculum, strategy-based grouping, growth-focused evaluation, mastery orientation, agency support, and nurturing of relationships. Notably fewer of the emerging AE in the observed system support a challenging curriculum (e.g., *Expectations for aligning claim, data, and warrant*) than undermine it (e.g., *Teacher walks student up to answer*). Students working in groups did not occur within the five

week data collection interval, and is an uncommon practice in the observed classroom. There is a relatively even split between emerging AE that support (e.g., *Norm for back-and-forth engagement with teacher*) and undermine (e.g., *Value for grades*) growth-focused evaluation of student performance. Significantly fewer AE support (e.g., *Value for students' opinion*) than undermine (e.g., *Value for correct answer over effort/process*) mastery achievement orientation in the classroom. Closely related to this is support for students' learning agency, including their development of metacognitive strategies, ability to self-evaluate, and a positive sense of self-efficacy. Few AE were found to support (e.g., *Teacher holds student accountable for content*) this classroom characteristic, while a large majority were found to undermine it (e.g., *Norm for reading texts collectively; Teacher verbally unpacks written directions*).

While the system of 27 emerging AE in the research tend not align well with Weinstein's (2008) characteristics of high expectation classrooms, there is one prominent exception: many of the AE are found to be nurturing of relationships, while none are found to undermine this characteristic. From *Value for student wellbeing* and *Value for students' opinion* to *Sitting-in-rectangle implications*, all observed AE relevant to the characteristic seemed to support it. This is in keeping with the RI of the classroom teacher of record, who very much views herself as a caregiver to the students, and takes clear steps to ensure they each feel included and safe. However, four of the norms found to support the nurturing of relationships (*Adaptable due dates; Norm for students' late arrival; Expectations of low student responsibility; and Norm for not reading in preparation of quiz*) seem to support the characteristic in ways that may ultimately be maladaptive for students. This highlights an important classroom tension (also demonstrated within Ms. Mahoney's RI system) between supporting students' wellbeing and supporting their growth as learners.

While considering the different ways in which the system of emerging AE identified in the current study speak to the extant literature on AE demands some extrapolating and bridging of gaps, it moves the current study closer to the important task of approximating the degree to which

an observed AE system tends to assume accurate, over-, or underestimations of the observed group's potential for future academic success.

### **How Does Discourse Mediate Teachers' and Students' Co-construction of Academic Expectations in the Setting?**

Language is action-oriented. The things we say (or *do not* say) perform functions in our social landscape (Potter, 2003). In this study, focal functions were those that helped support (develop, sustain, verify) or undermine (resist) one learning community's co-construction of AE. While all utterances have signaling power, their power varies. The frequentness of an utterance, for example, can enhance its power. In the current study, teacher utterances dramatically outnumbered student utterances, implying a power differential supported by the teacher's positionality in the classroom's activity system. Although the AE literature did not examine teacher-to-student talk ratios, I assume they differ significantly across learning settings. In this study the frequency of teacher utterances and teacher positionality appeared to enhance the signaling power of teacher utterances compared to those of students.

Importantly, and as my findings suggest, the signaling power of an utterance—and often the message itself—can easily go unnoticed by the speaker. In the current study teachers' implicit messaging in the classroom, informed by their ontological beliefs (sometimes framed as biases in the literature; Peterson et al., 2016) provided important insight that would likely be difficult to obtain by applying self-report measures tailored to collect explicit expressions (e.g., questionnaires). Glock and Kovacs (2016) draw a distinction between these AE expression types and what they afford. In controlled (i.e., explicit) utterances the speaker has time and motivation to reflect, inviting the potential for social desirability bias to shape responses. Because automatic utterances tend not to afford this, the speaker's implicit attitudes are more likely displayed. In the current study I prioritized the collection of automatic utterances (e.g., classroom discourse) over controlled utterances (e.g., stimulated recall interviews; curricular material). I attempted to capture instances in which participants conveyed a message (AE constituent) to other participants

who then perceived the message (AE constituents) to understand how repetition of such enactments over time came to accrete into fully fledged AE in the setting. While researchers have hypothesized similar processes in their attempt to understand how behavioral confirmation occurs (Brophey, 1983; Darley & Fazio, 1980), they have not examined the process through which AE are actually constructed. An important understanding that emerged from this study is that the construction process tends to occur in an obscured manner wherein the key players are largely unaware of the act they are engaged with. The finding aligns somewhat with Rosenthal's (1994; 2003) concept of "covert communication" which he describes as "subtle, largely nonverbal, and ordinarily unintended" teacher-to-student messaging (p. 151; 2003). It is important to note that nonverbal includes aspects of discourse delivery such as tone of voice, pacing, and pitch. Rosenthal identified four categories of "covert communications" that teachers performed at higher rates when engaging with students for whom they held high AE: 1) they conveyed more socioemotional warmth, 2) taught students more material, 3) called on them more often, and 4) provided them with more differentiated feedback (all in comparison to students for whom the teachers held lower AE). Because my data are not quantitative, and because I center the AE of the learning community as opposed to the differential delivery of AE to individual students within it, I cannot directly compare my findings to these well known outcomes but I can speak to them in certain ways. My data demonstrate Ms. Mahoney's consistent conveyance of warmth to her students. Her utterances are equally as warm to Haylee (for whom she clearly holds high expectations) as they are toward students who only attend class on rare occasions, and to students who do attend but who rarely turn in work. It may be that the current historical moment features notably different teacher attitudes toward both learning and (specifically marginalized) learners compared to those prevalent when Rosenthal arrived at his initial findings. This finding contradicts that of Urhahne (2015) who showed low-expectation students struggled to build positive relationships with their teacher, contributing to their reduced academic self-concept.

With regard to the second category, there is some evidence suggesting Ms. Mahoney may teach less material to the observed class when hypothetically compared to a class for which she might hold higher-expectations (i.e., if she were to teach a class at a different school, for example). There are numerous instances in which she affords the class more time for an activity than she had originally set out to offer; often this occurs despite large portions of the class either dual-engaging with phones or other devices, or withdrawing from the activity altogether (e.g., sleeping). These incidents played a central role in constructing the AE, *Adaptable due dates*. For example, in the week 2 observation students spent the entire period engaged with make-up work that Ms. Mahoney had previously given them ample class time to complete. Although the EQ2.3 document had been scheduled to go out to students via Google Classroom that morning, when students failed to turn in their writing portfolios for EQ2.2, Ms. Mahoney rescheduled it to arrive at the onset of the next class meeting. Thus, the 90 minute period was afforded to students to complete two items: finish the *Kite Runner* quiz (a 13 questions short answer and multiple choice quiz which they had previously been given an hour of class time to complete), and complete the two-paragraph writing portfolio. By the end of this 90 minute make-up period only three students had turned in EQ2.2, and several who were in class that day did not turn theirs in for over a month. Indirectly, Ms. Mahoney's "covert communication" of her willingness to extend assignment due dates has likely resulted in students being taught less material than might be appropriate. In this way, there is alignment between my findings and those reported by Rosenthal. However, a broad array of other factors (e.g., multiple levels of SCCP) also contribute to this practice.

In certain ways my findings also align with Rosenthal's third category suggesting that teachers call on higher-expectation students more often. Ms. Mahoney's cold calling of student during back-and-forth discussions, for example, demonstrates her concentrated attention on higher performing students and her clear refrain from calling on students who have "checked out" either by putting their head down on the desk, removing themselves physically from the rectangle

of desks to sit in an alternate space, or simply by giving all of their focus to their phone (i.e., the SCCP: *High number of students not working*). This nonverbal messaging likely contributes to the construction of several AE emerging in the setting including: *Student norm for dual-engagement*, *Norm for students “checking out” during class*, and *Norm for student use of phone/device*.

Rosenthal’s fourth category involves teachers providing more “differentiated feedback” to their higher expectation students. Differentiated in this context refers to feedback that holds students to account for accuracy or fitness of their response. Here my data provide mixed results. There are several instances in which Ms. Mahoney attempts to hold her students to account. In fact, one emerging AE in the setting is *Teacher holds student accountable for content*. But in several instances the data also provide counter-examples. These take various forms, but a particularly common form is demonstrated by the emerging AE, *Teacher does the meaning-making for students*, a teacher move which often supports the AE, *Student norm for dual-engagement during back-and-forth*. For example, when students are afforded short and simplified recaps throughout a text (as is often manifest in *Teacher does the meaning-making for students*), it enables students to pay minimal or peripheral attention to the academic task while simultaneously engaging otherwise. The teacher’s recaps facilitate students’ superficial but often passable engagement in the back-and-forth in part because it affords them enough familiarity with the text to respond to the semantic differential scales and writing portfolio even as they dual-engage.

The processes described here are each mediated by discourse. Each example alone is unremarkable. It is the recurrence of small events such as those described that renders them formative over time. This accretion of AE constituents into more fully formed AE with traction in the setting is likely supported by the inconspicuous nature of the messaging, the positional power of teachers as messengers, and by the plurality of student perceptions (i.e., one teacher transmission of AE information is perceived and acted upon by a multitude of students).

Formative patterns of behavior (e.g., teaching students more or less material) are also enacted by, and come to accumulate as a function of classroom discourse.

### **How Do Teachers' and Students' Role Identities Shape—and Get Shaped By—Academic Expectation in the Setting?**

An individual's RI can be viewed as their system of beliefs, goals, self-perceptions, and perceived action possibilities related to their role in a given cultural activity system (Engeström, 2001; Kaplan et al., 2022). This study examined participants' interrelated RI most proximal to their teacher and student roles to understand the relative reciprocity of these roles with the AE activity system in one 11th grade English class. While AE research has traditionally treated aspects of identity as isolated variables (e.g., academic self concept), I attempted to treat the construct of identity as a complex system in dynamic relationship with other systems. I used the Dynamic Systems Model of Role Identity (DSMRI; Kaplan & Garner, 2017) as a tool for theoretical meaning-making. Centering three focal students and two teachers, outcomes of my analysis help reveal the deep interrelated nature of the participant RI systems and the emerging AE activity system in the setting.

The current study supports the notion that the AE activity system in a given setting is dynamically related to participants' RI. Because AE are ontological beliefs, they are necessarily embedded in teachers' and students' RI systems. When what are initially individual and perhaps not yet fully formed ontological assumptions are enacted socially, they converge with and sometimes clash with other beliefs in the setting; in this context the ontological assumptions are tested, tried and amended; they receive influence from individual and group goals, from action possibilities, and from self-perceptions; and they are pushed and pulled by a multilevel network of control parameters within the classroom and beyond it. This slow churn of influences all the while privileges those states that are approaching stability, the attractor states. But the system is agnostic with regard to its attractors. From an educator perspective, the attractor states entered may be beneficial (e.g., conduce toward student curiosity and wellbeing) or may be undesirable

(e.g., conduce toward students' amotivation, or performance-avoidance orientation). When an AE emerges from the churn and gains traction in the setting, it is demonstrating the properties of an attractor state. In one sense, individual beliefs about what an academic task or situation demands for success is distributed, reworked, and eventually may emerge as a collective assumption or AE in the setting. In this instantiation (and in others along the AE's trajectory) it may come to afford and constrain participants' action possibilities, inform their goals, and help shape their subsequent beliefs. Collectively, these beliefs and the behaviors they inform also shape the achievement culture in the broader learning space.

While teachers' ontological and epistemological beliefs about students' learning potential are formed in part *inside* the classroom and have effects beyond it, social interactions in the broader workplace also shape teacher beliefs from *without*. Agridad's (2018) findings around "teachability culture" have relevance here. Teacher beliefs about their students' capacity and willingness to learn are distributed across the workplace. Within the churn of influences their beliefs are collectively—although passively—reworked to comprise the institution's "teachability culture," or the school staff's shared expectations of how "teachable" students may be (p. 266). Across 66 primary schools in three urban areas of Belgium, Agridad found a school's socioeconomic status was significantly related to its teachability culture (achievement levels and cognitive ability were controlled for). Agridad surmised different work habits of students across low and high socioeconomic schools may be a critical part of the explanation. My data offer support here. Work habits like those reflected in the *Norm for students' late arrival*, *Student norm for dual engagement*, and *Norm for not reading before the quiz* might each play a part in teachers' coming to believe a student is less willing to learn. However, in keeping with Rubie-Davies et al. (2007b), my data also suggest these work habits develop in part as a function of teachers' transmittal of AE information. These expectation transmittals, and students' enactment of them, also play a role in shaping students' beliefs about who they are as learners (i.e., their *student RI*). These self-perceptions inform what action possibilities they perceive and enact, helping to shape

their work habits. While the current study only observed occurrences inside the classroom, the school's teachability culture is an adjacent and interdependent system that helps shape participant RI. Future studies might adapt the methods used in the current study to investigate processes by which teachability culture develops, particularly in schools serving disenfranchised students.

In the current study participants' self-perceptions of who they are as students helped inform their approach to academic tasks inside the classroom, and their goal pursuits beyond the classroom. Related constructs are found in the AE literature. Students' self-expectation, sense of self-efficacy, and self-concept of ability have all shown to mediate relations between teacher expectation effects and academic achievement (Wang et al., 2018), indicating both the power that beliefs can recruit, and the potential of one's RI as a system of influence. Eccles and Wigfield (1985) identify students' self-concept of ability as a mediator of their motivational behavior, with implications for learning and achievement outcomes. In particular, they suggest the phenomenon involves students' "perception of control over achievement outcomes" (Eccles & Wigfield, 1985, p. 192). Omar presents a case in point. He expresses a high self-concept of ability that poorly aligns with what he perceives to be overly simple academic tasks which (per Omar's perception) are graded with little transparency. He describes teachers "*not being clear on what's being graded*" and suggests his grade suffers as a result of teachers who exhibit poor practices that conduce toward his lack of focus (i.e., reduced participation), and then "*giving out participation grades*" (JA6). This perceived alienated position regarding his achievement outcomes likely enter into his ongoing struggle to retain (and regain) his academic motivation. From a DSMRI (Kaplan & Garner, 2017) perspective Omar's story demonstrates a high self-concept of ability (self-perception) misaligned with the learning opportunities afforded him (action possibilities). His ontological belief that he should have more autonomy in the setting exacerbates his frustrations. These misalignments in RI content undermine his willingness to engage authentically in the learning tasks, and he opts instead to engage in ways that serve his proximal goal to simply get the assignment done (i.e., the AE, *Assignment completion prioritized over deeper learning*).

Some of his selected action possibilities involve evasion tactics that undermine his learning while still garnering the needed score.

Counter to most studies of AE, this study focused on construction of the AE instead of the specific processes of behavioral confirmation. However, Brophy's (1983) adaptation (to fit within educational domains) of Darly and Fazio's (1980) confirmation model offers a relevant insight. It suggests that if a teacher's expectation utterance comports with the perceiving student's self-image, that student is more likely to respond with confirming behavior, whereas if the messaging is misaligned with their self-perception, the student is less likely to behaviorally confirm the expectation expressed. Data in the current study tended to confirm this. A simple example is the difference in Haylee and Frank's responses when each is asked to read aloud during a back-and-forth session. Twice over the data generation interval Ms. Mahoney solicited Haylee, whose self-perception is that of a highly engaged student, to read the featured text aloud; both times she readily accepts and begins to read. The only time over the data generation interval that Frank (who's RI as *student* largely subordinates to that of *athlete*) was asked to read aloud, he promptly declined. Ms. Mahoney's solicitation may be seen in these examples as a message to each student that they are the "sort of student" who thus engages. Haylee believes herself to be this sort; Frank does not. Similar examples are abundant and unsurprising. According to the model, a student's confirming behavior (i.e., agreeing to read aloud) reinforces the teacher's previously held perception of that student as, in this case, a committed student or an uncommitted student, which the teacher then incorporates into their repertoire of AE about that student, likely informing future treatment.

The current study employed the DSMRI as a tool to understand the complex processes of RI development in the context of AE co-construction. Future researchers should strongly consider taking the additional step of extending RI exploration to the participants themselves, using DSMRI material as scaffolds. Although such a design would increase the data collection efforts

of the researchers, it would reduce analysis on the back end, enrich the experience for participants, and likely generate data of increased trustworthiness.

### **To What Extent and in What Ways Does the School's Institutional Culture Inform the Collective Construction of Academic Expectations in the Classroom?**

In the current study I have conceptualized culture as an indicator of “ways of being” in the setting. “Culture,” says Crotty, “is best seen as the source rather than the result of human thought and behaviour” (p. 53; 1998). My data suggest that each is continually helping to shape the other, but that some instantiations of culture garner more encompassing power than do others. In the research setting there appeared to be certain cultural attractor states (e.g., the AE, *Value for grades*) with a disproportionate influence on subsequent AE construction. This may be due to such states’ persistence over time allowing their recedance into the “background” of participants’ daily experience. Instead of these cultural attractors states presenting as perceptible but mutable entities guiding teachers’ and students’ formation of beliefs, goals, self-perceptions, and action possibilities, they masquerade as essential and structural members of the learning architecture. Now teachers’ and students’ critical questioning of their effects cease, particularly if the attractor state is born of SCCP (e.g., *Grading structures and policies*) that operate at levels outside of the classroom (i.e., beyond the agentic reach of teachers and students). The institutional culture of a learning setting emerges as a product of its multilevel system of SCCP, the individual and collective (e.g., students’; administrators’) RI systems of its members, and the historical moment in which it exists. Because the resulting culture cannot effectively be named, parsed, or directly pointed to as a cause (e.g., of the AE, *Expectations for students’ low responsibility*), it seems to garner a kind of immunity in the setting. Institutional culture is thus immersive. It seeps into each level of school operations because it constitutes something akin to the physical *matter* in which those operations occur; in this way institutional culture fills voids that it encounters even when there is not an intention to do so, and sometimes without members’ knowledge that it has done so. Like a fluid, it saturates the social cultural landscape.

This study identified underestimated AE in the research setting that may well be endemic to the school as a whole. Although my means of determining this outcome diverges from typical methods, the findings themselves are well aligned with those of Ready and Wright (2011) who found that students in lower achieving and lower socioeconomic classrooms were judged by their teachers to have lower skills as a function of the setting itself. Across the 1,822 classrooms in their sample, only half of students' actual between-group differences accounted for the socio-demographic disparity. Ready and Wright suggest the teachers' work context, not the racial-ethnic bias that decades of AE research attempted to document as the culprit, was a central factor. Their study did not explain *why* these work contexts might conduce toward underestimating student ability, a fruitful line of inquiry for future AE studies. The teachability culture conceptualized by Agirdad (2018) likely enters into the phenomenon.

Another important phenomenon to consider is the entrenched nature of ability beliefs that institutional cultures in some communities may inadvertently reproduce through processes such as that depicted in the conceptual model (Figure 7). As some researchers have highlighted, low AE *are* appropriate when they accurately reflect the student's ability (Brophy, 1983; Jussim & Harbor, 2005). It may be that limited initial ability ( more prevalent in marginalized learning settings; Jussim et al., 1996) in *some* students in the setting, is generalized to the school population, producing a *collective* self-fulfilling prophecy effect. The institutional culture, as a source of beliefs and behaviors, would be instrumental in such a process. For example, schools, in their traditional arrangement, urge teachers toward systematizing their judgments of student ability. Even as schools delineate a path of growth for students, they tend to do so while keeping students in designated "lanes" that are determined in part by achievement beliefs that proliferate in the setting. This is in line with Dompnier and colleagues' (2015) "class context effect" suggesting teachers' AE of individual students is based in part on how that student compares to others in the group. Performance expected of the top performing student in an overall low performing school may pale in comparison to a similarly ranked student in a high performing

school. In this sense the top performers in a school set a “bar” by which all other performers in the school are evaluated, including by themselves. For students and teachers immersed in the setting, these metrics become the only metrics. This enables a high ability student with low motivation like Omar to minimize their effort while easily earning their ‘A’ by end-of-term. In the process, AE such as *Assignment completion prioritized over deeper learning* are likely to emerge, effectively truncating learning potential for all but the mastery oriented students. Processes such as these proceed largely unexamined because they are not evident to immersed members of the learning community. This is likely to increase their role in shaping institutional culture.

Even when immersed members perceive the institutional culture and can identify its reverberations on the AE system, they tend to see the culture as an immutable influence. Students, parents, and often teachers rarely view perturbing the system, even in small ways, as an action possibility. An example from the week 3 observation illustrating this reduced sense of agency demonstrated by students is offered in Appendix D. Paired with the immersive and difficult-to-discern quality of the school’s institutional culture, students’ diminished sense of agency likely contributes to the perpetuation of underestimated AE. Teachers may also experience low sense of agency in the face of institutional culture. Many emerging AE in the setting appear to be particularly bound by policies and practices at the school’s upper levels, often with direct consequences for classroom behaviors. *Norm for student use of phones/devices* is one example. While cell phone policy is developed administratively, enforcement is minimal to none, leaving teachers ill equipped and poorly positioned to manage the problem on their own. In one stimulated recall interview I asked Ms. Mahoney if she felt the school supported her in navigating the issue of students using phones in class. She gave an unequivocal “No,” telling a detailed story illustrating this lack of agency (see Appendix E). While students’ phone access is not *necessarily* related to academic performance and expectancies in direct ways (although it often is), students and teachers’ attitudes around such issues—partly informed by their sense of agency regarding them—have strong implications for the school’s institutional culture.

In her book offering an ecological perspective on AE and its confirmation, Weinstein (2002) describes the capacity of a school's culture to influence processes of AE construction:

*While the dynamics of such expectancies may become manifest in interpersonal interactions, they are always driven and reinforced by institutional arrangements...Such institutionalized reinforcement can turn fleeting expectations into entrenched beliefs—which over time can shape children's school careers and even the careers of faculty. Expectancy processes do not reside solely "in the minds of teachers" but instead are built into the very fabric of our institutions and our society" (p. 190)*

The current study identified numerous such "fleeting expectations" which are likely to gain footing in the setting. Weinstein suggests that the institutional culture—the "fabric" of the school—plays an important role in whether they do. Findings from this study support her claim. The school's institutional culture is a powerful, if indirect, player in affording and constraining students' and teachers' co-construction of AE in the setting. Its immersive quality undermines members' awareness of its functions and its abstract quality affords it an almost illusory status, effectively absolving it of important connections to ongoing system issues.

### **Implications for Theory**

In reviewing the AE literature I argued that the expectation construct, featured most consistently as teacher expectations (TE), should be reconceptualized in terms that account for its complex dynamic nature. I pointed to three assumptions that the TE literature makes implicitly and consistently, and argued they were indefensible. Findings of the current study support that position. Instead of AE being primarily located and created within the teacher, my findings suggest AE are collectively constructed and held; the construction process involves all members of the learning community, and occurs in conjunction with the sociocultural surroundings of that community. Instead of AE being stable entities, my findings suggest that while some AE gain more traction than others in the setting, an AE's potential for change is part of its very constitution. And instead of expectation effects being extractable units that can be studied in isolation, my findings suggest that an expectation effect exists in dynamic relationship with other such effects (and in relationship with in-person and sociocultural features). Behavioral

confirmation of an AE by one student is a transmission of AE information to another student. This is also the case when an AE is conceived at a broader scale (e.g., a student's potential to succeed in a course), across a broader timeframe (e.g., the AE experienced by a student in their 9th grade year dynamically interact and help shape those they experience in their 10th grade year), or within a single student's mind (e.g., a student's perception of an AE conveyed to their classmate informs their notion of the AE in relation to their own upcoming action possibilities). In relation to the widely made ontological assumptions in the extant literature, findings from the current study support my argument that TE should be reconceptualized as "academic expectations," and, more importantly, that AE in a learning setting make up a complex dynamic system rather than a component dominant system (Hilpert & Marchand, 2018).

Reconceptualization of the AE construct implies new directions for expectation theory. First, given that processes of AE construction are deeply contextualized and involve micro-interactions of multiple individuals, modeling construction processes is ideally done *in situ* by individuals familiar with the context. The current study presents a potential model (Figure 7) that can now be tested in other settings and situations to understand which of its aspects might generalize, and which tend to be setting-specific. Development of alternative models would contribute additional and needed field-based knowledge toward a more fleshed out theoretical understanding around the *how* and *why* of AE construction. Second, expectation theory has traditionally centered individualized processes. However, the reconceptualization for which I argue implies the need to emphasize collective processes that are investigated using a systems lens. While many researchers have begun to examine AE at whole class and whole school level, they have often done so by treating complex phenomena as isolated variables. Understanding influential factors of AE construction as dynamic elements within a system demands a shift in conception that is carried to the research design stage. Finally, for half a century the focus in AE theory has been behavioral confirmation and its effects (i.e., the self-fulfilling prophecy). But this framing has required application of a methodology poorly aligned with the conception of AE as a

complex dynamic system. Perhaps it is time to broaden our theoretical understanding of the problem to include what might be termed an *immersion effect* in which the behaviors and beliefs that give rise to the system of underestimated AE at the site proceed undetected even by benevolent perpetrators who have identified the underestimation as problematic, and seek change. Including this immersion effect as an important (and addressable) concept within endemic situations of underestimation may promote avenues for meaningful intervention at classroom, institution, and district levels.

### **Implications for Research**

The findings of this study undermine the three earlier discussed assumptions demonstrated in several decades of teacher expectation research. Given this, current AE researchers should view past findings through a lens that takes into account the widespread misconstrual of the AE construct. For example, several decades of studies have found that only 5 to 10 percent of students behaviorally confirm their underestimated AE (Hattie, 2009; Jussim & Harbor, 2005). This overall small effect may have allayed concerns that an educational injustice was occurring. Applying a critical lens to past findings may suggest those concerns were prematurely set aside. A reconceptualization of the problem to apply a complex systems lens that accounts for immersion effects could enable research agendas that prioritize change in learning settings that face systemic underestimation. Whereas past inquiries centered the effects of students' behavioral confirmation of their teachers' expectations, there is now a need for inquiry agendas that focus on how and why AE are differentially constructed across different settings. Researchers should join Rubbie-Davies et al. (2007b) and others in their attempt to understand important differences in high-expectation versus low-expectation settings. However, instead of a singular focus on teachers' differential practices across these settings, a focus must also be placed on sociocultural aspects of the learning context, including processes by which institutional culture inadvertently reproduces behaviors and beliefs that conduce toward underestimation of students'

potential. Such research would begin to address existing knowledge gaps around AE systems and the processes involved in the co-construction of these systems.

Developing knowledge of these systems across a diversity of settings is a necessary part of identifying and documenting patterns of underestimation that traditional methodologies have been unable to detect. Within the teacher expectation literature the term underestimation is most often applied and defined in terms of behavioral confirmation, but the concept extends beyond these confines. If we acknowledge that student potential cannot be effectively measured (Tenenbaum & Ruck, 2007), the focus of AE research logically shifts from the individual underestimated student, to settings of systemic underestimation, and potential avenues for intervention. There is a need to definitively identify underestimation in terms that are relevant to its system-level presentation; using this conception of the phenomenon, AE researchers can begin the needed processes of documenting patterns of prevalence, identifying potential levers for system change, and designing interventions and policy changes as and where they are needed.

While many possibilities exist for carrying out such efforts, the current study offers a methodology for examining AE systems that can be adapted across diverse learning settings, and one that researchers, practitioners, and stakeholders can conduct collaboratively. Once a system of AE is mapped (this can be done by a single teacher, or by a team of students, teachers, researchers, and more), identifying within it critical control parameters or levers of change should be a collective process that extends beyond members of the mapping team to also include individuals with alternate perspectives. Within a team working to intervene in the AE system identified in the current study, a teacher might note the central cluster of closely related emerging AE represented in Figure 4 (pg. 93)—*Teacher step-by-steps students through assignment; Teacher does the meaning-making for students; Norm for reading texts collectively; Teacher walks student up to answer; and Teacher verbally unpacks written instructions*—as central to the perpetuation of low AE in the classroom. A student on the same team may note the cluster's connection to *Student norm for dual-engagement, Negative AE perceived/transmitted*, and an administrator

might note the cluster's indirect connection to *Norm for students' late arrival*. The team can then chart a course to strategically intervene around the most central and critical issues identified in the system. Strategies would include gaining more clarity on what SCCP and RI influences inform such enactments and responses. One intervention might include changing teachers' enacted discourse upon a student's late arrival. Instead of a simple accommodation of the lateness, or treating it as business as usual, the teacher might initiate an in-class policy that asks students to sign-in upon their late arrival, including noting the current time. A simple nudge such as this, especially when enacted with consistency, would send a message of increased accountability to late arriving students without singling them out among their peers or shunning their lateness. This behavioral nudge is an example of a small change lever; strategically designed clusters of such nudges are manageable at the classroom and individual teacher level. However, the AE activity system is likely to require the identification and activation of change levers at the institution and district levels, the purview of which may extend beyond the investigation team. Identifying and shining light on these system trouble spots and potential areas for change is nevertheless an important step in managing broader system change because it builds awareness from within.

The intervention effort described above involves researcher-practitioner collaboration. In the most ideal situation, collaboration would be extended to students and administrators; each are groups that can afford perspectives of which a researcher may not be positioned to conceive. However, research employing the methodology presented in the current study can also be scaled back and endeavored by teams as small as one. Finally, a variation on the methodology presented here may be to enable participants to conduct their own role identity analysis using DSMRI materials tailored to the purpose. This could empower participants as change-makers, increase their awareness of the AE system and its effects (including their role in it), and may increase the overall trustworthiness of the data. A possible benefit of this approach is a reduction in data analysis at the back end, although there would also likely be an increase in data collection

preparation up front, as the researcher would need to teach processes of DSMRI analysis to participants.

A rich area of research closely related to that presented here is the study of achievement goal structures. Few known studies examine goal structures in the context of AE construction; such a pairing would likely reveal important findings for developing students' learner agency. Understanding the implications of an AE system for students' sense of agency in the setting is a logical next step in my own research endeavors.

### **Implications for Practice**

While AE researchers have traditionally applied quantitative methodologies to determine whether AE in a setting are underestimated, accurate, or overestimated, I offer that applying a qualitative approach plays an important role in understanding how and why expectations come to be. In her book chapter on creating high expectations in learning settings Weinstein (2008) argues that the process of determining AE effects is context specific, multilayered, and concerns “interactions between qualities of individuals and settings, nested relationships at multiple levels of educational systems, and accumulation over time” (pp. 81-82). The complexity she describes is reflected in my findings. While it has not been the focus of this study, making determinations of under-, over-, and accurate estimations in learning settings will be an important step in understanding the current state of educational equity. The task might be accomplished in part by employing the methodology presented in this study, with a slight shift in focus. Teachers in particular are well positioned to conduct such studies. While generating teachers' motivation for this research may pose challenges, conducting such assessments and related AE research would help increase teachers' sense of role agency.

Engaging in AE research can also develop teachers' awareness of their own minute-by-minute contributions to the emerging system. A central engine of power wielded by the AE activity system is the inconspicuous nature of its processes. Therefore, teachers' awareness of the system—including its primary components (i.e., AE information transmitted and

perceived) and its processes (i.e., accretion, mainly through acts of sustaining the emerging AE)—is a key lever in a teacher’s role toward affecting positive change in systems characterized by underestimation. One challenge in building teacher awareness is the teacher’s investment in their process. Decades of research implied teachers were the central culprits of low AE, and this rhetoric likely still frames the issue for many. If a teacher is to look critically at the AE system emerging in their setting, they must be willing to look at all of its parts, including the role they may be playing in developing, sustaining and verifying expectations. Ideally, then, a teacher chooses to explore the AE of their own accord. There may be less success if the dictate to explore an AE system comes from school administrators, or from the district level. Teachers, in a perfect world, would assume a *teacher-researcher* RI, taking on a position of curiosity both around their practice and the emerging “expectation environment” at their site. But given the demands of the profession, teachers are also unlikely to have the necessary time to carry out a research agenda. Considering the obstacles, creating research-practice partnerships may be the best approach for practitioners. It may also be possible for professional development that guides teachers in designing self-directed studies, the findings from which might be examined and synthesized using a jigsaw approach.

Yet another approach is to conduct a school-wide study using a project-based design that positions students as among the researchers. A six to eight week project could involve student investigation teams mapping emerging AE in their classes. After an initial training period, students would record, transcribe, and code classroom discourse; examine and interpret their own (and perhaps one other participant’s) RI; and code and interpret the SCCP they experience during the data collocation interval. Within a given structure they could share their results with one another, find commonalities and differences, engage in conversations to understand and explain these differences, all the while working in and across thematic groups. One authentic application of such a study would include student groups presenting their assessment and recommendations to an accreditation review panel (e.g., the Western Association of Schools and Colleges) that is in

the process of evaluating the school. One practical application for such a project would be the development of the students' sense of agency in their own education, and the development (among all participants: students, teachers, administrators) of a shared lexicon that informs thinking and communication around how AE develop, what kinds of AE stakeholders *want* to develop, and how that might be done.

Perhaps the broadest and most enduring lever of change offered by engaging in the study of AE processes (whether it is done by a single teacher or an entire team of students, teachers, and administrators) is building awareness. AE construction occurs quietly, and is therefore easy to overlook. But its results may be robust.

### **Conclusion**

This study adds to the yet narrow body of literature that is extending expectancy research through the application of a complexity lens. It offers practitioners and researchers a qualitative methodology for understanding how and why AE are constructed in a learning setting. Such knowledge can help researchers and practitioners identify important levers of change in efforts to reshape low expectation environments that contribute to and maintain educational and social inequities. This ethnographic case study investigated the collective construction of an array AE in one 11th grade classroom over five weeks. Analysis of classroom discourse was paired with examination and interpretation of focal participants RI systems, and a broad assessment of sociocultural control parameters at multiple system levels. Findings suggest that often implicit micro-level transmittals and perceptions of AE information—framed by the agent's RI—accrete (or are resisted) over time. If an AE gains enough traction in the setting it becomes a control parameter of the same AE system that helped shape it. This “metabolizing” of the AE's own environment implies that interdependent clusters of expectations can be self-perpetuating over time, unless their system is perturbed.

This study had a number of limitations. Perhaps the most important is that students with low motivation profiles were significantly underrepresented, whereas these individuals likely

have important perspectives that might enrich understanding of the AE system in the setting. Students in the setting that exhibited low motivation rarely spoke in class, often did not turn in work, and missed many class time minutes. These factors made including their voices difficult. Another limitation was students' rate of consent (69%). Non-consenting students' contributions (e.g., with a class transcript) could not be included in the study, and at times such students provided information with distinct significance for the research goals. Recording of class periods was far from optimal; students often spoke quietly, residual noise was common, and my equipment was not of high quality. This resulted in my often filling transcript gaps with the phrase "inaudible." Finally, while a common limitation, it also should be mentioned that participants' awareness that they were being observed and recorded—even given my practitioner status in the setting—likely changed the behaviors of some participants.

Constraints aside, this study contributes to AE scholarship in important ways. It offers a complex systems perspective on half a century of literature, resulting in the proposed reconceptualization of the AE construct and its related problem of focus, implying the need for an aligned methodology to investigate how and why questions about AE systems across diverse learning settings. The study presents such a methodology and its initial application in one classroom serving historically marginalized learners. The current study creates a foundation for a new era of AE research that acknowledges and leverages the complex dynamism inherent to expectation phenomena.

## REFERENCES

- Abraham, F. D., Abraham, R. H., & Shaw, C. D. (1990). *A visual introduction to dynamical systems theory for psychology*. Santa Cruz, CA: Aerial Press.
- Agirdag, O. (2018). The impact of school SES composition on science achievement and achievement growth: Mediating role of teachers' teachability culture, *Educational Research and Evaluation*, 24(3-5), 264-276, DOI: 10.1080/13803611.2018.1550838
- Archambault, I., Janosz, M., & Chouinard, R. (2012). Teacher beliefs as predictors of adolescents' cognitive engagement and achievement in mathematics. *The Journal of Educational Research*, 105, 319–328. doi:10.1080/00220671.2011.629694
- Becker, D. (2013). The impact of teachers' expectations on students' educational opportunities in the life course: An empirical test of a subjective expected utility explanation. , *Rationality and Society*, 25, 422–469. doi:10.1177/1043463113504448
- Benner, A. D., & Mistry, R. S. (2007). Congruence of mother and teacher educational expectations and low-income youth's academic competence. *Journal of Educational Psychology*, 99, 140–153. doi:10.1037/0022-0663.99.1.140
- Brophy, J. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology*, 75, 631–661.
- Brophy, J. E. (1985). *Teacher-student interaction*. In J. B. Dusek (Ed.), *Teacher expectancies* (pp. 303 - 328). Hillsdale, N. J.: Lawrence Erlbaum.
- Brophy, J. E., & Good, T. L. (1970). Teachers' communication of differential expectations for children's classroom performance: Some behavioral data. *Journal of Educational Psychology*, 61(5), 365–374. doi:10.1037/h0029908
- Claire, T., & Fiske, S. (1998). A systemic view of behavioral confirmation: Counterpoint to the individualist view. In C. Sedikides, J. Schopler, & C. A. Insko (Eds.), *Intergroup cognition and intergroup behavior* (pp. 205–231). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Cooper, H., (1979). Pygmalion grows up: A model for teacher expectation communication and performance influence. *Review of Educational Research*, 49, 389-410.
- Cooper, H., & Good, T., (1983). *Pygmalion grows up: Studies in the expectation communication process*. New York: Longman.
- Creswell, J. W. & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). SAGE Publications, Inc.
- Darley, J. M., & Fazio, R. H. (1980). Expectancy-confirmation processes arising in the social interaction sequence. *American Psychologist*, 35, 867–881.
- Darley, J. M., Fleming, J. H., Hilton, J. L., & Swann, W. B., Jr. (1988). Dispelling negative expectancies: The impact of interaction goals and target characteristics on the expectancy confirmation process. *Journal of Experimental Social Psychology*, 24, 19-36.

- de Boer, H., Timmermans, A.C., & van der Werf, M. P. C. (2018) The effects of teacher expectation interventions on teachers' expectations and student achievement: narrative review and meta-analysis, *Educational Research and Evaluation*, 24(3-5), 180-200, DOI: 10.1080/13803611.2018.1550834
- Demagnet, J., & Van Houtte, M. (2012). Teachers' attitudes and students' opposition. School misconduct as a reaction to teachers' diminished effort and affect. *Teaching and Teacher Education*, 28, 860–869. doi:10.1016/j.tate.2012.03.008
- Dompnier, B., Pansu, P., & Bressoux, P. (2006). An integrative model of scholastic judgments: Pupils' characteristics, class context, halo effect and internal attributions. *European Journal of Psychology of Education*, 21, 119–133.
- Dusek, J. B., & Joseph, G. (1985). The bases of teacher expectancies. In J. B. Dusek (Ed.). *Teacher expectancies* (pp. 229–250). Hillsdale, NY: Erlbaum.
- Eccles, J. S., & Wigfield, A. (1985). Teacher expectations and student motivation. In J. Dusek (Ed.), *Teacher expectancies* (pp. 185-226). Hillsdale, NJ: Lawrence Erlbaum.
- Engeström, Y. (2001) 'Expansive learning at work: Toward an activity theoretical reconceptualization'. *Journal of Education and Work*, 14(1), 133–156.
- Fisher, A. J., Medaglia, J. D., & Jeronimus, B. F. (2018). Lack of group-to-individual generalizability is a threat to human subjects research. *Proceedings of the National Academy of Sciences of the United States of America*, 115(27), E6106–E6115. <https://www.jstor.org/stable/26511087>
- Glock, S., & Kovacs, C. (2013). Educational psychology: Using insights from implicit attitude measures. *Educational Psychology Review*, 25(4), 503-522. <http://dx.doi.org/10.1007/s10648-013-9241-3>.
- Gregory, A., & Huang, F. (2013). It takes a village: The effects of 10th grade college-going expectations of students, parents, and teachers four years later. *American Journal of Community Psychology*, 52(1-2), 41–55. doi:10.1007/s10464-013-9575-5
- Guastello, S. J., & Liebovitch, L. S. (2009). Introduction to nonlinear dynamics and complexity. In S. J. Guastello, M. Koopmans, & D. Pincus (Eds.), *Chaos and complexity in psychology: The theory of nonlinear dynamical systems* (pp. 1– 40). New York, NY: Cambridge University Press.
- Guay, F., Marsh, H. W., & Boivin, M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*, 95, 124–136.
- Hamilton, D. L., Sherman, S. J., & Ruvolo, C. M. (1990). Stereotype-based expectancies: Effects on information processing and social behavior. *Journal of Social Issues*, 46, 35–60.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Abingdon: Routledge.

- Harris, M.J., & Rosenthal, R. (1986). Four factors in the mediation of teacher expectancy effects. In R.S. Feldman (Ed.), *The social psychology of education* (pp. 91–114). New York: Cambridge University Press.
- Hilton, J. L., & Darley, J. M. (1985). Constructing other persons: A limit on the effect. *Journal of Experimental Social Psychology*, 21(1), 1-18. ISSN 0022-1031, [https://doi.org/10.1016/0022-1031\(85\)90002-2](https://doi.org/10.1016/0022-1031(85)90002-2).
- Hilpert, J. C., & Marchand, G. C. (2018) Complex Systems Research in Educational Psychology: Aligning Theory and Method, *Educational Psychologist*, 53(3), 185-202, DOI: 10.1080/00461520.2018.1469411
- Hinnant, J. B., O'Brien, M., & Ghazarian, S. R. (2009). The longitudinal relations of teacher expectations to achievement in the early school years. *Journal of Educational Psychology*, 101(3), 662–670. <https://doi-org.libproxy.temple.edu/10.1037/a0014306>
- Hong, J. & Cross Francis, D. C. (2020). Unpacking complex phenomena through qualitative inquiry: The case of teacher identity research, *Educational Psychologist*, 55(4), 208-219, DOI: 10.1080/00461520.2020.1783265
- Hornstra L., Stroet, K. van Eijden, Goudsblom, E.J. & Roskamp, C. (2018) Teacher expectation effects on need-supportive teaching, student motivation, and engagement: A self-determination perspective, *Educational Research and Evaluation*, 24(3-5), 324-345, DOI: 10.1080/13803611.2018.1550841
- Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13-31). John Benjamins. <https://ebookcentral.proquest.com/lib/templeuniv-ebooks/detail.action?docID=622373>.
- Johnston O, Wildy H, Shand J. (2019). A decade of teacher expectations research 2008–2018: Historical foundations, new developments, and future pathways. *Australian Journal of Education*, 63(1),44-73. doi:10.1177/0004944118824420
- Jussim, L. (2012). *Social perception and social reality: Why accuracy dominates bias and self-fulfilling prophecy*. New York: Oxford University Press.
- Jussim, L., Eccles, J., & Madon S. (1996) Social perception, social stereotypes, and teacher expectations: Accuracy and the quest for the powerful self-fulfilling prophecy. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*, (Vol. 28, pp. 281-388). Academic Press.
- Jussim, L., & Harber, K. D. (2005). Teacher expectations and self-fulfilling prophecies: Knowns and unknowns, resolved and unresolved controversies. *Personality & Social Psychology Review (Lawrence Erlbaum Associates)*, 9(2), 131–155. [https://doi-org.libproxy.temple.edu/10.1207/s15327957pspr0902\\_3](https://doi-org.libproxy.temple.edu/10.1207/s15327957pspr0902_3)
- Kaiser, J., Helm, F., Retelsdorf, J., Südkamp, A., & Moller, J. (2012). Zum Zusammenhang von Intelligenz und Urteilsgenauigkeit bei der Beurteilung von Schülerleistungen im Simulierten Klassenraum [On the relation of intelligence and judgment accuracy in the

process of assessing student achievement in the simulated classroom]. *Zeitschrift für Pädagogische Psychologie* [German Journal of Educational Psychology], 26, 251e261. <http://dx.doi.org/10.1024/1010-0652/a000076>

- Kaplan, A., & Garner, J. K. (2017). A complex dynamic systems perspective on identity and its development: The dynamic systems model of role identity. *Developmental Psychology*, 53(11), 2036–2051.
- Kaplan, A., & Garner, J. K. (2022, July). Dynamic Systems Model of Role Identity (DSMRI): Analysis guide and codebook: Version 6. Temple University & Old Dominion University.
- Kaplan, A., Hadid, J., & Bridgelal, I. (2022). Identity. In T.L. Good & M. McCaslin, (Eds.), Educational Psychology Section. In D. Fisher (Ed.), *Routledge encyclopedia of education* (Online). Taylor & Francis: New York.
- Kaplan, A., Katz, I., & Flum, H. (2012). Motivation theory in educational practice: Knowledge claims, challenges, and future directions. In K. R. Harris, S. Graham, & T. Urda (Eds.), *APA Educational Psychology Handbook Vol. 2. Individual differences and cultural contextual factors*. American Psychological Association.
- Korp, H. (2012). I think I would have learnt more if they had tried to teach us more’—Performativity, learning and identities in a Swedish Transport Programme. *Ethnography and Education*, 7(1),77–92. doi:10.1080/17457823.2012.661589
- Lazarides, R. & Watt, H. M. G. (2015). Girls' and boys' perceived mathematics teacher beliefs, classroom learning environments and mathematical career intentions. *Contemporary Educational Psychology*, 41, 51-61. ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych.2014.11.005>.
- LeCompte, M.D. & Preissle, J. (1993). *Ethnography and qualitative design in educational research* (2nd ed.). Academic Press.
- Li, Z. & Rubie-Davies, C.M. (2018) Teacher expectations in a university setting: The perspectives of teachers, *Educational Research and Evaluation*, 24(3-5), 201-220, DOI: 10.1080/13803611.2018.1550835
- Madon, S. J., Jussim, L., & Eccles, J. (1997). In search of the powerful self-fulfilling prophecy. *Journal of Personality and Social Psychology*, 72, 791–809.
- Madon, S. J., Smith, A., Jussim, L., Russell, D. W., Eccles, J., Palumbo, P., et al. (2001). Am I as you see me or do you see me as I am: Self-fulfilling prophecies versus self-verification. *Personality and Social Psychology Bulletin*, 27, 1214–1224.
- Marsh, H.W. & Yeung, A.S., (1997). Causal effects of academic self-concept on academic achievement: Structural equation models of longitudinal data. *Journal of Educational Psychology*, 89, 41-54. <https://doi-org.libproxy.temple.edu/10.1037/0022-0663.89.1.41>
- Master, A., Cheryan, S., & Meltzoff, A. N. (2016). Motivation and identity. In Kathryn R. Wentzel and David B. Miele (Eds.), *Handbook of motivation at school* (pp. 300-319). Routledge.

- McKown, C. & Weinstein, R. S. (2008). Teacher expectations, classroom context, and the achievement gap, *Journal of School Psychology, 46*(3), 235-26. ISSN 0022-4405, <https://doi.org/10.1016/j.jsp.2007.05.001>.
- McMullen, L.M. (2021). *Essentials of discursive psychology*. American Psychological Association.
- Mercer, N. (2015, March 2). Education, Language and the social brain [Video podcast]. In Department of Education Public Seminars, University of Oxford. <https://podcasts.ox.ac.uk/education-language-and-social-brain>
- Merton, R. K. (1948). The self-fulfilling prophecy. *Antioch Review, 8*, 193–210.
- Miles, M.B., Huberman, A.M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE Publications, Inc.
- Möller, J., Pohlmann, B., Köller, O., & Marsh, H. W. (2009). A meta-analytic path analysis of the internal/external frame of reference model of academic achievement and academic self-concept. *Review of Educational Research, 79*(3), 1129–1167. <http://www.jstor.org/stable/40469091>
- Neuberg, S. L. (1989). The goal of forming accurate impressions during social interactions: Attenuating the impact of negative expectancies. *Journal of Personality and Social Psychology, 56*, 374-386.
- Owens, J. (2022). Double jeopardy: Teacher biases, racialized organizations, and the production of racial/ethnic disparities in school discipline. *American Sociological Review, 0*(0). <https://doi-org.libproxy.temple.edu/10.1177/00031224221135810>
- Pesu, L., Viljaranta, J., & Aunola, K. (2016). The role of parents' and teachers' beliefs in children's self-concept development. *Journal of Applied Developmental Psychology, 44*, 63–71. doi:10.1016/j.appdev.2016.03.001
- Peterson, E.R., Rubie-Davies, C., Osborne, D., & Sibley, C. (2016). Teachers' explicit expectations and implicit prejudiced attitudes to educational achievement: Relations with student achievement and the ethnic achievement gap, *Learning and Instruction, 42*, 123-140, ISSN 0959-4752, <https://doi.org/10.1016/j.learninstruc.2016.01.010>.
- Potter, J. (2003). Discourse analysis and discursive psychology. In P.M. Camic, J.E. Rhodes, & I. Yardley (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp.73-94). American Psychological Association.
- Proctor, C. P. (1984). Teacher expectations: A model for school improvement. *The Elementary School Journal, 84*, 469–481.
- Raudenbush, S. W. (1984). Magnitude of teacher expectancy effects on pupil IQ as a function of the credibility of expectancy induction: A synthesis of findings from 18 experiments. *Journal of Educational Psychology, 76*(1), 85–97. <https://doi-org.libproxy.temple.edu/10.1037/0022-0663.76.1.85>

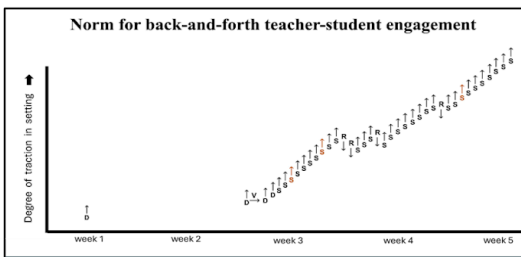
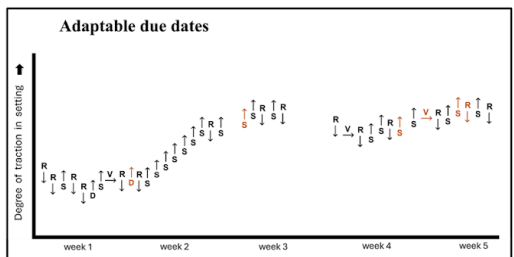
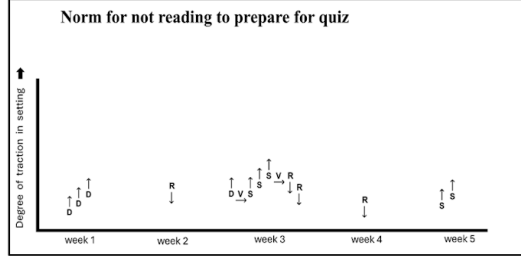
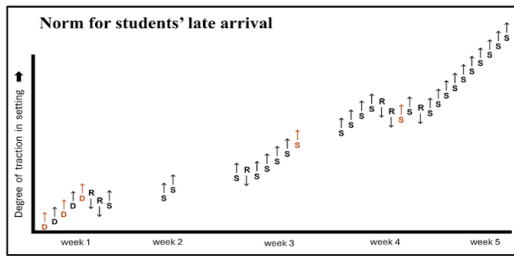
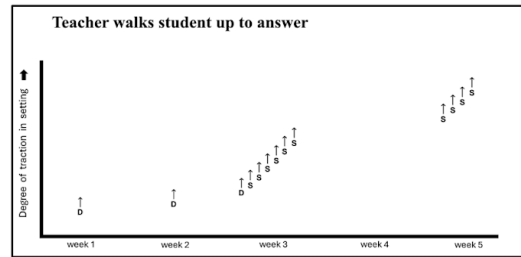
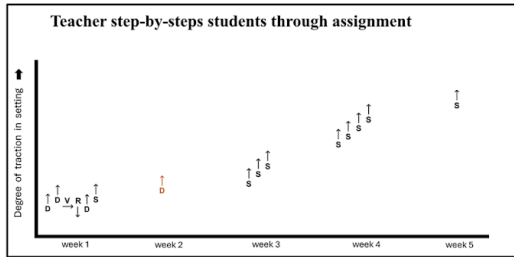
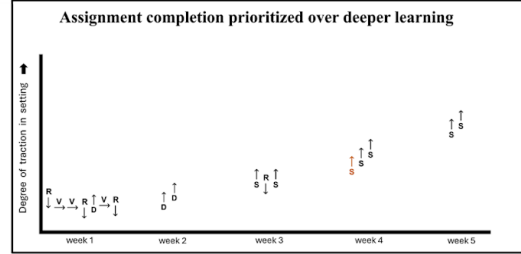
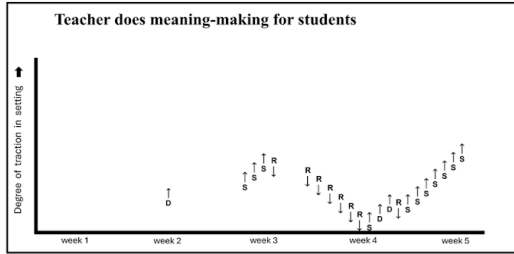
- Ready, D. D., & Wright, D. L. (2011). Accuracy and inaccuracy in teachers' perceptions of young children's cognitive abilities. *American Educational Research Journal*, 48, 335–360. doi:10.3102/0002831210374874
- Ricca, Barney. (2020). Death of chaos: Meta-fors, methods, and more [Webinar]. Complexity in Education SIG 17. <https://www.youtube.com/watch?v=PjnfS4-ioxw>
- Richardson, M. J., Dale, R., & Marsh, K. L., (2014). Complex dynamical systems in social and personality psychology. In H. R. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253-282). Cambridge University Press.
- Rodriguez, M. A. (2012). “But they just can’t do it.” Reconciling teacher expectations of Latino students. *Journal of Cases in Educational Leadership*, 15(1), 25–31.
- Rosenthal, R. (1994). Interpersonal expectancy effects: A 30-year perspective. *Current Directions in Psychological Science*, 3, 176–179.
- Rosenthal, R. (2003). Covert communication in laboratories, classrooms and the truly real world. *Current Directions in Psychological Science*, 12, 151-154. <https://doi.org/10.1111/1467-8721.t01-1-01250>
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. Rinehart & Winston.
- Rubie-Davies, C. M. (2007b). Classroom interactions: Exploring the practices of high- and low-expectation teachers. *British Journal of Educational Psychology*, 77(2), 289–306. <https://doi-org.libproxy.temple.edu/10.1348/000709906X101601>
- Rubie-Davies, C. (2010). Teacher expectations and perceptions of student attributes: Is there a relationship? *British Journal of Educational Psychology*, 80(1), 121–135. doi:10.1348/000709909X466334
- Rubie-Davies, C., Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *British Journal of Educational Psychology*, 76, 429–444. doi:10.1348/000709905X53589
- Rubie-Davies, C., Hattie, J.A.C., Townsend, M.A.R., & Hamilton, R. J. (2007a). Aiming high: Teachers and their students. In V. N. Galwey (Ed.), *Progress in educational psychology research* (pp. 65-91). Nova Science Publishers, Inc.
- Rubie-Davies, C.M., Peterson, E.R., Sibley, C.G., & Rosenthal, R. (2015). A teacher expectation intervention: Modelling the practices of high expectation teachers, *Contemporary Educational Psychology*, 40, 72-85.
- Rubie-Davies, C., Weinstein, R. S., Huang, F. L., Gregory, A., Cowan, P. A., & Cowan, C. P. (2014). Successive teacher expectation effects across the early school years. *Journal of Applied Developmental Psychology*, 35(3), 181–191. doi:10.1016/j.appdev.2014.03.006

- The School District of Philadelphia Board of Education (2023). *Goals and Guardrails Summary*. [https://www.philasd.org/schoolboard/wp-content/uploads/sites/892/2023/08/Goals-and-Guardrails-Summary\\_Updated-8.17.2023.docx.pdf](https://www.philasd.org/schoolboard/wp-content/uploads/sites/892/2023/08/Goals-and-Guardrails-Summary_Updated-8.17.2023.docx.pdf)
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed., pp. 443-466). SAGE.
- Südkamp, A., Kaiser, J., & Möller, J. (2012). Accuracy of teachers' judgments of students' academic achievement: A meta-analysis. *Journal of Educational Psychology, 104*(3), 743–762. <https://doi.org/10.1037/a0027627>
- Swann, W. B. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology, 53*(6), 1038–1051. <https://doi-org.libproxy.temple.edu/10.1037/0022-3514.53.6.1038>
- Szumski, G., & Karwowski, M. (2019). Exploring the Pygmalion effect: The role of teacher expectations, academic self-concept, and class context in students' math achievement. *Contemporary Educational Psychology, 59*, 101787, ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych>.
- Tenenbaum, H. R., & Ruck, M. D. (2007). Are teachers' expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology, 99*(2), 253–273. <https://doi-org.libproxy.temple.edu/10.1037/0022-0663.99.2.253>
- Thomas, W. I., & Thomas, D. S. (1928). *The child in America*. Knopf.
- Thorndike, R. L. (1968). Review of Pygmalion in the classroom. *American Educational Research Journal, 5*, 708-711.
- Timmermans, A. C., de Boer, H., & Van der Werf, M. P. C. (2016). An investigation of the relationship between teachers' expectations and teachers' perceptions of student attributes. *Social Psychology of Education, 19*, 217–240. doi:10.1007/s11218-015-9326-6
- Timmermans, A.C., Rubie-Davies, C.M., & Rjosk, C. (2018). Pygmalion's 50th anniversary: The state of the art in teacher expectation research, *Educational Research and Evaluation, 24*(3-5), 91-98, DOI: 10.1080/13803611.2018.1548785
- Tsui, A. B. M. (2012). Ethnography and classroom discourse. In J. P. Gee & M. Hanford (Eds.), *The Routledge handbook of discourse analysis* (pp. 383-395). Taylor & Francis Group.
- Tyler, K. M., & Boelter, C. M. (2008). Linking black middle school students' perceptions of teachers' expectations to academic engagement and efficacy. *Negro Educational Review, 59*, 27–44.
- Upadyaya, K., & Eccles, J. (2015). Do teachers' perceptions of children's math and reading related ability and effort predict children's self-concept of ability in math and reading? *Educational Psychology, 35*, 110–127. doi:10.1080/01443410.2014.915927

- Urhahne, D. (2015). Teacher behavior as a mediator of the relationship between teacher judgment and students' motivation and emotion. *Teaching and Teacher Education, 45*, 73-82. doi:10.1016/j.tate.2014.09.006
- Urhahne, D., Chao, S.-H., Florineth, M. L., Luttenberger, S., & Paechter, M. (2011). Academic self-concept, learning motivation, and test anxiety of the underestimated student. *British Journal of Educational Psychology, 81*, 161–177. doi:10.1348/000709910X504500
- van den Bergh, L., Denessen, E., Hornstra, L., Voeten, M., & Holland, R. W. (2010). The implicit prejudiced attitudes of teachers: Relations to teacher expectations and the ethnic achievement gap. *American Educational Research Journal, 47*(2), 497–527. <http://www.jstor.org/stable/40645448>
- Wang, S., Rubie-Davies, C.M. & Meissel, K. (2018) A systematic review of the teacher expectation literature over the past 30 years, *Educational Research and Evaluation, 24*(3-5), 124-179, DOI: 10.1080/13803611.2018.1548798
- Weinstein, R. S. (2002). *Reaching higher: The power of expectations in schooling*. Harvard University Press. <https://doi.org/10.4159/9780674045040>
- Weinstein, R. S. (2008). Schools that actualize high expectations for all youth: Theory for setting change and setting creation. In B. Shinn, & H. Yoshikawa (Eds.), *Toward positive youth development: Transforming schools and community programs* (pp. 81-101). Oxford University Press.
- Weinstein, R. S., Marshall, H. H., Sharp, L., & Botkin, M. (1987). Pygmalion and the student: Age and classroom differences in children's awareness of teacher expectations. *Child Development, 58*, 1079–1093.
- Wiggins, S. (2017). *Discursive psychology: Theory, method and applications*. SAGE Publications Ltd.
- Wood, L. A., & Kroger, R. O. (2000). *Doing discourse analysis: Methods for studying action in talk and text*. SAGE Publications Ltd.
- Zhou, J., & Urhahne, D. (2013). Teacher judgment, student motivation, and the mediating effect of attributions. *European Journal of Psychology of Education, 28*, 275-295. <http://dx.doi.org/10.1007/s10212-012-0114-9>.

# APPENDIX A

## EMERGING ACADEMIC EXPECTATION TRAJECTORIES



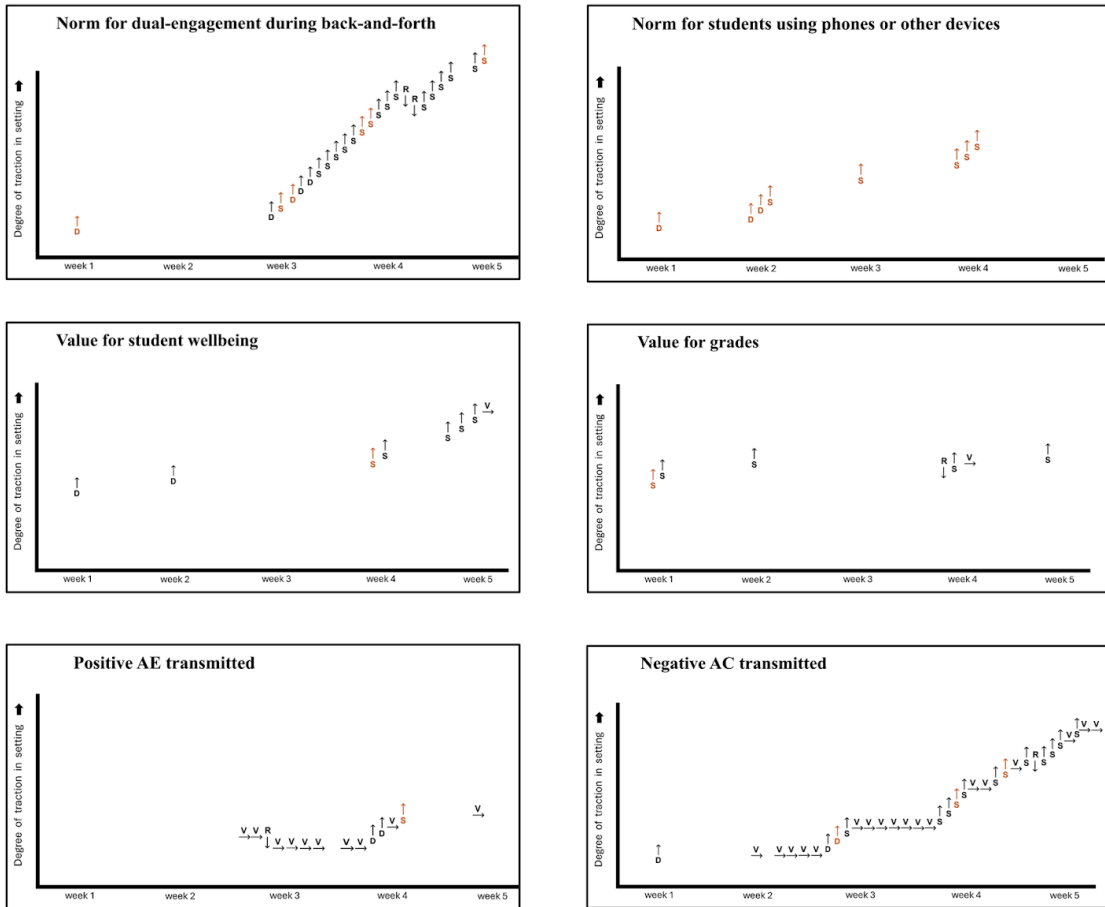


Figure 8. Thumbnails of High Frequency AE Trajectories

## APPENDIX B

### CONTEXTUALIZED NARRATIVE OF DATA GENERATION INTERVAL

The five-week interval of primary data generation occurred at the onset of the school's second term. At this juncture the 11th graders have become somewhat comfortable with their new English curriculum (the Quest materials differ in important ways from the school's more traditional English language arts fare), and some of their and their teachers' expectations are beginning to gain traction. As context for the empirical investigation carried out in this work, a chronological narrative of each observation is offered below.

#### **Thursday, November 16th (Week 1 Observation)**

It is a mild Fall morning at Northington High School. Although the second quarter of the academic year does not technically start until tomorrow, today a new grading window opens. For some students this can serve as a motivator for completing work because it offers the sense of having a "fresh start"; for others it is inconsequential. Class begins at 7:30 am, but for the first twenty minutes only Haylee, Omar and one other student are present. Once all three are settled I explain to them that we will be doing a journal activity shortly, but that we will wait a few more minutes to allow for the arrival of additional students. I let them know that after the journal they will have a quiz on their current novel (*The Kite Runner*) and that they can use this time to prepare. At 7:40, with still only three students present, I post the journal activity on Google Classroom and we begin. It asks students to examine their dreams, barriers that complicate their pursuit of these dreams, and strategies to address those barriers. When I ask if anybody wants to share a dream they wrote about, only Omar shares. Haylee shoots me a shy smile and looks as if she might share, but ultimately remains quiet. Midway through the journal activity another student arrives; I explain what we are working on and prompt her to read the instructions for the parts of the activity that she has missed. In the interim there is a teacher conversation about the Quest computers, which have recently been located and delivered to the building (they were

inadvertently moved to the 9th grade site over the summer). Sounds of sirens and the particularly loud video from next door are background noises of note.

At 8:05 we wrap up the journaling, and I hand the reins to Ms. Mahoney, who give each student a *Kite Runner* Quiz. The quiz is given in paper format, and features a mixture of multiple choice and short answer questions (e.g., *What weapon does Hassan use to fend off Assef?*). She tells students they can use their books. One more student arrives. Omar discloses that he has not even “*looked at the cover*” of the book yet. In five minutes two more students arrive and I update them on what we are busy with. A student from another class period checks in; he was absent recently and asks Ms. Mahoney what he missed, socializes with her for 2-3 minutes, and then comes over to say hello to me. Eventually the class grows quiet as students flip through their books in search of answers to the quiz questions. Some work collaboratively. About an hour into class another student arrives and mentions a traffic issue; she appears distressed as she gets up to get her quiz. Ms. Mahoney says gently, “*You have a stressful morning?*” and then, “*I got it for you babe*” as she walks over to hand the student a quiz. Two more students arrive. Ms. Mahoney updates the class on the activities underway and notes the missed journal that students can complete later. Several students are looking at their phones; some have their books out and are working on the quiz, while others are not engaging with classwork at all. There has not been any timeframe given to students with regard to quiz completion. As class wraps up Ms. Mahoney asks, “*Okay so do you want me to hold onto your quizzes so that you can finish next week rather than take them home?*” Students begin packing up and moving toward the door to wait for the bell. Frank, one of the three focal students in the study, was absent on this day. Eight of the twelve students enrolled attended this class.

### **Monday, November 20th (Week 2 Observation)**

It is day-one of a short week; the school will be closed on Thursday and Friday for the Thanksgiving holiday. The mornings are growing cooler day by day. Five minutes into class

Haylee and another student are the only ones present, but in another minute Omar arrives, and shortly after, another student comes in. In these first fifteen minutes of class students get oriented, socialize (e.g., two students go into the hallway to visit with other students), and arrive. Omar jokingly suggests he cannot work because he's forgotten his computer, and when he's given one to borrow he jokes that it looks like it was made before he was born. There is a mood of kindness and joviality this morning. Ms. Mahoney asks, "*So who's winning tonight, the Eagles or Kansas City?*" and engages students in sports-talk for a bit. Then, as one more student arrives, she closes the classroom door and sits inside the rectangle (an indication to students that they should now open their documents and follow along with the instruction). There are seven students present.

Ms. Mahoney reorients the students to the work they have done on the EQ2.2 document (i.e., reviews the narrative), and then introduces the last portion, the Writing Portfolio (a two-paragraph response to a prompt). She gives examples of how students might respond to the prompt, and reviews the content of the paragraph scaffold she has written out on the whiteboard. In the meantime one student is pulled out of class for administrative purposes and another arrives. After Ms. Mahoney finishes previewing their work, the students engage with it independently and the room falls quiet. In a few minutes Ms. Mahoney reminds students they have a bit of time to complete their *Kite Runner* quizzes, and reminds them of the journal activity which some still need to finish as well. The rest of the period becomes a sort of "wrap up" for these assignments. Soon Frank arrives and begins his quiz (he missed the last class, so he is only just beginning it). A student who has completed only her quiz is playing a video game on her computer and engaging with her phone. Ms. Mahoney tells her "*2.2 is what we're working on.*" When Frank seeks Ms. Mahoney's help on a quiz question she flips through the pages of his book to find the answer, and then points him to it. One more student arrives, for a total of ten. Another student turns in the quiz; others work on it throughout the period. Most students are either only now doing the reading, or are simply flipping through the pages to find the answers to quiz questions. The heaters have been turned on throughout the school building now, and the one in our classroom

seems somewhat indiscriminate, heating the room to such a point of uncomfortableness that we counter it by periodically turning on the air conditioning.

By an hour into class a restlessness is evident among some of the students. Some are now on phones. One student is using her phone as a mirror while she applies make-up perfume and styles her hair. Frank unpacks some food from a bag and begins to eat it, engaging with the phone he holds in his lap. One student moves to sit beside Haylee and they look at her computer together. Midway through this period of malaise Ms. Mahoney tells the students, “*So just be aware I’m lookin at the gradebook...*” and she names several items that students should have turned in by now. When the class is nearly over Ms. Mahoney asks to collect the remaining quizzes, but allows one student to take his home again. As the class begins to pack up their things she reminds them that there will be no more class time for completing EQ2.2., and notes they will play a game on Wednesday (the day before Thanksgiving).

### **Wednesday, November 29th (Week 3 Observation)**

Winter has arrived in Philadelphia. The outdoor temperature was 24 degrees Fahrenheit as I walked from the bus stop to the entrance of the security trailer. Upon arriving into the classroom I learn that the heat in our wing of the building is not working; this is the third day of it being inoperative; the four students in the room (Haylee and Omar among them) seem unphased. About ten minutes into the period Ms. Mahoney hands each student the next *Kite Runner* quiz, telling them, “*Since you guys are on time you might as well get started.*” Another student arrives about five minutes later. For the first 30 minutes of class Ms. Mahoney is in and out of the room gathering information about the heating situation in other classroom and from other teachers; there is a consensus that the indoor temperature is at about 50 degrees, with some rooms – ours included – colder because they are near the building’s entry areas where doors can sometimes stand open during peak student arrival time. I move to sit at the opposite side of the classroom because I can feel the cold air flowing freely through the open spaces on either side of the

window air conditioning unit behind me. One student is huddled beneath her blanket-like scarf, head and all.

The room is quiet as students work on their quizzes. As students arrive they are given paper copies of the quiz; often they borrow a book to use during the class period. At one point Ms. Mahoney asks the class if anyone has gotten to the shocking part of the novel yet. When nobody knows what she means by this she conveys her conclusion: *“Tells me you didn’t read,”* and asks them again, *“Anybody know what happened yet?”* She shakes her head saying *“Oh maa-aan.”* As students work many wear listening devices (whether over ear headphones or earbuds), and many engage with their phones throughout the period. Rico sings quietly and he works on his quiz. Now the loud video next door begins again. Soon Ms. Mahoney says to the class, *“Okay, it’s 8:16, let’s try to finish up by 8:30 ‘cause I want to start 2.3 today.”* One student seeks help on the quiz and she writes page numbers next to each quiz question the student has not completed. More students arrive. Now Ms. Mahoney moves from student to student systematically writing page numbers next to quiz questions. Rico asks for help on number four and Ms. Mahoney says *“It’s D.”* As 8:30 nears she explains to students that for the next quiz they will only be given 30 to 35 minutes and that all unanswered questions will simply be marked wrong. Another student arrives. We are all wearing our jackets. I get up periodically to walk around the room because sitting in one place makes me all the colder. Students are rubbing their hands together. None of the students complain about the cold; they seem to take it in stride.

At 8:35 Ms. Mahoney directs students to open EQ2.3 in their Google Classroom and sits in the rectangle to begin the lesson. All 12 enrolled students are now in attendance. The article included in the activity shares a common topic with the last one, and Ms. Mahoney begins by having students recall some of the main points from that last article as a way to orient them to the current one. She runs a back-and-forth conversation in which she calls on students to answer her questions, read parts of the article aloud to the class, and share their responses to the semantic scales (comprehension scaffolds placed throughout the document). When they get to a scale she

reads it, elaborates on it, and provides examples of how one might respond. When a student who is reading struggles with a word (e.g., prophetic) she sometimes interjects to explain the term or demonstrates its pronunciation. Often, between sections of the reading, she summarizes or reframes in simpler terms – or sometimes reframes using the students’ linguistic register – the content of the text. Other times she provides cultural context where she imagines it may be lacking (e.g., the use of the term “G.I. Joe”). Yet other times she provides her reaction to a part of the text, or relates it to a story from her own life. As this back-and-forth plays out students complete the scaffolds on their own documents. In this way, Ms. Mahoney walks the students through the different activities in EQ2.3. When a student reads their response to a scale she often provides in-the-moment feedback, or presses them for more specific information. Before sending students on their way at the end of the block Ms. Mahoney reminds them of their next reading assignments and implores them to do the reading beforehand for the next quiz on December 13th.

**Thursday, December 7th (Week 4 Observation)**

It is a wintery morning with a light snow forecasted. When I arrive it quickly becomes clear that there is a brewing tension this morning between teachers and site administration. Because Ms. Mahoney plays an important role in union matters, her room is a temporary hub for communications about the matter. Teachers come in and out, and she repeatedly steps into the hallway to talk on the phone. By ten minutes into class there are four students present, including Haylee. I wait a few more minutes for stragglers (one more student arrives), and then begin the journal activity. This one builds on the last one; it helps students think about when to keep pursuing a dream versus when they might better adapt or reconceptualize it. The tense energy around the union matter settles for now and gives way to a particularly quiet morning; the usual hallway noise is now only an occasional exchange of voices in the distance. There are now seven students in the room and journal work is wrapping up. Along with some others, Haylee has turned in her journal; she reads her own book on a Kindle, a common engagement for her. One more

student arrives as I tell the class, “*Try to get those turned in today.*” We are about forty-five minutes into the period.

Ms. Mahoney, now sitting in the rectangle, reminds students that the last three assignments (EQ2.2, 2.2., and 2.3) are now past due and should be turned in. Then she asks Haylee if she will read aloud the introductory paragraph for EQ2.4. and Haylee obliges. Ms. Mahoney herself reads the next portion aloud, a one page narrative designed to illustrate and make more accessible the slightly abstract themes that students will soon encounter in the main text. When she comes to the end of the narrative she asks after the class’s opinion on what transpired in the story. The room is silent. When she presses further and begins calling on specific students their responses are of an exceedingly general nature. As Ms. Mahoney presses further, it becomes evident that the central conflict in the story was not ascertained by most of the students. Because the story is quite simple, a logical assumption is that students were otherwise engaged during the read-aloud. A semantic scale and short ranking activity follow the narrative, and as students complete these items Ms. Mahoney engages them in a back-and-forth to understand where they marked their scales and why. Throughout the discussion she affords students the benefit of the doubt, never making light of what appears to be their lack of understanding but instead kindly attributing their lack of animus toward the character and his action to their generous natures. She does, however, hold students accountable for backing up their answers with textual evidence, pressing them toward greater specificity.

Now we move to the next section of the assignment. It is based on a longer and more complicated text, a Business Insider article about Mark Zuckerberg’s questionable ethics during Facebook’s rise. After a preview of the article’s content Ms. Mahoney asks another student to read a segment of the text aloud. Periodically she stops the reader to explain something, offer an interpretation, help with vocabulary, or point out something of import. One more student arrives and quietly opens her computer. As some students share in the reading aloud of the article, others appear disengaged from the reading. Frank and another student engage with their phones, another

student engages with her tablet (which is propped behind her computer screen), and Haylee is reading her Kindle (which lays across her computer's keyboard); and two students wear listening devices that are connected to their computers. Now Frank puts on cologne. There are only eight minutes left of class. Ms. Mahoney reads the last segment, and then with two minutes to go, she identifies a stopping place and tells the class they will pick up here next week. She reminds students of work though should now be turned in, and the students pack up and move to the door in anticipation of the bell. Omar is absent today.

### **Wednesday, November 13th (Week 5 Observation)**

Interim reports are due on Friday, marking the midway point in the quarter. For some students this serves as a motivator to get past due work turned in. In the first fifteen minutes of class the hallway is exceptionally active with students socializing. Ms. Mahoney and I have a conversation about the difficulty of launching a lesson when so few students arrive on time (only Halylee and one other student are present). Then the conversation moves to a discussion about one student's particularly difficult homelife. I am made uncomfortable by this (given there are students in the room) and ungracefully try to end it. A third student arrives, and then Omar comes in as well, limping and assisted by another student who says hello to us and then bids Omar adieu. Omar tells Ms. Reinhold and I about his twisted ankle which he sustained while playing basketball with friends. We offer sympathy and advice. Ms. Reinhold prepares to go to a meeting, hands out the quiz to students, verbally provides those present with page numbers on which the answer to each quiz question can be found. A substitute teacher arrives and Ms. Mahoney hands me the quizzes to give to late arriving students, and, after telling the class she hopes to return soon, heads to her meeting.

Over the next forty-five minutes Halylee and six other students arrive; I get each one started on the quiz and explain to each that Ms. Mahoney will be back soon. I do this strategically because there is a well established norm in the school wherein students do not engage in work when a substitute is in. I am making sure they know this is not a typical such day: their teacher

will return and will expect them to have completed their quiz. Many students need to borrow books, and I facilitate this. Haylee completes her quiz in 25 minutes, and begins working on something for another class. When Ms. Mahoney returns the group who were given page numbers are all finished and working on other things or engaging with their devices. Other students continue to work on their quizzes through the remainder of the class (straight through the back-and-forth that Ms. Mahoney launches next).

Having returned from her meeting and collected a handful of quizzes, she now sits in the rectangle and asks students to open EQ2.5, the mid-unit assessment. It consists of a short position article on a controversial topic, has students summarize the author's position and then argue their position in a short, polished essay. It is designed to mirror an English placement test that students would typically be asked to take before enrolling in college coursework. Ms. Mahoney reads the full article aloud to the students, stopping to explain vocabulary (e.g., affluent, misogyny), and interpreting for the student at times. Then she reviews the directions and gives examples of writerly moves they might make (e.g., gives a verbal example of how they might establish reciprocity). She reminds students that the points for this assignment are in the "test grade" category which means the score receives more weight than a typical assignment. Several students (Frank among them) work on their quiz straight through this back-and-forth (likely they recall the warning given them during the last quiz, and assume they will need to turn it in at the end of class instead of taking it home with them, which has been more typical). When the students are packing up she tells them all to have a great day and wishes Omar good luck with his knee. The bell rings and the students are off.

## APPENDIX C

### THE KITE RUNNER QUIZ

Name \_\_\_\_\_

**The Kite Runner**  
Chapters 1-5

1. Amir loses his mother in childbirth. How does Hassan lose his mother? a) she ran off with a group of dancers b) she also died in childbirth c) was killed in a car accident on the way home from the hospital d) disappeared one week after the birth without a word
2. As soon as Hassan is born, his mother turns to Hassan's father and says "There. Now you have your idiot child to do your \_\_\_\_\_ for you."
3. When Amir is six, his father Baba pays for and builds a/an a) sports arena b) hospital c) orphanage d) school
4. A fifth grade teacher told Amir's class to pronounce words correctly so a) people would view them as intelligent b) they would not be teased c) people from all races would understand them d) God would hear better
5. Amir's grandfather was a) stabbed to death by a thief b) killed by a political rival c) killed in a war with Russia d) killed for denouncing God
6. In 1970, Baba travels to Tehran, Iran to watch \_\_\_\_\_ on television, for Afghanistan didn't have television yet.
7. Amir hears his dad tell Rahim Khan: I would never believe he's my son if a) he didn't have a birth certificate b) I hadn't seen the doctor pull him out of my wife c) he didn't have my facial features d) I saw him in a crowd of strangers
8. Ali is taken in by Amir's grandfather because Ali's parents were a) exiled b) sentenced to life in prison c) killed in a car accident d) drug addicts
9. Explain how Amir discovers his talent as a writer.  
\_\_\_\_\_
10. Rahim tells Amir his first short story contains a) irony b) foreshadowing c) conflict d) hyperbole e) allusions
11. The neighborhood bully Assef tells Hassan and Amir that \_\_\_\_\_ was a great man.
12. What weapon does Hassan use to fend off Assef? \_\_\_\_\_
13. What unusual birthday gift does Hassan receive?

Figure 9. Scanned Copy of *The Kite Runner* Quiz

## APPENDIX D

### ILLUSTRATED EXAMPLES

#### **Example 1**

On this day the school's heater failed to function for a third consecutive day. With the morning's outdoor temperatures in the low twenties, the classroom temperature upon my arrival was difficult to tolerate. Although Ms. Mahoney spent nearly the first 30 minutes of class working toward solving the issue (documenting what rooms were affected, attempting to get temperature readings, and connecting with administrators), the complacency of the students around the lack of heat in the classroom was alarming. Early on that morning I said to the class, "*Get your parents to call the school you guys. Start applying pressure*" (JH, week 3 transcript). My suggestion was met mostly with skeptical looks from students. One offered, "*My mama would never. She only look at me and be like, 'Well you're a kid so' ...*," here, her voice trailed off. When I later asked the student what she had meant by "*you're a kid*," she told me her mother would see it as inappropriate to make such a complaint on her behalf because she was "*a student, just a student here at the school*" (SRI-heater, NP). As each of the nine late arriving students came into the classroom that day, not one of them mentioned the lack of heat or asked if repair of the heater was underway. After the initial period in which Ms. Mahoney worked to document the issue, class proceeded in its normal fashion. The incident demonstrates the low sense of agency felt by stakeholders of the learning community.

#### **Example 2**

Ms. Mahoney explains in a stimulated recall interview how during the previous week a student held up her open Yondr bag (school mandated locked sack in which students store their phones during the school day) and said, "Look Miss, even Mr. Cain says I can go through and not have to close it" (SRI-policy). The student here reportedly referred to the school's dean of "climate" (phone use is within this domain) allowing her to pass through the security protocols

that morning without locking her phone into its Yondr bag. Ms. Mahoney explained in this interview the lack of consequences in place for students' phone use, and protocols a teacher is asked to follow when phones become an issue in their classroom: They are to call for a climate officer to visit the room and conduct an unannounced phone sweep during an upcoming class. Ms. Mahoney described how this played out in her room: "*They'll say to the kid, 'come on now, put your phone away.' They don't take it like they're supposed to. So then nobody calls, right?*" She tells me that she has called several times of late, but no officers ever arrive. She does not believe this is deliberate (instead she attributes it to the increasingly high rate of staff absences), but is frustrated by it nonetheless. Ultimately, students learn there are no consequences and several students in every class dual engage with their phones as a regular "way of being" in the classroom, with notable implications for teachers' action possibilities and students' work habits.