

The Pennsylvania State University
The Graduate School
College of the Liberal Arts

THE DEVELOPMENT OF L2 WRITING TEACHERS' PEDAGOGICAL CONTENT

KNOWLEDGE IN TEACHING ACTIVITY

A Dissertation in
Applied Linguistics
by
Dorothy Worden

© 2015 Dorothy Worden

Submitted in Partial Fulfillment
of the Requirements
for the Degree of
Doctor of Philosophy

August 2015

The dissertation of Dorothy Worden was reviewed and approved* by the following:

A. Suresh Canagarajah

Edwin Erle Sparks Professor of Applied Linguistics, English, and Asian Studies
Dissertation Advisor
Chair of Committee

Karen E. Johnson

Kirby Professor in Language Learning and Applied Linguistics

Deryn P. Verity

Director of ESL/EAP Programs and Senior Lecturer in Applied Linguistics

Xiaoye You

Associate Professor of English and Asian Studies

Xiaofei Lu

Gil Watz Early Career Professor in Language and Linguistics and Associate
Professor of Applied Linguistics and Asian Studies
Director of Graduate Studies

*Signatures are on file in the Graduate School

ABSTRACT

In the field of TESOL, research in teacher cognition has contributed to a better understanding of teachers' mental lives and how they influence their teaching practices (Freeman & Johnson, 1998), yet little of this research has focused on L2 writing teachers (Borg, 2006). As a result, we know relatively little about the mental lives of L2 writing teachers (Hirvela & Belcher, 2007; Lee 2010), including what knowledge they possess and how they draw on and develop this knowledge in teaching practice. Furthermore, though the general education literature has theorized a bi-directional relationship between teacher knowledge and teacher reasoning (Shulman, 1987), this relationship has not been adequately researched (Hashweh, 2005). There is a need, therefore, for research that examines the knowledge of L2 writing teachers and specifically how this knowledge develops in and through the activities of teaching.

Operating from a sociocultural theoretical perspective (Vygotsky, 1986; Lantolf & Thorne, 2006; Johnson, 2009) and using a variety of data including interviews, concept maps, video recordings of classroom instruction, stimulated recalls, and instructional artifacts, this study examines the development of four L2 writing teachers' pedagogical content knowledge (Shulman, 1987) over a semester of teaching.

Overall, the findings demonstrate the highly contingent and emergent nature of teachers' PCK. As the writing teachers planned, taught, and reflected on their teaching, both their underlying content knowledge and pedagogical content knowledge developed in overlapping ways. Moreover, this development was mediated by a variety of factors. Among these factors, teachers' underlying value-laden conceptions of writing and teaching, the required first-year writing curriculum, their students' emerging understandings of the content they were teaching, and the activities and interactions involved in the research methodology all mediated the teachers' developing conceptualization of the content of the class and how to teach it to this particular group of students.

TABLE OF CONTENTS

LIST OF FIGURES	viii
ACKNOWLEDGMENTS	ix
CHAPTER 1: REVIEW OF THE LITERATURE	1
Introduction.....	1
Overview of the Chapter.....	1
Writing Teacher Cognition	2
L1 Focused Studies	2
L2 focused studies.....	12
Summary and Future Directions for Writing Teacher Cognition Research.....	19
Teacher Knowledge	22
Pedagogical Content Knowledge: The Foundation.....	23
Theoretical Extensions of the PCK Framework.....	25
Critiques of PCK Framework	29
The Development of Teacher Knowledge in Teaching Activity	32
Summary and Future Directions	37
Conclusion	37
CHAPTER 2: METHODOLOGY	38
Overview.....	38
Research Questions.....	38
Theoretical Orientation: Vygotskian Sociocultural Theory.....	38
The Origins of Human Cognition in Social Activity	39
The Genetic Method	40
Human Cognition as Mediated by Tools	42
SCT in Language Teacher Cognition and Education Research.....	44
The Research Context.....	46
The ESL 015 Composition Class.....	46

The Analytic Essay Assignment	47
The Participants	48
Data Sources and Collection	57
Data Preparation	62
Data Analysis	63
Conclusion	64
CHAPTER 3: JENNIFER: BALANCING STABILITY AND FLEXIBILITY IN GENRE- BASED TEACHING	65
Overview of Data Collected.....	66
Jennifer’s Pre-Teaching PCK of the Analytic Essay	67
Summary of Pre-Teaching PCK	79
PCK in Development	79
Post-Teaching PCK.....	95
Conclusion	100
CHAPTER 4: SONJA: A CONCEPT DEVELOPING IN TEACHING ACTIVITY	102
Overview of Data Collected.....	102
Sonja’s Pre-Teaching PCK of the Analytic Essay	104
Summary of Pre-Teaching PCK	110
PCK in Development	111
A Concept Emerging in Activity	111
“I’m sort of (.) deviating from my plan:” A Concept Emerging in Activity	112
“So what do you guys think they are?”: Students’ Emerging Understandings	118
From Emerging to Integral Concept	123
Elements and Perspectives: Differentiating Similar Concepts through Guided Reflection	127
CHAPTER 5: ANNA: TEACHING THE UNKNOWN GENRE	139
Overview of Data Collected.....	140
Anna’s Pre-Teaching PCK of the Analytic Essay	141

Summary of Pre-Teaching PCK	150
PCK in Development	151
Reconceptualizing Objectivity: Researcher as Expert Mediator	151
Reconceptualizing Genre and Content: Classroom Interactions with Students	158
Reconceptualizing Description and Analysis: Interpreting Student Texts.....	169
Post-Teaching PCK.....	175
Discussion of Changes in Anna’s Knowledge	178
Conclusion	183
CHAPTER 6: SERGEI: NON-DEVELOPMENT AND THE IMPACT OF UNDERLYING	
CONCEPTS	185
Sergei’s Pre-Teaching PCK of the Analytic Essay	187
Underlying concept one: Good writing is grammatical and structural accuracy	189
Underlying concept two: Teaching is telling and learning is remembering	197
Underlying Concepts and the Development of PCK	198
Post-Teaching PCK.....	226
Conclusion	230
CHAPTER 7: DISCUSSION AND IMPLICATIONS	232
Summary of the Findings.....	232
Nature of L2 Writing Teachers’ PCK.....	233
Teaching Unknown Genres.....	233
Developing Specialized Content Knowledge	234
Developing PCK in Teaching Activity	236
PCK and CK Emerging in Activity.....	237
Research Methods as Mediation	240
Role of Underlying Concepts.....	241
Limitations of the Study.....	242
Concluding Remarks.....	243

REFERENCES	245
APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDES	261
APPENDIX B: CONCEPT MAP PROMPTS	266
APPENDIX C: STIMULATED RECALL QUESTION BANKS.....	268
APPENDIX D: TRANSCRIPTION CONVENTIONS	270

LIST OF FIGURES

Figure 1: Jennifer pre-teaching concept map, 10/4/2013.....	68
Figure 2: Jennifer class presentation, 10/8/2013.....	81
Figure 3: Jennifer post-teaching concept map, 11/26/2013	96
Figure 4: Sonja pre-teaching concept, 10/02/2013	104
Figure 5: Sonja, 10/07/2013, shoulders raised, BH chest level hands facing each other palms cupped, fingers curled and spread apart; two beats	115
Figure 6: Sonja, 10/07/2013, “thin- what are the {components that he analyzes}	116
Figure 7: Class presentation, 10/7/2013.....	124
Figure 8: Sonja post-teaching concept, 11/7/2013.....	134
Figure 4-9: Anna Pre-Teaching Concept Map, 10/18/2014.....	142
Figure 10: "What is an analytical essay?" Anna, class presentation slide, 10/23	161
Figure 11: "Choose a topic," Anna, 10/23	163
Figure 12: "Analytical Essay," Anna, 10/23	164
Figure 13: "Analytical essay," 10/25	168
Figure 14: Anna Post-Teaching Concept Map, 12/3/2013.....	176
Figure 15: Sergei Pre-Teaching Concept Map 10/15/2013.....	188
Figure 16: Sergei, Post-teaching concept map, 11/20/2013.....	227

ACKNOWLEDGMENTS

I am immensely grateful for the guidance and support offered to me by so many as I completed this research. First of all, many thanks go to my advisor Suresh Canagarajah and committee members Karen E. Johnson, Deryn P. Verity, and Xiaoye You for their generous advice and feedback on this project as well as for each of their unique contributions to my development as a scholar, writer, and teacher over the course of my graduate studies. I would also like to thank my professors, colleagues, and friends in the department of Applied Linguistics for inspiring and challenging me throughout my time at Penn State. In particular, my thanks go to the members of the Multilingual Writing Research Group and the CRELLT CA Data Analysis Group for helping me at the beginning stages of making sense of the data. I am also extremely grateful for the feedback and dialogic mediation of Brooke Ricker Schreiber, Brody Bluemel, and Matt Jadlocki.

This research was funded by the Gilbert R. Watz Graduate Fellowship in Languages & Linguistics granted by the Center for Language Acquisition as well as by the Research and Graduate Studies Office of the College of Liberal Arts. I am grateful for their support, however, the contents of this dissertation do not necessarily represent the opinions of Mr. Gil Watz, the Center, the College, or the University.

Finally, my deepest gratitude goes to the teachers who allowed me into their classrooms and their thinking through participating in this study. I learned so much from watching you learn. Thank you.

CHAPTER 1: REVIEW OF THE LITERATURE

Introduction

Teacher cognition research, which is broadly concerned with examining what teachers know, believe, and think about in their professional lives, has been an important component of the educational research tradition since the late 1970's (see Fenstermacher, 1994; Verloop, Van Driel, & Meijer, 2001 for reviews). The field of second language teacher education (SLTE) lagged behind this trend and had only "begun to recognize that teachers, apart from the method or materials they may use, are central to understanding and improving English language teaching" (Freeman & Johnson, 1998, p. 401) by the late 1990's. Despite this delay, studies examining the cognition of second language teachers have provided important insights into second language teachers' mental lives (see Woods, 1996; Borg 2006 for reviews). The field of L2 writing has been even slower in turning its attention to teachers both in terms of a sustained focus on teacher education (Hirvela & Belcher, 2007) and in developing a research interest in L2 writing teachers' cognitions (Lee, 2010, 2013). In fact, in his review of research on second-language teacher cognition, Borg (2006) identifies the teaching of writing as the least researched language skill in teacher cognition in both L1 and L2 contexts. This lack of research is particularly significant given that writing "has become by far the most important of the L2 language skills" at the university level in terms of institutional credit and the sheer numbers of students enrolled (Leki, 2006, p. 60).

Overview of the Chapter

This chapter begins by reviewing the literature on writing teacher cognition from both L1 and L2 focused studies, specifically examining the emerging trends and themes in this small but growing body of studies as well as the direction future research might take. The review will then broaden to examine the construct of teacher knowledge from the general education literature. This section will begin with a brief historical overview of the rising interest in teacher knowledge in the late 1970s before focusing specifically on Lee Shulman's (1986, 1987) construct of pedagogical content knowledge (PCK). Following a brief introduction to PCK, extensions and critiques of the PCK framework will be examined. Additionally, the relevant literature on how teachers develop PCK, particularly in the context of teaching practice and experience, will be examined. The

chapter will close with a discussion of the need for research that applies the construct of PCK to the development of L2 writing teachers' knowledge development in teaching experience.

Writing Teacher Cognition

Relatively little research explicitly investigating writing teacher cognition exists in either the L1 or L2 writing literature, though both fields have issued recent calls for increased attention to the experiences and needs of those learning to teach writing (Reid, 2011; Hirvela & Belcher, 2007). In both fields, the majority of publications that do focus on writing teachers (L1 or L2) have primarily been concerned with theorizing the knowledge base needed for writing instruction and on offering models and resources for writing pedagogy methods courses (for example, see Tremmel & Broz, 2002; Dobrin, 2005; Gebhard, 2010). Research on what writing teachers know, believe, think, and on how writing teachers develop is relatively sparse in both fields. However, though research in the area of writing teacher cognition is not particularly plentiful, the studies that do exist outline several important themes, questions, and concerns for future research to take into account. In the following sections, I will review the relevant research studies focusing on writing teacher cognition from both the L1 and L2 literature.

L1 Focused Studies

Teachers' confidence, attitude, and beliefs regarding writing

Within the L1 writing literature, research that does examine writing teacher cognition, whether at the university or K-12 level, has tended to emphasize a consistent set of themes and concerns. One such theme that is prevalent, particularly in the K-12 literature, is the writing teacher's identity, development, and self-perception as a writer. This research, usually grounded in a process model of writing, operates under the premise that teachers' identities and abilities as writers have an important effect on their identities and abilities as writing teachers. In light of this premise, several studies have undertaken to describe writing teachers' attitudes toward writing as well as their self-perceptions of their own writing ability. Such investigations have consistently found that many writing teachers lack self-confidence as writers and often hold negative attitudes toward writing (Gardner, 2014; Bausch, 2010; Frager, 1994; and Street, 2003). For instance, Gardner (2014) used quantitative and qualitative methods to assess preservice primary school

teachers' self-confidence and self-perceptions as writers and understanding of the writing process. He found that approximately two-thirds of the teachers held negative or indifferent attitudes toward writing and rarely wrote extended texts beyond what they were required to complete for their classes. A similar finding was reported by Bausch (2010) who used surveys, narratives, and concept maps to examine 150 teachers' perceptions of literacy development and instruction. The results showed that while the majority of the teachers enjoyed reading and were confident in their reading abilities, they were much less confident and positive about their abilities and identities as writers.

In light of the negative attitudes towards writing often exhibited by teachers, several researchers have attempted to unearth the sources of such attitudes by determining what experiences teachers report as contributing to the formation of their writing identities and beliefs. Hall & Grisham-Brown (2011) used narratives elicited in focus group interviews to identify experiences that had an impact on teachers' developing writing attitudes and beliefs. Having their writing showcased publicly, writing prompts that allowed for creative responses, and process-oriented instruction all had a positive impact on teachers' writing attitude and confidence. Teachers' negative attitudes and low writing confidence, on the other hand, were usually attributed to experiences of receiving negative feedback on writing, particularly from teachers. Frager (1994) reported a similar finding about the experiences the teachers in his study most often cited as contributing to their writing identities, whether positive or negative. He found that teachers repeatedly cited memorable experiences of having their writing criticized, choices (or lack of choices) about what and how to write in school settings, experiences writing in professional contexts, and writing for public audiences as the most identity-forming writing experiences of the teachers. These studies generally emphasize the powerful, lasting, and largely negative effect writing teachers' experiences as writers, and particularly as student writers, have on their developing attitudes and dispositions toward writing instruction.

In addition to studies describing teachers' attitudes toward writing, several researchers have sought to establish a connection between their attitudes and beliefs regarding writing and their classroom practices. One common finding of such studies is that there are often contradictions between teachers' stated support for writing, and

particularly for process writing pedagogies, and their actual practices. Bausch (2010) found that even teachers who considered themselves strong writers and believed that it was essential for writing teachers to practice writing did not engage in significant writing outside of class. In regards to instruction, both Simmerman et al (2011) and Brindley & Schneider (2002) found contradictions between teachers' stated beliefs and their classroom practices. Simmerman et al. surveyed 112 K-6 teachers to examine how they perceived process writing instruction. Overall, the teachers reported valuing process writing to a greater degree than they described using it in their actual classroom practices. Brindley & Schneider used surveys to assess fourth-grade teachers' perceptions of writing development and instruction. They found contradictions in teachers' stated beliefs about writing development and their actual instructional practices. For example, some teachers believed that drawing, talking, and playing were valuable and integral parts of children's writing processes and literacy development, yet they did not allow for such practices in their classrooms. The authors cite the demands of the required state curriculum and writing test as a possible source of the conflicts between teachers' beliefs and practices.

Street (2003) also documented the impact of teachers' writing attitudes on classroom practice. Using questionnaires and interviews with the teachers, their supervisors, and their methods course instructors, Street grouped five pre-service middle school teachers into three categories based on their self-confidence as writers: reluctant writers; developing writers; and confident writers. By observing each of these teachers as they taught writing lessons in their practice teaching placements, Street was able to draw tentative connections between their attitudes as writers and their practices as teachers. Not surprisingly, teachers' self-confidence as writers did influence their practices in teaching writing. The confident writer in the study, who wrote extensively for pleasure and hoped to one day be a published author, was able to garner greater levels of student excitement for writing and readily shared her own writing with her students. The teacher classified as a reluctant writer, on the other hand, viewed writing with great personal distaste. She had experienced little success writing in her own schooling, and generally believed that writing was an innate ability that could not be taught. This attitude impacted her teaching considerably as she presented writing to her students as a chore rather than a

source of enjoyment and learning. This attitude toward writing instruction was noted by both the researchers, university supervisor, and mentor teacher.

In light of such findings about the often negative attitudes and experiences writing teachers bring with them to the classroom, there have been a variety of studies that have proposed ways to change such negative attitudes and examined the effect of such interventions. In general, these studies have emphasized the need for writing teachers to engage in supportive and validating writing experiences for teachers to counter the largely negative and critical apprenticeships of observation that so many teachers report (Frager, 1994; Power, 1997; Street, 2003). One major site of such research has been the various Summer Institutes of the National Writing Project (NWP), an organization that aims to improve writing instruction through providing professional development to writing teachers (“About NWP”). One key element of the NWP’s philosophy is that teachers’ writing practices are a key part of their success as teachers. As a result, peer writing groups form a central element of their professional development model. Research on the effect of such peer writing groups has generally found that writing intensively and sharing their writing in a workshop setting increased teachers’ self-confidence as writers (Whitney, 2008, 2009) and gave them a new perspective on writing as a process and tool for learning (Whitney & Friedrich, 2013). Such increased confidence and new perspectives, along with supportive professional networks created within the peer writing groups, contributed to teachers’ reported sense of increased empowerment, confidence, and control in their teaching (Brachter & Stroble, 1994; Kaplan, 2008; Stankevich, 2011; Dierking & Fox, 2012, Pella, 2011).

This increase in teachers’ writing confidence has also been shown to have a positive effect on teachers’ instruction and student achievement. Whyte et al. (2007) surveyed writing teachers and found that those who participated in the NWP wrote more than non-NWP teachers. Moreover, the amount teachers wrote was positively associated with student writing achievement. Pritchard (1987) also supports the effectiveness of this approach. By comparing the writing achievement of students whose teachers had participated in the NWP and students whose teachers had not, Pritchard was able to demonstrate that the students of NWP-trained teachers achieved a statistically significant gain in writing scores.

In addition to the need for more sustained writing practices and positive experiences as writers, several scholars have argued for particular kinds of writing experiences as important for teachers. Reid (2009) advocates for a pedagogy that focuses on immersing preservice teachers in writing that is "difficult, exploratory, or critically effective" (p. 198). Based on textual evidence in the form of commentary from six cohorts of graduate composition pedagogy students, Reid argues that such writing assignments push students, who are often talented writers who have never before struggled with writing, to develop empathy for their students and to meaningfully engage in the writing process, perhaps for the first time. Krest (1990), Gardner (2014), and Locke (2015) all advocate for critical reflection of their own writing histories and practices as a means of increasing teachers' self-confidence as writers and efficacy as teachers. Krest further argues that becoming a reflective writer, "one who is willing to look at my own techniques (successful or unsuccessful) as well as face my own frustrations" helped her to empathize with her students' experiences and to personalize concepts from writing process theory (p. 18). In an example of implementing challenging and reflective writing experiences as elements of writing teacher preparation and development, Bentley (2013) describes an "unfamiliar genre project," in which K-12 English Language Arts (ELA) were required to research, write, reflect on, and design curricular materials for teaching an unfamiliar genre. Bentley's findings demonstrate that the project pushed teachers to reflect critically on their beliefs about the purposes of teaching ELA and enabled them to better empathize with their students' confusion, fear, and frustration when encountering an unfamiliar form of writing.

What all of these proposals have in common is a strong emphasis on writing teachers' identities and practices as writers. By impacting how writing teachers write, experience writing, and reflect on their writing, teacher educators hope to impact their writing attitudes and beliefs concerning writing and, by extension, their practices as writing teachers.

Teachers' developing theories of writing and writing instruction

At the university level, while there is still concern about teachers' writing attitudes and identities, a great deal more attention is paid to how novice writing teachers, particularly graduate student instructors of first year composition (FYC) conceptualize

their teaching. Much of this research is particularly interested in tracing how teachers construct personal theories of writing and writing instruction in response to the theories and disciplinary knowledge presented to them in the course of their teacher training, particularly the ubiquitous composition seminar course required for so many new teaching assistants and instructors.

In a landmark book length study in this vein, Bishop (1990) examined the learning experiences of five experienced writing teachers enrolled in a nontraditional PhD program in rhetoric. The program allowed teachers to take classes and complete their degrees while simultaneously teaching composition full time. Bishop's ethnography traces their experiences as they encounter new perspectives and theories regarding composition instruction in the pedagogy seminar. The vision of writing pedagogy presented in the pedagogy seminar was deeply process-oriented and student-centered and emphasized a workshop approach to writing instruction. Also, significantly, the orientation of the curriculum and the seminar professor was what Bishop refers to as "convergent" model of teacher training. The pedagogy seminar professor believed that the teachers in his class would be current-traditional teachers, and the professor's explicit goal was for these teachers to "convert" to this new, process-oriented pedagogy (p. 11). Evidence of such conversion in the form of a required curriculum revision project utilizing the principles advocated in the seminar was an important determinant of the teachers' course grades.

While all the teachers in the study considered themselves "more process paradigm oriented than their colleagues" (p. 5) even prior to taking the seminar, this orientation to writing advocated by the seminar professor still conflicted in many ways with their current teaching practices as well as their beliefs about writing instruction. Many were resistant to the expectation that they "convert" to process-pedagogy, though they accommodated the professors' expectations in order to receive a good grade on their final curriculum development project. As the teachers took the theories and perspectives from the pedagogy seminar to their writing classes, they filtered what they were learning through their personal constructs and private theories (as opposed to the theories they publicly espoused) of writing pedagogy. This filtering greatly impacted how they integrated process pedagogy into their specific teaching contexts. In this process of

integration, teachers' private and public theories of writing pedagogy were negotiated and adjusted.

A similarly complex picture of resistance and adaptation of valued theories of writing was found by Farris (1996). Like Bishop, Farris's study also highlights the diverse knowledge and beliefs teachers draw on to develop their own working theories of composition. Farris used classroom observation, teaching logs, interviews, and course material to examine how four first time teachers of freshman composition interacted with composition theory, programmatic factors like the assigned textbook, and students as they constructed their own theories of composition. The program in Farris's study was deeply invested in expressivist pedagogy, particularly as instantiated in the required process-oriented textbook. Much of the teachers' development of a theory of composition, then, centered on their adoption, modification, or resistance to this model of the teaching of writing.

In addition to the individual narratives of the teachers' changing beliefs and practices, Farris identifies two primary themes that emerged in all the teachers' experiences. The first theme related to the limitations of the expressivist approach to the writing process advocated by the required course textbook. All four of the teachers, to varying degrees, came to question and resist this writer-focused emphasis on self-discovery in favor of a more socio-rhetorical approach to composition. This movement was often motivated by the students' difficulties managing the competing demands of self-expression and audience awareness in the writing assignments of the course. Additionally, all the teachers approached the teaching of the writing course not from a coherent theoretical position, as much composition scholarship would assume or hope, but from a patchwork of personal experiences, beliefs, theories, and attitudes which they worked to integrate with the public theories and values of the program and discipline.

Ebest (2005) more explicitly addresses the issue of resistance in her study examining how graduate teaching assistants take up the composition theory from their graduate seminars and how their response affects their teaching and their students. The case studies presented from her five-year longitudinal research project highlight that new TAs are often resistant to the pedagogical expectations and values of their particular programs, which often conflict with their own expectations and experiences as students.

While most of the graduate students in the study were eventually able to overcome their feelings of resistance, a small subset were not. Ebest presents these teachers' case studies and concludes that their ongoing resistance stemmed from the way the constructivist, process-oriented pedagogy they encountered challenged their gendered personal concepts and sense of self-efficacy in ways that could not be overcome in the course of the seminar.

In all of these studies, there is a strong theme of teachers' resistance to theory and to the process approach to teaching writing into which these programs were attempting to socialize students. This issue of resistance has been taken up by several additional scholars in theorizing the composition practicum (see Dobrin, 2005 for several examples). While much of the early work on resistance focused on understanding resistance in order to overcome it, Welch (1993) explicitly questions what she calls the "conversion" metaphors inherent in much of this work on TA training. In particular, Welch reflects on the culture of writing teacher preparation at "University B," which positioned writing teachers as "converts" to a particular vision of teaching, a vision that alienated Welch and four other resistant teachers – eventually causing them to resign their assistantships and withdraw from the program. After leaving the program, which advocated (and required) acquiescence to a combative, social-constructivist model of academic discourse and education, Welch returned to her previous university with its more expressivist, process-oriented approach to writing instruction. On returning to this university, Welch came to realize the assumptions and beliefs that underscored this culture "as assumptions, as historically situated and politically informed ways of constructing and understanding teaching and learning" (p. 399). While this realization was valuable for her, she still criticizes the model of teacher training at university B for framing teacher learning as "a simple two-way pull between power and freedom" in which "doubting, debating, questioning, revising" were both explicitly and subtly discouraged and denied, leading four other graduate students, who would not or could not "convert," to not only leave the university, but to leave the profession for good (p.400).

A critical attitude toward the preparation and support offered to graduate teaching assistants also characterizes Restaino's (2012) study, which followed four graduate students through their first semester teaching writing at a large public university.

Restaino draws on the political theories of Hannah Arendt to illuminate how graduate students experience the teaching of writing as both labor, in which graduate students engage in a never-ending stream of activity devoted to simply "staying alive" in the classroom, and the more empowering experiences when their activity leads to moments of brilliance, ingenuity, and resistance that are made concrete as work and public as action (pp. 15-16). Restaino argues that graduate students' efforts to simply survive their first semester of teaching can limit their opportunities to reflect on their practice in meaningful ways. As a result, after surviving their first semester, teachers will likely have increased confidence, but this confidence does not reflect any actual depth of knowledge or criticality about the nature of composition theory or pedagogy. Instead, it is often the case that in their "early efforts to survive, to stay afloat, new teachers learn to teach writing in a way that undermines the potential for enduring, lasting contributions to instruction, even to their own development as teachers" (p. 22).

Restaino's study further demonstrates the role of new graduate students' knowledge of writing more generally, and particularly of composition theory, in their considerable anxiety about teaching. The teachers in Restaino's study, most of whom were creative writing and literature students, had deeply conflicting personal experiences with writing. Though they had all entered graduate school with at least some belief in their efficacy as writers, the new demands of graduate level writing shook their confidence as writers even as they were taking on the responsibilities of teaching writing. Additionally, while they read composition theory in their practicum course, the fact that this practicum was concurrent with their first semester of teaching resulted in them applying "snapshots of theory" "rather uncomfortably, into the practical everyday needs of their first classrooms" (p. 26). In particular, process theories of writing were introduced in a cursory way in the practicum. However, because the teachers did not fully understand these theories even as they implemented them, process writing, in the form of cycles of required prewriting, drafting, revision, and teacher commentary, became meaningless, time consuming labor when translated into teachers' classroom practice. Restaino additionally describes the dangers of placing graduate student instructors too quickly and completely into positions of classroom authority that they are ill-equipped to take on. Instead, she advocates for new modes of preparing and mentoring graduate

student writing teachers that grant them "permission to be students' even as they are teachers" through inviting "them into a more sheltered space in which they can figure out their own relationship to the fraught task of knowledge making in composition" (p. 113).

Estrem & Reid (2012), also advocate for a more gradual and long-term vision of TA preparation and development. Their study used surveys and anonymous interviews over the course of three years at two research sites to examine how novice TAs experience their teaching. While the teachers did note the importance of formal study in the development of these principles, such formal study was only one of a variety of influential factors that also included their personal experiences as learners and writers, teaching and tutoring experiences, and the community of peers and mentors within their teaching programs. One major finding of Estrem & Reid's study is that the TAs experienced learning to teach writing as a long and recursive process in which they needed multiple opportunities to explore their teaching practice and reflect on the meanings of their classroom experiences – something the interview protocols allowed the teachers in the study to do. While teachers' actual development is a long process, Estrem and Reid note that this process is "often obscured by the myths of quick competence on which learners, teachers, and institutions rely" (p. 450). Given this trend, the authors argue that mentors "create more opportunities for all TAs to solve (or at least untangle) their teaching "challenges" through reconsidering them, through exploring multiple angles and approaches, and through drawing on resources that they have readily available to them" (p. 466). McQuitty's (2012) qualitative case study examining how one teacher learned to teach writing through her engagement with the activity systems of her teacher education program and her first teaching job also points to the emergent and situated nature of learning to teach writing.

Summary of L1 writing teacher cognition literature

To recap, two major themes emerge in the literature on L1 writing teacher cognition. First, particularly in K-12 focused studies, there is a significant amount of attention paid to the teachers' writing practices, experiences, and self-confidence. This emphasis on teachers' own writing practices and experiences as a central component of writing teacher preparation is given institutional endorsement in the *CCCC Position Statement on the Preparation and Professional Development of Teachers of Writing*

(Conference on College Composition and Communication, 1982). The recommendations in this statement, which were endorsed in 1982 at the height of the process writing revolution, place a heavy emphasis on the key place of writing experiences in the preparation of writing teachers. Among their recommendations that teachers study theories of process writing and gain practice in responding to student writing, they devote a significant amount of attention to teachers' own writing practices, recommending that teacher and continuing education preparation programs provide opportunities for current and future teachers "to write," "to read and respond to the writings of students, classmates, and colleagues," "to become perceptive readers of our own writing, so that we can ask questions about, clarify, and reshape what we are trying to express," and "to experience writing as a way of learning" (para. 1-5).

In addition to the findings related to teachers' identities as writers in the K-12 literature, research at the post-secondary level has demonstrated the long and often fraught process of learning to teach writing. In particular, such research has illustrated the complicated and shifting relationship between teachers' personal theories of writing and the public theories of writing that are espoused, promoted, and sometimes required by the teachers' professional and institutional communities. In general, such research has moved from a focus on overcoming teachers' resistance to theory to taking such resistance seriously. More recent research in this vein has pointed to the need to recognize the long, recursive, and emotionally charged nature of learning to teach writing. Additionally, such research has advocated for programs that give teachers the opportunity to engage with and negotiate the relationship between theory and practice through ongoing reflection and sheltered participation in teaching practice.

L2 focused studies

Historically, L2 writing research has focused its scholarly attention almost exclusively on the learners and the curriculum of L2 writing rather than on teachers (Hirvela & Belcher, 2007). The majority of publications that do include a significant discussion of L2 writing teachers have primarily been concerned with theorizing the knowledge base needed for writing instruction generally and L2 writing instruction particularly and on offering models and resources for L2 writing teacher preparation courses. For example, the recent special issue of the *Journal of Second Language Writing*

focusing on L2 writing teacher education included an article arguing for genre-based pedagogy as a central element of the knowledge base of L2 writing teachers (Hyland, 2007) as well as articles describing practices for preparing L2 writing teachers to respond to student writing (Ferris, 2007), teach academic vocabulary (Coxhead & Byrd, 2007), and assess student writing (Weigle, 2007). A variety of resources designed to provide current and future L2 writing teachers with a theoretical introduction to the discipline as well as a variety of pedagogical strategies also exist (Casanave, 2004; Ferris & Hedgecock, 2005; Canagarajah, 2002; Hyland, 2003b).

Such resources are clearly valuable for both novice L2 writing teachers and L2 writing teacher educators, yet there is still a need for empirical research examining what L2 writing teachers know and believe about teaching L2 writing and crucially how they acquire such knowledge, in other words, research on L2 writing teacher cognition. The body of research that addresses these critical questions is small, but growing. The research on L2 writing teacher cognition is generally more eclectic in nature than that of the L1 writing scholarship. As a result, the themes and categories that exist in this literature are less defined.

L2 writing teachers' belief, attitudes, and practices regarding error correction

Like the L1 literature, much of the existing research on L2 writing teacher cognition has focused on understanding teachers' beliefs and attitudes regarding writing instruction. Yet, while the L1 literature has more broadly emphasized teachers' attitudes toward writing, the L2 literature has tended to focus more specifically on some of the more contentious and highly-researched aspects of the teaching of L2 writing. Most notably, there is a fairly large body of literature examining teachers' beliefs and practices regarding giving written feedback to students (Lee, 2004; Evans, Hartshorn, & Tuioti, 2010; Min, 2013), how teachers' level of experience influences their feedback beliefs and practices (Junquiera & Kim, 2013), how teachers' beliefs compare to students' beliefs and to teachers' actual practice (Lee, 2003, 2009; Montgomery & Baker, 2007) and how teacher education can impact these beliefs and practices (Shin, 2002). One common finding of such studies is that teachers are often conflicted about their own error correction practices. For instance, Montgomery and Baker (2007) found that while teachers believed they focused on global issues in feedback more than local issues, an

examination of their actual feedback practices revealed the opposite to be true. Lee (2003) investigated L2 writing teachers' perspectives and practices in regards to error feedback using surveys and follow up interviews. While the teachers spent a significant amount of time marking errors comprehensively and saw it as required teaching task, they doubted its effectiveness. These studies highlight the relationship between teacher beliefs and teacher practice as being far from straightforward and instead marked with conflicts between teachers' beliefs and their actual practices.

L2 writing teachers' conceptions of writing and writing instruction

Other studies have investigated teachers' more generalized conceptions of writing and writing instruction, particularly seeking to classify teachers' conceptions of their teaching in relation to the major theoretical traditions of writing instruction such as the largely form-focused current traditional approach, the process approach, and the discourse community or genre approach to writing instruction (Silva & Leki, 2004). Khanalizadeh & Allami (2012), for example, surveyed 122 EFL teachers in Iran to determine whether their beliefs most closely matched formalist, process, or social views of writing. They found that while the teachers held a variety of views simultaneously, the form-based approach was dominant. Yang & Gao (2013) used class observations, interviews, and analysis of course materials to examine the beliefs and practices of four experienced EFL writing instructors at a Chinese university and classified their beliefs and practices as more or less process or product oriented. While all four teachers conceptualized writing as a process of thinking and agreed that product and process should be integrated in writing instruction, they emphasized different aspect of writing in their instruction with some more focused on written products and linguistic accuracy and others on process activities such as brainstorming and outlining. Shi & Cumming (1995) and Cumming (2003) categorized seven experienced teachers' conceptualizations of their course content, or their overall beliefs and knowledge about the goals and curriculum of the courses that they taught, based on the relative personal importance they assigned to various aspects of L2 writing instruction, namely rhetoric, language, process, and content. They found that the teachers displayed unique and consistent conceptions of L2 writing instruction and that these conceptions had a powerful impact on how teachers responded to a curriculum change in their institutional context.

A variety of studies indirectly address the issue of the source of teachers' conceptions of writing and writing instruction (Shi & Cumming, 1995; Winer, 1992; Shin, 2002, 2003; Lee, 2010, 2013). Yigitoglu & Belcher (2014) address this question more directly, investigating not only how teachers conceptualize L2 writing instruction but more particularly how their own literacy experiences in their mother tongues and additional languages impact their beliefs and practices as teachers. Both teachers in their study, one a bilingual native English speaking teacher and the other an English-as-an-additional-language (EAL) speaker, saw connections between their literacy experiences and their teaching but focused differently on their L1 and L2 experiences. The bilingual teacher whose mother tongue was English drew on both her L1 and L2 (Spanish) writing experiences, while the EAL speaking teacher who had majored in her L2 and completed most of her writing in her L2 tended to invoke her L2 literacy experiences more frequently.

Studies of L2 writing teacher education and professional development

While the studies cited above have largely focused on describing teachers' knowledge and beliefs regarding L2 writing instruction, several studies have also examined how the teacher beliefs, attitudes, and practices such as those noted in the above studies can be addressed and changed by teacher education. Winer (1992) analyzed student journals a TESL writing practicum to see how specific activities and reflection on these activities impacted the teachers' largely negative attitudes toward writing and writing instruction. Shin (2002) describes how an activity requiring teachers to write in a second language changed teachers' perceptions regarding error correction and Shin (2003) reports on the use of reflective journals in a writing methods course for MA TESOL candidates. She argues that the journals, along with required student-teacher writing conferences, helped the teachers to confront their knowledge and beliefs about writing instruction. This allowed the teachers to adjust their beliefs about teaching L2 writing and develop their own writing identity.

Writing teacher identity is also a major theme in Lee's research. Lee (2010) used interview and classroom data from an MA level class for in-service writing teachers to investigate the learning of four EFL teachers from Hong Kong. She found that the course promoted teacher learning in a variety of areas. First, through engagement with readings

and class activities such as a classroom research project, the teachers were encouraged to problematize the conventional approaches to writing instruction in their institutional contexts. The findings also emphasize the important role the classroom research project played in teachers' learning. By studying their own teaching practices, the teachers were able to reflect on their beliefs and test out the new ideas about writing instruction presented in the course readings. As they attempted to apply these new concept to their teaching practice, the teachers were also able to reflect on how to integrate the new, idealistic visions of writing instruction with the realities of their teaching contexts. Engaging in regular writing practice in the class through required weekly posts on readings also impacted the teachers' learning in the class. Finally, through the course, the teachers were invited to take on a new identity as "writing teachers" rather than just "language teachers." Lee (2013) further discusses the significance of this identity move, demonstrating how this new identity was discursively constructed as the teachers moved through the various contexts and practices of their professional lives. By encouraging teachers to reflect on their multi-faceted identities, Lee argues, teacher educators can encourage teachers to develop their preferred identities so that they are able to maintain these identities as they leave the teacher education program and move into their professional roles and contexts.

An additional and growing line of research examining the effectiveness of writing teacher education efforts focusing on genre analysis and genre-based writing pedagogies, particularly those based in Systemic Functional Linguistics (SFL), has investigated how teacher education on these theories can impact the developing knowledge, beliefs, and practices of both pre-service and in-service writing teachers. Gebhard, Chen, Graham, & Guanawan (2013) report on the learning evidenced by the curriculum design projects completed by ten MA TESOL students as part of a required course in language and language learning. The case study participants' conceptualization of grammar underwent a significant shift from sentence level and form-focused to discourse level and focused on meaning and function. However, the participant teachers' understanding and application of the SFL concepts they studied was significantly influenced by their schooling histories and imagined future teaching contexts. In a more in-depth look at one teachers' use of SFL in literacy instruction, Gebhard, Harman, & Seger (2007) trace how one teacher used

concepts from SFL to design literacy instruction for her L2 5th grade students. In this study, the teacher was able to use SFL concepts to help her students unpack the dense academic language of their standardized exam questions and to use professional writing to successfully advocate for the reinstatement of afternoon recess, which had been suspended to provide more time for test preparation.

Teachers' perspectives on situated L2 writing pedagogy

A final theme evident in the literature on L2 writing teacher cognition examines how teachers' conceptions and practices of writing instruction interact with their institutional and cultural contexts. These studies are particularly common in EFL writing contexts as researchers seek to understand how EFL teachers take up, resist, and adapt Western pedagogies (predominantly process writing) in their local contexts. Many of these studies have focused on the particular material, institutional, and ideological challenges EFL teachers face when attempting to implement such pedagogies in new contexts. You (2004), for instance, discusses the adoption of Western writing pedagogies in China. Through observing and interviewing EFL writing teachers at a Chinese university, You found that many contextual factors such as the nationally unified writing syllabus, required standardized assessments, large class sizes, and low economic status of English teachers limited their adoption of Western, process-oriented approaches to writing instruction. Instead, teachers incorporated selected elements of such pedagogies into their predominantly form-focused approach to teaching writing.

Similar contextual factors, particularly requirements that students complete a minimum number of compositions and the presence of high stakes writing assessments, impacted teachers' conceptions of writing in Sengupta & Falvey (2010). The researchers used surveys, interviews, classroom observations, and document analysis to examine how English language teachers in Hong Kong conceptualize and teach L2 writing and particularly how they adopted, or didn't, a process oriented view of writing instruction. They found that teachers focused almost exclusively on sentence-level language concerns with little attention paid to discourse or cognitive aspects of writing. Follow up interviews demonstrated that both teachers' knowledge and contextual factors contributed to this emphasis on grammar. In terms of teacher knowledge, the researchers found that while the teachers had some understanding of writing as a process, they largely lacked

knowledge of the discourse features of writing, while the particular institutional factors cited above also influenced this conception.

Taking up the issue of the impact of context on teachers' beliefs and practice in a more positive light, Tsui & Ng (2010) examine the pedagogical strategies of two L2 writing teachers in Hong Kong. Their study demonstrates how the teachers' strategies for writing instruction emerged as they responded to the perceived possibilities for learning that were situated in the culture of the learners and cultures of the institutions in which they worked. The article particularly focuses on the teachers' approaches to using peer response and how they adapted this pedagogical strategy to appeal to their students' cultural values of self/group relationships and face, and to the demands of their school curriculum in which peer response was used as a means to increase students' engagement in writing process approaches without overloading teachers who were required to assign, respond, and grade many product-oriented writing assignments in addition to the occasional process assignment. Tsui & Ng frame these teachers' adaptations of process pedagogy not as divergent applications of the principles of process writing, but as skillful and reasoned pedagogical choices.

The ability to recontextualize and adapt pedagogical alternatives displayed by the teachers in Tsui & Ng's study also constitutes one of the characteristics of expert teachers in Tsui's (2003) book length study on the characteristics and development of teaching expertise. Tsui presents case studies of four EFL teachers (who taught writing among other subjects) with different levels of experience, focusing on their developing expertise as teachers. Tsui uses these case studies to argue for a model of teaching expertise that conceptualizes teacher expertise as a process rather than a state. She argues that one critical feature of expertise that differentiates expert teachers from novices is the way experts develop and hold knowledge. In other words, while expert and non-expert teachers often did very similar things in the classroom, expert teachers conceptualized these activities differently than their novice colleagues. Expert teachers' knowledge of content, students, and pedagogy was generally more integrated and more situated in the local context. Additionally, expert teachers are able to see more options and possibilities beyond those immediately present in her local teaching context and are also more capable

at "theorizing" from their specific teaching experiences and "practicalizing" theoretical knowledge.

In the context of L2 writing instruction in the U.S. university setting, Childs (2011) presents a case study of a novice ESL writing teacher, Mark, as he "wrestles with his conception of what it means to be an L2 teacher" (p. 67). Using interviews, teaching observations, stimulated recalls, teaching journals, audio recordings of TA meetings, and collected lesson plans, Childs traces how Mark's conception of teaching developed as he moved through and participated in various activity systems that included his own remembered language learning experiences, the ESL writing program, and his dual roles as an MA TESL student and L2 writing teacher. Childs' findings point to the long, recursive, and emotionally charged nature of teacher development and highlights the importance of supportive mentoring that provides a consistent conceptual vision of what it means to be an L2 writing teacher.

Summary of L2 writing teacher cognition literature

As noted in the introduction to this section, the research on L2 writing has tended to be concerned with a wider range of themes than the L1 literature. The focus on written feedback and error correction, for instance, is one area of concern that is not represented as fully in the L1 literature. Another noteworthy theme that is particularly apparent in the L2 literature is the emphasis on the relationship between teachers' instructional contexts, their beliefs, and their teaching practices. Given the wide range of contexts in which L2 writing instruction is undertaken, such a focus is particularly relevant and necessary. Such research has demonstrated that teachers' beliefs and practices are shaped and sometimes constrained by the demands of the contexts in which they work. The ability to creatively negotiate these demands, moreover, has been demonstrated to be a central component of teacher expertise.

Summary and Future Directions for Writing Teacher Cognition Research

Taken together, the research on L1 and L2 writing teacher cognition suggests some general findings as well as some gaps that future research might address. First, both the L1 and L2 literature share a strong interest in examining teachers' beliefs, attitudes, and conceptions of writing and writing instruction. Teachers' attitudes toward writing and writing instruction have generally been shown to be largely negative (Gardner, 2014;

Bausch, 2010; Frager, 1994; Street, 2003; Winer, 1992; Shin, 2002, 2003; Lee, 2010, 2013). Such research has also pointed to the lingering effect of teachers' experiences as writing students on their attitudes and practices as both writers and teachers of writing (Frager, 1994; Hall & Grisham-Brown, 2011). Though the shared finding that teachers often come to teaching with such negative experiences and attitudes is troubling, the demonstrated effectiveness of writing teacher education and professional development to change such attitudes is an encouraging finding shared by both L1 and L2 literature (Frager, 1994; Power, 1997; Street, 2003; Whitney, 2008, 2009; Winer, 1992; Shin, 2002, 2003; Lee, 2010, 2013).

An additional shared concern for both the L1 and L2 literature is the relationship between teachers' personal theories of writing and the theories they encounter in the professional scholarship. Such relationships become particularly fraught when teachers are covertly or explicitly asked to "convert" to a new theoretical orientation to writing (Bishop, 1990; Farris, 1996; Ebest, 2005; Welch, 1993; Restaino, 2012). The transplanting of theories of composition developed in the United States to new local contexts, particularly in the case of EFL writing practices, further complicates teachers' relationships to such theories (You, 2004; Sengupta & Falvey, 2010; Tsui & Ng, 2010).

Yet while these results are illuminating, there are several limitations associated with them. First while teachers' attitudes and beliefs regarding writing instruction has been relatively well investigated, teachers' *knowledge* of their subject area and how to teach it has received considerably less attention. The studies that have investigated this question have tended to compare teachers' conceptions of writing instruction to pre-established theories of composition. These L1 and L2 studies have demonstrated the complicated, conflicting, and resistant nature of teachers' relationships to composition theory. Research on such content-specific knowledge, while not ignoring the importance of teachers' beliefs and values, would be of value.

As second limitation relates to the dominant focus on process approaches to writing instruction prevalent in the literature. This can be explained partly by the age of many of the larger studies (i.e. Bishop, 1990; Farris, 1996) which were conducted during the late 1980s and early 1990s as the process approach was still ascendant in much of composition pedagogy. Additionally, the high representation of L1 studies examining the

K-12 context and studies from the EFL context in the L2 literature explains some of this emphasis as the process approach is still extremely influential in both contexts. While these studies certainly still have value, this preoccupation with process approaches does highlight a significant gap in the literature. Aside from the work of Meg Gebhard and her colleagues examining how teachers use SFL genre theory to teach, we know very little about how L2 writing teachers engage with post-process pedagogies such as genre-based writing instruction. Given the recent rise in the popularity and influence of such approaches in a variety of L2 contexts (Hyon, 1996) and the recognition among genre researchers of the uniquely central place teachers' knowledge holds in such approaches (Bazerman, 1994; Hyland, 2003a; 2007; Martin, 2009), such research could provide particularly valuable information for teacher educators preparing writing teachers to teach in a post-process or genre-based model.

In addition to the need for research that examines how teachers negotiate with post-process approaches to writing instruction, particularly genre-based approaches, there is an additional need for research that places a greater emphasis on connecting teacher thinking to classroom practice. Largely because of the broad focus on beliefs and conceptions of writing held by writing teachers, the majority of the studies available use a relatively wide methodological lens. Many rely exclusively on survey and interview data or documents such as literacy narratives produced by teachers in the context of preservice preparation or professional development initiatives (i.e. Gardner, 2014; Bausch, 2010; Simmerman et al, 2012; Hall & Grisham-Brown, 2011; Winer, 1994; Shin, 2002, 2003; Lee, 2010, 2013; Tsui & Ng; 2010). While some studies were able to include an element of classroom observation (i.e. Bishop, 1990; Farris, 1996; Restaino, 2010; Street, 2003; Shi & Cumming, 1995; Yang & Gao, 2013; You, 2004) these observations were limited in that all of the researchers' classroom data were in the form of field observations. While these observations, which were not video recorded, can provide a broad view of the classroom, they do not allow for detailed examinations of teachers' classroom interactions.

Finally, though both L1 and L2 studies have emphasized learning to teach writing as a long process in which teachers' professional teaching contexts play a particularly important role, there are relatively few studies that examine how writing teachers

continue to develop beyond the confines of teacher preparation classes or professional development programs. Even when teachers' classroom context are examined, such examinations of teaching tend to be conceptualized primarily as a way to demonstrate how teachers incorporate learning from teacher education coursework and professional development into their classroom practices. Thus writing teachers' classrooms have been examined primarily as a site where learning from other contexts is applied rather than a context in which teachers develop new knowledge. This is particularly true in L2 writing teacher cognition research, where no studies of college level writing teachers' learning in teaching practice exist.

The present study seeks to address these gaps by examining L2 writing teachers' subject-specific knowledge as it develops and is used in the context of classroom practice. To inform this project, I draw on the rich theoretical and research tradition on teacher knowledge in a broad range of fields. In the following section, I will review this literature, focusing particularly on the concept of pedagogical content knowledge, its extensions and critiques, and the relevant studies that have examined how it develops in and through the activities of teaching.

Teacher Knowledge

Prior to the 1980's the issue of what teachers know about teaching was not one that the educational research literature was particularly interested in answering. (see Galluzzo, 1999 for a good historical overview). The primary agenda for educational research in the 1960's and 1970's focused on the identification of generalizable strategies for effective teaching. In this line of investigation (sometimes referred to as "process-product" research) researchers identified variables in teacher behavior and correlated them with student achievement, particularly as measured by standardized exams. The research on teacher wait time is a good example of this sort of research (see Tobin, 1987 for a review). In this line of research, the focus is not so much on what teachers know as simply on what they do. So, in wait time research, for example, it did not matter whether or not teachers knew why longer wait times were beneficial or could articulate the considerations that went into their decisions to wait more or less time for particular questions. All that mattered was their ability to perform the effective teaching behavior. Teachers' knowledge of such behaviors would likely be held consciously in the form of

rules, and teachers were expected to acquire knowledge of such effective teaching through direct instruction in teacher education programs.

While there were certainly dissenting voices to this view of effective teaching, these voices did not start to become prominent in the literature till the late 1970's and early 1980's. Research into teacher decision making (see Calderhead, 1981 for an example), reflective practice (Schön, 1995), practical knowledge (Elbaz, 1981, 1983), personal practical knowledge (Clandinin, 1985; Clandinin & Connelly, 1986), and pedagogical content knowledge (Shulman, 1986, 1987) all flourished during the 1980s.

Of particular relevance for the present study is Shulman's (1986, 1987) concept of pedagogical content knowledge (PCK). This construct has proven to be extremely influential in teacher cognition and education research, particularly in the fields of science and math teacher education. The remainder of this section will examine theoretical foundations of PCK in depth, as well as review relevant literature that has extended and critiqued this theoretical construct. Additionally, research that has studied how teachers develop PCK, particularly in the context of teaching practice, will be examined. The section will close with a brief discussion of how the present study will build on this literature while also addressing some of the most significant critiques of the PCK framework.

Pedagogical Content Knowledge: The Foundation

In his presidential address to the American Educational Research Association in 1985, Lee Shulman made an important contribution to the development of the construct of teacher knowledge by refocusing researchers on the domain of teachers' subject matter knowledge. Though his work is most well-known for the concept of PCK, his actual argument in this and other related publications is actually much more complex. Moreover, his arguments regarding PCK cannot be properly understood without recognizing the ways they are embedded in the historical tradition of teacher knowledge research and the ways in which those research findings had been used politically.

Shulman's goal, articulated across multiple publications, (Shulman, 1986; 1987; Wilson, Shulman, & Richert, 1987) was to establish a knowledge base for teaching that makes teachers' knowledge of their subject matter central. He frames this argument in explicitly historical and political terms. The importance of the subject matter in

conceptions of teacher knowledge and expertise, Shulman (1986) argues, has a long historical tradition, but this tradition had been lost in the process-product research that characterized the 1960's and 1970's. In classical and medieval education, Shulman notes, and into the 19th century, content knowledge was emphasized (often over pedagogical knowledge) and, moreover, content knowledge and pedagogical ability were viewed as a unified form of teaching expertise. However, in the process-product research tradition, the knowledge of content had been largely ignored as researchers sought to generate generalizable findings on generic teaching behaviors like wait time. For Shulman, the focus on context-free teaching behaviors in the process-product research is not in itself a problem. It becomes a problem, however, when such research gets taken up by policy makers in setting standards for teacher certification and evaluation.

In response to these historical and political factors, Shulman (1986) and his colleagues in the "Knowledge Growth in Teaching" research project proposed a knowledge base for teaching that reincorporated the "missing paradigm" of content knowledge (p. 7). The exact categories of this knowledge base vary across Shulman and his colleagues' early publications. The most commonly cited version, however, is Shulman (1987) which identifies seven categories of teachers' knowledge: content knowledge, general pedagogical knowledge, knowledge of curriculum, pedagogical content knowledge, knowledge of learners and learner characteristics, knowledge of educational contexts, and knowledge of the purposes of education from a historical and philosophical perspective. In particular, Shulman's model emphasizes PCK as being "of special interest because it identifies the distinctive bodies of knowledge for teaching" (p. 8). PCK, according to Shulman, differs from content knowledge (CK). CK is composed of knowledge of the major findings, theories, and investigative procedures of a given field and is shared by both teachers and non-teaching experts in that field. PCK, in contrast, represents both the process and result of a teacher transforming content knowledge into pedagogically appropriate forms for students. As a result, PCK is the unique province of teachers. So, for example, an expert L2 writing teacher would have a categorically different sort of knowledge about writing than a non-teaching professional writer would possess. In addition to general content knowledge common to both, the teacher would possess knowledge of "the conceptions and preconceptions that students of

different ages and backgrounds bring with them to the learning” of L2 writing as well as “the most useful forms of representation, the most powerful analogies, illustrations, examples, explanations, and demonstrations” of L2 writing concepts for learners (Shulman, 1986, p. 9). This knowledge of content for teaching is PCK.

Theoretical Extensions of the PCK Framework

Shulman’s call to make the subject matter once again central to the study of teaching was quickly taken up by many researchers. The concept has been applied as a means of describing the unique knowledge of teachers in a variety of disciplines including science (Lee & Luft, 2008), mathematics (Krauss et al., 2008), music (Millican, 2013), and English language arts (Gudmundsdottir, 1991) just to name a few. While studies that have applied PCK in these ways have made significant contributions to the literature of their respective fields, they have not focused on extending or clarifying the theoretical construct of PCK itself. Instead, though the construct of PCK has been “widely used, its potential has been only thinly developed” with most studies” which have instead “assumed that its nature and content are obvious” (Ball, Thames, and Phelps, 2008, p. 389). Because of this lack of development in most studies, the following review will focus primarily on those studies that have attempted to develop the PCK concept itself, rather than just applying it in the study of some other central question.

In his original description of PCK, Shulman (1987) makes clear that it is a composite form of knowledge, one that “represents the blending of content and pedagogy” (p. 8). PCK draws on other categories within a teacher’s knowledge base. Shulman’s (1986) original descriptions of PCK cite several component parts, particularly knowledge of instructional representations of the content and knowledge of students’ common misunderstandings of a particular topic as components of PCK (pp. 9-10). In his 1987 article, he conceptualizes PCK more broadly as the “blending of content and pedagogy” without specifying the specific concepts this blended knowledge might include (p. 8). While Shulman emphasizes different sources at different times, what is clear is that PCK is a synthetic form of knowledge, created through combining and transforming different aspects of a teacher’s total knowledge base.

Much of the work that has been done to develop PCK as a concept, then, has focused on clarifying and adding to the categories of the knowledge base from which

PCK is formed. Some of these studies have examined the component parts of PCK identified by Shulman, complicating and deepening our understanding of the nature of what teachers know and need to know about content, pedagogy, and students to form PCK. Other studies have proposed new categories and subcategories of knowledge that teachers draw on in the process of transforming their knowledge of a subject for teaching.

One of the major trends in the research that has developed the concept of PCK by adding to our understanding of its component parts has been a focus on the role of the teacher herself in the transformation of content knowledge and general pedagogical knowledge into PCK. In a move similar to concurrent conceptions of teacher knowledge as deeply personal (Clandinin, 1985; Clandinin & Connelly, 1986; Elbaz, 1981, 1983), these studies have emphasized that teachers are not merely cognitive beings working in a purely rational way with the content that they teach. Rather, their individual values, emotions, visions, and histories shape and impact not only how they understand content for themselves, but how they transform that content for teaching.

Regarding the role of values in PCK, Gudmundsdottir (1990) shows how four high school history teachers' value-laden orientations toward their subject matter had an impact on their PCK and their classroom practice. The study shows how these teachers created personal "pedagogical models" based on their value positions in relation to their content knowledge. Those models then impacted how the teachers selected, adapted, and supplemented curricular texts to lead students to the version of knowledge they believed was important and valuable. In other words, the values that teachers held toward their subject matters, though not a factor originally considered in Shulman's model, had a major impact on both the development and nature of their pedagogical content knowledge.

Similarly to Gudmundsdottir's treatment of values, Grossman's (1989, 1990, 1991) research comparing the development of PCK among six novice English language arts teachers entering the teaching profession with or without professional teacher education coursework has demonstrated the importance of teachers' values and beliefs regarding the purpose of teaching their particular subject. In her study, Grossman found that even though the teachers all had similarly high levels of subject matter knowledge, they had very different conceptions of what it means to teach English. The difference

between these two sets of teachers was much more fundamental than just possessing more or less developed general pedagogical knowledge. They displayed deeply different conceptions of the value and purpose of English as a subject and their role and responsibilities as teachers of English. In response to these findings, Grossman created a revised formulation of PCK that included teachers' values as a central component.

Together, these studies with their shared focus on the impact of values, beliefs, and emotions in the process of teaching content are significant because they demonstrate that combining content and pedagogy is not only a cognitive act, but also as a deeply value-laden and emotional enterprise for teachers. The activity of transforming content for teaching is not some clinically rational process. Rather, teachers experience it as fraught with competing values, visions, goals, and emotions that must be delicately balanced. As Hammerness (2006) notes, teachers often experience their obligation to the discipline they represent and their responsibility to respond to the needs of their students as being contradictory demands. This sense of being pulled in two directions by the requirements of the content and the needs of the students is one that is frequently noted in studies of teacher thinking, even studies that do not focus specifically on content knowledge in teaching (Ball & Wilson, 1996¹; Elbaz, 1981, 1983; Grossman, 1990; Clandinin & Connelly 1995).

In addition to the expanded focus on the moral and affective components of teachers' PCK development, other research has focused on clarifying the nature of the content knowledge (CK) teachers transform into PCK. The work of Deborah Ball and her colleagues in the Mathematics Teaching and Learning to Teach and the Learning Mathematics for Teaching research projects represent a unique line of research in this vein. Focusing on math education, particularly at the elementary school level, their work has empirically investigated the nature of the content knowledge needed for teaching (Ball, 2000; Ball, Thames, & Phelps, 2008), how to meaningfully assess teachers' knowledge of their content for teaching (Hill & Ball, 2004, 2009) and how the quality and character of teachers' content knowledge impacts their educational practices and,

¹ Ball and Wilson (1996) focuses explicitly on this content, whereas the other studies mention it as an important, but not central, point.

ultimately, student achievement (Hill, Blunk, Charalambous, Lewis, Phelps, Sleep, & Ball, 2008; Hill, Rowan, & Ball, 2005).

Ball, Thames, & Phelps, (2008) most clearly demonstrates the importance of this research. The researchers note that teachers' knowledge of content, though nearly universally regarded as crucial, is not well-understood from a research perspective. Moreover, the lack of empirical research into nature of content knowledge and how it gets utilized in practice means that the majority of work in the PCK framework has been based on "ad hoc arguments about the content believed to be necessary for teaching" rather than empirically-based conclusions about the knowledge teachers actually need for their practice (p. 390). To address this shortcoming, Ball and her colleagues conducted empirical research to identify the tasks math teachers are commonly called on to perform as they teach and to classify the kinds of mathematical knowledge as well as knowledge of students and instructional methods needed to complete these tasks. They then created hypotheses based on these investigations and developed survey measures to further assess the content knowledge and PCK of mathematics teachers.

The results of this research are insightful. Based on their findings, the authors have been able to clarify the conceptualization of both teachers' content knowledge and PCK. In particular, the researchers have identified two different categories of content knowledge that the teachers drew on in their work. The first, *common content knowledge*, refers to the knowledge that teachers need and use on a regular basis but that is also used in settings outside of teaching. In writing, the ability to craft a coherent paragraph might be one example. The second category, *specialized content knowledge*, is a particular kind of content knowledge that teachers possess that is not typically used in other settings. However, unlike PCK, specialized content knowledge does not directly relate to either a teacher's knowledge of students or of instructional practices. Instead, the authors describe specialized content knowledge as an "unpacked" or "decompressed" form of knowledge (p. 400). To take paragraph coherence as an example again, though both teachers and non-teaching writers need to be able to craft a coherent paragraph, only teachers need to possess an "unpacked" knowledge of the various methods for crafting coherence as well as the shades in effect each method carries. An important aspect of developing teaching, then, is not only transforming content knowledge into PCK, but also unpacking one's

content knowledge to make it available for such transformation. This finding regarding the specialized content knowledge of mathematics teachers is one that the authors themselves describe as being an unexpected outcome of their research, and it is one that has significant implications for both research and teacher education.

Critiques of PCK Framework

In addition to the many studies that have applied and the relatively fewer studies that have extended the construct of PCK, several noteworthy critiques have also emerged in the literature. These critiques have tended to focus on problems related to how knowledge and the development of knowledge are conceptualized in both the initial framework of PCK and in subsequent research and policies emerging from this model. These critiques can be grouped loosely into two claims about the shortcomings of PCK—that it focuses on static forms of knowledge rather than dynamic thinking processes and on the individual rather than the role of community and context in knowledge.

The first major critique of the PCK framework and subsequent research has been that it reifies knowledge, treating it as static and stable, and as a result has not paid sufficient attention to the teachers' thinking and learning processes. These critiques have noted the lack of clarity and agreement regarding the definition of PCK in the research literature and have blamed much of this lack of clarity is the result of the ways in which PCK has been simultaneously viewed as both a static form of knowledge and an active, ongoing process of thinking and transformation (Sockett, 1987, Cochran, DeRuiter, & King, 1993; Fenstermacher, 1994; Hashweh, 2005). This conflation has limited our ability to use PCK as a tool to explicitly scaffold and assess teacher development (Park & Oliver, 2008) and has led to a research agenda that tends to focus “on knowledge at the expense of thinking processes” (Hashweh, 2005, p. 280).

Ellis (2007) represents this critique perhaps most incisively. Operating from a sociocultural and situated learning perspective, Ellis argues that the line of research he names “autonomous professionalism,” which includes much of the research in the PCK framework, has taken teachers' subject knowledge as a given. While other categories of teachers' knowledge, such as their knowledge of learners and pedagogy, are seen as necessarily dynamic and contingent, subject knowledge is conceptualized as “fixed and universal” (p. 450). The result of this dual conceptualization of professional knowledge is

that teachers' content knowledge is seen as "context-free [. . .] stable, prior, and universally agreed" even though subject disciplines are necessarily characterized by change, debate, and historical shifts (p. 450). In essence, Ellis argues that much of the research on teachers' subject specific knowledge has reified such knowledge. This static and stable conceptualization of subject matter knowledge has furthermore enabled the creation of educational policies that aim to measure, count, and set minimum levels for teachers' subject knowledge through various forms of legislation and has also contributed to the widespread division of content and pedagogy in teacher education.

Another closely related critique has focused on the extent to which PCK research has emphasized knowledge as the property of an individual and has not adequately accounted for the role of communities and contexts in the content, form, and development of teachers' knowledge. Sockett (1987) first made this critique, arguing that though Shulman's framework acknowledges the complexity of teaching as an activity it fails to account for the complexity of teaching as an occupation – in which teachers must adjust between their own knowledge of ideal content teaching and the requirements of the contexts in which they work. Ellis (2007) makes a similar point, arguing that much of the research on subject matter knowledge "conceptualizes the development of knowledge as a purely cognitive process that takes place inside a head" (p. 451). This view of knowledge development does not account for the role of other people or environments in the development of subject knowledge. Instead, learning is seen as an individual act in which the teacher accumulates predefined subject matter concepts. One of the consequences of this individualistic orientation to subject matter knowledge, Ellis argues, is that the responsibility for any failure to develop appropriate knowledge effectively rests on the individual teacher rather than on the systems in which the teacher learns and works. Even Shulman himself in his more recent work has noted the need to "frame a more comprehensive conception of teacher learning and development within communities and contexts" (Shulman & Shulman, 2004, p. 2).

Overall, these two overlapping critiques of the PCK framework have pointed to a need to reconceptualize teachers' subject matter knowledge as dynamic and emergent in the varying professional contexts in which teachers learn and work. In response to the problems of both the static and individualistic representations of knowledge within PCK

research, several scholars have proposed new models of teacher knowledge that attempt to ameliorate these issues. For example, Cochran, DeRuiter, & King (1993) propose a modification of PCK based on constructivist theories of knowledge and learning that attempts to resolve the confusion between PCK as a category of knowledge and a process of combining knowledge by focusing solely on PCK as a form of reasoning. They argue that “knowledge” is too static a term to capture the deep interaction of different forms of knowledge inherent in teaching, instead emphasizing the dynamic and changing nature of the concept by re-termining it “pedagogical content knowing” (PCKg). They define PCKg as “a teacher’s integrated understanding of four components of pedagogy, subject matter content, student characteristics, and the environmental context of learning” (p. 266). These component elements of PCKg, they note must develop simultaneously in the context of authentic practice in order for them to be successfully integrated into PCKg, and thus they advocate for models of teacher education that integrate content and pedagogy.

Similarly to Cochran, DeRuiter, and King (1993) Hashweh (2005) offers a reconfiguration of PCK that seeks to clarify the relationships between knowing as action and knowledge as artifact. This reconfiguration differentiates between “the set or repertoire of private and personal content-specific [. . .] pedagogical constructions that the experienced teacher has developed” (p. 277) and the ongoing process of reasoning and reflection through which these pedagogical constructions are formed. A pedagogical construction, Hashweh argues, represent a “snapshot” of a teacher’s thinking at a particular point (p. 282). Such snapshots are useful to study, he notes, but we cannot generalize the insights we gain from studying the snapshot to the overall process by which teachers reason about their subject matter. For this more dynamic process, Hashweh argues for a revival of research on teacher planning and decision making.

Other researchers have further argued for models of teachers’ professional knowledge and learning that account for both the dynamic and situated nature of such knowledge. Shulman and Shulman’s (2004) reconceptualization of teacher learning and expertise defines an accomplished teacher as one who is “*a member of a professional community who is ready, willing, and able to teach and to learn from his or her teaching experiences*” (p. 2, italics in original). This definition still incorporates PCK as an

element of what it means to be “*able to teach*,” but the authors emphasize that such knowledge is insufficient for teacher development if it is not supported by the other factors such as motivation, vision, and particularly a supportive professional community and the reflective practices that allows teachers to learn from the ongoing interactions within the classroom.

Ellis (2007) also calls for a reconceptualization of professional "subject knowledge as emergent within complex and dynamic social systems" (p. 447). He offers a model for how this sort of subject knowledge develops through the practice of teaching, focusing especially on how teachers' subject knowledge develops and is accessed and used within complex social systems in which teachers learn and work. Within this model, Ellis notes, "subject knowledge exists as much among participants in the field (the teaching of a subject in schools) as it does within them" (p. 458). This conception further ascribes more responsibility to teachers in schools (as opposed to researchers in universities) for the constitution of the subject and for the ongoing examination of "the boundaries of 'what counts' as subject knowledge" (p. 459). A similar argument regarding the role of teachers in the constitution of subject matter is made by Park and Oliver (2008) who note that both the acquisition and use PCK “are interwoven within the context of instructional practices” and that teacher thus “do not simply receive knowledge that others create to teach, but produce knowledge for teaching through their own experiences” (p. 278).

The Development of Teacher Knowledge in Teaching Activity

What is common to all the critiques and approaches in the previous section is a focus on teacher knowledge, including their PCK as being emergent in the social contexts and activities of teaching. One practical implication of this view is that research should focus on teachers' PCK in development, rather than in its more stabilized form and that this research should focus on the development through engagement in professional contexts and activities, including teaching practice itself. Unfortunately, little research that examines PCK from this developmental and situated perspective exists. That is not to say that the question of how PCK develops has been ignored in the literature. In fact, the development of PCK has been a central concern for researchers and teacher educators from the beginning. According to Shulman (1987) there are four potential sources of

teachers' PCK: the content disciplines, educational curricula, educational coursework, and teaching practice. To this Grossman (1990) adds Lortie's (1975) concept of the apprenticeship of observation. Of these potential sources of PCK, the role of teachers' educational coursework has received by far the most scholarly attention with multiple studies investigating how PCK develops and how its development can be promoted through preservice teacher education (see for example Nuangchalerm, 2012; Montesaño, 2011; Van Driel, Jong, & Verloop, 2002; Barnett, 1991; Bencze, Hewitt, & Pedretti, 2001; Kim & Hannafin, 2008; Lin, 2002) as well as inservice professional development (see for example Mosenthal & Ball, 1992; Bentley, 2013; Heller et al., 2012; van Driel & Berry, 2012; Swackhamer, Koellner, Basile, & Kimbrough, 2009).

The issue of how teachers develop PCK outside of their professional educational coursework, and particularly how they develop PCK through teaching activity, has received considerably less attention in the subsequent research on Shulman's framework. Despite this general lack of attention, Shulman and his colleagues in the knowledge growth project do not ignore the question of how PCK develops in the activity of teaching. In fact, they offer us a model of how PCK develops, that Shulman (1987) refers to as a "model of pedagogical reasoning and action" (p. 15). Central to the PCK framework is the idea that teachers do not merely teach the content of the academic disciplines. Rather, they transform the content through combining it with pedagogical knowledge to create pedagogically appropriate representations for their students. This process of transformation of the content, Shulman (1987) argues, is the central component of pedagogical reasoning and action. In Shulman's model, pedagogical reasoning is a cyclical process consisting of six elements: comprehension, transformation, instruction, evaluation, reflection, and new comprehension. Teachers begin with *comprehension* of the content they need to teach, including both the substantive content knowledge as well as an understanding of the overall purposes, organizing structures, and methods of investigation in a given discipline as well as a deep appreciation for the connection of the concept to other ideas both within and beyond the discipline. Following comprehension, teachers move to the step of *transformation*. This step, for Shulman is at the heart of what it means "to reason one's way through the act of teaching" and its purpose is "to think one's way from the subject matter as understood by the teacher into

the minds and motivations of learners” (p. 16). As part of the process of *transformation*, teachers critically evaluate instructional materials, choose metaphors and examples to represent the content in appropriate ways for the students, and adapt their representations for the particular group as well as for the needs of individuals. Following this process of *transforming* the content, teachers engage in *instruction* itself. This is the most readily observable part of the activity of teaching. Additionally, both during and following instruction, teachers engage in *evaluation* of students’ understanding both informally through interaction with the students during the lesson and also through more formal assessments. Teachers must also have the ability to *reflect* on their teaching in order to learn from the experience. The final element of the pedagogical reasoning cycle is *new comprehension*. Through the process of comprehending, transforming, and teaching a particular concept, the teacher achieves a new and deeper understanding of the content, students, and instructional options for teaching this subject. This new comprehension, then, becomes the starting point for additional cycles of pedagogical reasoning as the teacher teaches the content again.

Shulman’s model of pedagogical reasoning and action is significant because it posits a bi-directional relationship between teacher knowledge and teaching activity. In this model, what teachers know about their content, students, and teaching influences their instructional practices, but engaging in that instructional activity also has an impact on teachers’ knowledge. Yet while this model is promising, there are still issues related to how it conceptualizes teachers’ content knowledge and how it has been taken up in subsequent research. The first potential limitation of this model relates to the way it treats the stage of comprehension in particular as a given and *a priori* condition for teaching. For Shulman, teachers’ content knowledge is an assumed precondition for teaching, an assumption that does not apply to the other processes in his model which he treats as much more context dependent and flexible explaining that “they are not meant to represent a set of fixed stages, phases, or steps” but can in fact “occur in different order” with some processes even being truncated or skipped entirely in a given teaching act (p. 19). The point, Shulman notes, is not to say that teachers must work through the entire pedagogical reasoning process for every teaching activity, but rather that they must have the ability to do so when the situation demands it. Yet despite this general caveat

regarding the variability and order of the processes, one element in Shulman's model is certainly fixed. This is the first stage in his model – that of comprehension. In Shulman's model, "to teach is first to understand" (p. 14). In other words comprehension of the content is itself a necessary precondition for teaching. Thus, while content knowledge is emphasized as centrally important in this model, the process by which teachers develop such content knowledge is tacitly assumed to take place prior to the start of the pedagogical reasoning cycle.

According to Ellis (2007), this treatment of content knowledge as "an essential prerequisite" but focusing scholarly attention on other categories of the knowledge base is not limited to Shulman, but is a common feature of teacher knowledge research. (p. 449). It is certainly the case that few subsequent empirical studies of teachers' knowledge development in teaching practice, and particularly their development of content knowledge have been attempted. The research that does address the development of teacher knowledge in teaching activity has generally found this process to be far more unpredictable and difficult than Shulman's model implies and has also demonstrated the extent to which teachers' prior content knowledge cannot and should not be taken as a given in examinations of their development of PCK.

The most significant study of teachers' development of PCK in teaching activity comes from Grossman's (1989, 1990, 1991) study examining the development of PCK among six novice English language arts teachers. Grossman's study highlights the incredible difficulty of developing PCK through teaching activity. Though all the teachers encountered opportunities to learn from their teaching experiences, the teachers who had entered the teaching profession without any professional education coursework lacked a framework into which they could incorporate the insights they gained through teaching. These difficulties led Grossman to conclude that "Learning from experience is neither as automatic nor as effortless as new teachers might like to believe" (p. 109) and that when it does occur it "can be haphazard, dependent to a certain extent on chance" (p. 49).

Additional studies have focused attention on the difficulties teachers face as they attempt to develop PCK in teaching activity. Like Grossman, many of these researchers have emphasized the importance of a strong conceptual framework into which teachers'

new insights can be incorporated, but note that this conceptual framework is often lacking due to the limited and inappropriate content preparation many teachers experience. The content knowledge teachers acquire in their disciplinary courses, it has been argued, may be insufficient in amount, will likely not be presented or learned as part of a coherent conceptual system, and is not integrated with their pedagogy coursework. Instead, teachers are expected to integrate their knowledge of pedagogy and content independently when they enter the classroom (Grossman, Wilson, & Shulman, 1989; Ball, 2000). Unfortunately, research has demonstrated that this integration does not always happen (see Ball, 2000; Grossman, 1990). As Ball (2000) puts it, in this traditional model of teacher education, “We assume that the integration [of content and pedagogical knowledge] required to teach is simple and happens in the course of experience. In fact, however, this does not happen easily, and often does not happen at all” (p. 242).

This lack of adequate and appropriate content preparation for teachers has a particularly negative impact because of the extremely limited opportunities teachers have to develop deep content knowledge once they enter the teaching profession. While teachers are continually required to learn new content in the process of teaching, their avenues for learning such content effectively are often severely limited. For example, teachers often learn new content through curricular materials such as textbooks. However, curricular materials are typically not designed to support teacher learning and may even inhibit teachers’ ability to develop deep content knowledge (Valencia, Place, Martin, & Grossman, 2006). Even when such materials do offer opportunities for teachers to learn about content, such learning requires that teachers have enough “subject matter background to inquire into the materials on their own,” a level of deep subject knowledge that many teachers lack because of the previously mentioned problems related to their content preparation (Grossman & Thompson, 2008, p. 2025).

Other avenues for teachers to deepen their content knowledge are likewise limited. Conversations with mentor teachers, for example have been shown to incorporate issues of content inconsistently at best. Feiman-Nemser & Parker (1990) analyzed conversations between novice and experienced teachers to see how content permeated those discussions and how the experienced teachers dealt with issues of content

knowledge in their discussions. They found that mentor teachers often either assumed that the novice teachers already held enough content knowledge (despite evidence to the contrary) or recognized the novice teachers' lack of content knowledge, but chose to ignore it, focusing on general pedagogical issues instead, leaving novice' shaky or incorrect conceptions of the content they were teaching intact.

Summary and Future Directions

The influential concept of PCK and its subsequent developments have pushed educational researchers and teacher educators to take teachers' knowledge, and particularly their subject matter knowledge, seriously. Yet need remains for studies that do more to examine how PCK develops through teaching activity. Such studies will need to account for the dynamic, contextual, emergent, and communal nature of teachers' PCK both as it initially develops in preservice teacher education and crucially as it continues to develop through teachers' ongoing engagement with the processes of pedagogical reasoning. Such studies may be able to shed light on the difficult and seemingly haphazard process by which teachers learn from their classroom experiences. Understanding what factors contribute to and perhaps hinder such teacher learning can, in turn, inform teacher educators' efforts to prepare teachers for, and support them in, ongoing PCK development.

Conclusion

To summarize, this review has highlighted two gaps in the existing literature that this study seeks to fill. First, it has demonstrated the general lack in research focusing on L2 writing teacher cognition and the particular need for research that examines the knowledge, beliefs, and learning of teachers using a post-process approach to writing instruction. Second, the review of the literature related to pedagogical content knowledge has demonstrated the need for research that addresses the dynamic and contextual nature of teachers' PCK, particularly by studying it as it develops through teaching activity. The following chapter will describe how this study was designed to address both of these related needs.

CHAPTER 2: METHODOLOGY

Overview

The purpose of this study is to investigate the development of L2 writing teachers' pedagogical content knowledge (PCK) as they engage in the activities of teaching. Four first-time teachers of post-secondary ESL writing were recruited to participate in the study. Using a multiple case studies approach and drawing on a sociocultural theoretical perspective on teacher learning this study uses semi-structured interviews, concept maps, classroom video data, stimulated recalls, and instructional artifacts collected throughout a single semester in order to examine the nature of teachers' PCK, how it develops over a semester of teaching, and how the activities of teaching mediate this development. By triangulating changes in how teachers conceptualized the content of the class to the specific activities of teaching captured in the classroom video data, the study will contribute to a richer theoretical understanding of how teacher knowledge develops through teaching activity. Additionally, the results will contribute to the understanding of L2 writing teachers' practices and conceptions of their teaching and to the field's practices in training and supervising both novice and experienced L2 writing teachers.

Research Questions

This study investigates the PCK of post-secondary L2 writing instructors and how their PCK develops through the activities of teaching. Using a multiple case study approach, this research will answer the following questions:

1. What is the nature of post-secondary L2 writing teachers' pedagogical content knowledge?
2. How does the pedagogical content knowledge of post-secondary L2 writing teachers develop in and through the activities of teaching?
3. What factors mediate the development of post-secondary L2 writing teachers' pedagogical content knowledge?

Theoretical Orientation: Vygotskian Sociocultural Theory

To address these research questions, a sociocultural theoretical perspective was adopted based on the work of Soviet psychologist L. S. Vygotsky. As Lantolf and Thorne (2006) note, the term sociocultural theory (SCT) covers research with a broad range of

perspectives and emphases, but these research agendas are united in their use of Vygotsky's theories to illuminate and understand the relationship between a human's mental functions and their physical, cultural, historical, and social contexts (Wertsch, 1995). SCT approaches to the study of educational processes have become increasingly influential in the fields of second language acquisition (see Lantolf & Thorne, 2006; Lantolf & Beckett, 2009 for a detailed review) and second language teacher education and cognition (see Johnson, 2009; Johnson & Golombek, 2011; Hawkins, 2004).

SCT, at the broadest level, is a "theory of mind" that seeks to understand the relationship between human cognition and the social and cultural world in which humans live (Lantolf, 2004, p. 30-31). In pursuit of this overall goal, Vygotsky's work is characterized by attention to three interrelated themes: 1) the origins of human cognition in social activity; 2) the genetic method; 3) human cognition as mediated by tools (Wertsch, 1985, 1989). The following sections will discuss these three themes and associated concepts, paying particular attention to how these concepts have been taken up in and can inform research in language teacher cognition and research.

The Origins of Human Cognition in Social Activity

One of Vygotsky's (1986) central arguments is that certain aspects of human cognition, what he referred to as "higher mental functions," do not originate in the head of the individual, but rather begin on the social plane and are subsequently internalized by the individual. In other words, "the true direction of the development of thinking is not from the individual to the social, but from the social to the individual" (Vygotsky, 1986, p. 36). Much of Vygotsky's argument in this respect was founded on his work with the development of thinking and speaking in children. Unlike theories of his contemporaries, most notably Piaget, Vygotsky conceptualized the development of speaking and thinking as beginning with social speech. The child then takes this social speech and applies it to him or herself as a means of regulating his or her own behavior. This movement from the social plane to the psychological plane represents a revolution in human development in which "*the nature of the development itself changes, from biological to sociohistorical*" (Vygotsky, 1986, p. 94). This fundamental shift in how development is conceptualized has radical implications. As Wertsch (1989) notes, a sociocultural approach to mind can redress traditional psychology's overemphasis on the uncovering of universal aspects of

human nature as the primary goal of research. An SCT approach, in contrast, seeks to understand mental functions as situated in their cultural and historical settings.

The Genetic Method

Vygotsky's view of human cognition as emerging from engagement in social and cultural activity necessitates not only a situated perspective in research, but also a fundamentally developmental perspective. This developmental perspective on research makes up the second major theme in Vygotsky's work – the genetic method. For Vygotsky, the goal of uniting cognition and context in the study of psychology was as much a methodological question as it was a substantive one. The traditional methods of psychology, Vygotsky argued, were plagued by two related methodological problems. First, in order to study human cognition, psychologists separated human cognition into elements such as memory and attention which were then studied independently. Isolating aspects of the human cognitive system in this way, Vygotsky (1986) argued, was similar to a chemist trying to understand the properties of water by studying hydrogen and oxygen independently (p. 4). The essential properties of the object of study are lost when subdivided and isolated in this way. In place of this approach, Vygotsky advocated for a new method of analysis which focused on the smallest units which retained the characteristics of the whole system. In the study of the connection between thinking and speaking in children, for example, Vygotsky posited that “word meaning” was the appropriate unit of study. In teacher cognition, the more complex unit of the concept has been proposed as an appropriate unit of study (Smagorinsky, Cook, & Johnson, 2002).

One important consequence of studying units rather than elements of human cognition is that this approach reintegrates “other aspects of the mind” that are traditionally excluded from traditional psychological studies of cognition (Vygotsky, 1986, p. 10). In particular, human emotion is returned to the study of human mental processes. Vygotsky rejected the separation of emotion and cognition that characterizes western rationalism and saw this separation as a “major weakness of traditional psychology, since it makes the thought process appear as an autonomous flow of ‘thoughts thinking themselves,’ segregated from the fullness of life, from the personal needs and interests, the inclinations and impulses of the thinker” (Vygotsky, 1986, p. 10). Instead, Vygotsky viewed emotion and cognition as existing in a dialectical relationship

so that cognition is never separate from emotion, but rather emotion is seen as the starting point of thought. Analyzing emotion and cognition together, he argued, “demonstrates the existence of a dynamic system of meaning in which the affective and the intellectual unite” and thus allows researchers “to trace the path from a person’s needs and impulses to the specific direction taken by his thoughts, and the reverse path from his thoughts to his behavior and activity” (p. 11). This “affective-volitional tendency” Vygotsky (1987) argued “holds the answer to the last ‘why’ in the analysis of thinking” (p. 252).

In addition to the problem of studying aspects of human cognition in isolation, and thus removing the affective and volitional dimensions of human mental functioning, an additional methodological problem Vygotsky sought to remedy was the problem of studying cognitive processes after they had already developed. This critique mainly surfaces in Vygotsky’s discussion of the development of concepts. Vygotsky argued that approaches that focused on verbal definitions of concepts were “inadequate” because such approaches dealt “with the finished product of concept formation, overlooking the dynamics and the development of the process itself” (p. 96). Instead of studying concepts after they had already formed, Vygotsky argued for a new form of analysis focused on examining human cognition as it was in the process of development. This developmental approach to studying human cognition is known as the genetic method, and it constitutes a central concept in Vygotsky’s theory. This methodology was not an optional strategy for the study of human cognition. Rather, for Vygotsky, “the only appropriate way of understanding and explaining higher, culturally organized, forms of human mental functioning, was by studying the process and not the outcome of development” (Lantolf & Thorne, 2006, p. 28).

One key feature of the genetic method is that it involves examination of development across multiple timescales or domains. *Phylogenesis* refers to the development of species through evolutionary processes, *sociocultural history* focuses on the historical development of human cultures, *ontogenesis* examines the development of a human individuals across their lifespan, and *microgenesis* refers to the development of specific processes and concepts over relatively short periods of time (Wertsch, 1985). Though these domains may be studied separately, in reality all the domains “clearly

overlap and interconnect with each other” particularly the ontogenic and microgenetic domains (Lantolf & Thorne, 2006, p. 57).

This study in represents one such example of how microgenetic analysis of the development of single concepts in activity, what Wertsch (1985) referred to as “a very short-term longitudinal study” (p. 55) can help to illuminate the development of an individual teachers’ thinking (ontogenesis). Though little of Vygotsky’s own work focused on the microgenetic domain, this is the where the majority of L2 studies have focused. As Wells (1999) has noted, the focus on development across multiple timescales that characterizes the genetic method is particularly valuable in that it “helps us to resolve the vexed problem of the relationship between the individual and his or her social and cultural environment” by illuminating the relationship between social and cultural activity and “the participants, practices and artifacts through which the activity is instantiated on particular occasions” (Wells, 1999, p. 57).

Human Cognition as Mediated by Tools

The third theme from Vygotsky’s work is the view of human cognition as being fundamentally shaped and mediated by cultural tools. Mediation, Lantolf and Thorne (2006) note is “the central concept of sociocultural theory” (p. 59) and it was through this concept that “Vygotsky made his most important and unique contribution” (Wertsch, 1985, p. 15). Vygotsky’s fundamental claim on this subject is that higher forms of human cognition are mediated by material, psychological, and cultural tools such as language. Through interacting with these tools and gradually internalizing them, humans are able to be bring their biological cognitive functions such as memory, attention, and learning “under the intentional and voluntary control of the person” (Lantolf & Thorne, 2006, p. 59). In this way, humans can move from the lower forms of human cognition “which are characterized by the *immediacy of intellectual processes*” to higher forms of cognition in which “*activity is mediated by signs*” (Vygotsky, 1986, p. 109).

Kozulin (2002) notes that there are essentially two forms of mediation – symbolic mediation in which a learner interacts with symbolic tools and human mediation in which the learner interacts with the intentionally mediating efforts of a more experienced other such as a parent or teacher. In the case of symbolic mediation, Kozulin (1998) differentiates between the mediation offered by material tools and the mediation offered

by psychological tools. This difference is not so much a property of the tool itself as it is a difference in how a given tool is used at a particular moment. While material tools are directed outwardly toward the environment, psychological tools are directed inwardly to mediate a person's own mental processes. Moreover, a single tool can often be both material and psychological in its use. Language is a particularly relevant example of this principle. Language can function as a material tool when it is directed outwardly to affect others' behavior or a psychological tool when directed toward oneself with the goal of self-regulation (Lantolf & Thorne, 2006, p. 60). In the case of human mediation, "an adult of more competent peer places him- or herself 'between' the environment and the child—thus radically changing the conditions of the interaction" (Kozulin, 1998, p. 60).

Concept development

Of particular value in illuminating the development of writing concepts for teaching purposes is Vygotsky's work on concept development. In particular, Vygotsky's (1986) distinction between spontaneous and scientific concepts provides insight into the changing nature of teachers' concepts as they develop. Spontaneous concepts are those concepts that develop through our day to day experiences in the world. The internal structure of such concepts is therefore concrete and empirical in nature. Scientific concepts in contrast are systematic with a logical internal structure and are typically learned in formal instructional contexts. It is important to note that Vygotsky does not privilege one type of concept over the other, but sees either as insufficient for full self-regulation. Because of their concrete and empirical nature, spontaneous concepts are rarely consciously held and therefore are not readily available for reflection and critique. Scientific concepts, on the other hand, are consciously held but can become stuck in their initial verbal definition form if never connected to concrete experience, thus relegating them to the realm of empty "verbalism." (p. 149). For Vygotsky, the true goal of concept development then is for spontaneous and scientific concepts to become united into true concepts. This occurs as the "*initial verbal definition*" which forms the starting point of a scientific concept is "applied systematically" and "gradually comes down to concrete phenomena" and the spontaneous concept "goes from the phenomenon upward toward generalizations" (Vygotsky, 1986, p. 148). Once formed, true concepts can be powerful mediational tools for self-regulation as individuals develop the ability to apply the

concept “in various situations and [. . .] to articulate the reasons for doing so; in other words, thinking *in concepts*” (Johnson, 2009, p. 22).

While the goal of education, in Vygotsky’s view, is the development of scientific concepts, it is important to note that this development is often far from straightforward. Instead, concept development is complex and continues after the external form of the concept (i.e. the linguistic definition) has been mastered. Instead, it can be thought of as a process of individuals “coming to understand the meaning and functional significance of the sign forms one has been using all along” (Wertsch, 2007, p. 186).

Zone of proximal development

One final Vygotskian concept that bears mentioning is the concept of the zone of proximal development (ZPD). While this concept appeared only very late in Vygotsky’s work and was never fully articulated, of all of Vygotsky’s concepts it has “proliferated most broadly and arguably has had the greatest impact in the West” (Lantolf & Thorne, 2006, p. 263). Within Vygotsky’s own writing, the ZPD has both qualitative and quantitative dimensions. As a qualitative concept, “it points to those cognitive functions that are absent in the unaided performance of the child” whereas quantitatively, it constitutes “a measure of the difference between unaided and aided performance” (Kozulin, 1998, p. 69). Whether conceptualized in a qualitative or quantitative way, the ZPD focuses attention on the role human mediation (Kozulin, 1998, 2002) in leading the development of a learner. As a learner engages in a task that is beyond their capacity to complete independently, a more capable other “selects, changes, amplifies, and interprets objects and processes to the child” (Kozulin, 1998, p. 60). The goal of this mediation, it is crucial to note, is not merely to provide assistance so that the learner can complete the task as the ZPD has sometimes been interpreted (see Kinginger, 2002 for a discussion of such interpretations). Instead, the goal of mediation in the learner’s ZPD is for the learner to internalize and gain control over the mental processes associated with the activity. In other words, the goal of mediation in the ZPD is development, not just accomplishment.

SCT in Language Teacher Cognition and Education Research

SCT has become increasingly influential in the field of L2 teacher cognition and education as a result of the ways that an SCT approach can ground an understanding of the processes by which teachers learn, thus enabling us to “see” teacher learning as it

occurs through mediated and situated activity (Johnson & Golombek, 2004). In this same vein, Johnson (2009) argues that SCT's vision of cognition as emerging in social interactions pushes the field of L2 teacher education to reconceptualize teachers not merely as vehicles of instruction but as "learners of teaching" (p. 2). From this perspective, to understand teachers, we must investigate the social and cognitive processes of learning to teach and particularly examine how teachers' cognitive development emerges out of the various social interactions and settings in which they participate.

A variety of empirical studies have used SCT as a lens through which to examine teacher learning. These studies have focused on the effect of various types of mediation including reflective and narrative writing (Arshavskaya, 2014; Arshavskaya & Whitney, 2014; Golombek & Doran, 2014; Golombek & Johnson, 2004) and the role of strategic mediation provided by peers and the teacher educator in teaching practicum experiences leading to concept development (Johnson & Arshavskaya, 2011; Newell & Connors, 2011). Additionally, Vygotsky's unified emphasis on cognition and emotion has recently been taken up by researchers in L2 teacher cognition and education to illuminate the relationships between emotion, cognition and activity in learning to teach. In particular, such work has examined the role of emotional/cognitive dissonance in prompting teachers to seek mediation through tools such as narrative inquiry (Golombek & Johnson, 2004). These moments of emotional/cognitive dissonance constitute potential "growth points" that, with appropriate mediation, can lead to development (Golombek & Doran, 2014; Johnson & Worden, 2014).

The study of teachers' concept development as they move through and across activities and settings in their educational and professional careers has also been highly influential in language teacher cognition and education research. For example, Smagorinsky and his colleagues have conducted several studies of teachers' concept development across various social and professional contexts such as the transition from teacher education to the first full time teaching job (Smagorinsky, Wilson, and Moore, 2011; Smagorinsky, Rhym, & Moore, 2013). Smagorinsky, Cook, and Johnson (2002) moreover argue that Vygotsky's notion of concepts can effectively bridge the theory and practice divide that is endemic in much of the discourse of teacher education because

concepts effectively unify experience and theory through their focus on both everyday concepts and scientific concepts. Other studies in L2 teacher cognition and development have also examined teachers' mediated concept development in a variety of contexts (Childs, 2011; Arshavskaya, 2014; Singh & Richards, 2006).

More specifically focusing on teacher knowledge, the radically situated and developmental nature of an SCT approach to the study of human cognition provides a way to avoid the major critiques that have been leveled at the teacher knowledge framework. These critiques have focused on the way that teacher knowledge research has failed to account for the affective and moral components of teaching and teacher learning (Sockett, 1987) and has treated knowledge as a decontextualized and static "thing" rather than an emergent and dynamic process (Cochran, DeRuiter, & King, 1993; Fenstermacher, 1994; Shulman & Shulman, 2004; Ellis, 2007; Park & Oliver, 2008). SCT provides a robust theoretical framework that allows researchers to examine teacher knowledge as situated and emergent. Instead of being viewed as pre-existing and autonomous, knowledge, from an SCT perspective emerges in and is bound up in the social contexts of teaching. From this perspective, an attempt to understand teachers' knowledge would be better understood as an attempt to understand "the activity of knowing, as this is carried out by particular, concrete individuals" (Wells, 1999, p. 76). Moreover, the ways in which Vygotsky integrates cognition, affect, and human activity reincorporates the role of teachers' values, beliefs, emotions, and goals into the study of their knowledge and learning processes.

The Research Context

The ESL 015 Composition Class

The data for this study were collected in four concurrent sections of a course titled "ESL Composition for American Academic Communication II" (ESL 015), a credit-bearing course that fulfills the first-year composition requirement for undergraduate students at a large public university in the United States. The course is designed for intermediate to advanced non-native speakers of English who enroll in the course through a process of guided self-selection in consultation with their academic advisors. The general goal of the course is to prepare students for the academic reading and writing tasks they will encounter in their college careers. In particular, the curriculum at the time

of the data collection worked to build academic writing skills such as effective use of writing processes, critical reading, research, writing with sources, self-editing, and, most crucially for this study, the ability to write several different types of essays “that meet the needs of different audiences and purposes” and demonstrate understanding of “the concept of audience, genre, and voice” (Verity, 2013, p. 43). The major assignments of the course consisted of four pedagogical genres: the extended definition essay, the comparison/contrast poster presentation, the analytic essay, and the researched argument essay.

The Analytic Essay Assignment

The classroom video data and the stimulated recalls all took place during the unit focusing on the third of four required essays – the analytic essay. According to the handbook for instructors, the analytic essay was designed to function as an introduction to the formal elements of academic writing, with a particular emphasis on library research and academic citation practices. The handbook additionally emphasized the relationship between the analytic essay and the final argumentative essay in the class, explaining that “the Analytic Essay is designed to *prepare* them [students] to write the Argumentative Essay by providing intensive practice with library research, wide outside reading, citation, quotation, paraphrase, references, etc.” The distinction between the analytic and argumentative essay “is that the Analytic Essay is basically a “report” based on research [. . .] while the Argumentative Essay is all that, plus a personal stance that the student creates by assembling evidence” (Verity, 2013, p. 9).

To clarify the distinction between the analytic and argumentative essays, the teachers were advised to steer their students toward “a topic that does not lend itself to argument.” Examples that were suggested included either an investigation of a famous case of fraud or the historical origins of a particular stereotype. Additionally, the handbook encouraged the teachers to focus their students’ attention on moving beyond a merely factual retelling of the event or issue to an examination of the underlying social factors that made such an event or issue possible in a given context. In other words, a successful essay would both “answer the questions of Who? When? What? Where? and Why?” and “go beyond these questions to suggest which points are most relevant for

understanding what really happened, according to the source material” (Verity, 2013, pp. 9-10).

The Participants

Four teachers of ESL 015 participated in the study. All the teachers of the course were approached at the mandatory instructor orientation prior to the start of the semester and invited to participate in the study. Six teachers initially volunteered and their informed consent was obtained. The four teachers included in this study were selected because they were all teaching the course for the first time in the semester of data collection. The names assigned to each teacher in this study are all pseudonyms that each teacher selected for him or herself in the course of the first interview. Table 1 provides an overview of each teacher’s background, including their experiences teaching English and other languages.

Participant	L1	Years language teaching	Previous language teaching experience
Jennifer	English	less than 1 year	ESL writing (Private academic summer camp, USA)
Sonja	Russian	9 years	ESL mixed skills (IEP, USA) Russian as a foreign language (private online program, USA) Russian as a foreign and heritage language (University, USA)
Anna	Mandarin	less than 1 year	EFL mixed skills (Private language school, China)
Sergei	English	less than 1 year	ESL public speaking (Private academic summer camp, USA)

Table 1: Participant Overview

While all of the teachers reported having a variety of informal teaching experiences, including tutoring and teaching apprenticeships, in terms of their formal teaching experiences, most of them were relative novices. Three of the teachers, Jennifer, Anna, and Sergei, had less than one year of previous language teaching experience, and for all three this course was their first experience teaching at the university level, though

both Jennifer and Sergei had previously taught other subjects (special education and agriculture, respectively). Sonja was the most experienced language teacher, having taught both ESL and Russian as a foreign and heritage language for nine years, though she had not previously taught a course specifically devoted to academic writing.

Participant Profiles

The following sections will provide a more detailed profile of each of the five participant teachers. Their general background, experiences learning to write, self-perceptions as writers, teaching history, and beliefs about teaching L2 writing will be discussed. All of the quotes in these sections are drawn from each teachers' first semi-structured interview (interview 1) unless otherwise noted.

Jennifer

A student in the MA TESL program and a graduate teaching assistant (TA), Jennifer identified herself as a native speaker of English who had also studied German, Japanese, French, and small amounts of Apache and Norwegian.

For Jennifer, being a writer was a core element of her personal and familial identity. Jennifer described her own experiences of learning to write, not as learning, but as something that “felt like it just happened” because “there was no other option in my family” but to become a writer. Since she saw herself as a writer from such a young age, Jennifer found the writing instruction she received in K-12 not “particularly relevant because I'd already mastered the skills” and viewed the assignments she was required to complete as just getting “in the way of me doing my real writing.” It was only when she came to college that Jennifer began to see writing instruction as beneficial because it focused specifically on the academic writing she was required to do for her courses.

Jennifer's initial teaching experiences came through tutoring as an undergraduate and after graduation working as a caretaker for developmentally disabled adults, a job which Jennifer quickly realized was essentially a teaching position. Following a hiatus in which she went back to school for a degree in recreational management, Jennifer began working as a substitute teacher and eventually enrolled in the MA TESL program. Her only prior experiences teaching writing had been the summer prior to data collection in which she had worked as the writing instructor at an ESL academic summer camp for

middle and high school students. The semester of this study was Jennifer's first experience teaching at the college level.

One of Jennifer's primary goals for her students' learning is that they would come to realize that "there's more than one way" to successfully complete any writing task. Jennifer viewed this statement as being somewhat of a "mantra" for her and tied it specifically to her own experiences as a writing student in which she felt stifled by the requirements that she write in a particular way. She was also highly aware that her mantra of "more than one way" could potentially be in conflict with her students' expectations based on their educational backgrounds, and noted that she had felt pressured in her summer classes, by both the institution she worked for and by her students' parents, to be more prescriptive in her teaching style.

In terms of her current students, Jennifer believed that writing was an important subject to study because it would prepare them for writing assignments throughout the rest of their college careers. Jennifer recognized that her students would primarily be majoring in the science, technology, engineering, and mathematics (STEM) disciplines, and that each major would require different kinds of writing, so she saw the primary purpose of the course she was teaching as helping students "develop some type of skill or some type of understanding that (...) kind of blankets all the majors that we are going to run into." In addition to the ways in which writing would help students academically, Jennifer hoped that her class would help students see the value of writing as a critical thinking tool, so that they would realize "I'm not doing it just because I have to for this particular class, but I'm actually: (...) thinking deeper and putting things together in different ways, I'm (...) um seeing (...) beyond the surface information." This kind of attitude change was something that Jennifer viewed as important for novices in the process of becoming successful college writers. She also saw the ability to evaluate one's own writing in comparison to a model and then use a model as a guide for future revision and writing as a key skill in the development of writing expertise.

Sonja

Sonja was just beginning her first semester in the Ph.D. program in Applied Linguistics at the time of the study. She identified herself as a native speaker of Russian. She had completed her education through her undergraduate degree in Russia before

moving to the United States where she completed a Master's degree in TESOL and taught for several years prior to pursuing her Ph.D.

Sonja had very specific memories of learning how to write. In particular, she described an interaction with one of her undergraduate professors as a revelatory moment in her development as an academic writer. While Sonja recalled being taught to write a variety of genres, including descriptions and narrations, in elementary school, she felt that she had never really been taught to write "essays" in high school and thus believed that she "really never mastered [. . .] those genres that we associate with higher level writing." It was not until a university professor who was helping her with an essay for a scholarship competition sat down with her and explained "okay. this is how you write. you have to have an introduction, you have to have (.) a body, blah blah blah" that "it sort of clicked." Her professor's explicit explanation was complemented by her own experiences as a "voracious reader" in such a way that "it all kind of made sense."

When asked to describe herself as an academic writer, Sonja responded that she viewed herself as a "struggling" writer who found "putting my ideas into words" difficult. Sonja wanted to produce writing that was "clear and logical and concise," as she knew was expected by her professional community, but also wanted "to write beautifully." As a result, she found that "when I need to write something, it takes me a very very long time, I do- I go through a lot of revisions."

Sonja was by far the most experienced language teacher in the study, having taught ESL and Russian as a foreign/heritage language for nine years prior to the focus semester. While she had not taught a first year writing course before, she did have some experience with writing instruction. During her MA program, Sonja described working as a TA in a TESL methods course. While the course was not specifically focused on writing, the professor was an L2 writing specialist, and Sonja felt that through working with this professor as well as observing ESL writing courses at the university, she had gained "an idea of (.) what writing is- or how we teach writing." Following graduation, Sonja had participated in developing a content based curriculum for an advanced Russian language program where she subsequently taught. As she developed writing assignments for this program, she used the insights she had gained from the TESL methods course as a source of ideas and even adapted activities and strategies from ESL writing textbooks.

In regards to her current teaching, Sonja believed that writing was an important subject for her students to study because she viewed the ability “to speak or write clearly,” beautifully, and persuasively as “an essential skill for just about any educated person.” Additionally, Sonja believed that writing was important for students to learn because of it could “make you a better thinker” by making “you think in a more organized manner.” Students could become proficient academic writers, Sonja believed, through extensive writing practice coupled with explicit instruction in the expectations of the academic community, which Sonja saw as often being communicated through her written feedback on drafts.

Anna

At the time of the study, Anna was an MA TESL student with a graduate teaching assistantship. Anna identified Mandarin as her first language, and, in addition to English, had studied Japanese and Spanish.

Anna had completed her undergraduate degree in China and described her experiences learning to write in English as primarily occurring in college classes. She noted that unlike her Chinese writing education, which focused more on narration and other styles of writing, her English writing experiences “start[ed] from the point of academic writing.” Anna recalled taking one class focusing specifically on English academic writing, which she described as helpful for her at the time. She also notes that the content of this class was very similar to the content of the ESL 015 class she was currently teaching. Despite her generally positive experiences with English writing classes in China, Anna expressed some anxiety about her own abilities as an academic writer. She was particularly concerned with her lexicogrammatical proficiency saying that she felt “like my vocabulary isn't enough, and the structure is always confusing.” Additionally, Anna expressed concern that she still lacked “a really really clear (.) concept of academic writing.” In particular, Anna connected this perceived lack of a concept to her experiences writing the many different genres required in her MA coursework. Though she was aware that these genres “would have a lot of difference between each other” she felt that “still I kind of treat them the same” and that such a one-size-fits-all approach “is not what a good writer would do. they would distinguish (.) and use different strategy and form of each one.” Overall, Anna’s perception of herself as a

struggling academic writer caused her to feel “disappointed, and stressed” about the prospect of teaching the class, as she anticipated that she would need to learn a lot of new content in order to teach it.

As with most of the teachers in this study, Anna’s previous teaching experiences were fairly limited. In addition to tutoring, a micro-teaching project in an TESL methods course, and a teaching practicum requirement for her MA program, she had taught English at a private language school in China the summer prior to the study. The class was made up of high school students or recent graduates who were preparing to take the Intermediate Interpretation Test for admission into college. This class did include some limited writing instruction which focused on translating passages from English to Chinese or vice versa.

In her current teaching, Anna hoped that her ESL 015 students would gain confidence in writing, so they would know “that writing’s not that hard, as you know, you can write” but at the same time she wanted students to realize that they “do need to communicate in certain formats” if they expect their writing to be taken seriously in an academic context. Anna described this awareness of the accepted genres and formats of academic writing as “the thing that I want them to know most.” She believed that writing was an important subject for her students to study primarily because she believed that “they will be using writing a lot in the future,” regardless of their majors, in order to “make your point clear, to: like to: announce what you have found in your own field you need to write and let other people know.”

In order to become proficient college-level writers, Anna believed that students needed to recognize “that writing is not just taking this class it is actually help you to get your ideas out” and that it was impossible to “become a good writer or learn how to write (.) only in the classroom.” Instead, she believed that novice writers need to gain a stronger awareness of their own needs in writing and devote significant time to practicing writing in order to become successful academic writers. This is not to say that the instructor had no role in novice writers’ development, but Anna saw the role of instructors as being primarily to “raise their awareness of h:ow (.) many things that you should pay attention to when you are writing.”

Sergei

Sergei, a native speaker of English, was a part time student in his final year of study in the MA TESL program at the time of data collection. In addition to English, Sergei reported that he spoke a little Italian, had studied elementary French and Cherokee, and had learned some German and Korean during his time in the U.S. military.

Sergei began studying TESL after retiring from his career as an agronomist. When asked about how he learned to write academically, Sergei recalled writing “a lot of papers (.) uh (.) on plant genetics o:n farming practices on soil science (.) things like that” while working on his undergraduate degree in agronomy, as well as “original research” in his Master’s degree courses in Ecology as being his primary sources of learning. When prompted, he did remember taking a first year English course, but said that it “wasn't specifically about writing.” In addition to the academic writing he had done as a student, in his career as an agronomist, Sergei had written “many articles on gardening [and] on farming” for professional newsletters.

When he recalled beginning his studies in the MA TESL program, Sergei described himself as being initially nervous about writing “because of the length of time that had passed since I'd done it and the fact that I had no background at all in what I was beginning to study.” In his classes, Sergei had relied on his professors, fellow graduate students, and family members to provide him with feedback and support in his writing. Now, nearing the end of his studies, he described himself as “more confident” about his writing, but found that “there's still that little queasiness of (.) I'm going into an unknown territory” when he was faced with unfamiliar writing tasks and the varying expectations of different graduate courses and professors.

While Sergei had little experience in language teaching at the time of the study, he had a variety of other teaching experiences from his previous career. He estimated that he had taught somewhere between 100 and 150 seminars in agriculture and had trained his employees in the use of computer programs. He additionally described teaching Sunday school at his church for many years. In the MA TESL program, Sergei had participated in two required teaching projects – an extended team teaching project in which he taught a single lesson to an ESL class and a teaching practicum in which he observed an ESL class for a semester and taught five classes. Both of these projects had

been in the context of ESL 015. Additionally, Sergei had substitute taught several class sessions of a graduate level ESL speaking course. In the summer prior to the study, Sergei had taught speech at the same academic summer camp Jennifer worked at. This summer camp was his only independent language teaching experience at the time of the study.

Like most of the teachers in the study, Sergei identified the writing his students would do in their future academic and professional lives as the primary reason for his belief in the importance of writing instruction. Sergei hoped that by the end of the class his students would be able to say “that they are better writers than they were when they came into the class.” Additionally, he hoped that they would learn to give academic presentations and would also improve their general comprehension of oral English.

In describing his goals for his students’ learning, Sergei expressed having “a hard time” reconciling his beliefs about language learning both internally and in relation to the expectations of the program. He noted that “before I came here [the MA TESL program] I was very definitely a prescriptionist” and believed that “if you're going to learn English you learn it properly” by striving for grammatical accuracy and good pronunciation. Now, while he reported knowing “there’s no standard English” and his students’ “varieties of English are you know that have good structure internally,” he was very concerned about the impact such non-standard varieties of English would have on their future academic and professional careers. Overall, at the time of the study, Sergei described himself as “kinda in between” his previous prescriptionist beliefs and what he described as the “descriptionist” perspective advocated by his professors and the department. This conflict bled into his teaching as well, as he had to juggle the expectations of the program director who “has said we don't have to correct grammar” with his own belief that a good “paper has good grammar” and that this good grammar was a primary marker of writing quality.

In terms of writing development, Sergei believed that to be successful writers in college, his students would need to “study the basics,” which he identified as the typical structural features of the academic essay that were described in the textbook. He additionally believed that students needed to write extensively in order to make and subsequently learn from their mistakes. Overall, he academic believed writing

development “boils down to lots of practice and learning from mistakes and lots of studying on how to do better.”

The Researcher

From a sociocultural perspective, which sees human interaction as the starting point of mental development, my own interactions with the participants as a researcher represent an important source of mediation in the teachers’ developing PCK. This effectively means that the researcher is also a participant in the research study and that the research methods themselves functioned as an intervention in the teachers’ developing thinking. Far from being a methodological problem to be mitigated, I chose to both acknowledge and utilize this mediational function of my research methods and talk by using my talk, particularly in the stimulated recalls, as not only a means of capturing teacher thinking, but also as strategic mediation that was designed to push teachers’ thinking. This recognition and utilization of research methods as a form of intervention aimed at the development of the research participant is fully in line with a SCT approach to research (Lantolf & Thorne, 2006).

Because of my own acknowledged role as participant in the research, it is worthwhile to examine my own identity within the research context and my relationship to the participants as these factors influenced the roles I took on during the data collection. First, it is important to note that I am both a scholar and an experienced teacher of L2 writing. At the time of the study, I had been teaching writing at the post-secondary level for a total of eight years. My values and beliefs as a writing teacher can best be classified as socio-rhetorical and critical. I view writing instruction as a process of helping students to notice and critically examine the discursive and rhetorical practices of the discourse communities they wish to join and to gain mastery over the language and literacy resources available in a given discourse so that they can acquire greater levels of control over the various linguistic and rhetorical choices available to them. Additionally, I strive to engage in critical writing pedagogy (Canagarajah, 2002) through positioning my students’ cultural and linguistic knowledge, values, and abilities as valued resources in my classroom.

In addition to my identity as a teacher of L2 writing, I had a recognizable public identity as a scholar and advocate of L2 writing instruction within the department. I was

the leader of a student run research group in multilingual writing, I had presented on L2 writing research at the department roundtable series, and I frequently discussed the teaching of L2 writing classes in the shared graduate student/ adjunct office space. Additionally, in the semester prior to the study, I had co-taught a masters' level course on teaching L2 writing. Both Anna and Jennifer were students in this class, so I had an established relationship with them as a source of information and feedback for L2 writing issues. While I had not taught the other teachers in the study, I had friendly and collegial relationships with all of them at department events and in the office space shared by all the graduate student instructors.

My identity and relationship to the participants impacted the role that I took on during the data collection. In particular, because of my public persona as an L2 writing resource for new instructors, and my professional relationship as a teacher educator with two of the participants, I anticipated that the teachers might ask for my opinion and suggestions on aspects of their teaching at some point during the data collection. In view of this, I made the decision prior to data collection that though I would not offer directly unsolicited pedagogical suggestions (i.e. you should do this or that in your classroom), when a teacher directly asked me for my insight, I would give it. Indeed, this happened on several occasions both during interviews and stimulated recalls and even in the teachers' classrooms when they would ask me to assist them in answering student questions. Moreover, as a regular presence in the teachers' classrooms, the students themselves would occasionally seek my advice and input on their developing drafts, particularly when their teacher was currently assisting another student.

Data Sources and Collection

In order to get a rich a picture of the teachers' knowledge development over the course of the semester, this study used a qualitative approach, relying on six sources of data:

1. semi-structured interviews;
2. concept maps;
3. video recordings of instruction;
4. stimulated recalls;
5. instructional artifacts;

6. program documents

The general schedule for data collection is found in Table 2 and a detailed description of each of the data sources follows.

Weeks	Data Collected	Research Focus
Week 1 – Week 2	Interview 1	Participant background, teaching philosophy, goals for class
	Concept Map 1	Understanding of goals for student learning
Week 2	Interview 2	Understanding of class curriculum, syllabus walkthrough
	Concept Map 2	Understanding of class curriculum
Week 5 – Week 7	Interview 3	Goals for analytic essay unit, understanding of the genre, potential student responses, curriculum walkthrough
	Concept Map 3	Understanding of goals / curriculum of analytic essay unit
Week 5 – Week 10	Analytic Essay Unit (5-10 hours per teacher)	Classroom instruction of analytic essay
Week 6 – Week 14	Stimulated Recalls (3 per teacher)	Classroom episodes and artifacts focusing on concepts being taught
Week 10 – Week 14	Interview 4	Reflections on teacher/student learning in analytic essay unit, understanding of the genre, student responses to instruction, future changes to curriculum
	Concept Map 4	Revised understanding of goals / curriculum of analytic essay unit; comparison with Concept Map 3

Week 14 – Post-Semester	Interview 5	Understanding of class curriculum, syllabus walkthrough, reflections on teacher/student learning in course, teaching philosophy, goals for learning in future versions of course
	Concept Map 5	Revised understanding of class curriculum, comparison with Concept Map 2
	Concept Map 6	Revised goals for student learning, comparison with Concept Map 1

Table 2: Data Collection Schedule

1) Semi-structured interviews

Each teacher participated in five semi-structured interviews conducted over the course of the semester. For each interview, I identified one to three broad topics of discussion, but remained open to other topics that arose as the interviews progressed. Additionally, teachers were invited to bring up their own questions and topics of concern for discussion in the context of the interviews. The interviews typically lasted approximately one hour and were all audio recorded (See appendix A).

Interview 1 focused on teachers’ biographies with particular emphasis on their histories and self-perceptions as writers and their previous teaching experiences. In this interview teachers were also asked to describe their goals for their students’ learning in the class, their understanding of what constitutes excellent undergraduate academic writing, and their beliefs regarding how novices become successful academic writers.

The focus of interview 2 was the teachers’ understanding of the curriculum of ESL 015. The interview primarily consisted of a virtual walkthrough of each teachers’ syllabus. These walkthroughs were recorded using screen capture program. Teachers were given a bank of questions and asked to comment on relevant aspects of their syllabus using these questions as a guide for reflection.

For interview 3, teachers were asked to describe their goals for the analytic essay unit, their understanding of a successful analytic essay, and their beliefs about what parts of the unit their students might find challenging. Because this interview occurred as

teachers were actively planning the analytic essay unit, they were also encouraged to use the interview as a space to think through the issues they were facing as they prepared their curriculum.

Interview 4 occurred shortly after the end of the analytic essay unit. In this interview, teachers were asked to reflect on the unit, particularly on what they believed their students had learned, what their students had found challenging, and what, if anything, the teachers themselves had learned through teaching the unit. They were also asked to describe their current understanding of a successful analytic essay and to describe what their goals and pedagogical approach to the unit might be if they were to teach the unit again.

In interview 5, the teachers repeated the syllabus walkthrough task from interview 2, reflecting on their experiences with and current understanding of the curriculum. Teachers were also asked to reflect on the class as whole, particularly on anything they believed they had learned through teaching, their students' experiences of the class, and how they might approach teaching a future version of the class. Teachers were additionally asked to describe their current understanding of the goals and purposes of the class, excellent academic writing, and the process of writing development.

2) Concept maps

As part of the semi-structured interviews, each teacher was asked to complete six concept maps (one each for interviews 1-4 and two for interview 5). There were three basic concept map prompts which teachers were asked to respond to twice, both before and after a relevant instructional unit (see appendix B). Concept maps one and six asked teachers to visually represent their goals for students' learning and were completed at the beginning and end of the semester. Concept maps two and five asked teachers to visually represent their understanding of the curriculum of the course and were completed in the second week of the semester for concept map two and at the end of the semester for concept map five. Concept maps three and four asked the teachers to visually represent their understanding of the goals and curriculum of the analytic essay instructional unit and were completed at the beginning and end of that unit. For each concept map, the teachers were given the option to either explain the concept map as they drew it or to draw the concept map first and then explain the completed drawing. In both cases, the

teachers' explanations of the concept maps were video recorded. Additionally, when they completed the three post-teaching concept maps (4, 5, and 6) the teachers were shown their own pre-teaching concept maps of the same prompt and asked to comment on any relevant similarities or differences they observed. This commentary was also video recorded.

3) Video recordings of instruction

During the teaching of the third of four required papers, the analytic essay, I attended and video-recorded every class taught by the participating instructor. I defined the analytic essay instructional unit as beginning on the first day that the teacher introduced the assignment to the students and ending on the last day the assignment was discussed in class as identified by the teachers themselves. These video-recorded units ranged from five to ten hours of classroom instruction per teacher. Following the first two video recorded classes, I asked the teachers to wear an audio recorder with a lapel microphone to ensure that the teachers' individual conversations with students during class work times would be recorded.

4) Stimulated recalls

During the course of the analytic essay unit, each teacher participated in three stimulated recalls. For these stimulated recalls, I chose excerpts from the video-recordings of the teachers' classes or classroom artifacts that focused on some aspect of the content being taught. In choosing these excerpts, I focused particularly on teachers' explanations of content, student responses to teachers' questions about content, student questions about content, and moments of apparent confusion or difficulty on the part of the teacher or the students. Additionally, I occasionally chose classroom documents such as grading rubrics, worksheets, and informal student writing as artifacts to prompt teacher reflection. The teacher and I then watched the excerpts or examined the artifacts together, and the teachers were prompted to reflect on their thinking. These conversations tended to be quite free-flowing, and the direction was determined largely by the teachers' comments. However, I also created a bank of reflection prompts that I would choose from to start the discussion of each excerpt. I also shared this bank of questions with the teachers (see appendix C).

The final stimulated recall occurred while the teachers were evaluating their students' final drafts of the analytical essay. For this stimulated recall, each teacher was asked to select three student drafts that represented high, middle, and low examples in terms of how well the texts met the teacher's goals for this particular assignment. The teachers were then asked to comment on what they saw as the strong and weak elements of each draft.

All the stimulated recalls were audio recorded. Additionally, when instructional artifacts and student papers were used as prompts for reflection, the teacher and I viewed these artifacts on a computer that was running screen capture software. This enabled me to record an ongoing screen shot as the teachers navigated through these documents, highlighting and pointing to excerpts that they found noteworthy.

5) Instructional artifacts

I collected relevant instructional artifacts from each teacher. I collected each teacher's course syllabus and semester schedule as well as all documents related to the analytic essay instructional unit. These documents included assignment sheets, grading rubrics, presentation slides, worksheets, model essays, and lesson plans. The teachers added me as a participant in their online course management systems. This allowed me to download instructional artifacts that they placed there for the students. Additionally, I collected hard copies of handouts and worksheets that were distributed in class during the instructional unit.

6) Program documents

In addition to the artifacts generated by each teacher, I collected program documents that were distributed to the teachers. I obtained a copy of the course textbook in order to examine any readings the teachers assigned to their students. I also collected a copy of the handbook for instructors designed and written by the program director. Finally, I was added as a member to the ESL 015 email listserv. The program director used the listserv to send out reminders of programmatic events and deadlines and to circulate sample lesson plans and other teaching materials. I did not collect all the materials from this source, but only those that participating teachers used or mentioned.

Data Preparation

Following data collection, all the interviews, concept maps, stimulated recalls, and classroom teaching excerpts focused on in stimulated recalls were transcribed using broad verbatim transcription conventions. Additionally, gestures were selectively transcribed when they became relevant to the analysis. The transcription conventions can be found in appendix D. The transcriptions were completed by the researcher and a team of five trained transcribers. Additional excerpts from the teachers' classroom instruction that had not been focused on in the stimulated recalls but became relevant in the subsequent analysis were also transcribed by the researcher. All data excerpts included the following analysis were reviewed by the researcher and the transcriptions were refined when necessary.

Data Analysis

After completing the transcriptions of all the data, I used QSR NVivo data management software to facilitate my analysis of the data. My first step was to do several rounds of broad, open coding of all the data. At this stage, I read all the transcripts carefully, noting common themes and concepts that emerged. This stage of open coding enabled me to become deeply familiar with the data and to identify themes across the participants' individual cases.

Following this open coding, I began a more purposeful coding procedure drawing on theoretical concepts from the literature on teacher knowledge and learning. In this stage of the analysis, I coded the data for instances in which teachers' reflections focused on their knowledge of students, contexts, content, curriculum, and pedagogy. Additionally, at this stage of coding, I coded for the concept or topic the teachers were teaching and discussing (i.e. the analytic essay genre, writing process, peer review, thesis statements, etc. . .) as well as for explicit mentions of any artifacts or people that they identified as mediating their knowledge or learning (i.e. the textbook, teacher handbook, conversation with colleague, professional coursework, etc.). This level of coding enabled me to see broad changes in teachers' thinking and talk related to these specific categories from the beginning of the semester to the end.

I then examined each teachers' case individually. I first identified broad changes in each teachers' representations of their knowledge in the interviews and concept maps. I

then examined the video recordings of their classroom teaching and the stimulated recalls for moments in which their knowledge was being challenged or pushed through their interactions with students, student texts, or guided reflections with me. After identifying these excerpts, I took a microgenetic perspective, examining the teachers' process of development as it unfolded in these moment to moment interactions.

In the process of analyzing each teachers' data, prominent themes in their development emerged. In constructing the cases that make up the following four chapters, I focused my analysis on the themes most relevant for each teacher in order to tell the most comprehensive and coherent narrative of each teachers' development based on the data. This effectively means that the following chapters may focus on different aspects of each teachers' development rather than on uniform sets of themes and comparisons.

Conclusion

The multiple case study approach adopted by this research study allows for a focus on each teachers' developing PCK over the course of the semester. Moreover, the dual focus on broad changes in the teachers' knowledge and beliefs in the interviews and concept maps and the moment to moment interactions captured in the video recordings of the teachers' focus instructional unit enables this study to see how teachers' knowledge emerges from in the situated activities of their teaching practice.

CHAPTER 3: JENNIFER: BALANCING STABILITY AND FLEXIBILITY IN GENRE-BASED TEACHING

- Jenn: so here is trying to make it (.) sort of specific enough that they could see the difference between analytic and argumentative when we get there when I um highlight the argumentative essay next unit (.) but I also wanted them to realize that (.) th-there was some freedom this is an exploratory process. so they can do it differently and I was really really trying to make that clear and I know I've reiterated that with a number of students either generally like I did in the introduction or specifically based on their questions
[. . .]
- DW: do you feel like you yourself have a strong understanding of what an analytic essay is?
- Jenn: yes.
- DW: so you do
- Jenn: yes.
- DW: it's just a matter of (1)
- Jenn: getting that across. especially with students who are having difficulty with some genre paradigms as it is. (Jennifer, stimulated recall 1, 10/18/2013).

In the above interaction, Jennifer is reflecting on the process of selecting the description of the analytic essay she presented to her students on the first day of the unit. Jennifer's reflections and responses to my questions here demonstrate the two most significant features of her experience teaching the unit. First, Jennifer's experience most closely reflects the idealized process of pedagogical content knowledge development described in Shulman (1987) in which a content expert transforms his or her understanding of the content into pedagogically appropriate forms for her students. Jennifer began the unit with a high level of confidence in her knowledge of the genre based on her experiences writing many analytic essays in her undergraduate literature major. The challenge of teaching then, as she articulates here, was not coming to understand the concept of analysis for herself, but rather "getting that across" to her students, particularly given their previously evidenced difficulty with "genre paradigms." Jennifer's initially high level of confidence in her genre knowledge distinguishes her case from the other teachers in the study who were by and large much more uncertain about their own knowledge. This knowledge profile allows us to examine how Jennifer transformed her knowledge of genre for the purposes of teaching and can offer us

important insights into how teachers’ pedagogical knowledge of genre might differ from writers’ genre knowledge.

This interaction also reveals one instantiation of the central tension that characterized multiple aspects of Jennifer’s teaching. As she designed this explanation of the genre for her students, Jennifer reports being concerned with making her explanation “specific enough” to highlight the differences between the analytic and argumentative essay assignments while still communicating that there is “some freedom” in the “exploratory process” of writing the paper. This tension between specificity and freedom is an example of a much more pervasive tension between stability and flexibility that infused Jennifer’s teaching as her strongly held underlying values of exploration and choice were challenged by the requirements of the given curriculum and the needs of her specific group of students. This chapter will examine how Jennifer negotiated this tension throughout the semester as she prepared to teach the analytic essay, interacted with her students in individual and whole class contexts, and interpreted her students’ performance in the class. The chapter will close with a discussion of the implications of Jennifer’s case for our understanding of writing teachers’ genre knowledge, and the complex issue of transfer in writing education.

Overview of Data Collected

Jennifer devoted six days of instruction to the analytic essay unit and collected two drafts. Table 1 shows her schedule for the unit.

Date	Data Collection or Instructional Focus
10/4	<ul style="list-style-type: none"> • Interview 3 • Concept map 3
10/8	<ul style="list-style-type: none"> • Introduction to the analytic essay • Analysis of sample essay
10/10	<ul style="list-style-type: none"> • APA citation and avoiding plagiarism • Workshop working thesis statements
10/15	<ul style="list-style-type: none"> • Guided reflection on writing process • Workshop analytic essay drafts
10/17	<ul style="list-style-type: none"> • Workshop analytic essay drafts

10/18	<ul style="list-style-type: none"> • Stimulated recall 1
10/22	<ul style="list-style-type: none"> • Class canceled because of instructor illness
10/24	<ul style="list-style-type: none"> • FIRST DRAFT DUE – FORMATIVE INSTRUCTOR COMMENTS, UNGRADED • Peer review analytic essay drafts
10/29	<ul style="list-style-type: none"> • Introductions and conclusions
10/31	<ul style="list-style-type: none"> • FINAL DRAFT DUE – EVALUATIVE INSTRUCTOR COMMENTS, GRADED
11/1	<ul style="list-style-type: none"> • Stimulated recall 2
11/26	<ul style="list-style-type: none"> • Stimulated recall 3 • Interview 4 • Concept map 4 • Concept map 3 and 4 comparison

Table 3.1: Jennifer's analytic essay unit schedule

Jennifer's teaching, at least in the analytic essay unit, included very little teacher-fronted instruction. Instead, she provided her students with ample time to work on their essays in class and encouraged them to discuss their in-process writing with their classmates and with her. As a result, the data from Jennifer's classroom include many one-on-one consultations with her students. These one on one consultations provide a unique view of how a teacher like Jennifer adapts her instruction not only for the class as a whole, but also for the specific need and challenges of individual students.

Jennifer's Pre-Teaching PCK of the Analytic Essay

As previously mentioned, Jennifer began the unit with a high level of confidence in her knowledge of the analytic essay genre, which she then transformed into explanations appropriate for her students. Her conception of the genre as depicted in her pre-teaching concept map (Figure 2) shows her strong conceptual understanding of analysis as a rhetorical mode and demonstrates her initial steps of transforming this content knowledge into pedagogical forms.

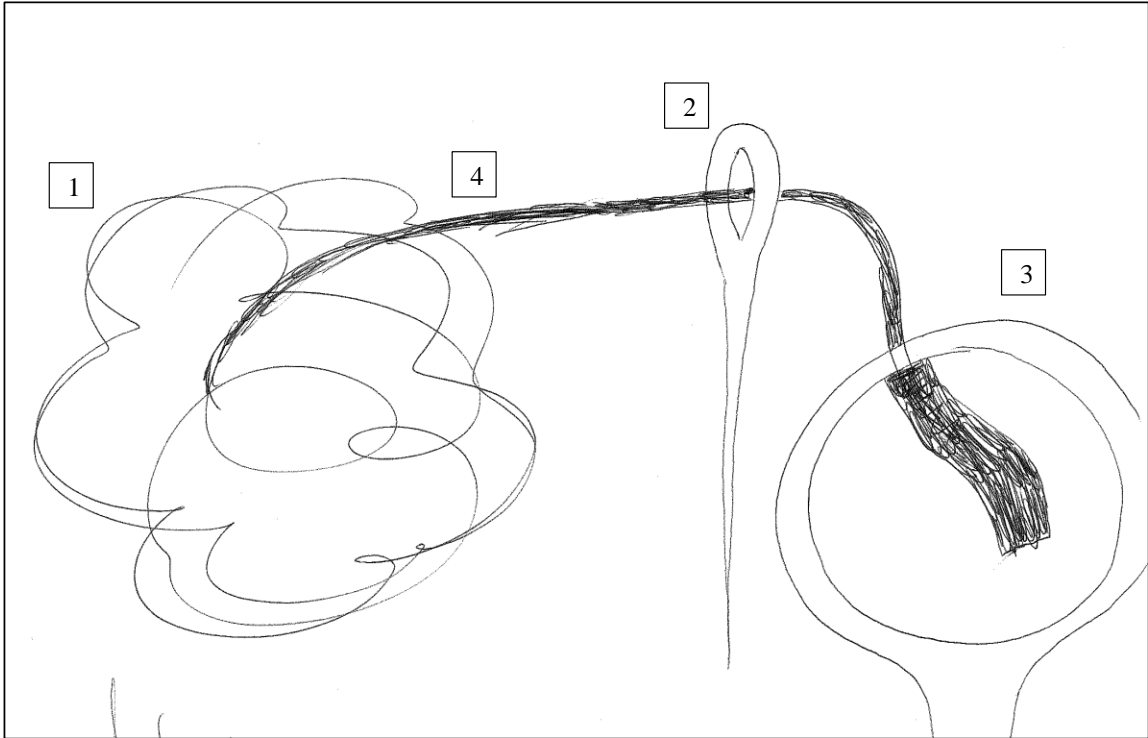


Figure 1: Jennifer pre-teaching concept map, 10/4/2013

Jennifer conceptualized the process of analysis through a sewing metaphor. The process starts, Jennifer explains with a “big bundle of knotted up thread” (1). This thread represented “the vast amount of information (.) within their [students’] own heads. and also outside in the research world.” For students who had not yet developed a clear idea of what they want to write about, Jennifer noted that this information “kind of looks like a big interwoven (.) tangly mess.” The process of analysis, Jennifer explained, involves taking this messy tangle of information and ideas and “focusing in two wa:ys.” Jennifer depicted the first kind of focusing through the image of the needle. The needle represented “developing a controlling idea.” Selecting a controlling idea is metaphorically related to “passing the thread through the eye of the needle.” In doing so, students can begin to manage the inherent messiness of the information by “choosing to focus on just this, (.) piece of this uh this wide body.”

The second form of focusing that Jennifer saw as crucial to the process of analysis is represented by the magnifying glass (3). After choosing a focus, analysis involves a writer “taking that and they're examining it very closely” in order to see how “it’s constructed, uh in a certain way (.)um (.) or out of a certain material, or what have you.”

This kind of close examination is “what analysis is doing,” even while the thread (4) remained “connected to the thesis which connects it to this larger body, (.) of information.”

Several noteworthy features of Jennifer’s pre-teaching concept of the analytic essay unit are evidenced in this concept map. First, Jennifer focuses entirely on the process of analysis as the writer experiences it. She describes in a relatively chronological fashion the various conceptual steps a writer, in this case a student writer, goes through to construct an analysis. The fact that Jennifer’s own knowledge of the analytic essay was based in a large part on her experiences as a writer may partly account for her taking this perspective in her concept map. Jennifer’s concept map also reveals some of her initial process of transforming her content knowledge. In particular, we can see evidence of how Jennifer is integrating her knowledge of the genre and her knowledge of students. As she describes the process of analysis from the student writers’ perspective, she includes a focus on how her students will experience the process based on their status as novices, particularly acknowledging the confusion and anxiety that students will likely experience when faced with the “big interwoven (.) tangly mess” of their ideas and the research. This attention to student emotion in conceptualizing the genre represents a step in transforming her own expert genre knowledge into PCK (Rosiek, 2003; Zembylas, 2007). Finally, we can see that this process of integrating her knowledge of content and knowledge of pedagogy is still very much in process. Jennifer’s concept map makes no explicit mention of her role as a teacher, or the role of classroom instruction at all. This lack of explicit attention to pedagogical practice in the concept map does not mean that Jennifer had no concept of how she planned to teach the unit, but it does demonstrate a greater focus at this point in the semester on the concept and process of analysis from a writer’s perspective than on modes of instruction.

In terms of sources of her content knowledge, Jennifer described her knowledge of the analytic essay as stemming in large part from her experiences as a writer, explaining that “I’ve done a number of different types of analyses” and particularly “because I was a lit major so you know I had (.) a very specific type of analytically developed essays” (Jennifer, stimulated recall, 10/18/2013). In Vygotskian terms, this experiential knowledge of the genre constitutes an everyday concept. It was from this

starting point of an everyday concept based on her writer’s genre knowledge that Jennifer began to transform her knowledge into pedagogical forms for her students. Prior to this process of transformation into PCK, however, we can see evidence of another process – that of unpacking her existing genre expertise. While Jennifer’s experiences writing analytic essays as an undergraduate literature major provided her a strong starting point to her content knowledge, she did not simply transfer this expert knowledge into her teaching. Instead, through the process of preparing to teach the analytic essay, Jennifer reports doing a variety of things to and with her existing expert knowledge. For example, Jennifer describes a process of synthesizing her various individual writing experiences that involved analysis as a part of creating her knowledge of the genre.

Excerpt 3.1

1 Jenn: I've partly put it [her knowledge of the analytic essay genre] together from
2 a synthesis of those- **all right what's the common elements in all of this**
3 and yes analysis tends to be an element in argumentative you know for
4 instance **so I've also (.) I can recognize those elements as I've balanced**
5 **other types of essays that I've done, argumentative for example.**
6 (Jennifer, stimulated recall 1, 10/18/2013)

Jennifer’s initial steps of preparing to teach the analytic essay involved drawing connections between the specific, contextual experiences she has had writing analytic essays in the past. Though she begins with local instances of the genre that she has written in the past, Jennifer describes synthesizing these experiences to determine “what’s the common elements in all of this” (line 2). Interestingly, her awareness of the core elements of analysis across specific contexts in turn allows Jennifer to connect the analytic essay genre to other genres that include elements of analysis but were not themselves labeled as analyses. In particular, Jennifer notes that she is able to “recognize those elements as I've balanced other types of essays that I've done,” such as argumentative essays (lines 4-5). The process Jennifer goes through here is in essence a process of moving from local knowledge of analytic essays in specific contexts, to developing a more global understanding of the features of analysis across contexts. Through synthesizing her various writing experiences and abstracting key features from them, Jennifer is unpacking her expert genre knowledge into the specialized content

knowledge (Ball, Thames, & Phelps, 2008) that is necessary for teaching. This process is also very similar to the process of generalizing by which everyday concepts are abstracted in their developmental process of moving closer to a true concept. Through this process of unpacking or generalizing, Jennifer is reorganizing her expertise with analysis into a more self-aware and explicit knowledge of the features of the genre. In other words, she is beginning to move from an everyday concept toward a true concept of the analytic essay genre.

In addition to unpacking her genre knowledge based on her own writing experiences, Jennifer soon expands her understanding of the genre to include writing situations beyond her own experiences. One way Jennifer does this is through researching the analytic essay in various online instructional resources. These resources provided scientific concepts of the genre that Jennifer could then evaluate and integrate with her existing everyday concept. One such resource that Jennifer reported using, particularly in an effort to find models of the genre to give to her students, is the Michigan Corpus of Upper-level Student Papers (2009). The representations of the genre that Jennifer found in this source among others pushed her to expand her own understanding of the genre to include a greater range of variability and to further focus in on the emerging core features of the genre. In particular, Jennifer noted (with some frustration) the wide range of ways that analytic essays were classified in the sources she consulted.

Excerpt 3.2:

1 Jenn: **there just seems to be:, uh- a lot of u:m (.) either (.) misconception**
2 **about what the genre i:s, but there're so many places, so many online**
3 **sources that uh treats (.) analytical and argumentative as synonyms (.)**
4 **practically. so then it was trying to fi:nd things that deliberately**
5 **would outline the differences to my students (.) that agreed with each**
6 **other ((exhaled laughter)) cause that was a big thing as well, (.) [. . .] just**
7 **how there seems to be no (.) good one definition. and even the**
8 **textbook that we use doesn't have an an- an analytical chapter. I think**
9 **because it's usually you either qualify it in a much more detailed way,**
10 **so they have process analyses (.) but that's (.) not quite what we're**
11 **getting at. (Jennifer, interview 3, 10/4/2013)**

What Jennifer found in the instructional sources she consulted was what she saw as a great deal of “misconception about what the genre is” (line 3-4) with the sources she consulted either treating “analytical and argumentative as synonyms,” (line 5) or “qualify[ing] it in a much more detailed way” by focusing on particular types of analytic essays such as process analyses (lines 10-11). Though Jennifer found this inconsistency frustrating, bemoaning the fact that “there seems to be no (.) good definition” for the analytical essay (lines 8-9), the experience of sorting through the highly varied ways that analysis was described and classified in these secondary sources raised her awareness of the range of textual practices that could be considered forms of the analytic essay.

While the variability Jennifer encountered in these sources certainly had a role in expanding her knowledge of the range of texts that could be considered “analytical” it is also important to observe that in Jennifer’s initial everyday concept of the genre was crucial to helping her access these alternative conceptions. As Jennifer notes, the analyses she encountered in the resources she consulted were often not labeled as analyses. Instead, they were often treated as synonymous with argumentative essays. If Jennifer had not already had an everyday concept of analysis or been able to recognize elements of analysis in her own argumentative writing experiences prior to consulting these sources it is unlikely that she would have been able to recognize the analytical elements included in these differently classified example texts.

Beyond drawing on everyday concept of the genre derived from her own writing experiences and the highly varied scientific concepts of the genre found in the instructional materials she consulted, Jennifer also used her knowledge of her students as a source of genre knowledge. In particular, Jennifer considered her students’ future writing needs and how the types of analyses her students would need to complete might both differ from and be similar to her own analytic writing experiences as she conceptualized the genre and the assignment. Jennifer explicitly references the variability of her students’ likely future experiences with the analytic essay as part of her understanding of the genre.

Excerpt 3.3:

- 1 Jenn: how I understand the analytical essay is: (.) basically what the name
2 implies. **you are examining something, in fairly detailed level,** and

3 **since my undergrad is in Irish literature of course I- I could focus it**
4 **specifically on that that particular field, say alright if I'm doing an**
5 **analysis, my opinion has no place in it. number one.** um I'm looking at,
6 and now in literature I realize that it's a lot of (.) educated guesswork, (.)
7 um what the author meant, uh you know different ways you can see
8 something or how many levels, of analysis you want to use or are even
9 there, um **so I realize most of my students (.) are (.) uh rather in some**
10 **type of scientific or mathematical field [. . .] so um so I know this- that**
11 **others will be looking at some type of analysis that better fits their**
12 **field. so it's not going to be literary. (.) but still we can use some of the**
13 **same skills, uh just close examination, asking the same questions, how,**
14 **what, why:** (Jennifer, interview 3, 10/4/2013)

Again, Jennifer's explanation of her knowledge of the analytic essay includes her own experiences as a writer – particularly her experiences writing analyses of Irish literature in her undergraduate major, explaining that one of the primary features of analysis in her experience was “examining something, in fairly detailed level” while refraining from personal opinion (lines 2-4). At same time, however, Jennifer acknowledges that her experiences of analysis are field-specific (line 4). As she explains, she is aware that “most of my students (.) are (.) uh rather in some type of scientific or mathematical field [. . .] so um so I know this- that others will be looking at some type of analysis that better fits their field” (lines 9-10). These considerations of the various permutations of analysis that her students would likely encounter serve to further expand and unpack her understanding of the genre. As before, however, the end result of Jennifer's unpacking and expanding of her knowledge of the genre leads to a synthesized knowledge of the core features of the genre across different contexts. Here, Jennifer notes that she pairs her expanded understanding of the variability of the genre across fields with a recognition that even in the midst of this variability, “we can use some of the same skills, uh just close examination, asking the same questions, how, what, why.” (lines 11-12).

In essence, through this process of reflecting on her own writing experiences and her students' future writing needs, Jennifer is constructing a true concept of the genre of

9 Jenn: students.
10 DW: yeah
11 Jenn: yeah yeah. I'm (.) I've **I've been you know making sure I shape it and**
12 **I'm going to stick it to what I've found. and what I've- I've been**
13 **presenting** mostly because I (.) agree with what I found, (.) and am
14 presenting, so (.) yeah but I'm I (.) **think** that I will see some tendency
15 **towards u:m (.) opinions or more argumentative paper.** (Jennifer,
16 interview 3, 10/4/2013)

Jennifer explains that the primary challenge she anticipates for her students is refraining from including their opinions in the analytic essay. Instead, she anticipates that she will “see some tendency towards u:m (.) opinions or more argumentative paper” (lines 13-14). Jennifer attributes this tendency partially to the fuzzy nature of the analytic essay itself, observing that students will likely have difficulty “<adhering, to a genre, that does not seem to have one (.) clear (.)> definition” (lines 5-6). At other points in the pre-teaching interview, Jennifer expands on her reasoning about the sources of this anticipated difficulty. In addition to the highly variable nature of the analytic essay genre, Jennifer notes that her students’ have a more general tendency to revert to argumentative writing when feeling uncertain or rushed. She explains that she had already observed this tendency in some of the other assignments in the class, noting that “even in the (.) extended definition essay. just th- they run out of things to say and and shift it to the persuasive” (Jennifer, interview 3, 10/4/2013). Jennifer is also, however, quick to note that she does not believe this tendency is restricted to multilingual students, but that she has “seen it (.) across the board” even in peer reviews with her fellow graduate student (both L1 and L2) classmates (Jennifer, interview 3, 10/4/2013). To combat her students’ tendency to slip into argument, Jennifer describes “making sure I shape” her explanations of the genre to particularly highlight the distinction between analysis and argumentation as well as taking care to “stick it to what I've found. and what I've- I've been presenting” in order to provide the students with a consistent set of expectations regarding the genre (lines 10-11).

While Jennifer certainly perceived the slipperiness of the genre as a potential challenge to her students, she also recognizes this inherent malleability as a potential

asset of the genre that her students would also need to master. This came up particularly in response to a follow up question about the value of writing papers like the analytic essay.

Excerpt 3.5:

1 DW: do you think that it's valuable for students to write the kind of papers
2 where they're (.) not supposed to include their opinion
3 Jenn: **I think it's valuable to do both** because there are going to be quite a
4 number- **especially those working in the uh science and maths, where**
5 **it- um a lot of the expectation is going to be wait this is going to be I**
6 **know dry (.) um presentation you're not putting your opinion you're**
7 **simply presenting the facts and but that of course as they get to higher**
8 **level papers, or for different purposes will be including opinions** and
9 then supporting it basing on the facts. **so I just think that it's important**
10 **they get a good sense (.) of the (1) boundaries between the genres?** if I
11 can um say that (.) now (.) **so that they can realize how they can**
12 **manipulate and adjust them. and just so that they're able to. so if they**
13 **are faced with a major project that's really going to count for**
14 **something and then they're given (.) uh you- very clear, rigid um (.)**
15 **paradigms that they have to work in, that they'll be able to adapt**
16 **themselves into that** and not ha:ve the (.) uh potential or: the um (.)
17 what's the word I want, the tendency to **shy** out of bounds if it's really
18 going to matter for their grade or their (.) publishicable ability? (Jennifer,
19 interview 3, 10/4/2013).

Jennifer's response to my question about the value of genres like the analytic essay is that "it's valuable to do both" (line 3). Jennifer's reasoning here focuses on the issue of transferability of learning and again rests on her understanding of her students' future writing needs. Particularly in the sciences and math, Jennifer notes, students will likely be expected to produce papers and presentations in which "you're not putting your opinion you're simply presenting the facts" (lines 6-7). At the same time, she also believes that more advanced papers in these fields "will be including opinions" (line 8). Given this imagined future for her students, Jennifer emphasizes "that it's important they

get a good sense (.) of the (1) boundaries between the genres” (lines 9-10). This awareness of the boundaries allows students to “adapt themselves into” the “very clear, rigid um (.) paradigms” that they may be asked to follow for certain assignments (lines 13-14). At the same time that Jennifer conceptualizes an awareness of genre boundaries as crucial for genre adherence, she also sees this awareness as contributing to students ability to “realize how they can manipulate and adjust” such genre boundaries (line 11). In other words, what was likely to transfer to their future writing experiences, Jennifer reasoned, was not the specifics of the analytic essay genre so much as the experience of negotiating the simultaneously fixed and fluid nature of genre-based writing itself.

Jennifer’s dual focus on the malleability and rigidity of the genre of the analytic essay mirrors a more general, and often very productive, tension that came to characterize her teaching over the course of the semester. This tension was based in the conflict Jennifer perceived between her own strongly- held underlying value in choice and variability in writing instruction and needs of her students and demands of the required curriculum. Jennifer belief in flexibility and choice applied both to how she conceptualized writing and the kind of pedagogy she hoped to enact in the classroom. This value was expressed clearly even from the first interview prior to the start of the semester.

Excerpt 3.6:

- 1 DW: um, so just a little bit about (.) just you as a teacher perhaps and uh how
2 you see yourself. so um (3) so just imagine that like a student is in your
3 class and they come back a year later, after a year what would you want
4 them to (.) remember about your class? and to say about you as a teacher
5 and what they learned in that class.
6 Jenn: alright. **I hope that- and they might not use the word (.) facilitator**
7 DW: mhm
8 Jenn: **but I hope that that's how they will see: you know my instruction**
9 while it's happening, (.) and um also look back and see- (.) and I'm **I'm big**
10 **on the: (.) there's more than one way. now just that's probably my**
11 **mantra**
12 DW: yeah

13 Jenn: to it, (.) um **especially since I had a a very interesting and different (.)**
14 **um writing development(.)al background.** so I saw that you know so
15 many things just (.) didn't work for me or I didn't need it, you know these-
16 **we seem to have (.) gone through a phase (.)where (.) you're supposed**
17 **to do this and then you move on to this step, and then this step and it's**
18 **go to build and not only do you have to be able to do these steps you**
19 **have to memorize them and be able to write them out so that you can**
20 **prove you know them on some test. and I just think that's absolutely**
21 **ridiculous and it it doesn't allow the freedom of expression, um, the**
22 **development of ideas even.** I I see so many papers where: (.) alright,
23 you're presenting some facts but nothing's r:really been developed. (.) and
24 **"I want to see you in this paper." "oh no, we're not supposed to!"**
25 DW: mhm
26 Jenn: **so I want to also be an empowerer? in um in the writing,** and I think I
27 am to some degrees and then of course being in the classroom and the
28 summer program where alright **I have, you know the institution you**
29 **know telling me I have to put certain things in, uh I've got some of the**
30 **students' parents you know "we expect this from the program" and**
31 **having to put them in and a lot of them were at odds, um to my to my**
32 **little mantra there because it was supposed to be a way and you know**
33 **this is it.** (Jennifer, interview 1, 8/28/2013)

As Jennifer notes, the refrain of “there’s more than one way” did function as a “mantra” for her throughout the semester (lines 9-10). This mantra, Jennifer explains, comes from her own experiences as a student (lines 12-13) in which she found the rigid step by step instruction as frustrating and restrictive to developing her papers in the way she wanted to (lines 14-20). Now that she was a teacher, Jennifer wanted to implement a more facilitative and empowering pedagogy (lines 6, 24). At the same time, however, she recognized that this “more than one way” vision of writing instruction would potentially put her in conflict with the expectations of various other stakeholders whose expectations for “a way” were “at odds” with Jennifer’s pedagogical values (lines 28-29). In fact, Jennifer had already encountered this resistance in her previous summer’s teaching at an

academic summer camp. In this position, she experienced the pressure of the institution “telling me I had to put in certain things in” as well as the pressure from her student’s parents who “expect this from the program” (lines 26-28). Her students’ as well provided a source of resistance through their tendency to react to her desire “to see you in this paper” with a fearful “oh no, we’re not supposed to!” (line 22). While the student anxiety that Jennifer alludes to here was something she believed she would see throughout the class, Jennifer specifically identified the analytic essay unit as a point in the semester when such anxiety would reach a peak. Whereas the first two assignments would probably “be okay” she anticipated that when they reached the analytic essay many of her students would “go ‘(.hh)! what do you want?’ (.) again” when faced with this longer and more demanding essay (Jennifer, interview 2, 9/4/2013). Thus, even from very early in the semester, Jennifer expressed a strong belief in her mantra of “more than one way,” while simultaneously being aware of how this mantra might conflict with the expectations and preferences of both the program and the students.

Summary of Pre-Teaching PCK

Overall, Jennifer’s pre-teaching PCK and her descriptions of how she developed it demonstrate the process of transforming a writers’ genre knowledge into the pedagogical genre knowledge needed for teaching. For Jennifer, the process of transforming her content knowledge into PCK included synthesizing her own specific and contextualized experiences writing analyses (her everyday concept) and expanding her knowledge of the genre to include analysis in other fields. Jennifer’s pre-teaching PCK also points to the emerging tension between genre rigidity and fluidity. This tension, which is central to genre theory, also reflects an underlying tension Jennifer experienced between her own vision of ideal pedagogy and the needs and expectations of her students and the institution.

PCK in Development

As she taught the analytic essay, Jennifer continued to navigate the tension between drawing clear genre boundaries, especially between the analytic and argumentative essays, and the natural fluidity and variability of the rhetorical mode of analysis. Her instruction and her reflections on her instruction reveal this balancing act as an overarching theme in Jennifer’s developing and enacted PCK. In particular, we can

see the moment to moment and student to student adjustments Jennifer makes as she moves from addressing the whole class to working with students individually. Within these shifts, the adjustments between genre stability and flexibility become a visible and noteworthy element of Jennifer's teaching.

Much of Jennifer's drawing of genre boundaries was done through the official course documents she designed and adopted for the unit. For example, in her grading rubric for the analytic essay, Jennifer included "genre" as a category of evaluation. Her description of her grading criteria for this category presents a relatively strict vision of adhering to clear genre "rules." For instance, to receive three of three points in this category, a paper must demonstrate "clear adherence to the rules of the genre" while "minor deviation" from these "rules" would result in a grade reduction of two points and "significant deviation" would result in zero (Jennifer, grading rubric, 2013). The language of these explanations with their focus on "rules," "adherence," and "deviation" all present genre primarily as a rigidly bounded form of writing. Other documents Jennifer created show a similar preoccupation with clearly defining genre boundaries and emphasizing the boundaries of the genre. One good example of this comes the presentation Jennifer created to introduce the students to the assignment of the first day of the unit. Through a short lecture to the whole class, Jennifer presented an explanation of the key features of the genre. She began this lecture by discussing the need to start with a research question. The second slide in her presentation addressed what a writer then did to answer the research question and provided the most explicit definition of the analytic essay genre in Jennifer's teaching. Figure 2 below shows this definition.

Then what do you do with it?

You answer the research questions objectively.

You have **no** preconceived notions or opinions about the topic.

You evaluate the topic and draw conclusions from factual information from reliable sources.

You piece findings together to present the purpose of the paper.
(Use appropriate transitions!)

You use serious contemplation and a critical evaluation to answer the research question.

<http://www.write.com/writing/resources/articles/research-writing/organization/analytical-vs-argumentative-research-papers/>

Figure 2: Jennifer class presentation, 10/8/2013

This definition, which Jennifer adopted verbatim from an online source (*Analytical vs. argumentative research papers*, n.d.) heavily emphasizes the objective nature of the analytic essay, telling students that they must “answer the research questions objectively,” “have no preconceived notions or opinions about the topic,” and use “factual information” to construct their paper. The other points that are emphasized are the need to create coherence through “piec[ing] findings together” and the importance of “serious contemplation” and “critical evaluation.” As with her rubric, the main focus of this presentation slide is on the creation of clear genre boundaries, particularly between analysis and argument. The clarity of these boundaries is created through the use of unmitigated directives and prohibitions as well as the repetition and rephrasing of the requirement for objectivity. In fact, the only change Jennifer made to this original website’s definition, the highlighting of “no” in the sentence “You have **no** preconceived notions or opinions about the topic” further emphasizes the strong line that is being drawn between analysis and argumentation.

While her unit documents such as this presentation slide presented the concept of genre as a rigid set of “rules” which formed clear boundaries between different types of writing, Jennifer’s reflections on her teaching, as well as her accompanying verbal explanations of the genre to her students, construe the genre as much more fluid and contingent. This tension between the rigidity and fluidity of genre can be seen in her

reasoning on the definition of the analytic essay in figure 2. In the first stimulated recall, I asked Jennifer to explain how she designed this definition. Her response includes many of the considerations she voiced in the pre-teaching interview, but even more clearly highlights the tension between genre fluidity and student freedom on one hand and genre boundaries and curricular requirements on the other.

Excerpt 3.7:

1 DW: so any thoughts on that? can you tell me (.) what you were thinking when
2 you designed that
3 Jenn: ok when I designed that (.) like (.) I think I probably told you earlier but
4 now officially on the recording here the- and even out (.) **in you know the**
5 **regular vast array of sources that we have, there seems to be (.) either**
6 **differences (.) or a whole lot of ambiguity in defining what an analytic**
7 **essay is. it's either lumped in with argumentative and kind of**
8 **considered the same thing**, sometimes synonymously (.) um (.) and
9 **others it's: not labeled analytic it's put under something like report or**
10 **research paper and of course (.) when you start getting um specifically**
11 **into the higher levels of uh the different fields, an analytic essay is**
12 **going to mean something a little different in perhaps a science** where
13 you know here we have the research and the analysis of that research you
14 know versus the exploration of a topic. **so here is trying to make it (.)**
15 **sort of specific enough that they could see the difference between**
16 **analytic and argumentative when we get there when I um highlight**
17 **the argumentative essay next unit (.) but I also wanted them to realize**
18 **that (2) th-there was some freedom this is an exploratory process. so**
19 **they can do it differently and I was really really trying to make that**
20 **clear** and I know I've reiterated that with a number of students either
21 generally like I did in the introduction or specifically based on their
22 questions [. . .] **I also knew that in the syllabus we have analytical and**
23 **we have argumentative so I was figuring that the program is seeing a**
24 **distinction so all right I need to find this distinction. the textbook**
25 **doesn't give it, I started doing research online and it came up- or**

26 **found um some definitions or some points that matched what I**
27 **already think and matched what I think is kind of meant in the**
28 **syllabus.** (Jennifer, stimulated recall 1, 10/18/2013)

As in the pre-teaching interview, Jennifer emphasizes the wide range of variability in the genre descriptions and classifications she found in the online sources she consulted (lines 4-9). She also acknowledges the variability of what can constitute analysis in her students' various academic fields, particularly at the higher levels (lines 9-13). In this explanation, however, Jennifer more explicitly recognizes the role of the required curriculum in her thinking about the analytic essay. As Jennifer explains, because the curriculum included both analytic and argumentative essay assignments, she reasoned that "the program is seeing a distinction" between these two types of writing and therefore "I need to find this distinction" (lines 21-22). The result of these competing demands and conceptions of the analytic essay was a definition that Jennifer hoped would be "sort of specific enough that they [the students] could see the difference between analytic and argumentative when we get there" and yet also would enable her students "to realize that (2) th-there was some freedom this is an exploratory process. so they can do it differently" (lines 13-17). This definition also attempts to balance the students' immediate need to transition from the analytic essay to the argumentative essay with their longer term needs to write various forms of analyses in their future classes. It was this simultaneously defined and open-ended nature of the genre and assignment that Jennifer "was really really trying to make that clear" in her explanations to the class (line 17-18).

While Jennifer had certainly tried to make the both conventional and fluid nature of the genre clear in her initial explanation, she continued to navigate this tension throughout the remainder of her teaching in the unit. This process of navigation can even be seen in her verbal explanations of the definition of the analytic essay in figure 2, particularly related to the requirement that the writer include "no preconceived notions or opinions about the topic" in the analytic essay genre. While Jennifer had visually highlighted this prohibition in the slide itself, when she explained it to the class, she complicated this clear prohibition with a much more nuanced understanding of the role of opinion in the analytic essay.

Excerpt 3.8:

1 Jenn: so no: preconceived notions or opinions about the topic, now ((using laser
2 pointer to highlight link at bottom of screen)) this statement I took from
3 this webpage down here which you can see a little better um if you open
4 this up (.) so but so **n:o:: no opinions that's probably the important**
5 **one, (.) you may have an opinion. (.) you all probably do (.) especially**
6 **as you're doing your research, you'll have an opinion on what's**
7 **important (.) to study, what's important to present, (.) you may have a**
8 **reason, why I want to present this because I want the world to know,**
9 **so you're going to have formed some opinions (.) along the way, (1)**
10 **but for the analytic paper, you have to be really careful. (.) some on**
11 **them might come out a little bit but the paper is not about stating**
12 **your opinion,** getting people to follow your- er agree with your line of
13 thinking, so you don't want to persuade them yet, (.) or argue them into it,
14 so you're just basically showing the facts, the support, research, (.)
15 exploring it, **now preconceived notions I'm not sure if I totally agree:**
16 **with that, that's (.) kind of what you thought of before (.) there's a**
17 **place for this.** (Jennifer, 10/8/2013).

As Jennifer verbally explains the definition she included in the slide, she moderates the strong emphasis on excluding all opinion. While her visual presentation emphasized that the students should “have **no** preconceived notions or opinions about the topic” (Figure 2), here Jennifer acknowledges that in fact students will “have an opinion” about the topic or are “going to have formed some opinions (.) along the way” as a result of their research (lines 4-9). Moreover, she acknowledges that these opinions “might come out a little bit” in the paper itself (line 10). While these opinions exist and may in fact be visible to the reader, Jennifer still emphasizes that “the paper is not about stating your opinion” (lines 10-11). In other words, Jennifer creates a much more flexible boundary between the analytic and argumentative essays. In both, writers have opinions. In both, the opinions may be visible, though perhaps to different degrees. The distinction then is not whether or not the essay contains opinions but rather whether the purpose of the essay is to convince the reader of those opinions. Jennifer takes this adjustment even

further with the her verbal explanation of the admonition to have “no preconceived notions,” directly stating that “I’m not sure if I totally agree: with that” and that in reality “there’s a place for this” kind of preconceived notion in the analytic essay (line 15).

When I asked Jennifer about this excerpt, and particularly her comment about the preconceived notions, she explained how both her understanding of the genre and her knowledge of individual students shaped her explanations.

Excerpt 3.9:

- 1 DW: yeah so I was interested in that last statement you were making about the
2 pre[conceived notions
3 Jenn: [preconceived notions
4 DW: not totally (.) agreeing with that
5 Jenn: mhm
6 DW: can you just say- can you elaborate a little [bit on that
7 Jenn: [a(h)lri(h)t so um I I wasn- I
8 **was disagreeing with- with the fact that uh um this website in**
9 **particular (.) um was saying you you can't have preconceived notions**
10 **and and (.) as I was looking at it in the earlier class (.) actually I**
11 **thought (1) I don't totally agree with that because there are going to**
12 **be preconceived notions. so it's not so much that we don't have them**
13 **(.) it's that we don't overtly (.) show that as our opinion in the paper and**
14 **I've I've talked with some students independently ones who I didn't**
15 **think would be so confused by the fact that (.) yes your opinion is**
16 **going to come out i:n (.) tone and because we haven't really um talked**
17 **about that yet but some of the ones who I thought could handle it I've**
18 **had more once again informal and and some more personal guidance**
19 **(.) on that, (say) yes you will have preconceived notions, yes it's probably**
20 **going to come out a little bit we can't make the paper completely devoid**
21 **(.) of all of that there's just really not a way to do it but you know but**
22 **(.) you don't want to make it overt. (Jennifer, stimulated recall 1,**
23 **10/18/2013)**

First, Jennifer explains that she had actually realized “I don't totally agree with that” in her previous section of the class. In particular Jennifer disagreed with the advice to have no preconceived notions on the basis that “there are going to be preconceived notions. so it's not so much that we don't have them (.) it's that we don't overtly (.) show that as our opinion in the paper” (lines 11-13). While Jennifer noted her disagreement within the class lecture, she did not get into the details and intricacies of the relationships between opinion, tone, and overall purpose of the paper. Instead, as she explains here, Jennifer chose to address these issues through “informal and [. . .] personal guidance” in the form of one-on-one consultations with her students (line 17). Additionally, she reserved these conversations for individual students “who I didn't think would be so confused by the fact” and “who I thought could handle it” (lines 14, 16).

This explanation is illuminating because it shows that Jennifer in fact has multiple versions of the definition of the analytic essay and strategically chooses what to emphasize in what context with which students. While the course documents like the introductory PowerPoint and the grading rubric maintained a relatively strict separation between the analytic and argumentative essays through emphasizing the need to refrain from opinion in the analytic essay, in her verbal explanations, Jennifer softened this prohibition. Moreover, in her personal consultations with more advanced students, Jennifer further complicated the boundary between the analysis and argument by explaining that opinions could be included in the analytic essay through tone so long as these opinions were not overt. This differentiation points to how Jennifer strategically transforms her own expert and specialized knowledge of the genre into pedagogical representations for different contexts and groups of students.

One example of Jennifer's practice of adjusting her explanation of the genre for more advanced students happened during the second of two workshop days she scheduled during the unit. Toward the beginning of this class, S1 approached Jennifer to ask her advice on his potential topic for the analytic essay. S1 was a relatively vocal student in Jennifer's class, and in previous conversations with me, Jennifer had identified him as one of the most advanced students in the class. He thus certainly qualified as one of the more advanced students for whom Jennifer anticipated presenting a more fluid notion of the boundaries between the genres. As she reported, her conversation with him did indeed

both acknowledge the presence and need to adhere to genre boundaries and the inherent fluidity of those boundaries.

Excerpt 3.10:

- 1 S1: **is it possible to write about (.) the s:- the symptoms of leukemia?**
2 Jenn: the what sentence?
3 S1: like symptom
4 Jenn: a symptom. (.) **like analyzing a symptom or the symptoms.**
5 S1: the symptoms
6 Jenn: okay, there are different types of leukemia so you would probably have to
7 [look that up first
8 S1: [(bone marrow one) bone marrow?
9 Jenn: okay. so like- **so analyzing the symptoms, that would be mor:e straight**
10 **description, s:o: how you could turn that into an analysis would be**
11 **u:m (.) maybe looking at some of the: procedures, (.) or: how**
12 **diagnoses are made based on the symptoms?** because there're there are
13 probably going to be some some different and some more interesting
14 things than just (.) outlining the symptoms. that you can do with that.
15 S1: I can descri:be leukemia and then talk about the procedure,
16 Jenn: **yeah yeah and the description in that case would support**
17 S1: mhm
18 Jenn: **your um analytical (.) exploration of um what's done, what people go**
19 **through, those types of things.**
20 S1: okay
21 Jenn: **=because if you just describe symptoms it's more like an extended**
22 **definition.**
23 S1: (yeah)
24 Jenn: y(h)ea(h)h (Jennifer, 10/17/2013)

In his initial question, S1 asks whether he can “write about” the symptoms of leukemia (line 1). As she clarifies his question (lines 2-4), Jennifer recasts this with the more specific verb of “analyzing” (line 4). Her overall response to his question draws a distinction between description and analysis that she did not include in her initial

explanations of the genre to the whole class. She explains that “analyzing the symptoms, that would be more straight description” and that such an essay would be “more like an extended definition” (lines 10-11, 22). These comparisons serve to highlight the boundaries between these genres. However, even as Jennifer is creating these boundaries between description and analysis, she is also complicating the relationship between these genres. Although description and analysis are clearly distinct, description can “support” an analysis (lines 17-20) and a “straight description” can be turned “into an analysis” through slightly shifting the focus (lines 11-13).

Her intention to focus on the fluidity of the distinctions between these genres becomes even more pronounced in her reflections on this episode. In the stimulated recall, Jennifer describes communicating the potential interconnections between these genres while respecting this student’s freedom to develop his own paper in his own way as being her primary concerns in this interchange.

Excerpt 3.11:

- 1 DW: so I thought this was interesting because-I mean you've already talked
2 about how: the analytic essay can tend to sort of bleed into argument
3 Jenn: mhm
4 DW: but this seems to be kind of an opposite
5 Jenn: yeah
6 DW: direction problem, so I wonder if you could just kind of comment on that,
7 [you said you heard similar things [from other people
8 Jenn: [okay
9 Jenn: [yes I did and um and and **I think in**
10 **this (.) er in uh these cases that it's a-an issue with um specificity.**
11 DW: mhm
12 Jenn: **they're still wanting to be too general** because they're thinking about a:ll
13 of the: (.) you know just the um sub topics within the category, rather than
14 (.) making it really interesting by going (.) down a specific way and **what**
15 **I was trying to avoid and this came out a little bit in the awkwardness**
16 **of my responses was was trying to avoid telling him to do it, to go**
17 **down a particular way, I wanted to leave that freedom so I was trying**

18 **to give you know a couple examples and I did this with almost every**
19 **student who asked me I think (.) um a couple of examples of what you**
20 **could look at** so (.) hoping he doesn't try to take all the examples and
21 squeeze them in that's going to be a bit messy ((laughter)) figure out how
22 he can put the um. so **I was also trying to prove that yeah you can use**
23 **(.) other elements of um (.) or-or elements of the other two genres that**
24 **we worked with and include them in here, because typically the**
25 **comparison contrast aside from any you know (.) undergrad**
26 **academics isn't (.) really (.) a genre. right?**

27 DW: yeah

28 Jenn: **yeah. it's for another purpose, embedded in you know other papers,**
29 **same thing with the (.) extended definition,** so for him he was mostly
30 trying to you know revert to just that descriptive (.) um or yeah the
31 description. and (.) **but a lot of other students were- and they were**
32 **really worried about this they're coming up saying um (.) what if what**
33 **if I have like two opposi:ng (.) or if I'm illustrating two opposing**
34 **viewpoints or something that's kind of comparison contrast. I said you**
35 **can use it as long as that's not the paper. I said but use those**
36 **comparisons or contrasts as you develop the analysis and-and tell**
37 **some in fact you probably can't do a really good (.) analysis or**
38 **exploration without (.) showing some of that because it's going to**
39 **naturally be in there.** (Jennifer, stimulated recall 1, 10/18/2013)

As Jennifer had mentioned in a previous interaction and confirms here, S1 was not the only student who was having difficulties navigating the boundary between description or comparison contrast and analysis (lines 6-9, 29-33). Jennifer attributes this difficulty largely to a tendency on the part of the students “to be too general” in their treatment of the topics rather than “going (.) down a specific way” into an in-depth analysis of the topic (lines 12-14). This issue of breadth versus specificity seems to be the primary difference between description and analysis in Jennifer’s thinking. At the same time, Jennifer also sees the potential for interconnectedness between the genres. She classifies the previous two assignments the students had completed, the extended

definition essay and the compare contrast presentation, as not “really (.) a genre” outside the specific context of undergraduate academic assignments (lines 23-25). Instead, these rhetorical modes are “embedded in you know other papers” (line 27). Many of Jennifer’s students did not initially see this and were anxious about using the rhetorical modes of definition or compare contrast within the analytic essay (lines 29-33). In this interaction with S1, and in other interactions like it, Jennifer was trying to demonstrate to her students that “you can use (.) other elements of um (.) or-or elements of the other two genres that we worked with” (lines 21-23) “as long as that’s not the paper” (line 33).

In addition to trying to communicate this complex understanding of the relationship between the genres to S1, Jennifer also reports a concern with giving this student freedom to develop his paper in his own way. As she notes, her strategy of giving students several examples of what they could do to adjust their approach to the assignment to satisfy the need for genre adherence was motivated by her desire to “avoid telling him to do it, to go down a particular way” and thus “leave that freedom” for the students to choose their own way to develop the paper (lines 16-17). Jennifer was committed to this approach, even when it resulted in “a little bit in the awkwardness of my responses” as she perceived this response to include (line 15).

While Jennifer stated that she reserved this kind of nuanced understanding of the genre for her most advanced students, I was unable to find any examples of her presenting a more rigid and rule-governed explanation of the genre in any of her one on one interactions with her students during the unit. The closest I saw to Jennifer presenting a more clear-cut understanding of the genre based on students’ level was in her response to a student’s journal. As part of her course, Jennifer required students to complete a minimum of fifteen “dialog journals.” She described these journals as one to two paragraph “informal, communicative texts” that “should address the content of the class in some way” (Jennifer, syllabus, 2013). In the second stimulated recall, I asked Jennifer to comment on a selection of student journals. Over the course of the unit, several of the students posted comments about their developing understanding of the analytic essay. One of these comments in particular emphasized the requirement to avoid all opinion in the genre. When I asked Jennifer to reflect on this journal and what it showed her about

her students' knowledge of the genre, she again showed a differentiated concept of the genre for students of different levels.

Excerpt 3.12:

- 1 DW: my questions have to do with so, (.) u:m when you read these journal (.)
2 responses what do they tell you about the nature of the concepts that you
3 were teaching, so what those concepts are, which ones the students picked
4 up on
- 5 Jenn: right
- 6 DW: and also what does this tell you about how (.) the students understood
7 these things that you were teaching
- 8 Jenn: ok. so. if we look at this first one here, the first thing that- that I noticed
9 was u:m (.) that **they were talking about the different (.) points or**
10 **elements in the analytic essay (and) includes the fact that that**
11 **((reading from student text)) "the writer cannot display his or her**
12 **opinions and ideas," so that wasn't (.) exactly what I was trying to get**
13 **across? I was saying it could not be an overt (.) opinion or idea. you know**
14 **(.) however at the introduction to composition stage of the game**
15 **probably (.) it's ok to think you just- you just cannot. because**
16 **naturally they're going to- as they read more and as they write more**
17 **are going to understand how to - how they won't be able to fully avoid**
18 **it, just in the way that they write, in the tone they use, the audience**
19 **they choose to target and the subject that they pick and how much (.)**
20 **research they put in and how, is going to you know show that they're**
21 **going to- that they have opinions and ideas. so um so that would be one**
22 **thing and I'd probably um even comment back on something like this as I**
23 **notice and have the time to, I do comment back on the journals**
- 24 DW: yeah [I did see that]
- 25 Jenn: [yeah you probably] yeah saw (.) not everyone. (.) I'm just one person
- 26 DW: **so then as far as your understanding- your kind of expert**
27 **understanding of this genre, this is not entirely accurate but**
- 28 Jenn: **right**

29 DW: **you're ok [with it for a beginner**
30 Jenn: **[I'm ok with it (.) for a beginner exactly. yup. and I think**
31 **that (.) you know I: (.) my past writing teachers probably-and it's like**
32 **you can not and it's like ((whispers)) ok I can never do this but it also-**
33 **sometimes those- those absolutes tripped me up a little bit later on,**
34 **because I've had trouble breaking it, so once again in class (.) I tried**
35 **to display that (.) you know yes (.) it it's gonna come out you can't**
36 **help it but don't deliberately put in in there, or overtly put it in there,**
37 **yeah. because this this isn't the place for this and uh **talking to students****
38 **individually you know especially individually I can say you know**
39 **however (.) when we move on to the argumentative, you know, so I**
40 **can kind of help tie (.) in that that is a more appropriate** (Jennifer,
41 **stimulated recall 2, 11/1/2013).**

Jennifer notes that while the student's understanding of the genre as including no opinions "wasn't (.) exactly what I was trying to get across" (lines 4-5), "at the introduction to composition stage of the game probably (.) it's ok to think you just- you just cannot" (lines 6-7). Her students, she reasons, will eventually come to the realization that "they won't be able to fully avoid" opinions through independent reading. In other words, though Jennifer does not agree with this rigid vision of the genre, she sees the short term utility of it for novice writers. At the same time, however, she also sees how this kind of prohibition could backfire. As a writing student, Jennifer herself was on the receiving end of such absolutes (line 23). She also explains that such absolutes, however, "tripped me up a little bit later on, because I've had trouble breaking it" (lines 25-26). As a result, though Jennifer acknowledges the appropriateness of her student's emerging understanding of the genre in terms of absolutes, she does not reinforce this view through her teaching because of the potential difficulties such absolutes might create for students in their futures. Instead, Jennifer accepts this view, but also tries to communicate a more realistic and contextualized understanding of the role of opinion in the analytic essay, particularly through one on one conversations and feedback to individual students (lines 29-31, 13-14).

Throughout the entire analytic essay unit, Jennifer adjusted and readjusted her explanations of the analytic essay genre, emphasizing the rigidity and fluidity of the genre differently in different contexts. As she looked back on the unit after teaching, her reflections again focused on this delicate and ever shifting balance. In her evaluations of her students' final drafts, Jennifer noted that many students has still had trouble creating a separation between the genres of analysis and argument. Few students had started with explicitly argumentative thesis statements, but rather in the course of writing "they changed it, so they kind of kept the topic but they they changed the initial fairly objective question into something that end- that evolved into um a persuasive essay. that was the biggest issue" (Jennifer, stimulated recall 3, 11/26/2013). This difficulty maintaining adherence to the genre was one that Jennifer had anticipated, so she was not terribly surprised to find her students' papers exhibiting these issues, yet it still prompted her to reconsider aspects of her pedagogy. She explained that in light of this trend, "I've been trying to think of some ways to (.) to make that clearer. just next semester how how do I (.) really really (.) separate this (.) so that I don't get students going, 'I don't know what you mea:n'" (Jennifer, stimulated recall 3, 11/26/2013). This renewed focus on how to make the separation between analysis and argument clearer in order to avoid the kind of student confusion she was seeing in the final drafts indicates that Jennifer is yet again navigating the simultaneous rigidity and fluidity of the genre, especially in terms of her pedagogical representations of the genre. It further indicates that she may perhaps be moving toward a greater emphasis on absolutes in such representations.

In addition to the problems of genre adherence, Jennifer noted an additional problem that was common in her students' essays – their failure to successfully apply what they had been taught about APA citation style. Though this problem was not directly related to Jennifer's thinking about the fluidity and rigidity of the genre, it had a meaningful impact on Jennifer's thinking about her underlying pedagogical values of student freedom and choice.

Excerpt 3.13:

1 Jenn: **the APA stuff, that was probably my biggest disappointment, (.) cause**
2 **I I thought we hit it pretty hard** (.) I talked to some people individually,
3 showi:ng (.) resources and (.) it was very very obvious that a number

4 didn't- they they probably (.) never opened up Purdue OWL outside of
5 class for instance or (.) um or revisited the (.) um (.) revisited the uh
6 PowerPoint (.) on it. and now- **now some honestly just said, "I just can't**
7 **wrap my head around this" and I've had independent talks with some**
8 **who who knew that they were struggling but other others ignored**
9 **APA all together** and just did MLA, I mean straight up just did it. (.) and
10 didn't ev- yeah, not even a blend just straight. and ((quietly)) **so I was just**
11 **kind of wondering why (.) that might be one of my changes for next**
12 **semester, I might hit this earlier in the semester and (.) and even**
13 **though (I was) trying not to make it an element of of the first couple, I**
14 **might have to.**

15 DW: yeah

16 Jenn: just so that we can work out the bugs before (.) we get to this essay.

17 (Jennifer, stimulated recall 3, 11/26/2013)

Unlike the difficulties her students had adhering to the genre of analysis, Jennifer had not anticipated the kinds of problems she saw with her students' use of APA citation style. She expressed both "disappointment" and surprise at the problems she saw (lines 1-2). While she knew that some students had been legitimately overwhelmed and confused (lines 5-7), she could also see that some students had not reviewed the material and resources she provided, but instead had simply "ignored APA all together" (lines 5-8). In response to this evidence, Jennifer was reevaluating her pedagogy, "wondering why" the class had experienced these problems and considering introducing APA citations style earlier in the semester in order to "work out the bugs" before getting to the analytic essay (lines 9-14). Though Jennifer's reflections here seem fairly procedural and do not necessarily point to any conceptual adjustments, her later reflections on this issue, particularly as she drew the post-teaching concept map, reveal the deeper impact this instructional problem had on Jennifer's pedagogical reasoning.

Overall, through the course of teaching the analytic essay, Jennifer's instructional talk and her reflections in the stimulated recalls were characterized by a consistent focus on the central tension between certainty, absolutes, and rigidity on one hand and flexibility, freedom, and choice on the other. This underlying tension manifested itself in

many of the smaller sources of conflict and tension in Jennifer's teaching, particularly her understanding of the genre as both rigid and flexible, her understanding of her students' current need to meet the assignment requirements with their future needs for adaptability as writers, and the institutional and curricular expectations that she provided her students with "a way" with Jennifer's own mantra of "there's more than one way" to write and teach. Given this host of incommensurable requirements, Jennifer's teaching, and her development in her teaching does not, and indeed could not resolve this tension. Instead, her development consists of perceiving this tension in greater clarity as it arises in the specific contexts and interactions of her pedagogy and constantly adjusting and readjusting her teaching to navigate it. In the early stages of her teaching, Jennifer tends to emphasize flexibility and freedom to a slightly greater extent. After reading her students' drafts, however, Jennifer begins to question the extent of this focus and to move toward a greater focus on certainty and rigidity. This changing conception of this central tension is clearly reflected in Jennifer's post-teaching concept map and reflections.

Post-Teaching PCK

In the post-teaching concept map, Jennifer further reflected on her evolving understanding of the fluidity and rigidity of the genre and how to represent these aspects of writing most effectively to her students. Like the post-teaching interview, her concept map in Figure 3 represents a move toward a greater emphasis on her students' developmental need for some measure of definite and unambiguous guidelines in the analytic essay unit.

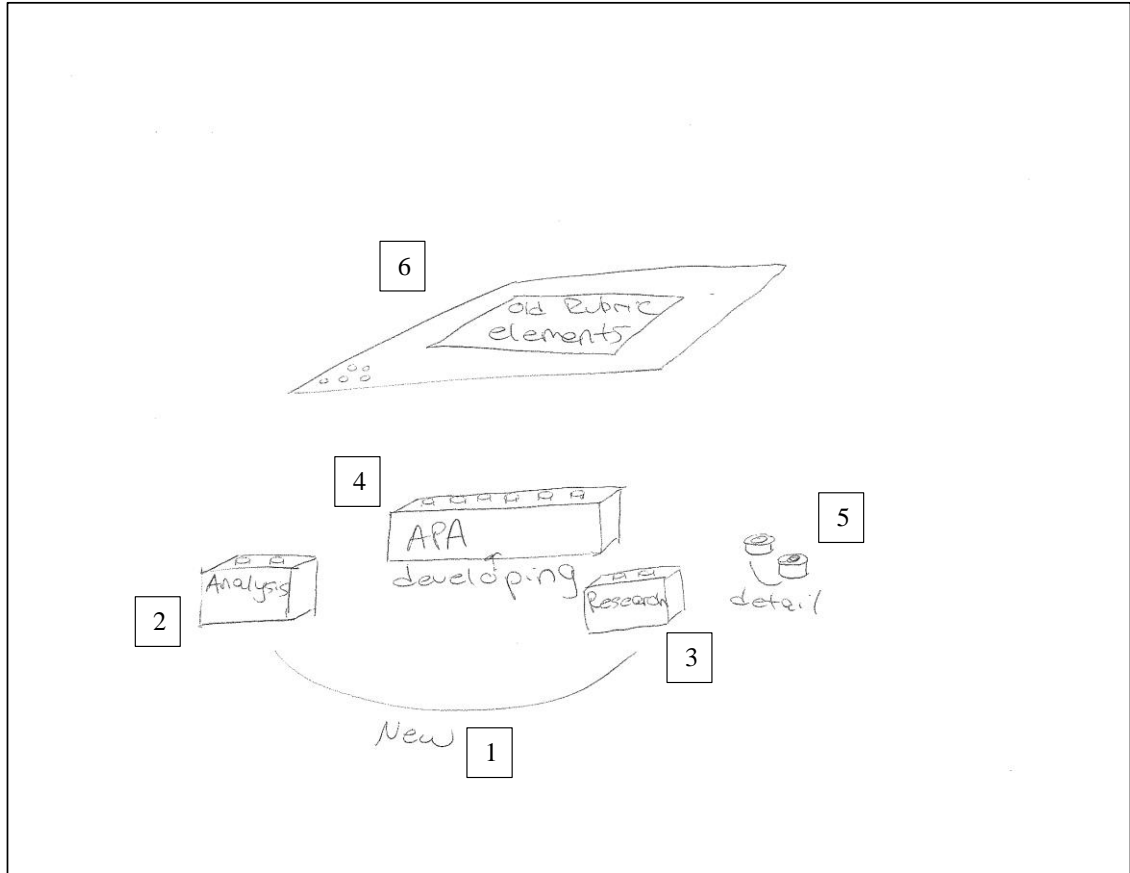


Figure 3: Jennifer post-teaching concept map, 11/26/2013

In her post-teaching concept map, Jennifer chose to use the visual metaphor of Legos to conceptualize the curriculum. The choice of this metaphor related specifically to the blend of flexibility and rigidity inherent in that medium. As Jennifer phrased it, “Legos represent that you can do it (.) number one, in different ways, (.) so they are adjustable, however each piece (.) is fairly rigid, so instead of modeling clay which could just be too (.) um (2) too: (.) I don't know, m- malleable (.) um an image.” Jennifer saw the rigidity of each Lego block coupled with the multitude of ways those blocks could be combined as making them a more apt metaphor for writing and her curriculum than something like “modeling clay” which she thought would be too “malleable” an image for her understanding of the unit.

The size and shape of the blocks in Jennifer’s concept map related to whether these were new elements or elements that had been developed over a longer period of time. The “basic building blocks” (2, 3) represented “new (.) um information that we were (.) adding in” for the analytic essay unit (1). Jennifer identified the question of

“what is analysis in this particular (.) context” (2) and research (3) as examples of topics and skills that would be new to the students in this unit. The larger block (4) represented a type of skill “that’s been kind of developed over time.” APA citation style was given as example of such a skill. Finally, the very small blocks (5) represented “some of the little details that we can add (.) kind of as needed.” These details included issues that Jennifer “didn’t foresee,” which Jennifer imagined dealing with “in smaller ways. or maybe even more personal ways individually student by student.”

The combined rigidity and flexibility of the Lego metaphor allowed Jennifer to conceptualize of her teaching as consisting of building on an “initial foundation” of “rubric elements” that “stay stable from the very beginning.” These features such as thesis development, unity, and coherence were broadly applicable to a variety of academic writing tasks. On top of this base, Jennifer could “add the new (.) um things” such as analysis and research while still retaining the flexibility to add “the little details [5] on a person by person basis, or as I notice something in class.” As an example, Jennifer cited the possibility that her students might “still (.) seem to have a: (.) and not that they’re wrong, but a slightly different idea of of how to analyze something.” In such a case, Jennifer would be able to “say, alright let’s let’s support it with you know (.) surround it by little details that we’re helping you know put it in this particular genre or or this particular style of writing, [yet not] you know shut down what their idea is because it might be pertinent in another context.” Jennifer’s Lego metaphor, thus seems to simultaneously represent the combination of rigidity and flexibility that she saw as both central to the notion of genre and her understanding of pedagogy itself.

In her reflections on the differences between her pre-teaching concept map and her post-teaching map, Jennifer herself emphasized the change in her focus on the rigidity and flexibility of her curriculum. As she noted, in her post-teaching map “I’ve definitely blocked (.) it out” whereas her pre-teaching map had emphasized “the analysis (.) process itself” which entailed taking “this whole cloud of: of ideas and preconceived notions either erroneous or n:o:t that are are coming as we’re sort of teasing it out and fully examining it.” While Jennifer saw the concept maps as different, she believed they were both important aspects of her current understanding of the content and how to teach it. In particular, Jennifer described her current understanding of the analytic essay unit as

balancing her awareness of the messy, flexible aspects of the analytic essay genre (as represented in the pre-teaching concept map) with her students' need for structure and clear guidance.

Excerpt 3.14:

1 Jenn: I might need to conceptualize that yes **I'm aware** (.) **that this [pre-**
2 **teaching concept map] is here** (.) **but I think** (.) **quite a number of my**
3 **students will will do better** (.) **if if they at least have the idea that,**
4 **okay, we're working with some hard and fast rules** (.) **rather than this**
5 **soupy mess** that (.) where we have to analyze the pieces because (.) how
6 can we analyze it if we don't know the rules? that type of (.) thing I think
7 is is the fear coming on. **so** (.) **despite the fact that I think ideally**
8 **((laughter)) you can by by seeing things and being exposed and and**
9 **um getting-** (.) **learning and developing through that process, I think**
10 **sometimes just** (.) **just have to be** (.) **given** (.) **a way and work with that**
11 **in order to see a little bit more.** (Jennifer, concept map comparison,
12 11/26/213)

While Jennifer still conceptualizes of the process of analysis as she did in the pre-teaching concept map as a bit of a “soupy mess” (line 4), she now also recognizes that “quite a number of my students will will do better (.) if if they at least have the idea that, okay, we're working with some hard and fast rules” (lines 1-4). In other words, though Jennifer has not abandoned her “mantra” that there is “more than one way” to write and to learn, she now tempers this value with the recognition that sometimes students “just have to be (.) given (.) a way and work with that in order to see a little bit more” (lines 6-10).

This change is not just a procedural adjustment in Jennifer's pedagogy, but represents a more significant shift in her underlying concept of her goals as a teacher. At the very end of the semester when asked to describe what she had learned in the course of teaching this class, Jennifer cited her experiences teaching this unit, and particularly her disappointment with her students' performance on APA citation, as being a major source of her learning in the semester. In these reflections, Jennifer again expresses a fundamental shift in her understanding of her students and her role as a teacher. She first

explains that, prior to teaching, she had not realized “how distant I was from the (.) college freshman ((laughter)) in in terms of you know type of mentality” (Jennifer interview 5, 1/29/2014). Because of this lack of awareness of the fundamental youth of her students and her strong belief in student freedom, she had been committed to not “patronize them by treating them like high school students,” but in doing so she “kept forgetting (.) a lot of them have never had to manage themselves so much” (Jennifer interview 5, 1/29/2014). Jennifer had imagined that her students would be able to handle the freedom that she offered “based on the thought that the students could also identify the goals and objectives and see them clearly as a solid structure in front of them” (Jennifer, concept map 5, 12/18/2013). In the course of teaching the analytic essay assignment, she had come to realize how many of her students “felt adrift” and as though “we're not quite really sure and we're trying to understand what the goal is a:nd the process at the same time” (Jennifer, concept map 5, 12/18/2013). This new understanding of her students’ ability to manage the freedom she wanted to offer them contributed to an important adjustment in how Jennifer perceived her role as a teacher.

Excerpt 3.15:

- 1 DW: do you feel like your understanding about the content or the purpose of the
2 course changed through teaching it?
3 Jenn: **I still feel that my initial (.) um (.) I guess objectives in terms of you**
4 **know helping them understand and work with and navigate that that**
5 **freedom of choice (.) that they have within it (.) really hasn't changed.**
6 **the way that I'm presenting it** and probably some of the changes I've
7 made on a micro level? (Jennifer, interview 5, 1/29/2013)

Though Jennifer frames the changes in her understanding of the content of the course as being primarily procedural – an issue of “the way that I’m presenting it” and “changes I’ve made on a micro level” (lines 5-6), the way she talks about her role actually demonstrates a more fundamental shift. Rather than simply giving students freedom, she now sees her role as helping students “understand and work with and navigate that freedom.” This is much more directive role than the supportive and encouraging role she had initially envisioned for herself prior to teaching and represents an important shift in her PCK. As Jennifer learned more about her students through

teaching, she incorporated this knowledge not only into her representation of the specific content of the analytic essay, but used this information to reconceptualize her own role as teacher. Fortunately, Jennifer's existing values which emphasized the flexible, contingent, and student-responsive nature of teaching provided her with an appropriate framework into which she could incorporate her new insights about her students' abilities (Gudmundsdottir, 1990; Grossman, 1990).

Conclusion

Overall, Jennifer's case has several important implications for our understanding of both genre-based writing pedagogy and the role of underlying conceptions of teaching and learning in the development of PCK in teaching activity. First, Jennifer's process of moving from her own everyday concept of the genre of the analytic essay to her representation of the genre for the students demonstrates some ways in which writing teachers' knowledge of a genre may differ from the genre knowledge of expert writers. While writers' genre knowledge and its development has received considerable research attention (Berkenkotter & Huckin, 1995; Beaufort, 2004; Bawarshi & Reif, 2010; Tardy, 2009) no research studies have yet examined the specific nature of writing *teachers'* genre knowledge. In planning for the analytic essay unit, Jennifer describes a process of drawing generalizations from her own experiences writing analytic essays, expanding on her experiences by reading descriptions of the genre from published sources such as websites and corpora, and incorporating her students' likely writing futures into a new understanding of the essential features of the genre that crossed both contexts and time frames. This expanded and synthesized notion of the genre may represent a form of specialized content knowledge (Ball, Thames, & Phelps, 2008) of genre that is unique to teachers. More research comparing teachers' knowledge of particular genres as writers with their knowledge of those same genres as teachers could contribute important insights to the literature on both writing teacher cognition and genre-based writing pedagogy.

The ongoing central tension of genre stability and fluidity that characterized Jennifer's teaching in the analytic essay unit is also a significant finding. In particular, we can see that the ways in which Jennifer negotiated this central tension were tied not only to her understanding of the essentially hybrid nature of genres, but also by the demands of the curriculum, the developmental level and emotional needs of her students, her value

of writer agency, her self-image as a teacher, and her the complex and varied ways in which Jennifer conceptualized learning transfer.

Jennifer's varied and context-specific ways of thinking about transfer of learning is particularly relevant given the recent attention learning transfer—particularly learning transfer from first-year writing courses—has received in recent composition scholarship (see for example Yancey, Robertson, Taczak, 2014). Jennifer's case points to the importance of teachers' conceptions of learning transfer in their developing PCK and teaching practice. Throughout the unit, Jennifer was acutely aware of both the short and long-term learning needs of her students and many of her adjustments between fixed and flexible explanations of the genre were based on her desire to accommodate both of these needs. Jennifer notes that her students' short term needs to differentiate between the analytic and argumentative essays within the required curriculum motivated her to design her definition of the genre to emphasize this distinction – in essence, focusing on fixed genre boundaries. At the same time, her awareness of her students' long term writing needs, in which she believed they would likely be asked to combine analytic and argumentative rhetorical modes, led her to emphasize the flexibility of the boundaries between these two genres.

Finally, Jennifer's case points to the influence of teachers' underlying beliefs and conceptions of teaching and learning and the important role they play in the content and ongoing development of PCK in teaching activity. Several researchers in the PCK framework have pointed to the role of teachers underlying values as providing a framework in to which they can incorporate the insights gained through teaching (Gudmundsdottir, 1990; Grossman, 1990). Jennifer's most centrally held beliefs about teaching –her mantra of “there's more than one way” – proved to function as just such a framework through which she interpreted not only her teaching, but also the new content she was expected to teach and her students' unexpected responses to her teaching. As we will see in the upcoming chapters on Anna and Sergei, not all underlying values and metaphorical constructions of teaching proved to be as productive and adaptive as Jennifer's.

CHAPTER 4: SONJA: A CONCEPT DEVELOPING IN TEACHING

ACTIVITY

it reminds me of the Russian joke that (.) um all young teachers know. like there's this intern who who's supposed to teach a class, so he's complaining to hi- to his friends, "oh my students are so stupid. I explained this theorem to them, and they don't understand it, I explain it again, they still don't understand, I explain it the third time, I finally understand it, and they still don't get it!" (Sonja, interview 4, 11/7/2013)

Sonja told the above joke as she reflected on her experiences teaching the analytic essay unit for the first time. Though Sonja herself was far more positive regarding her students and far more experienced as a teacher than this fictional intern, the process of coming to understand a concept through teaching and re-teaching it is one that Sonja indeed did experience powerfully in the course of the unit. In particular, the data collected from Sonja's teaching in this unit allow us to observe the development of a single concept over the course of the entire unit. For this reason, this chapter will consist of a detailed examination of the development of this concept from its initial, unplanned emergence in the midst of the first class session, through its various permutations as Sonja and her students negotiate a shared understanding of the concept within the classroom discourse and the students' texts, to its final integration into Sonja's content knowledge of the genre and PCK of the analytic essay unit.

Overview of Data Collected

Sonja devoted ten days of classroom instruction to the analytic essay unit and collected two drafts of the essay. In the middle of the unit, Sonja had to travel to attend an academic conference and thus missed three days of class (marked in italics in table 4.1). Sonja arranged to have Anna substitute teach in her class on one of these days (10/14) and had the program director bring in a group of students in the MA TESL program to run small group tutoring sessions on another (10/16). Sonja was unable to arrange for a substitute teacher on the last day of her travels and cancelled class to give her students more time to draft their analytic essays which were due that evening (10/18). Since the analytic focus of this dissertation is the concept development of the teachers, and not the class itself, the class was not filmed on days that Sonja was not present. During the unit,

Sonja also suspended classroom instruction for two days (10/23 and 10/25) in order to meet with her students individually to discuss their first drafts of the analytic essay. These meetings took place in the office which Sonja shared with many other instructors and teaching assistants. For these days, no video recordings were made, but Sonja was given an audio recorder and asked to record at least three student conferences for each day.

Table 4.1 outlines Sonja’s schedule for the unit with the corresponding instructional focus of each day of instruction as well as the dates of the two interviews, two concept maps, and three stimulated recalls (shaded).

Date	Data Collection or Instructional Focus
10/02	<ul style="list-style-type: none"> • Interview 3 • Concept map 3
10/07	<ul style="list-style-type: none"> • Analyzing model text “Stuck on the Couch” focusing on audience and purpose and use of sources • Introducing analytic essay genre and assignment
10/09	<ul style="list-style-type: none"> • Analyzing model text “The Violence in Our Heads” focusing on audience, purpose, and structure • Narrowing down topics • Brainstorming research questions and search terms for library databases
10/11	<ul style="list-style-type: none"> • Summaries and reporting verbs
10/11	<ul style="list-style-type: none"> • Stimulated recall 1
10/14	<ul style="list-style-type: none"> • <i>Sonja absent. Sally substitute teaches</i> • <i>Writing with sources and APA citation style</i>
10/16	<ul style="list-style-type: none"> • <i>Sonja absent. Program director brings MA student writing tutors to lead small group workshops</i>
10/18	<ul style="list-style-type: none"> • <i>No class</i> • FIRST DRAFT DUE – FORMATIVE INSTRUCTOR COMMENTS, UNGRADED
10/21	<ul style="list-style-type: none"> • Review introductions and thesis statements
10/23	<ul style="list-style-type: none"> • No class • Sonja holds individual writing conferences with students
10/25	<ul style="list-style-type: none"> • No class • Sonja holds individual writing conferences with students
10/25	<ul style="list-style-type: none"> • Stimulated recall 2
10/28	<ul style="list-style-type: none"> • Reflecting on analytic essay unit through concept map activity • FINAL DRAFT DUE – EVALUATIVE INSTRUCTOR COMMENTS, GRADED
11/7	<ul style="list-style-type: none"> • Stimulated recall 3 • Interview 4

	<ul style="list-style-type: none"> • Concept map 4 • Concept map 3 and 4 comparison
--	---

Table 4.1: Sonja's analytic essay unit schedule

Sonja's Pre-Teaching PCK of the Analytic Essay

Sonja's PCK of the analytic essay unit prior to teaching was elicited through a concept map activity as well as various questions in the third interview. Figure 4 shows the concept map Sonja drew prior to teaching the unit.

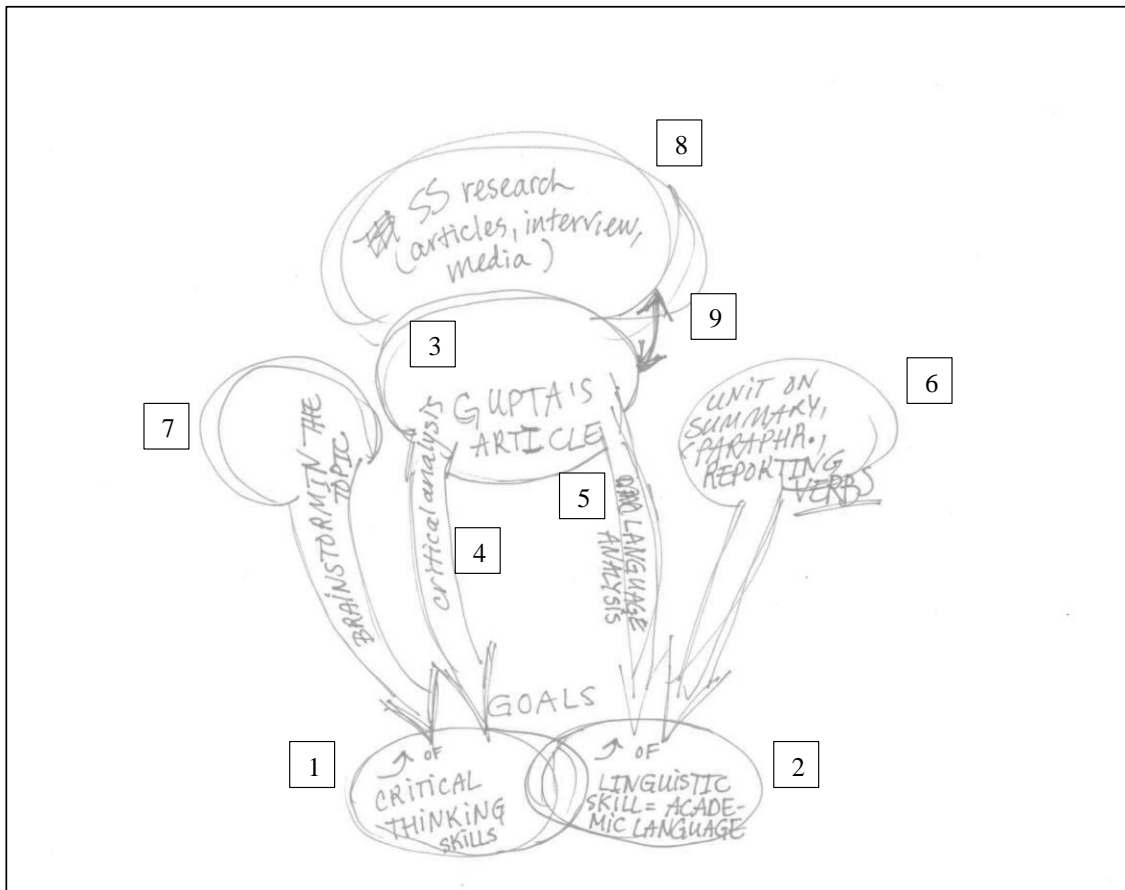


Figure 4: Sonja pre-teaching concept, 10/02/2013

Sonja began her concept map by depicting the “two goals that I have” for the unit as overlapping circles (1 and 2). Sonja described the first goal (1), as “some sort of development of critical thinking skills” although she noted that she did not believe it would be possible to “say that they will have developed this cognitive ability” within the limited time frame of the analytic essay unit. Her second goal (2) was the “development of linguistic really (.) academic language kind of thing.” For this goal as well, Sonja

noted that she was unsure how “how much I will be able to accomplish” because “language has so many aspects,” but still hoped to at least include some instruction that specifically focused on the use of formulaic language in academic writing.

Moving on from the goals, Sonja then focused her attention on “how I achieve them.” In particular, she focused on the essay, “Stuck on the Couch” by Sanjay Gupta (2012) that she planned to use as a model in her class (3). This essay, she explained would be used to help the students develop their critical thinking skills through the “critical analysis” of the essay’s content (4) that she intended to guide her students through in class. At the same time, she noted that this essay could also be used for conducting classroom activities on “language analysis” (5) because it provides “a great sort of example of language.”

In addition to the article, Sonja described how she would use handouts and presentations to teach “this unit on summary (.) and paraphrasing (.) and uh reporting (.) verbs” (6). Although Sonja linked this unit visually to the goal of developing “linguistic skill” and “academic language” (2) she also noted that she was not “completely divorcing that from (.) ability to think critically” because the choice of particular language resources, such as reporting verbs, can change the meaning of the entire phrase. Because of this connection between linguistic choices and meaning, Sonja conceptualized the teaching of academic language as fitting within both her goals of critical thinking (1) and language skills (2). The process of “just brainstorming the topic and thinking about the topic” (7) as well as “drafting it, discussing it with peers” and receiving teacher feedback would also be elements that contributed to the “goal of being able to analyze issues critically.”

Finally, Sonja included the reading students would do independently as they conducted their own research (8) as an element of the curriculum that contributed to both of her goals. As they conducted this research, the sources they found “will need to be analyzed for content and analyzed for language as well.” This process of analyzing sources in this way, Sonja noted, was one that would be modeled in class through collaboratively analyzing the model essay by Gupta (3). Because of this chronological progression from the model essay to independent research, Sonja explained that if she were to draw the concept map again, she would reverse the placement of these two

curricular elements of the model essay and students' independent research in order to reflect this chronological progression. Sonja noted this structural change with the bidirectional arrow that she added at the end of her drawing (9).

One of the major features of Sonja's understanding of the analytic essay genre prior to teaching that is reflected in her concept map is her dual focus on both critical thinking and language as key features of the genre. In particular, when asked to describe a successful analytic essay in the course of the pre-teaching interview, Sonja's response emphasized the cognitive aspects of the analytic essay as being the most central feature of the genre.

Excerpt 4.1:

1 **the way that I understand what analytic essay is is when you um uh when**
2 **you take an issue (.) that is clearly controversial, or debatable, or (.) just kind**
3 **of (.) doesn't sit well with people, and you explicate it.** you learn all you can
4 about it. a:nd (.) **it is (.) an important, an extremely important academic skill**
5 **and also just (.) sort of life skill, (.) not to jump to conclusions, to start argue**
6 **right away.** cause this is- most of the time that's the initial reaction. **people are**
7 **like (.) no! like you know no Obamacare! because it's unfair and this and**
8 **that. have you actually looked at the facts, have you tried to analyze? it?** so
9 this is uh (.) this is the kind of angle I want to (.) work (.) um (.) with I guess. and
10 something- and this is how I will try to justify: (.) this assignment for my students.
11 you have to learn (.) to (.) um to stop yourself from (.) judging something before
12 you learn to really really understand it really well. **so this is what this**
13 **assignment is for me. to learn to analyze an issue or an event or some sort of**
14 **(.) uh topic (.) without trying to (.) uh (.) to argue for or against something.**
15 **without sort of passing judgments.** and that's sort of- that is what (.) can help
16 people to overcome their own biases. (Sonja, interview 3, 10/02/2013)

From the beginning, Sonja includes a focus on the typical content and topic choice of the analytic essay genre. This genre, she notes, begins with “an issue that is clearly controversial, or debatable” (line 3). The process of analysis then, involves a writer learning all he or she can about an issue before attempting to “explicate it” (line 3). As with the other teachers, much of Sonja's explanation of the analytic essay focuses on

explaining the genre through contrasting it with other rhetorical modes, particularly argumentation. Analysis involves not just explicating an issue, but particularly doing so without giving in to the temptation to “jump to conclusions” or “argue right away” (line 5).

Another noteworthy feature of Sonja’s description of the genre here is her focus on the value of this skill in her students’ lives. Sonja emphasizes that the ability to analyze an issue “without trying to (.) uh (.) to argue for or against something” or “passing judgments” (lines 12-13) is “an extremely important academic skill and also just (.) sort of life skill” (line 4). The example Sonja gives of the reactionary political argument of “no Obamacare!” (line 6) which she contrasts with the more reasoned approach of “have you actually looked at the facts, have you tried to analyze? it?” (lines 7-8) further underscore her understanding of the purpose of the genre as not merely limited to students’ future academic writing, but as being relevant to a range of discourses, including political discourse.

In addition to permeating her expert understanding of the genre itself, Sonja’s focus on the intellectual value of analysis was also integrated into her knowledge of the curriculum. In particular, her understanding of the role and value of the analytic essay, as well as the potential difficulties she anticipated for her students, were based in her understanding of the place assignment in the curriculum overall. The analytic essay, as Sonja saw it, marked an important shift in the curriculum from less academic writing in the extended definition essay and compare/contrast poster presentation to a more academic kind of discourse.

Excerpt 4.2:

1 Sonja: well it's [the analytic essay] super important because **this is where I feel**
2 **like this is the real academic writing. and what we did so far was some**
3 **sort of a (.) um (.) ((light laughter)) it was a preparation** of course but
4 (.) um (.) because of the topics [. . .] **it was just too wishy washy.** students
5 were a little lost. I didn't really- like **it didn't give them practice with**
6 **academic writing per say,** so it was (.) uh (.) not all that great I guess.
7 [. . .]
8 Sonja: um (.) so this is the first real academic assignment.

9 DW: what **what makes it an academic assignment (.) to you,**
10 Sonja: **in the sense that they have to grapple with an issue? and analyze it**
11 **critically. in compare and contrast they sort of don't have to analyze**
12 **anything. (.) uh (.) at least not deeply and thoroughly (.)** and they're not
13 necess- they- and I pushed them (.) a little to to really go beyond the very
14 factual information. **but this is where they're expected to analyze facts,**
15 **ideas, (.) um preconceptions critically. um and this is what (.) sort of**
16 **makes it academic u:m (.) uh the fact that they will have to use critical**
17 **thinking (.) in order to write something. (.) so they can't just report,**
18 they can't just find (.) sources and say, well this person said this, this
19 person said that, there I'm done (.) um (.) **they have to use those sources**
20 **(.) to: (.) sort of support an idea. like they're not arguing necessarily**
21 **but still there's this (.) um (.) hidden agenda kind of thing.** (Sonja,
22 interview 3, 10/02/2013).

This excerpt illuminates an interesting connection between analysis and real academic writing in Sonja's thinking. Sonja initially notes that the analytic essay marks a transition from the "preparation" (line 3) of the extended definition essay and compare/contrast poster to "real academic writing" (line 2). Part of the distinction between the preparatory nature of the first two assignments and the academic nature of the analytic essay had to do with the topics students had written about for the first two essays. Sonja believed these topics, which she described elsewhere as being largely personal in nature, had been "too wishy washy" and had thus not given "them practice with academic writing per se" (line 5). In contrast, the analytic essay was "real academic writing" (line 2) precisely because it required students to "grapple with an issue? and analyze it critically" (line 10) and "to analyze facts, ideas, (.) um preconceptions critically" (line 14-15). In these excerpts, we can see the close relationships between analysis, critical thinking, and academic writing in Sonja's thinking. Analysis, provided it is critical, is the central component of what makes any assignment, including the analytic essay, academic. Within the analytic essay, Sonja defined critical thinking as not merely reporting what other sources had said (line 17), but using "those sources to: (.) sort of support an idea" (lines 18-19). While Sonja still differentiates this from argument (line

19), she does note that there is a relationship between analysis and argument, with analysis having a “hidden agenda” rather than an overt position (line 20).

Sonja’s knowledge of content and students as expressed in the interviews also focused on two dimensions of their relationship to the analytic essay—the cognitive and the linguistic aspect. In particular, Sonja identified potential difficulties that her students would face with the essay along both dimensions. From very early in the class, Sonja had identified the analytic essay as the one that would likely be the most difficult for her students. In the second interview, Sonja noted the difficulty of the analytic essay in comparison to the other assignments and tied this difficulty to her observations of her students’ current abilities.

Excerpt 4.3:

1 **this [the analytic essay] uh this requires s:o many more skills that the first**
2 **two assignments, that (.) the sort of the area of topics that I will have to teach, in**
3 order for my students to be able to write an analytical essay is quite quite (.) uh
4 broad. uh (.) and **the kind of the level of maturity that is required for that type**
5 **of writing is very high**, and you know **I have students and they all wrote their**
6 **personal introductions and you know a lot of them (.) weren't- sort of seemed**
7 **mature, but I have like girls who say that they like the color pink, and that**
8 **was, you know, that was all they could pretty much say about themselves, or**
9 **I like Winnie the Pooh** and ((laughter)) so(h), and I have- I understand that **this**
10 **is not only a technical assignment (.) um (.) you know how to structure an an**
11 **essay like that, it's it's also- it also requires a higher level of thinking out**
12 **from the students, and (.) you know it is technically complex and (.) it is a**
13 **difficult assignment from the content point of view, so this is gonna be**
14 **challenging.** (Sonja, interview 2, 9/6/2013)

Sonja’s understanding of the challenge this particular assignment would present to her students is grounded in her integrated knowledge of content and students. As previously discussed, Sonja believes that the intellectual demands of this particular essay were significantly higher than those that preceded it because it requires critical thinking and analysis. Here, Sonja notes that “the kind of the level of maturity that is required for that type of writing is very high” (line 4). This observation marks an important thinking

step between the characteristics of the genre itself and the kind of maturity and critical thinking ability required to successfully engage with this genre. She anticipates, moreover, that the intellectual demands of the assignment will prove challenging for her students because at least some of them do not seem to have developed this intellectual maturity. Sonja bases this belief on her students' performance on a separate writing task which asked them to write personal introductions. While some of the students "sort of seemed mature," Sonja also notes that many students also struggled to describe themselves in sufficiently serious and academic terms, relying instead on descriptions of their favorite colors and fictional characters from children's literature in their introductions (lines 6-8). Her students' difficulty creating deep or interesting content for this much simpler assignment led Sonja to believe that at least some of her students would struggle with the "higher level of thinking" required by this assignment as well as the technical elements of the essay (lines 11-12).

Summary of Pre-Teaching PCK

Overall, several key features of Sonja's pre-teaching PCK of the analytic essay emerge. The first and most consistent is her dual focus on both the conceptual and mechanical elements of the genre. This dual focus infiltrated how Sonja talked about the genre itself, her plans for teaching it, the difficulties she anticipated her students having with it, and the overall role of the essay in the curriculum. In other words, this dual focus was consistently represented in every component of Sonja's PCK.

Another important feature of Sonja's PCK to note is the somewhat incomplete nature of Sonja's definition of the analytic essay as a genre. While Sonja clearly had a more expanded understanding of the importance and value of the genre to her students' academic and everyday lives, her explanation of the genre itself is fairly vague. Also similarly to the other teachers in the study, Sonja's initial definitions of the analytic essay relied heavily on contrasting analysis and argumentation. When it came to actually describing what analysis itself consisted of, Sonja could only say that it involved researching an issue and "explicating" it. This is perhaps not terribly surprising given that Sonja herself described her knowledge of the analytic essay prior to teaching the unit "a good intuitive understanding of what a good analytical essay is," but noted that she didn't "necessarily know how to explain that to students" (Sonja, stimulated recall 1,

10/11/2013). While the difficulty of explaining her intuitive knowledge of the analytic essay could be interpreted as merely a difficulty of representation, this was not how Sonja herself interpreted it. Instead, Sonja viewed her difficulty explaining the concept as evidence that she herself did not yet fully understand it, explaining her general belief that “if I struggle with explaining something that means it's not completely (.) cl- like I don't have a very com- a very clear idea” (Sonja, stimulated recall 1, 10/11/2013). The belief that Sonja expresses here is quite similar to the idea that teachers must not only change the representation of their expert content knowledge by transforming it into PCK. They must first transform their own understanding of the concept, unpacking it into the *specialized content knowledge* needed for teaching (Ball, Thames, and Phelps, 2008). It was here, in this process of unpacking her intuitive knowledge into an explicit knowledge of the cognitive and discursive practices of analysis, that Sonja’s knowledge would show the greatest transformation.

PCK in Development

Within the analytical essay itself, Sonja’s PCK developed along several dimensions. The most significant of these involved the complex development of a particular concept in the activity of Sonja’s teaching. This concept was described using many terms over the course of the unit as Sonja tried and rejected multiple labels as she taught and reflected on this developing concept calling it “things,” “components of analysis,” “units of analysis,” “elements of analysis,” “perspectives,” and “points of analysis.” In the following discussion I will trace how the shifting terms Sonja applied to the concept and the various definitions and paraphrases she used over the course of her teaching and the stimulated recalls demonstrate changes in her content knowledge and pedagogical content knowledge of the concept. For ease of discussion, I will use the term final term Sonja used, *points of analysis* (in italics), to refer to the concept itself and will adopt Sonja’s specific terminology in quotation marks to refer to her representations of the concept a specific moments in time.

A Concept Emerging in Activity

The concept Sonja came to refer to *points of analysis* emerged in activity on the first day of the unit, developed over the course of the entire unit, and was eventually integrated into Sonja’s overall PCK of the analytic essay unit. This continuity provides us

with the unique opportunity to examine the development of this important concept in Sonja's thinking about the analytic essay from its very beginnings, through its many iterations and changes, and to its final incorporation in her overall PCK while also having access to Sonja's reflections on this process of development.

Within the initial stages of Sonja's development of this concept, her gestures proved to be an important part of her concept development. Therefore, the gestures Sonja uses as she talks about this concept have been transcribed in the following data excerpts so they can be used in the analysis. The transcription conventions I used for depicting gestures in this chapter can be found in appendix D. To assist in the comprehension of this analysis, I will also use annotated screenshots of relevant gestures.

“I'm sort of (.) deviating from my plan:” A Concept Emerging in Activity

The concept of *points of analysis* examined in this chapter emerged in the midst of Sonja's teaching on the first day of the unit. This class period focused on analyzing a model essay from the course textbook, Sanjay Gupta's (2012) “Stuck on the Couch.” Sonja spent the first half of the class leading the students through a discussion of this text focusing on collaboratively summarizing the content and analyzing the rhetorical purpose. In the midst of this discussion, Sonja marked a deliberate deviation from her planned lesson in order to address the emerging concept of “units of analysis.”

Excerpt 4.4:

- 1 Sonja: so you said this was (.) an informative essay, right? (.) uh (.) but we started
2 talking about analytical essays or analytic essays. do you think that we can
3 call this article an analytic (.) essay.
- 4 S1: oh definite[ly]
- 5 S2: [yes.]
- 6 Sonja: mhm? why (S2)?
- 7 S2: because it analyzes a like- why do people stop exercising? like how and
8 why does that happen?
- 9 Sonja: and h:ow does it do that.
- 10 S2: he gives examples of different article:s and studies that have been done in
11 other universities, about why this happens, and how as people go through
12 different stages of life, they stop exercising, like for example, like [S1]

13 said, when you start college you have- it's a whole new experience and
14 you have less time so you stop exercising and you start giving excuses?
15 Sonja: mhm mhm. **okay. so I'm sort of (.) deviating from my plan because (.)**
16 **our discussion's actually- (.) but it's going in the right direction, just**
17 **slightly (.) shaping up slight- slightly differently.** but I like that. cause
18 you seem to (.) to really: (.) understand the idea of analytic- of an analytic
19 essay.

20 Sonja: so what I want us to do guys right now is (.) open your books, grab a
21 partner (.) so one two, one two, one two, one two, one two, one two,
22 ((continues counting silently)) perfect. that means we are missing
23 someone. (.) okay so (.) grab your partner and look in the- (.) underline or
24 just mark with a pencil all the: (2) evidence- this is what (S2) just said, he
25 listed like all of this (3) evidence from (.) elsewhere, right? find those
26 instances of support (.) that Gupta brings into (.) his analysis. **or like**
27 **what are these-**

28 Sonja: *shoulders raised, BH chest level hands facing each other palms cupped,*
29 *fingers curled and spread apart; two beats [Figure 5]*

30 Sonja: thin- what are {the components that he analyzes?}

31 Sonja: *{BH by left shoulder palms cupped, fingers curled as if*
32 *holding a rectangular block, gazes at hands; moves hands out and down*
33 *toward right hip in three beats} [Figure 6]*

34 (2)

35 Sonja: okay?

36 (2)

37 Sonja: does that make sense

38 Sonja: what are the things elements (.) {o:f (.) no(h)t wanting to exercise or not
39 exercising does he an- analyze? (Sonja, 10/7)}

In this excerpt, Sonja is concluding the previous discussion on the purpose of the text by connecting the discussion of the text with the new assignment of the analytic essay that her students are beginning. Sonja asks whether the model text can be considered an analytic essay (lines 2-3). Several of her students answer this affirmatively

(lines 4-5). When asked to explain why this essay can be considered an analytic essay (line 6) and how the essay accomplishes this analysis (line 9), S2 responds that the text can be considered an analytic essay because it uses “examples of different articles and studies” (line 10) in order to explain “how as people go through different stages of life, they stop exercising” (lines 11-12). S2 then cites an example from the article previously mentioned by S1 of one how college is one life stage at which adults tend to stop exercising (lines 12-14).

Following this response, Sonja changes the direction of the class conversation. This change is, she notes, is a deviation from her original plan for the class and is in response to the way the ongoing conversation was “shaping up slightly differently” than anticipated (lines 15-17). It is not entirely clear from this excerpt what in the previous conversation prompted Sonja to change the plan for the class in this way. In the stimulated recall, when asked if she could remember the motivation for introducing this unplanned concept to the class, Sonja could not provide a specific reason, saying that “I wish I could provide a logical explanation” (Sonja, stimulated recall 1, 10/11/2013). The content of S2’s explanation of how the essay analyzes the causes for the cessation of exercise in adults is one possible spark for Sonja’s decision to change direction in the class. In this response, S2 mentions how “different life stages” are one of the general factors that contribute to adults’ decreasing physical activity. This idea represents a mid-level category in the text between the general topic of why adults stop exercising and the specific research that examines how particular life transitions such as the transition from high school to college contribute to the decreasing levels of physical activity among adults. In the subsequent conversation, this idea of “life stages” will be rearticulated as one of the *points of analysis* in the essay. It is possible that hearing this response from the student with its inclusion of these three levels of specificity could have prompted Sonja’s change of plans.

While she could not articulate a single motivating reason for her in-flight decision, in the stimulated recall, Sonja did confirm that the concept of *points of analysis* was one that had occurred to her in the class itself. She explains that “this idea came to me as I was talking about this article. right? I really did not think about this (.) before (.) uh or as I was preparing for the class or as I was reading the article” (Sonja, stimulated

recall 1, 10/11/2013). In other words, this concept is emerging as Sonja in the class interaction itself.

Following her introduction of this shift in plans, Sonja assigns a short task to students. While she first asks students to identify instances of evidence in the text (lines 22-23), she changes her directions at the end. Rather than asking students to identify the instances of evidence, she now instructs them to look for something else in the text (line 25). It is here that Sonja's gestures become particularly relevant to understanding the development of this new concept. In line 25, Sonja asks "like what are these-." Instead of using a word to finish this sentence, Sonja produces a gesture in the absence of speech (lines 26-28). Figure 5 shows a screenshot of this gesture.

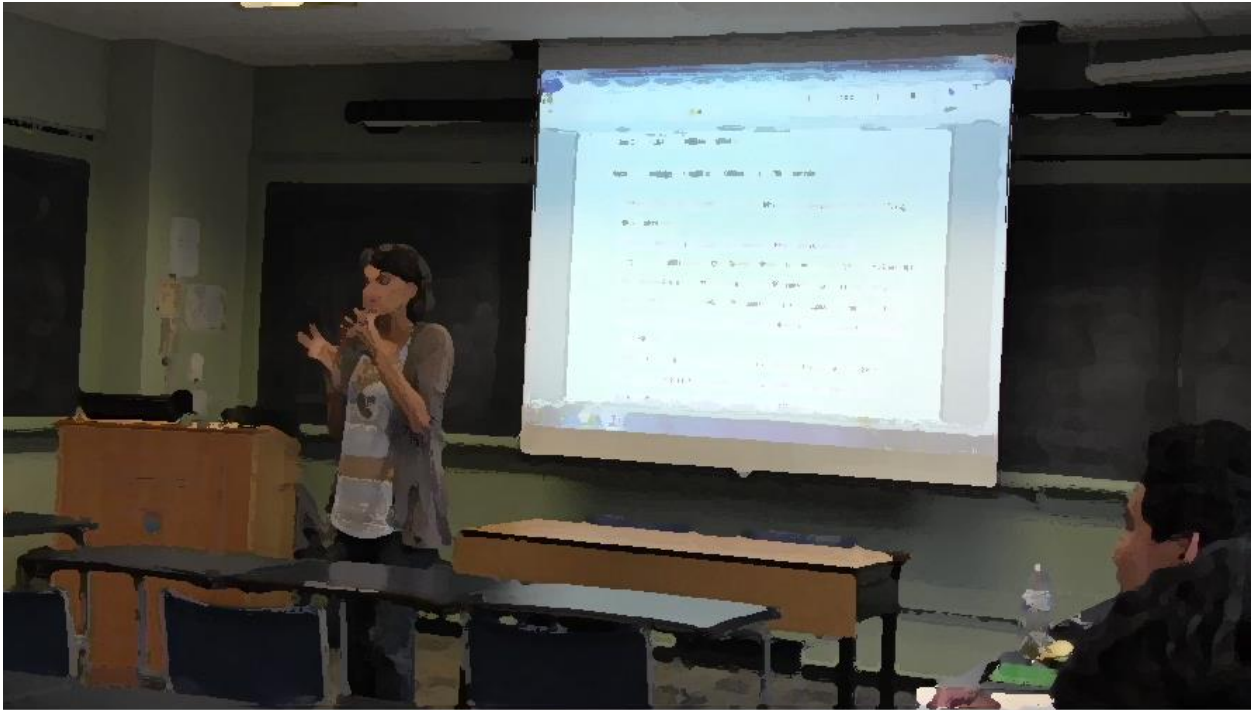


Figure 5: Sonja, 10/07/2013, shoulders raised, BH chest level hands facing each other palms cupped, fingers curled and spread apart; two beats

In the gesture depicted in figure 5, Sonja produces a container gesture. Sonja's use of this container gesture in the absence of speech as she searches for a word to attach to the concept she is developing marks a beginning step in her development of the concept. Even before Sonja is able to express this concept linguistically, certain features of the concept are being marked in her gesture. In this first the use of the container gesture, Sonja is marking the bounded nature of the concept.

Immediately following this gesture, Sonja begins to label the concept as “things,” but cuts herself off before finishing the word (line 28). Instead, she asks “what are the components that he analyzes” (line 28) while simultaneously performing the gesture in figure 3.

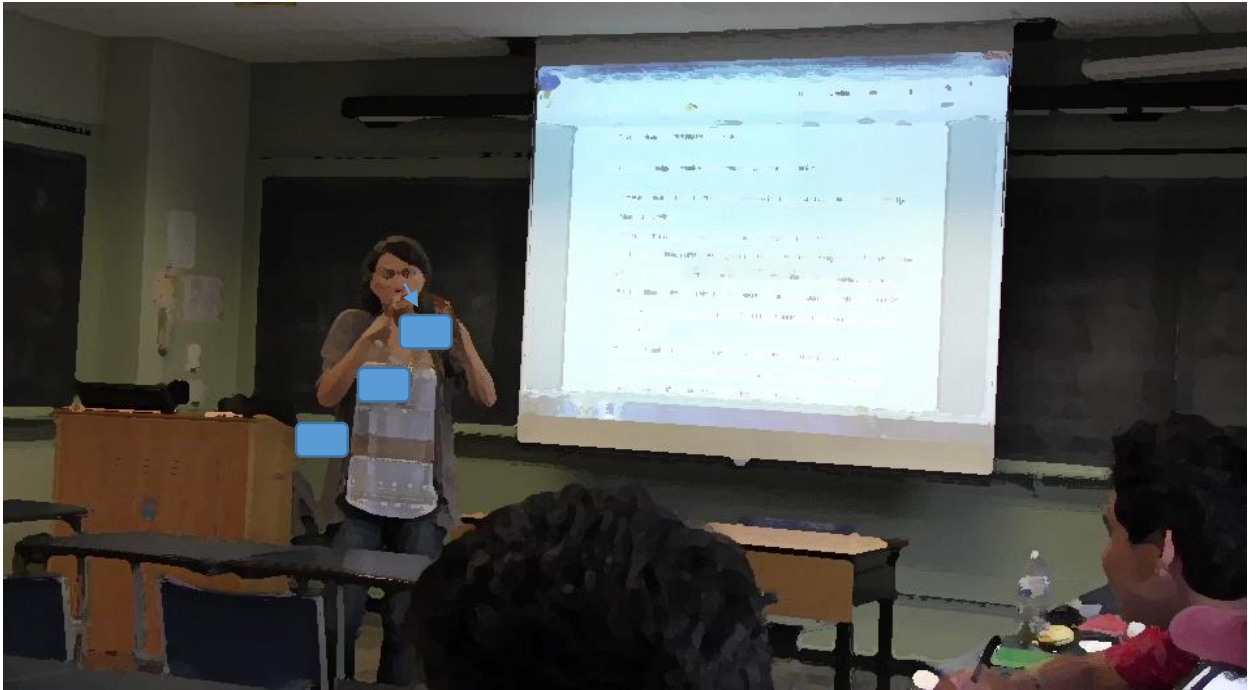


Figure 6: Sonja, 10/07/2013, “thin- what are the {components that he analyzes}

In this gesture, Sonja even more explicitly marks the boundedness of the concept she is developing. In this case, she modifies the container gesture so that it appears that her hands are holding a rectangular block. Sonja performs this block container gesture in three beats, moving the gesture downward and to her right with each beat. It is important to point out that Sonja’s gaze is on her hands for the first two of these three beats. This gaze is very similar to one reported in Streeck (2013) in which looking at one’s hands while gesturing was argued to indicate that the gesture was performing a self-regulator function. In essence, the gesture is being used as a form of self-mediation. In this instance, the gaze at her hands indicates that Sonja is not only producing this gesture in order to communicate this concept to her students, its interpersonal function, she is also producing this gesture to aid in her own development of the concept.

This gesture also adds an emerging dimension of linearity to the developing concept. While her initial gesture included the dimensions of both boundedness in the

form of the container gesture and repetition through including multiple beats, here Sonja not only includes multiple beats of the gesture, but positions these beats in a descending line. This addition adds a further dimension to the concept. While Sonja has not yet settled on a term for the concept, calling it both “things” and “components” at this point, her gestures reveal more about the nature of this concept as being bounded, multiple, and linear.

Overall in this excerpt we have been able to see the emergence and initial development of a new concept in Sonja’s PCK of the analytic essay. This concept emerged in the course of planning for the lesson as a spontaneous response to the ongoing interactions in the classroom on the first day of the analytic essay unit. Moreover, even as Sonja begins to use this concept in teaching, it is clear that her own understanding of the concept is still very much in development. Throughout the excerpt, we can see Sonja struggle to articulate this concept verbally to her students. The in-process nature of the concept is evidenced by the Sonja’s use of gestures as a means of not only of communicating the concept to her students, but also of communicating the concept to herself as a form of self-directed mediation. Within this initial development, Sonja’s gestures revealed much more than her speech alone about how she understands the concept.

The incomplete form of the concept in Sonja’s thinking is also evident in the shifting terms she applies to the concept, calling them first “things” then “components” then back to “things” then “elements.” This shifting use of terminology, moreover, does not merely indicate that Sonja is searching for a pedagogically appropriate representation of an established concept. Rather, through this search, she is attempting to externalize this concept for the first time. Sonja herself confirms this as we discussed this excerpt in the first stimulated recall.

Excerpt 5:

1 **I don't even like this (.) uh term element of analysis. I don't know what to call**
2 **it. and this is an issue because (.) I really don't- I haven't read enough about (.)**
3 **what an analytical essay is, how it is taught, etcetera, so I don't have the**
4 **metalanguage to (.) talk about it or think about it. so that- I'm coming up with**

5 this (.) as I go through this exercise with my students. (Sonja, stimulated recall 1,
6 10/11/2013).

Here, Sonja acknowledges her difficulty putting the concept into language, noting that she is still not entirely satisfied with the “term element of analysis” but doesn’t “know what to call it” (line 1). She attributes this problem to her own lack of knowledge about the analytic essay, noting that she believes she hasn’t “read enough about (.) what an analytical essay is, how it is taught” and thus “doesn’t have the metalanguage to talk about it or think about it” (lines 2-4). What Sonja is describing here is her lack of a scientific concept of *points of analysis*. In one sense, Sonja knows what a *point of analysis* is, but this knowledge is an everyday concept based in her writing experiences. However, what Sonja needs in order to teach is not this tacit, largely unexamined everyday concept but rather an unpacked, explicit, and systematic scientific concept that she could gain through reading more formal explanations of the genre. It is particularly important to note here that Sonja describes this lack of metaknowledge as inhibiting not only her ability to “talk about” the concept, but her ability to “think about it” as well (lines 3-4). This comment also demonstrates the important fact that Sonja’s struggle to express this concept is not merely an issue of choosing vocabulary terms to attach to a pre-existing concept in her mind. Rather, the very process of externalizing her thinking, of taking her everyday concept of these *points of analysis* and making them explicit and systematic for her students is transforming how she herself conceptualizes them.

“So what do you guys think they are?”: Students’ Emerging Understandings

Up to this point, we have not seen how the students’ own understanding of the emerging concept of *points of analysis* or how their contributions play a role in the development of this concept within both the discourse of the classroom and perhaps Sonja’s own thinking. Following the initial introduction of the concept in the previous class excerpt, Sonja gave her students some time to examine the model essay looking for these *points of analysis*. As she brought the group back together to discuss their findings, Sonja rearticulated her question, further attempting to explain the genre to her students as well as eliciting students ideas regarding what these *points of analysis* are in the context of the model essay. The students’ responses further shape Sonja’s developing concept and pedagogical representation of the concept.

Excerpt 4.6:

- 1 Sonja: so okay, we can bring it (.) to (.) sort of back (1) here and talk a little bit- I
2 **I don't necessarily know if I (.) um (2) put my question exactly how I**
3 **wanted it cause it just came to me, I'm like, let's look at those elements**
4 **of analysis, we can see there is a whole analysis, right, but you can't just**
5 **sort of analy:ze, let me analyze something without breaking it in**
6 **smaller units, elements of analysis, do you see how he breaks it into (.)**
7 **those manageable (.) elements, manageable units of analysis?**
- 8 Sonja: **so what was the first thing that (.) the first sort of component of his**
9 **analysis?**
- 10 S1: ((reading from text)) sixty percent of American adults do not exercise,
11 more than seventy-two million are obese?
- 12 Sonja: I didn't hear that.
- 13 S1: uh ((reading from text)) sixty percent of American adults do not exercise,
14 and more than seventy-two million are obese?
- 15 Sonja: **do you think that was an element?**
- 16 S1: um I think it was just because it- like it gives you background on like- it
17 just gives you real facts? (.) and it makes the essay- this essay more
18 relevant to everything in general.
- 19 Sonja: **what do you think was the purpose of these statistics?** ((writes "- Stats
20 =" on board))
- 21 S2: to make people realize that it is an issue?
- 22 Sonja: **yeah, don't you think this was more of a: (.) mag[ne:t?**
23 S3: [magnet, yeah.
- 24 Sonja: ((while writing "Magnet" on board)) this was part of introduction right?
- 25 Sonja: **cause if we say that the <pur: pose of this essay is to analyze why> (.)**
26 **so the elements of analysis are not going to be (.) how many people do**
27 **or do not analyze, right? we're trying to answer a question why? (.)**
28 **and those components (.) are gonna be something else, right? so what**
29 **do you guys think they are?**

30 S2: ((reading from text)) the kinesiology () at (Maxmaster) university that
 31 stated that college is the first big transition in life? so it becomes an excuse
 32 not to exercise?
 33 Sonja: uh huh, **can we sort of (.) come up with a name for this (.) [element?**
 34 S2: [college just
 35 makes- college is an excuse to uh not exercise?
 36 Sonja: **is it just colleges?**
 37 S4: **[I think it's life transitions]**
 38 S5: [life changes-] yeah life transitions
 39 S4: college and jobs and like-
 40 Sonja: **mhm and college is mostly used as a:**
 41 S2: the first transition. [like an example.]
 42 Sonja: [as a- right] as an illustration of such transition. **so**
 43 **there's this explanation or an attempt to explain, oh why? well there is**
 44 **this one unit (.) transitions. like life transitions.** what else does he talk
 45 about? what other components sort of (.) impact our (.) lack of desire to (.)
 46 exercise?
 47 S5: self-control
 48 Sonja: self-control okay. (Sonja, 10/7/2013, 18:49-19:43)

In this excerpt, Sonja again emphasizes the fact that the concept she is asking her students to engage with is not one that she had initially planned to include in the class, but rather “it just came to me” (line 3). Because of the emergent nature of this concept, Sonja acknowledges that she may not have “put my question exactly how I wanted it” (line 2). In the subsequent talk, Sonja again attempts to explain what it is that she wants her students to look for. How she describes the concept in this section is similar to what she said in the earlier excerpt, but now in addition to describing the concept of *points of analysis* in their own right, Sonja also contrasts the process of “breaking it [an analysis] in smaller units, elements of analysis” with the idea of “just sort of analyze[ing], let me analyze something” (lines 4-5). This contrasts the preferred, structured and staged approach to analysis with the unformed and undisciplined approach of trying to analyze a topic without such *points of analysis*.

In the following interaction, Sonja strives to come to a shared understanding with her students, through both responding to and shaping their emerging conceptualizations of *points of analysis*. In response to Sonja's request for a volunteer to offer the first component of analysis in the essay (line 8), S1 responds by reading a specific statistic cited in the text (lines 9-10 and 12-13). Sonja's follow up question, "do you think that was an element?" (line 14) both signals her negative appraisal of this answer and provides an opportunity for the student to clarify his thinking. S1 responds that he believes this statistic is a component of analysis because "it gives you background" and "makes the essay [. . .] more relevant to everything in general." (lines 15-17). This response highlights this particular student's developing understanding of the emerging concept of *points of analysis*. This student seems to understand a *point of analysis* as being essentially the same thing as a piece of evidence. Moreover, his explanation of why he identified this excerpt as a *point of analysis* highlights his understanding of the *point of analysis* as being related to the purpose of an excerpt – in this case, providing background and establishing the relevance of the topic.

Perhaps in response to this student's emerging focus on the purpose of the evidence, Sonja responds with another follow up question, asking "what do you think was the purpose of these statistics?" (line 18). S1 responds "to make people realize that it is an issue?" (line 20). Sonja accepts this response and re-labels this rhetorical function as a "magnet" (line 21), a concept she has previously taught as a strategy for writing an introduction that will attract a reader's attention. In the next turn, Sonja incorporates this student's focus on the purpose of a selection of text into a new explanation of the concept of a *point of analysis*. Sonja begins by rearticulating that "the <pur: pose of this essay is to analyze why>" and as a result, the components of analysis cannot be something that fulfill a different rhetorical purpose, such as attracting a reader's attention. Instead, "those components (.) are gonna be something else" (lines 24-27). This renewed attempt to explain the concept of a *point of analysis* with regard to the overall purpose of the essay demonstrates how Sonja is aligning her instructional language with the emerging understandings of the students.

Sonja then again repeats her request for students to volunteer one of the *points of analysis* they found in the article (lines 27-28). S2 responds by again reading a specific

piece of evidence cited in the text noting that college represents the first major life transition that causes adults to give up their exercise habits (lines 29-30). This answer also provides insights into how this particular student is understanding the emerging concept of *points of analysis*. While this student's contribution does focus on answering the question of why adults stop exercising, it focuses narrowly on a single example rather than more broadly on a mid-level category.

In the following interaction, Sonja works to guide S2 and the rest of the students to this broader understanding of *points of analysis* as a general category that can encompass several different pieces of evidence, rather than each piece of evidence itself. Sonja first asks S2 to "come up with a name for this (.) element" (line 31). S2's response, that "college is an excuse to uh not exercise?" (line 33) again focuses on the specific example of the transition to college, rather than the broader category of life transitions in general. Sonja follows up this contribution by asking "is it just colleges?" (line 34). S4 and S5 both respond simultaneously offering the terms "life transitions" (line 35) and "life changes" (line 36). Sonja accepts both these answers (line 35) and leads S2 to clarify that the transition into college is in fact "the first transition. like an example" rather than itself being a *point of analysis* (line 39). Sonja paraphrases the agreed upon answer (lines 40-42). Her explanation emphasizes that "life transitions" are a component of analysis because they represent "an attempt to explain, oh why?" (line 41). This response again incorporates the issue of purpose that emerged as a misunderstanding in S1's initial response, an element that was not present in her previous attempts to articulate the concept.

Overall in this excerpt we have seen how Sonja and her students negotiate the developing concept of *points of analysis*. Both Sonja and her students adjust and readjust their talk in an ongoing attempt to achieve a shared understanding of the emerging concept. In particular, we can see how Sonja both adopted the language of purpose from S1 and shaped S2's contributions to highlight the mid-level range of the concept of *points of analysis* as existing somewhere between the overall purpose of the essay and the individual pieces of evidence. These micro-adjustments and readjustments on the part of both teacher and students are a consistent feature of classroom discourse, particularly when the teacher is experienced and skillful enough to quickly assess her students'

emerging understandings and adjust her own instructional talk to address these emerging conceptions of the subject matter. What Sonja's case powerfully shows, though, is that such interactions do not only shape the students' developing concept, but also shape the teacher's developing knowledge. As the students' contribute their own attempts to articulate the concept of *points of analysis* Sonja uses their contributions to clothe her own incompletely articulated concept in shared language. In this way, Sonja and her students collaboratively construct this concept through the process of talking about it.

From Emerging to Integral Concept

Thus far, we have seen the emergence and development of the concept of *points of analysis* within the teaching of one class period. In Sonja's subsequent teaching within the unit, she further develops this concept and integrates it into her developing PCK. In this ongoing process of development, an additional model text Sonja uses in the class as well as her students' discussions of this model both continued to mediate this concept in Sonja's developing PCK.

On the second day of the analytic essay unit, Sonja assigned an additional model text for the students to read. This text, "The violence in our heads" (Luhmann, 2013) was a recently published editorial from *The New York Times* focusing on the relationship between schizophrenia and violence. In particular, Luhmann argued that the though the experience of hearing voices is a universal symptom of schizophrenia, the violence of the voices people with schizophrenia hear are more reflective of a patient's culture than a property of the disease itself. For the class, Sonja again led her students in analyzing both the content and structure of the article. This analysis included a planned focus on the concept of "elements/units of analysis" which she had introduced in the previous class. Figure 7, shows the directions for this analysis activity that Sonja wrote and posted for the students during the class.

Lesson topic: Analytic(al) essay

Task 1: Luhrmann's "The Violence in Our Heads"

Analyze the article from a "teacher's" perspective:

- Can you identify the structure of the essay? What is the introduction? How is it constructed? Can you find a thesis statement and if so, where?
- What is the purpose of the essay? (To analyze what?)
- What are the elements/units of analysis? ←
- What kinds of evidence does the author provide? Which sources does she cite? How does she bring in the evidence?
- How does Luhrmann conclude the essay? Can you think of an alternative conclusion?

Figure 7: Class presentation, 10/9/2013

These directions now include a question related specifically to identifying the "elements/units of analysis" in the essay (marked with an arrow). This planned focus indicates that the concept which emerged unplanned in the previous class period is becoming more integrated into Sonja's PCK of the analytic essay.

As Sonja led the class in this portion of the discussion, both her own explanations and her students' contributions demonstrate a much greater control over the concept of *points of analysis*. Though Sonja still searches for language to represent the concept to her students, her vocabulary is much more consistent here, only using two terms "elements" and "units" rather than the four terms she shifted through in the first day of the unit. Yet even though her language has become more predictable, Sonja's explanations of the concept still undergo an important shift in this lesson, moving from a focus on the concept of *points of analysis* as an analytic category applied to a finished text to an authorial strategy.

Immediately prior to the discussion of the units of analysis, Sonja and her students are discussing the thesis statement of the article, particularly noting how the author's final point in the text, an explanation of alternative therapies in which patients with schizophrenia respond to the voices they hear, is not included in the thesis statement. This observation leads into a discussion of the *points of analysis* involved in the text.

Excerpt 4.7:

- 1 Sonja: do you guy's see what (.) we are trying to come up with? there is
2 something else, right? how do we deal with voices (.) is also- also seems
3 to be a part of that right? of that essay although that's not necessarily in
4 that thesis. ((grimaces and nods head)) true? mhm.
- 5 Sonja: which brings me to the next point. **what are the elements or units of**
6 **analysis (.) that she is bringing in (.) to the essay?** so take a (.) a minute
7 or two, **try to find those (1) units of analysis. how is she trying to**
8 **analyze that.** (Sonja, 10/9/2013)

Sonja transitions from the discussion of the thesis statement into her direction for this new question focusing on “the elements or units of analysis” (lines 1-4). In her instructions to the students, though she still offers multiple possible terms for the concept, Sonja’s directions are significantly more concise than her initial attempts to explain the concept in the previous class. The one new element Sonja incorporates into this explanation is the question “how is she trying to analyze that” which she adds as an elaboration of her instructions to “try to find those (1) units of analysis” (lines 6-7). This elaboration brings both the author and the author’s intentions into the discussion. When bringing the class back together to discuss their findings, Sonja again paraphrased her directions, reframing the concept of *points of analysis* in similar terms as focusing on authorial intention.

Excerpt 4.8:

- 1 Sonja: any ideas? (.) so **I guess to make it- to make this question a little easier**
2 **(.) for you (2) is (.) to paraphrase it like this. so <what is it that the**
3 **author does> in the next few (.) paragraphs what is it that she is**
4 **doing?**
- 5 [student’s phone rings, other students laugh and playfully mock student]
- 6 S6: I think (.) uh she's comparing the voice experience of uh people with
7 schizophrenia in the US and India
- 8 Sonja: she's comparing the voice experiences of patients (.) where?
- 9 S2: in India and in the United States

10 Sonja: in India and in the U.S., right? (.) you know, there are a few paragraphs
11 that go over the study (.) and the experimental design and the results. (.)
12 right? **so we can say that (.) not just one paragraph, but the the whole**
13 **s:election or set of the next how many?** ((scrolling through text on
14 screen)) so two groups of patients right? that's two, three, (.) f:ive. **these**
15 **five paragraphs have to do with comparison (.) of (.) the hearing (.)**
16 **experiences. or voice hearing experiences.** um (.) does she sort of come
17 to a conclusion? on at least this (.) issue (Sonja, 10/9/2013)

Sonja indicates that the purpose of her paraphrase is to make her “question a little easier” for her students (line 1). This may indicate that as her students were working, she observed them experiencing ongoing difficulties with the concept of *points of analysis*. In her paraphrase of the directions, Sonja asks the students to explain “<what is it that the author does> in the next few (.) paragraphs” (lines 2-3). By identifying the section of text that she is referring to, Sonja reduces the cognitive load of the question. Now students need not identify which section of text is the *point of analysis*, but merely provide a name for this component. Additionally, Sonja’s focus on “what it is that the author does” further guides the students to the correct level of abstraction. By focusing on author action, rather than on what the text itself says, Sonja guides her students toward the rhetorical function of the entire section of text, rather than simply a summary of the content.

This rephrasing is apparently successful. S6 and S2’s responses (lines 5-6, line 8) both label the function of these paragraphs as comparing symptoms of patients in India the US. Sonja accepts and paraphrases these answers (line 9-15). Following this relatively short exchange, Sonja closes the discussion of the *points of analysis* and moves the discussion forward to the next topic, whether or not the author came to a conclusion regarding her central question (line 16).

In these excerpts, we can see that both Sonja and her students seem to have much greater control over the concept of *points of analysis*. Neither Sonja nor her students struggle as much to choose words or to successfully identify the units of analysis. While all parties involved seem to have a much easier time working with the concept in this section, Sonja still continues to adjust her explanations for her students’ emerging

understandings, in particular marking a shift from talking about *points of analysis* as independent elements of a finished text, to focusing on *points of analysis* as the result of an author's intention and work, a particularly important shift that mirrors the students' shifting interaction with the analytic essay genre from being an object to be analyzed as readers to being a text that they must construct as writers.

Elements and Perspectives: Differentiating Similar Concepts through Guided Reflection

Reflecting on these excerpts in the stimulated recall sessions, had a further impact on Sonja's developing concept of the *points of analysis* and her understanding of how to teach them. In excerpt 9, we can see a new aspect of Sonja's developing concept of *points of analysis* emerging. This excerpt also reveals the mediational function of my own contribution to this ongoing reflection.

Excerpt 4.9:

1 DW: so when you talk about um- again you've just said that it's hard to explain
2 what you mean by it, **but when you're talking about an element of**
3 **analysis, can you kind of describe what you mean by that?**

4 Sonja: mhm

5 DW: I mean **not necessarily describing it to a student [but just your**
6 **understanding of it.**

7 Sonja: [right

8 Sonja: um (.) **so when we talk about points of comparison and contrast in um**
9 **(.) in compare contrast essays, those are a little easier to explain,**
10 **they're a little more tangible.** like we we can point out or (.) um extract
11 those points of comparison so we call them points of comparison (.) uh
12 this is what it is, like this is what you see in the description of (.) um of
13 assignment, you have to find three logically um related points of
14 comparison and contrast and (.) um **that sort of doesn't warrant**
15 **additional in- additional explanation.** um (.) in most of the time in those
16 samples essays- sample essays and sample articles you can clearly see
17 them. um (.) **in the analytical essays (.) and specifically in articles that**
18 **(.) uh (.) that I asked them to read (.) those elements of er- or those**

19 **points of analysis are a little (.) less definable? they often run one into**
20 **another (.) um (.) oh: (.) but I guess they are (.) they are parts of an**
21 **issue?**

22 DW: mhm

23 Sonja: **they're s:- (.) is there another good word? (.)**

24 DW: **well maybe a way to think about it is what would you want your**
25 **students to be able to do with these units of analysis? (.) so right now**
26 **you're looking at it in a reading.**

27 Sonja: right

28 DW: identifying them?

29 Sonja: yeah yeah exactly and **this is what they did in in this in the assignment**
30 **for today so they j- they gave me a topic and they told me I'm gonna**
31 **look at (.) social component, economic component, and (.)**

32 DW: oh so when they write as well

33 Sonja: s- (.) right right right. and so (.) **I want them to uh to see an issue as a**
34 **complex one consisting of a number of (.) elements. um (.) and those**
35 **(.) elements need to be looked at (.) from different perspectives (.) sort**
36 of a thing. (Sonja, stimulated recall 1, 10/11/2013).

The interaction begins with me asking Sonja to explain her understanding of the concept of *points of analysis* (lines 1-3). I further specify that in this explanation, Sonja need not approach this explanation as if she were “describing it to a student” but could instead think of the task as more one of explaining her own understanding of the concept (lines 5-6). By phrasing the question this way, I am inviting Sonja to share her content knowledge – her own understanding of the concept as an expert to another expert – without having to concern herself with transforming this knowledge into appropriate forms for students.

Sonja responds by first situating her understanding of the concept within the overall curriculum of her course. She compares *points of analysis* to the “points of comparison and contrast” from the previous assignment in the class (lines 8-10). These points of comparison and contrast, she explains, were “more tangible” (line 10) and thus

didn't "warrant additional in- additional explanation" (line 14). In contrast, the *points of analysis* "are a little (.) less definable? they often run one into another" (line 18).

As she continues to explain the concept of the elements of analysis, Sonja again runs into difficulty choosing appropriate metalanguage, asking for my input on possible terms (line 21). Rather than providing possible terms, I instead suggest another "way to think about it," and ask "what would you want your students to be able to do with these units of analysis?" (lines 22-23). This question shifts the focus from naming a feature of a text to the describing the actions of a writer. Interestingly, this is similar to the move Sonja herself made in excerpts 7 and 8 when she rephrased her instructions to her students from trying "to find those (1) units of analysis" (Excerpt 7, lines 6-7) to "what is it that the author does in the next few (.) paragraphs" (Excerpt 8, lines 2-3).

Sonja's response highlights that she wants her students to use the concept of *points of analysis* as writers, rather than simply identifying them as readers. She references a recent homework assignment in which the students "gave me a topic and they told me I'm gonna look at (.) social component, economic component" (lines 28-29). It is in this mode of describing what she wants her students to do with the *points of analysis*, that Sonja brings a new dimension to the developing pedagogical concept. She describes her goals for her students, saying that "I want them to uh to see an issue as a complex one consisting of a number of (.) elements. um (.) and those (.) elements need to be looked at (.) from different perspectives" (lines 31-33). This idea of examining the "elements" of analysis "from different perspectives" is one that does not appear anywhere in Sonja's preceding talk, either in the classroom or earlier in the stimulated recall, yet this concept of "perspectives" would prove to be important to Sonja's understanding of both *points of analysis* and the genre of the analytic essay overall. In essence, Sonja begins to differentiate between to sub-concepts of the overarching concept of *points of analysis* – "elements of analysis" and "perspectives." The relationship between these two sub-concepts as Sonja expresses it here, is that the "elements" refer to the parts of a complex issue whereas "perspectives" refers to what an author does with and to those elements.

Even within this stimulated recall session, Sonja begins to use this concept of perspectives as a new way to talk about the concept of *points of analysis*. In her discussion of Luhrmann (2013) shown in excerpts 7 and 8, for instance, Sonja described

this concept as “units of analysis.” When she reflected on these excerpts in the stimulated recall, however, Sonja described the text as being comprised of various “perspectives” rather than “units.”

Excerpt 4.10:

- 1 DW: okay. s:o (.) any comments on that? what you were trying to do there? (.)
2 same thing basically or [something different?
3 Sonja: [yeah yeah **again the same idea** that uh okay we
4 uh (.) there is this phenomenon of hearing voices right? sound
5 hallucinations. so **how do we look at it? from what kinds of like what**
6 **kinds of perspectives can we bring into an analysis of iss- of this issue?**
7 uh, we can look at it from this cultural perspective, we can look at this (.)
8 issue from: this perspective of how do you deal with those? uh (.)
9 medically or therapeutically (.) or pharmaceutically versus therapeutically.
10 engaging with voices (.) um and **so that these were to me (.) uh**
11 **perspectives that she brings into the analysis of hearing voices.**
12 DW: alright let's see:
13 Sonja: **maybe I will find a good way to talk about it finally if we talk about it**
14 **long enough ((laughter))** (Sonja, stimulated recall 1, 10/11/2013).

Here, though Sonja identifies the overall objective of this activity as similar to the previous text analysis discussion (line 3) she uses quite different language to describe the concept. Rather than discussing the model text in terms of “units” or “elements of analysis,” she focuses on “what kinds of perspectives can we bring into an analysis of iss- of this issue?” (lines 5-6). Sonja’s final comment that “maybe I will find a good way to talk about it finally if we talk about it long enough” (lines 12-13) demonstrates her own awareness that the act of reflecting verbally on the concept and how to teach it is in turn shaping her language and indeed her own understanding.

The next important stage in Sonja’s development of the concept came through reflecting on her students’ final essays. In these reflections, Sonja demonstrated that this developing concept was becoming even further integrated into her overall understanding of the analytic essay genre and how to teach it. For the final stimulated recall, I asked Sonja to choose three final drafts written by her students that represented to her examples

of a high, middle, and low quality student analytic essays. When she actually brought in the essay drafts, however, Sonja noted that she had changed the task somewhat. While she started out “trying to choose the low or the higher achieving” essays, she found it “difficult for me to just universally: choose a good paper and a bad paper.” Instead, she “realized that (.) like you see different things in different essays and some things were more successful, some things were less successful” in each paper (Sonja, stimulated recall 3, 11/7/2013). Because of this difficulty and accompanying realization, the essays Sonja brought to this stimulated recall session do not fall neatly into high, middle, and low categories, but rather demonstrate elements that were “more successful” and “less successful” in ways that were meaningful to Sonja.

One of the essays Sonja chose was an essay titled “Unknown facts about milk.” The essay examined the sometimes negative health impacts of milk against the backdrop of the public perception of milk as healthy. This particular essay was very influential in Sonja’s thinking about the genre of the analytic essay. In excerpt 14, Sonja explains what was noteworthy about this particular essay.

Excerpt 4.11:

1 Sonja: **so this is a student who I was r:eally really worried about.** at the
2 beginning she was (.) uh I mean I'm- **she's still my sort of student of**
3 **concern** cause her language is very w- l- just plainly the level (.) her level
4 of English is really really poor. so tha:t is a product of uh many revisions
5 and her work with a tutor and whatnot, uh but I was also concerned about
6 the f- like I couldn't quite differentiate these things, like is it a problem of
7 her not really understanding what's going on in class? like not really
8 understanding my instructions, or she is just cognitively a little (.) um (.)
9 different, and h:as a problem of following directions or understanding (.)
10 uh conceptual- things conceptually. **so um I was a a little worried about**
11 **her (.) like I was anticipating problems with this assignment because I**
12 **wasn't entirely uh prepared for this assignment. but the very first**
13 **draft that she brought was sort of- like it wasn't (.) uh (.) like an**
14 **elegantly written thing or anything like that bu:t (.) structurally it was**
15 **completely correct, like here (.) some very um (.) um (.) ubiquitous**

16 **thi(h)ng, like something that you don't stop to think about, a:nd we**
17 **can look at it from these four I think she brought four different**
18 **perspectives, right, or three (.) right there was nutrition, environment, and**
19 economic. [. . .] so I guess that maybe (.) wasn't as clearly separated, but
20 still **the very (.) the very first approach to the top- like she got it, she**
21 she knew what I wanted to: (.) uh **she knew what I wanted them to do.**
22 **to look at a topic from (.) different perspectives, to analyze (.)**
23 **something from different perspectives, and that was (.) I thought a**
24 really- like that was a paper that I liked to read just from that sort of
25 curiosity point of view [. . .] **so structurally from the very beginning**
26 **this was something that I thought was a good example of an analysis**
27 (Sonja, stimulated recall 3, 11/7/2013).

As Sonja notes, even prior to receiving the essay, she was particularly concerned about this student. Her concerns were based in her perception of this student's low English proficiency expressed not only in her writing but also in her ability to understand classroom explanations and instructions. Additionally, Sonja expressed a more general concern about this student's ability to understand "things conceptually" (lines 1-9). In addition to the problems she anticipated because of her student's difficulties, Sonja notes that she was also "anticipating problems with this assignment because I wasn't entirely uh prepared for this assignment" (lines 10-11).

Because of her initial concern for this student, Sonja was pleasantly surprised to find that even from the first draft, though this student was still struggling at a language level with the essay, "structurally it was completely correct" (lines 11-14). In elaborating on what made the structure of the essay "completely correct," Sonja focuses on the content of the essay and how the essay made use of various "perspectives." The essay was a good example of analysis because it focused on "some very um (.) um (.) ubiquitous thi(h)ng, like something that you don't stop to think about" and examined this topic "from these [. . .] different perspectives" (lines 14-16). Sonja interprets this structure as evidence that the student in question "knew what I wanted them to do. to look at a topic from (.) different perspectives, to analyze (.) something from different perspectives" (lines 19-21). Moreover, it was the inclusion of these different perspectives

that led Sonja to evaluate this essay as “something that I thought was a good example of an analysis” lines 23-24).

Sonja’s comments on this essay demonstrate the extent to which the concept of “perspectives” has become integrated into her overall understanding of the genre of the analytic essay. Whereas before she taught the unit, she had not considered the role of *points of analysis* in the genre or in her teaching goals, here she describes the process of looking at a topic from multiple “perspectives” as not only her goal for her student, what she “wanted them to do” (line 20), but also a central component of the genre of the analytic essay itself, making this student’s linguistically challenged but conceptually competent essay “a good example of an analysis” (line 24).

Post-Teaching PCK

Further evidence of the extent to which this emergent concept of *points of analysis* was integrated into Sonja’s overall concept of the analytic essay, her knowledge of content, and her understanding of how to teach the essay can be found in her post teaching concept map as well as her comments in the post-teaching interview. Sonja’s post-teaching concept map highlights several changes in her PCK, particularly regarding the inclusion of the emergent concept she now labels for the first time as *points of analysis*.

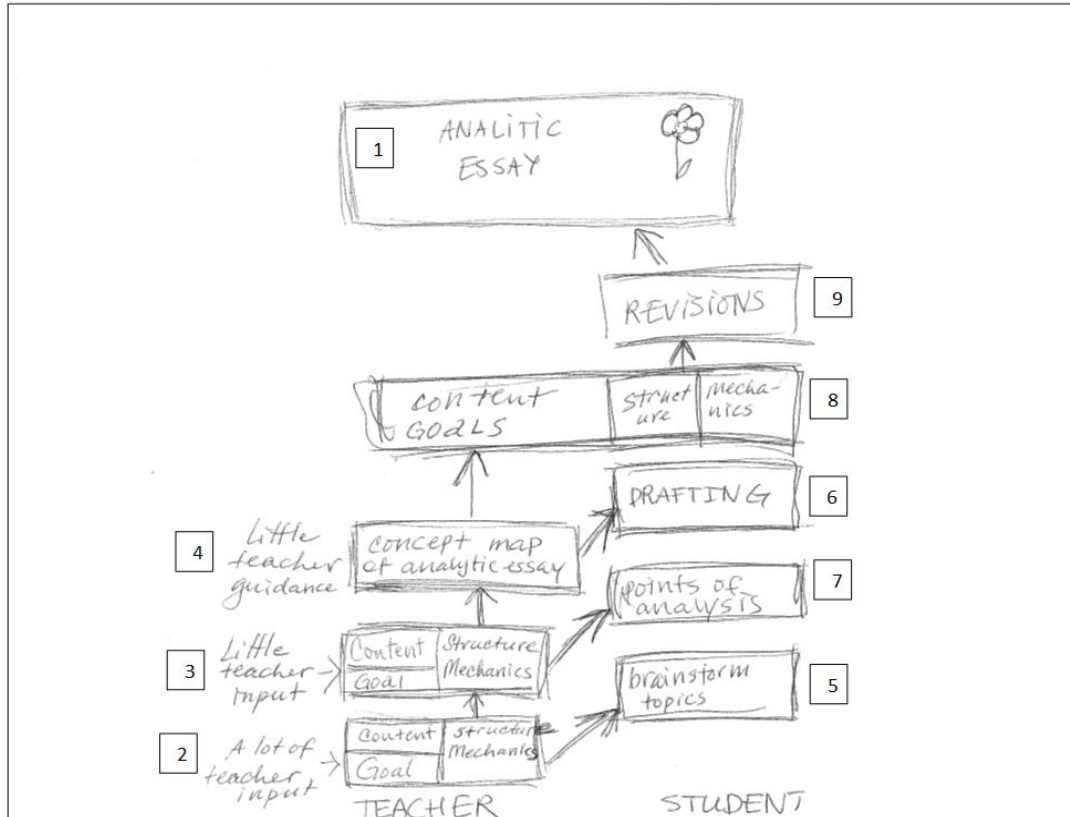


Figure 8: Sonja post-teaching concept, 11/7/2013

Sonja described her post-teaching concept map overall as consisting of “building blocks.” The overall goal, a complete analytic essay, was depicted at the top of the page (1). The materials and activities building up to that goal were depicted as blocks lower down on the page divided into two columns based on whether the activities and products that were relatively more teacher-initiated or student-initiated. As with the unit she had just finished teaching, Sonja believed that she would again start with two readings (2 and 3). Each of these readings would be analyzed “from at least two perspectives,” first from the perspective of content and “the goal of the essay” and second from the perspective what Sonja referred to as “the syntax of a text” including both “structure” and “mechanics.” The specific elements of structure and mechanics that she would cover, Sonja noted, would be flexible and based on “where the class is and what I feel this particular group needs to (.) um (.) to learn about.” This collaborative analysis, Sonja further noted would be largely teacher-led for the first essay (2), but would contain little teacher input for the second reading (3). At around this same time, Sonja noted, she wanted her students to also begin thinking about and researching their topics (5).

As a next step, Sonja noted that she would want her students “to come up with this representation of what an analytical essay is” through drawing concept maps (4) so that “before they start writing” students would “start with some sort of understanding” of the analytic essay as a complete genre. This concept map activity would also lead to students independently “think of these uh like points of- possible points of analysis” (7) before beginning to draft their own essays (8), revisions (9), and final (10).

When Sonja herself commented on the changes between the pre and post-teaching concept maps, she did not see the concept maps as “terribly different” especially in that they both include a strong focus on her two goals of critical thinking/content and structure/mechanics. Her main observation of the differences was that that the pre-teaching concept map was “a lot less structured [. . .] or a lot less (.) step by step kind of thing” than the post-teaching map. In particular, Sonja noted that blocks 2 and 3 in the post-teaching map represented how she had “reformulated” her understanding of the need “to engage with content and goal of an essay and that's where you need critical thinking.” Sonja also noted that while her pre-teaching concept map had included particular language features that she planned to work on such as formulaic sequences and reporting verbs, her post-teaching map left these specific skills intentionally unspecified. This reflected her current understanding “that this will really depend on (.) on that group of students (.) that I will face.”

Discussion of Changes in Sonja’s Knowledge

The inclusion of the concept of *points of analysis* represents the most noteworthy change in Sonja’s post teaching concept map, at least in terms of the focus of this chapter. This inclusion further demonstrates how this concept has been integrated into Sonja’s overall PCK of the unit, to the point that it becomes a central element of her planned future curriculum. It is at least initially unclear why Sonja would introduce a new term “points of analysis” here in her very final discussion of this concept. One possible reason for this new term can be gleaned from Sonja’s comments in the post-teaching interview. In particular, as in the pre-teaching interview, Sonja was asked to “describe a successful analytic essay now (.) after you’ve taught this class” (Sonja, interview 4, 11/7/2013). In her previous answer to this question prior to teaching the unit, though Sonja had much to say about the value of the analytic essay genre for students critical thinking and the

centrality of the practice of analysis in her understanding of academic discourse (see excerpt 1), when it came to describing how an analysis was actually accomplished, she had much less to say. She described writing an analysis as requiring a writer to “take an issue (.) that is clearly controversial, or debatable, or (.) just kind of (.) doesn't sit well with people, and you explicate it. you learn all you can about it” while refraining from arguing (excerpt 1, lines 1-3). After teaching the unit Sonja had much more to say about the actual process of analysis and her comments included an explicit focus on the related concepts which she now describes as the “parts of an issue” and the “perspectives” one can take on an issue.

Excerpt 4.12

1 Sonja: I look at it as something that (.) um (.) that **ideally looks at a topic that**
2 **seems very conventional** [. . .] and then when you do present this analysis
3 **there's a wow factor** that (.) kind of attracts the attention and (.) um (.)
4 but it doesn't have to be something that is- that we don't think is very
5 interesting on the surface [. . .] uh a successful analytic essay has to
6 properly narrow down or zoom into that topic um (.) **the topic also has to**
7 **be (.) um (.) analyzed from different points of view** and that's sort of (.)
8 like not every topic would n- provide that luxury of (.) oh! you can look at
9 this object from that perspective, and that perspective, and that
10 perspective. **and this is something that (.) I think as a genre an analytic**
11 **essay pushes us to do, it makes us look at a topic or an issue as if it**
12 **were an object and we look at this object, inspect that object from (.)**
13 **different perspectives or using different methods kind of thing,** (.) u:m
14 (.) tch (.) a:nd (.) another thing that (.) um (.) that is (.) very important for
15 me from this ideational point of view it h:as to (.) [. . .] **this analysis (.) is**
16 **microscopic kind of like you look at (.) parts of that issue but you**
17 **have to bring it back together and m:m: again zoom out and look at**
18 **this object from um (.) uh (.) from a sort of more distant point of view**
19 **and say how that feeds into the larger picture of a issue.** (Sonja,
20 interview 4, 11/7/2013)

This excerpt reveals a much more explicit concept of what analysis actually is. Rather than just “explicating” a topic, Sonja now describes analysis in terms of the concept of “parts of an issue” and “perspectives.” As she notes, analysis involves first “the mental practice of looking “a topic or an issue as if it were an object” (lines 10-11). Part of examining the topic as if it were an object involves taking a “microscopic” view and focusing in very close detail on the “parts of that issue.” These parts of the issue seem to be a new name for what Sonja has previously called “elements” or “units” of analysis. Another aspect of examining an issue as if it is an object involves inspecting “that object from (.) different perspectives or using different methods kind of thing” (lines 11-12). Based on Sonja’s inclusion of both of these related sub-concepts in her explanation, it is likely that the new term “points of analysis” in the concept map represents a new superordinate term for both of these related practices of analysis.

Regardless of the exact nature of the relationship between these three concepts of *points of analysis* “perspectives” and “parts of an issue” what is clear from this excerpt is these concepts do not represent merely peripheral concerns, but have in fact become central to Sonja’s entire concept of analysis and represent a significant change from her pre-teaching conceptualization of the genre. In other words, these concepts did not merely become integrated into her PCK as demonstrated in the post unit concept map, but have also permeated her overall understanding of the analytic essay as a genre, becoming integrated into her expert content knowledge.

Conclusion

Like the teaching intern from the joke in the epigraph to this chapter, Sonja came to understand the analytic essay not prior to teaching it, but in and through the very activities of teaching. This learning is most powerfully evidenced by the development of the concept of *points of analysis*. Sonja’s did not start with an understanding of this concept which she then systematically transformed into pedagogically appropriate forms which she then, in yet another step, taught and evaluated. Instead, for Sonja the development of her expert content knowledge and her PCK were largely indistinguishable. Both developed simultaneously in teaching activity and mediated reflection. In her final reflections on what she believed she had learned through the unit, Sonja herself noted the learning she experienced in the unit was not merely a

transformation of her existing understanding of the genre, but rather represented a transformation of how she understood the analytic essay itself.

Excerpt 4.12

1 Sonja so(h) uh (.) even though we like to think of teachers as being experts and
2 like I like to think that oh! I am an expert you know in the class, but the
3 truth is that we learn (.) a lot of things by doing things and (.) you know
4 and **I went into this (.) class not really knowing how to teach. (.) or**
5 **what an analytic essay is (.) um (.) deep down. not like (.) okay, I can**
6 **open a book and read about it but what it really is and how to teach**
7 **that,** so I have a better idea of course and it's quite possible that next time
8 (.) um (.) I will teach it and ha:ve a newer and (.) if not better idea. (Sonja,
9 interview 4, 11/07/2013).

For Sonja, what she learned about “what an analytic essay is” and “how to teach that” are both part of the same process of concept development (lines 4-6). This process of coming to know the concept “deep down” (line 5) in and through the activities and interactions of teaching has important implications for teacher education and supervision practices.

CHAPTER 5: ANNA: TEACHING THE UNKNOWN GENRE

this is hard. this is the first time I know what is an analytical essay and I need to teach them, so it's (.) really nervous before every class. I need to know I'm doing the right thing, so I learned what is analytical essay sort of a month before this. (Anna, interview 4, 12/03/2013).

The above quote, taken from an interview shortly after Anna had returned her students' graded final drafts, reflects the unique position Anna was in as she taught the analytic essay for the first time. While traditional models of the development of PCK begin from a point of the teachers' own expert understanding of content which teachers then transform into pedagogically appropriate forms for their students, Anna began her preparations for teaching the analytic essay from a point of near complete ignorance about the genre. Unlike Jennifer who assessed her own knowledge of the analytic essay genre as good, or even Sonja who viewed her knowledge of the genre as good, but largely intuitive, prior to teaching the unit Anna reported very little understanding of the analytic unit, describing her prior knowledge as "zero-percent understanding" (Anna, stimulated recall 1, 11/02/2013) because she had never "been taught of this kind- this genre before" (Anna, interview 3, 10/18/2013). This situation caused her considerable anxiety as she struggled to both comprehend the new genre and to explain it to her students almost simultaneously.

Anna's lack of initial knowledge of the genre shaped her development of PCK in unique and interesting ways. In Vygotskian terms, because of her lack of concrete experiences with the genre, Anna's did not have a strongly formed everyday concept of the analytic essay. As a result, Anna relied extensively on a range of sources such as the teacher handbook, educational websites, discussions with experienced instructors, and even conversations with her fellow participants in this study, Jennifer and Sonja, to craft her initial definition of the genre. These sources provided her with the beginnings of a scientific concept of the genre.

Anna's situation as she approached teaching this unit is less than ideal, but it is also a common one. L2 writing teachers are often called upon to teach genres that they have little to no experience writing or perhaps even reading. Indeed, the experience of being asked to teach unfamiliar concepts is a common one for all teachers, as Shulman (1987) has noted. How teachers in such a situation prepare, teach, and learn from their

teaching are important questions to examine. Anna’s experiences simultaneously learning about and learning to teach the analytic essay can provide insight into these questions. This chapter will examine how Anna’s PCK developed as her largely abstract, scientific understanding of the genre of the analytic essay became increasingly concretized in her interactions with students and student texts. Additionally, this chapter will demonstrate the crucial role of the mediation afforded by the interviews, concept maps, and stimulated recall sessions. As Anna’s case clearly shows, these tools did not merely capture Anna’s developing PCK, but actively shaped her understanding of the genre, her students, and the nature of writing pedagogy itself.

Overview of Data Collected

Anna started the analytic essay unit in the ninth week of the semester, the latest start date of any teacher in the study by nearly an entire week. Anna had delayed starting the unit in order to give herself more time to prepare. In particular, Anna used the delayed start time to allow her to see how other teachers dealt with the analytic essay by talking to Jennifer about the unit and also observing Sonja’s teaching.

Anna devoted seven days of instruction to the analytic essay, and collected three drafts of the essay. Table 5.1 shows her schedule for the unit with the corresponding instructional focus of each day of the unit as well as the dates of the two interviews, two concept maps, and three stimulated recalls (shaded).

Date	Data Collection or Instructional Focus
10/18	<ul style="list-style-type: none"> • Interview 3 • Concept map 3
10/23	<ul style="list-style-type: none"> • Analyzing model text “Stuck on the Couch” focusing on audience and purpose and use of sources • Introducing analytic essay genre and assignment • Brainstorming essay topics
10/25	<ul style="list-style-type: none"> • Reviewing analytic essay genre and assignment • Narrowing down topics • Brainstorming research questions and search terms for library databases
10/28	<ul style="list-style-type: none"> • Writing with sources presentation focusing on citation and common knowledge
11/01	<ul style="list-style-type: none"> • Writing with sources presentation focusing on avoiding plagiarism and using summary, quotation, and paraphrase
11/02	<ul style="list-style-type: none"> • Stimulated recall 1

11/04	<ul style="list-style-type: none"> • Guided peer-review activity focusing on genre and use of sources • FIRST DRAFT DUE – NO INSTRUCTOR COMMENTS
11/06	<ul style="list-style-type: none"> • Review of introductions and conclusions (covered earlier in semester) using student examples • SECOND DRAFT DUE – FORMATIVE INSTRUCTOR COMMENTS, UNGRADED
11/08	<ul style="list-style-type: none"> • Guided peer-review activity focusing on structure and coherence
11/13	<ul style="list-style-type: none"> • FINAL DRAFT DUE – EVALUATIVE INSTRUCTOR COMMENTS, GRADED
11/14	<ul style="list-style-type: none"> • Stimulated recall 2
12/03	<ul style="list-style-type: none"> • Stimulated recall 3 • Interview 4 • Concept map 4 • Concept map 3 and 4 comparison

Table 5.1: Anna's analytic essay unit schedule

Anna's Pre-Teaching PCK of the Analytic Essay

Anna's pre-teaching concept map of her knowledge of the analytic essay and how to teach it (Figure 9) shows the interrelated nature of her PCK, including elements of her understanding of the genre (content knowledge), her perceptions of her students' anticipated responses and difficulties with the content (knowledge of content and students), and her awareness of the various instructional strategies (knowledge of content and pedagogy) available to her to teach this unit. These various facets of her professional knowledge are integrated to form her understanding of what the analytic essay is and how to teach it.

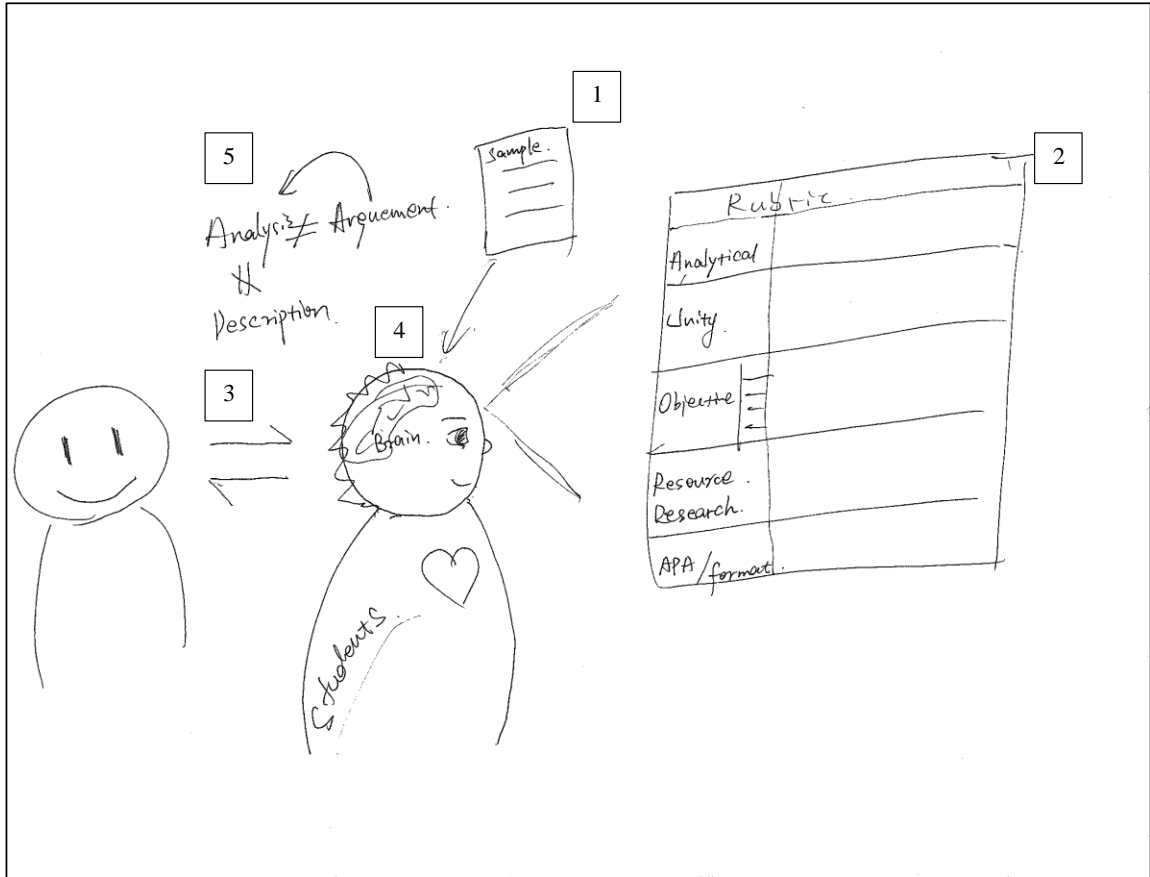


Figure 9: Anna Pre-Teaching Concept Map, 10/18/2014

As Anna explained, the concept map “actually demonstrate the material[s]” she planned to use in teaching the analytic essay. In particular, Anna included sample writing (1) as well as the rubric she had designed for the analytic essay (2) as important materials she would use. Anna described these curricular materials as “kind of the input” for her students. Through instruction they would be able to “see the rubric as a material and the sample and the idea are going to go into their brain” (4). Following this input, Anna wanted the students to “discuss with their peers, in peer review or in class activities” (3) as another instructional strategy to help her students (4) understand the genre of the analytic essay as it is represented in the rubric. This “input” from the curricular resources and class discussions would work together, Anna hoped, to help students understand that analysis is “not argument and it's also not description” (5).

The most prominent feature of Anna’s understanding of the analytic essay is her description of the genre as “not argument and it’s not description” (5). In describing her

goals for the analytic unit, Anna repeatedly emphasized that she wanted her students “to know the difference between analytical and argumentative” (Anna, interview 3, 10/18/2013). The primary difference between the analytic essay and the argumentative essay related to the objective tone and stance of the analytic essay. The analytic essay, she noted, should be “not so subjective.” Instead, her students should “try to be as (.) objective as possible on” whatever issue they chose to write about. This focus on objectivity is also reflected in the rubric she depicted in the concept map (2).

Though she defined the analytic genre partially through contrasting it with the argumentative essay, particularly as regards the use of personal opinion, Anna saw the relationship between analysis and argumentation as more complex than mere opposition. She also wanted the students to understand the developmental relationship between the analytical essay and the final argumentative essay.

Excerpt 5.1

1 Anna: I want them to know **the reason we have the analytical essay before the**
2 **final argumentative essay is for them to (.) um (.) to build on it, (.) so**
3 **they need to build on the analytical essay [. . .] to become able to**
4 **argue?** so they need first to gather information and be able to analyze the
5 issue and then they can argue in a more like (.) solid stance. (Anna,
6 interview 3, 10/18/2013)

Anna emphasizes here that the progression of the class, moving from the analytic to the argumentative essay, was not random, but reflected a natural developmental progression from analysis to argument. This progression was not something Anna had invented independently, but rather she explains that “I saw that in the syllabus” (Anna, interview 3, 10/18/2013) which explained that “The Analytic Essay is designed to *prepare* them to write the Argumentative Essay” (Verity, 2013, p. 9). However, Anna also noted that the developmental relationship between the analytic essay and the argumentative essay was not one that instructors commonly shared with their students. Anna explained her decision to share this information with her students saying that, “I want them to know a analytical essay [. . .] a tool or just only half way there, it is not a goal, so they do need to pay more attention on developing (.) instead of just the outcome” (Anna, interview 3, 10/18/2013). By letting students know that they would need to use

the same skills they learned in the analytic essay as they wrote their argumentative essay, Anna hoped the students would orient to the essay as a developmental process rather than just another text to be completed.

Another key element of Anna's initial definition of the genre was that, in addition to being "not argument" the analytic essay was also "not description." She emphasized that she wanted her students to "really analyze an issue instead of just describe it." The difference between analysis and description was one of depth and insight for Anna. Description focused on what was "happening on the surface" of an issue. In contrast, Anna saw analysis as "insightful," examining issues at a deeper level (Anna, interview 3, 10/18/2013).

While Anna attributed her the idea that the analytic essay is "not argument" to the curriculum, She particularly notes that the "not description" aspect of her concept of the genre came from her own experiences, particularly her experiences learning about the genre as she prepared to teach it. In the classroom, Anna repeatedly reminded her students that the paper they were writing "is analyzing an issue, not descrip- not describing an issue" (Anna, class session, 10/23/2013). In her reflections on this class excerpt, Anna explained how her focus on the difference between description and analysis had stemmed from her own confusion learning about the genre in preparation for teaching and her belief that her students would share the same confusion.

Excerpt 5.2

1 Anna: **most the thing I want to emphasize in class was the things (.) or were**
2 **things(h) that I was confused by this topic, so (.) when I was studying**
3 **what is analytical essay I will feel, well, this is what I thought or this is**
4 **what I might [. . .] have [. . .] done, and then I will think, well, my**
5 **student may be (.) confused at the same point.** (Anna, interview 3,
6 10/18/2013)

In this way, Anna used her own experiences learning about the analytic essay, and particularly the confusion she experienced, as a source of knowledge that enabled her to identify potential difficulties for her students and to present the genre in ways that addressed these difficulties.

Overall, when Anna talked about the analytic essay at this point, prior to teaching it, she focused on defining it by what it was not. She had a much more difficult time articulating what the analytic essay was in positive terms. When she tried to explain her understanding of what the analytical essay *is* rather than what it *is not*, Anna struggled to express her ideas. In this excerpt, for instance, Anna is attempting to explain what she sees as the features of a successful analytic essay.

Excerpt 5.3

1 Anna: **so I have things broke- break- breaki- broken down in pieces (.) and**
2 **all pieces are (2) uh how do I put this? (.) so analyze things, and in a**
3 **(.) a insightful way, (.) so I want to know a (.) like successful causal-**
4 **causality in any kind of issue instead of just judging things based on**
5 **their chronological order of happening, so just like really organized**
6 **analyze, that's what I thought of the analytical essay. (Anna, interview 3,**
7 10/18/2013)

While Anna is able to identify that part of analysis involves dividing a topic into smaller pieces, she runs into trouble as she attempts to explain what one must then *do* with these pieces of an issue. The relatively long pause followed by the self-referential question “how do I put this?” indicate this difficulty (line 2). The circular nature of the explanation she lands on, that analysis is breaking a topic down into pieces and then analyzing those pieces in an “insightful way” (lines 2-3) further demonstrates the difficulty of expressing this concept.

Overall, though it seems likely that Anna does indeed have at least an intuitive understanding of what analysis *is*, her explanations of the genre focus almost entirely on defining analysis by what it is not. This difficulty points to the incomplete nature of Anna’s concept of the analytic essay at this point. As Anna repeatedly noted in the interviews and stimulated recalls, the analytic essay was a very new genre for her. Perhaps because of her lack of experience with the genre itself, Anna relied on more familiar genres of description and argument that border the analytic essay. By defining how the analytic essay differs from these related genres, Anna is able to delineate the rhetorical space that the analytic essay occupies, even while lacking the metalanguage to explain what exactly should exist within that space.

When it came to her knowledge of students, Anna’s perceptions of how her students were likely to respond to this unit focused mostly on what she perceived as the disconnect between their ability to understand a concept in class and their ability to apply that concept in their own writing. Anna commented on this disconnect in her concept map itself. Even as she noted that her goal for the unit was for her students “to know analysis is- it's not argument and it's also not description” she commented that she believed that “although it's easy for them to to to like (.) know, but it's probably not easy when they come to their writing” (Anna, concept map 3, 10/18/2013). When it came to the analytic essay, Anna believed that her students would easily understand the concept of what analysis is, but would struggle to successfully write in an analytic style. Instead, she believed her students would likely unintentionally use evaluative language in their writing.

Excerpt 5.4

1 Anna: I guess they **they probably going to think this is pretty easy cause the**
2 **general idea is really clear, the framework of an analytical essay is to**
3 **analyze something** and they know what is be- what is um being objective,
4 they know they know, well, **this is just a concept, but it's kind of hard**
5 **for for them to really do, that way.** sometimes they just **without**
6 **realizing it they put their personal opinion in it or even they use words**
7 **with a strong connotation of personal opinion but they don't know it,**
8 so, for example they (choose) "this is a good example, this is a better way
9 of do it" but they probably didn't um- they probably don't think think this
10 is a a subjective judgment (Anna, interview 3, 10/18/2013).

Anna specifically identifies the difficulties she anticipates students will face as issues of performance and not conceptual understanding. Students will not, she believes have a difficult time understanding the “general idea” or “the framework” of the analytic essay because this is “just a concept” that is “really clear” (lines 1-4). Instead, Anna believes that her students will struggle when it comes to writing their own analyses. In particular, that they will likely include phrases or “words with a strong connotation of personal opinion” “without realizing it” (lines 5-7).

This downplaying of the conceptual challenge the analytic essay poses and foregrounding of the structural and linguistic challenges is particularly interesting given that Anna herself found the process of constructing a concept of the analytic essay to be extremely challenging. This difference in her evaluation of the conceptual difficulty of the analytic essay for her own learning and for that of her students can be attributed both to her perceptions of her students' writing abilities and attitudes and to her understanding of teaching and learning as the transfer of information.

When she discussed her students' abilities and their attitudes toward the course in the early interviews, Anna often expressed two connected beliefs. First, she frequently mentioned that her students already seemed to be quite advanced in their knowledge of writing. In discussing how she had developed the schedule for the semester, for instance, Anna commented on this perception of the students' previous knowledge.

Excerpt 5.5

1 Anna: when I decide what to put on the calendar, what to put in the syllabus, it's
2 really giving me a hard time. **I I just feel like the paragraph thing, they**
3 **know it, conclusion thing, they know it,** so I I **I'm afraid if I put all**
4 **these single things on the syllabus they won't pay attention,** so it's
5 really hard for me to to decide this. (Anna, interview 2, 9/12/2013)

It is important to note that Anna connects the students' prior knowledge of writing concepts, such as paragraphs and conclusions, with their motivation for the class. Because the students were already familiar with these concepts, she reasons, they would disengage from the course if they saw too many of such topics in the schedule.

Not only did Anna believe that her students actually had a significant amount of prior writing knowledge, she also believed that their own assessment of their prior knowledge would be even higher than their actual ability. In other words, Anna anticipated that her students would not be aware of weaknesses in their own writing and would thus not be motivated to change these things. As a result of this belief, Anna decided very early in the semester to frame her instruction not in terms of underlying conceptual knowledge about writing, but about the formal features of academic discourse.

Excerpt 5.6

1 Anna: **I want them to know that their writing (.) are not perfect.** because **they**
2 **think they can speak, they can talk in English so their writing should**
3 **be fine.** but I really want to- want them to know first that **writing's not**
4 **that hard, as you know, you can write,** but second, **you do need to**
5 **communicate in certain formats** so you you- there's (.) hh: **the genre?**
6 **the format? that is widely accepted in the academic world, you should**
7 **know that structure,** you should follow that. (Anna, interview 1,
8 8/29/2013)

As Anna works to both affirm students' prior knowledge about writing (line 3) and also raise students' awareness of their need for improvement (line 1), she begins to craft a separation between the concepts of writing and the structural and conventional elements of writing. This is even more clearly expressed elsewhere in Anna's interview data. For example, when she is describing her overall goal for the class, she explicitly states that the goal "is not actually teaching you how to write personally as wha- what- as like just get out what you think. it is actually tell you that how do you arrange your text to (.) attract (.) people in your own field" (Anna, interview 1, 8/29/2013). Here again Anna separates "how to write" or the ability to "get out what your think" from what she sees as the purpose of her class, to "arrange your text." In this instance as well, this separation is in direct response to her expectation that the students will believe their own writing ability is sufficient and thus be unmotivated to engage in the class. It is also interesting to note that in this case, Anna identifies "genre" as being primarily an issue of "format" and "structure," and thus not primarily a conceptual issue. This view of genre as primarily structural, coupled with her belief that students' writing difficulties will also be primarily difficulties of structural control rather than conceptual understanding together form one reason for Anna's emphasis of surface features and de-emphasis of conceptual features of the genre.

The other major reason for Anna's de-emphasis of conceptual knowledge is her initial concept of teaching and learning as the transfer of information. While Anna's knowledge of pedagogy as it relates to teaching the analytic essay is not explicitly stated

in her reflections, it can be inferred through her concept map. In particular, Anna's concept map reveals an understanding of teaching writing as providing input to students.

Excerpt 5.7

1 Anna: so this is what they what they see, **they see the rubric as a material and**
2 **the sample and the idea are going to go into their brain and they will**
3 **um (.) communicate, or discuss with their peers, in peer review or in**
4 **class activities** (Anna, concept map 3, 10/18/2013).

Though this excerpt demonstrates that Anna has some knowledge of the typical instructional strategies associated with writing instruction (reading sample essays, class discussions, and peer review), her understanding of how these activities contribute to student learning is limited to the transfer of information. Learning is described in almost magical terms of ideas going “into their brain” when they “see” the instructional materials (lines 1-2). While Anna does not address what class discussion and activities are meant to accomplish in this excerpt, at other points she describes the function of such activities similarly as the transfer of information, with class discussions functioning primarily an opportunity for students to share knowledge they have acquired in other writing classes. She notes that “there are a lot of topic in this class have been covered in their previous writing classes. so I thought they know something they can share” (Anna, interview 2, 9/12/2013).

Anna's focus on learning as getting knowledge into the brain is particularly interesting given her awareness that many of the things her students understood at an intellectual level were things they remained unable to apply in their writing. Even as she is using the input metaphor to describe learning in the concept map, Anna notes this difficulty, saying that “although it's easy for them to to to like (.) know, but it's probably not easy when they come to their writing” (Anna, concept map 3, 10/18/2013). Yet despite this awareness, Anna is not yet able to articulate a different concept of pedagogy that is based on learning to *do* something rather than the acquisition of knowledge.

Overall, while Anna is aware of many of the instructional strategies that are common in writing pedagogy, her conceptualization of the nature of teaching and learning as knowledge transfer limited her ability to utilize these strategies in ways that lead to students not only understanding writing concepts but being able to successfully

apply them to their own writing. Anna herself confirms this. During the third interview as we are discussing her plans for the analytic essay, Anna interrupts the typical question/answer structure of the interview specifically to ask for suggestions about how to use the pedagogical strategy of reading sample essays in such a way that it can improve students' own writing.

Excerpt 5.8

- 1 Anna: how do you- I mean- I I don't know, but **I know asking students to read**
2 **examples are really helpful for them to get an idea how- how should I**
3 **do this, but I don't know what can I do with those readings really**
4 (Anna, interview 3, 10/18/2013)

While Anna knows that reading examples is a “really helpful” instructional strategy in genre-based writing classrooms, she lacks detailed knowledge of how to actually utilize readings in class in effective ways (line 2). Here again we can see evidence of the highly abstract nature of Anna’s pre-teaching PCK. Anna’s understanding of both the analytic essay itself and how to teach it draw heavily on scientific concepts from secondary sources like the teachers handbook. However, because of her lack of experience with the analytic essay, these scientific concepts have not yet become concretized for her in corresponding everyday concepts. In this instance, Anna shows her awareness of a scientific concept – the pedagogical strategy of using model texts to teach writing – but does not have the corresponding concrete knowledge about how to enact this concept in a particular context.

Summary of Pre-Teaching PCK

Overall, several noteworthy features of Anna’s pre-teaching PCK emerge from the interview and concept map. First, her knowledge of the analytic essay genre is largely negative in nature in the sense that Anna explains the analytic essay almost exclusively through describing what it is not. In particular, she uses the genres of description and argument to sketch out the rhetorical boundaries of the analytic essay, but struggles to explain what analysis actually *is*. This difficulty likely stems from her own lack of experiences with the analytic essay as a writer or a reader.

A second noteworthy feature of Anna’s PCK is her beliefs about her students. Anna believes that her students will struggle not with understanding the analytic essay on

a conceptual level, but with mastering the structural and linguistic control needed to successfully write the analytic essay. This belief is related to her perception of her students as both already having a significant amount of writing knowledge and also overestimating their own skill as writers. The belief that her students would easily grasp the concept of analysis and would also be affronted if asked to learn things they believed they already knew led Anna to focus her instructional plans on the surface features of the analytic essay, rather than on the conceptual side of the genre. Finally, the concept map shows that Anna understands pedagogy as the transfer of information from the teacher to the student. This understanding of teaching and learning as information transfer conflicts in some ways with her perception of her students' difficulty as being one of applying what they have learned rather than one of comprehension, a tension Anna showed some awareness of even early in the semester.

PCK in Development

Over the course of the unit, Anna's concept of the analytic essay genre and how to teach it developed significantly. In this section, I will trace Anna's developing concept of the analytic essay through the unit and accompanying stimulated recalls. Through the mediation offered by her teaching experiences, and particularly through examining student contributions to class discussions and student writing, as well as my own expert mediation in and through the stimulated recalls, we will see how Anna's initial scientific definition of the analytic essay becomes concretized in everyday concepts of the genre as she interacts with students and student texts. A major part of this development involves a reconceptualization of the relationships between the analytic essay and the boundary genres of argument and description that Anna used to initially define it.

Reconceptualizing Objectivity: Researcher as Expert Mediator

The first development in Anna's concept of the analytic essay genre that we can directly see happening occurs not in the classroom or a teachers' meeting, but in the course of the third interview with me. As mentioned, in the middle of this interview, Anna changed the topic of conversation and asked "do you have time to tutor me?" (Anna, interview 3, 10/18/2013). She then asked my advice regarding how to use model texts in the class. In the course of our conversation about various reading strategies we

had an extended interaction about the nature of the analytic essay, and particularly the role of objectivity in the essay.

After Anna asked me for my suggestions of what to do in class with the readings she assigned to students, I offered her several suggestions, both from my own experiences as an L2 writing teacher and also from activities and strategies I had seen other participating teachers use as I recorded their teaching. In the following excerpt, which I have broken into three sections for ease of analysis, I suggest that Anna ask her students to identify words, phrases, or examples that reveal the author's position on the issue. I made this suggestion in response to what Anna had identified as a challenge she foresaw for students – that they would unintentionally use words with a subjective connotation. This suggestion led to a conversation about the nature of objectivity in the analytic essay.

Excerpt 5.9 part 1:

- 1 DW: you could have- you could have them look for- if you're concerned about biases
2 you could have them look for any s- I think (.) I think Gabriela [another teacher]
3 did this? or maybe maybe Sonja did this too? where, have them look for any
4 places where they can sort of see the author's opinion, right? so looking for
5 example stuff like what words give her away or what what phrases, or what
6 examples, how do you know what this author thinks about it
7 Anna: yeah
8 DW: u:m and **then talk about you know how much of that is just (.) okay, or**
9 **unavoidable, and is there a problem.** um, so
10 Anna: so, **is this okay to involve at least a little bit um (.) personal opinion in the in**
11 **the analytical essay =I guess it's not- this is not really easy to not involve at**
12 **all** (Anna, interview 3, 10/18/2013).

In this section, I begin by suggesting to Anna that she use the model essays as a starting point for a discussion on the linguistic instantiations of objectivity and subjectivity by asking students to identify sections of the model that show the writer's opinion (lines 1-5) and discuss how much visible writer perspective is appropriate in the analytic essay genre (lines 7-8). This suggestion is based on Anna's previously expressed concern that her students will inadvertently include evaluative language in their writing.

Additionally, my suggestions here reflect my own expert PCK as an experienced teacher of L2 writing. In particular, it reflects my scientific concept of authorial stance marking in writing – that authorial stance is always marked in one form or another and as a result there is no such thing as a perfectly neutral text.

In response to this suggestion, Anna asks whether or not it is “okay to involve at least a little bit um (.) personal opinion in the in the analytical essay” (lines 9-10) before immediately responding to her own question, saying that “I guess it's not- this is not really easy to to not involve at all” (line 10). My own introduction of my expert understanding of the ubiquitous nature of authorial stance marking, Anna’s identification of this question as pertinent, and her acknowledgement that pure objectivity is “not really easy” to achieve in a text work together to begin to construct an emerging *zone of proximal development* or (ZPD). Within this metaphoric space, Anna’s potential understanding of this concept is made visible for strategic mediation.

In the following section of the excerpt, I provide such strategic mediation for Anna’s developing concept of authorial stance marking. In particular, my mediation here focuses on pushing Anna to externalize her understanding of subjectivity and objectivity through verbalizing her concepts and to concretize her understanding of these concepts by describing what they might look like in actual student writing.

Excerpt 5.9 part 2:

- 9 Anna: so, is this okay to involve at least a little bit um (.) personal opinion in the in the
10 analytical essay =I guess it's not- this is not really easy to to not involve at all.
11 DW: yeah. yeah. I guess **it depends on what you mean by personal opinion, (.) so**
12 **what is it you want to keep out?**
13 Anna: um, judgment.
14 DW: judgment. yeah. (.) and **what would a judgment look like in that writing?**
15 Anna: **mm: (3) oh. it's not ea(h)sy.**
16 DW: ((laughter))
17 Anna: for example **they cannot say one is better than another in an apparent way,**
18 and also I don't want them to see things in um in a false causality, because this is-
19 they think this is what happened, but this is (.) probably not the truth, (.) that kind
20 of personal opinion,

- 21 DW: mhm mhm. yeah, so maybe:, so I think I think telling them directly like, you- I
 22 don't [want you to make] (.) **maybe value judgments? would be the way that I**
 23 **would say that**, about, **this is good or bad, this is better or worse, this is (.)**
 24 **something we should do, this is something we shouldn't do**, you know?
- 25 Anna: [yeah, right right right]
- 26 Anna: yes
- 27 DW: like those sorts of things? (.) **but in a way: like the interpretation, there's**
 28 **always a little bit of judgment, like I- (.)you know, I interpreted something**
 29 **this way and not these other ways**, you know?
- 30 Anna: right. thank you.
- 31 DW: yeah, so maybe that- cause I feel like y- I- I mean, anytime you're using a source
- 32 Anna: yeah, they they-
- 33 DW: and you're choosing one source and not another
- 34 Anna: it's a- right!
- 35 DW: it it [pu(h)shes the e(h)ssay] in a direction, so there i:s- (.) it's not completely
 36 objective, that's just not not possible, but-
- 37 Anna: [((laughter))]
- 38 Anna: yeah, right. right. (Anna, interview 3, 10/18/2013)

In this section, my contributions function as strategic mediation in Anna's developing understanding. I first ask Anna to externalize what she means by the "personal opinion" that she wants her students to refrain from including in their essays (lines 11-12). Anna responds that her understanding of "personal opinion" is "judgment." (line 13). I then ask Anna to concretize her understanding of judgment by describing what "judgment looks like in writing" (line 14). Anna's long pause and aside of "oh. it's not ea(h)sy" (line 15) indicate a degree of emotional/cognitive dissonance as Anna's understanding of the concept of judgment is stretched through the strategic mediation. Such moments of cognitive/emotional dissonance can function as important *growth points* in teacher learning when mediate in appropriate ways (Golombek & Doran, 2013; Johnson & Worden, 2014). While the mere expression of this emotional/cognitive

dissonance does not, in itself, constitute development, Anna's expression of emotion here is further indication that she is currently functioning within her ZPD.

Anna's response that students should avoid expressing the opinion that "one is better than another in an apparent way" (lines 17-20) highlights how Anna has already begun to internalize an understanding of authorial stance marking in writing as a continuum rather than a categorical difference. Writers can have personal opinions and even express them so long as they avoid doing so in "an apparent way." In my response, I rephrase Anna's explanation and also provide strategies, ("telling them directly") and possible language ("value judgments") that could be used to explain this distinction to students (lines 21-23). Additionally, by providing multiple examples of how value judgments could be expressed in writing, "this is good or bad, this is better or worse, this is (.) something we should do, this is something we shouldn't do" (lines 23-24), I further assist Anna in concretizing her understanding of judgment as a concept instantiated in actual discourse.

I further articulate my expert understanding of the nature of objectivity and subjectivity in writing, emphasizing that it is not possible to completely remove the author's personal perspective from a text because the author's perspective is revealed in their advancing of one interpretation over another or even in their choice of which sources to use (lines 27-36). Anna's frequent interjections of agreement in this section (lines 30, 32, 34, 38) show her receptiveness to this interpretation.

In the final section of this excerpt, I push Anna to reconceptualize objectivity as not merely the absence of subjectivity, but as a stance that an author actively creates through various linguistic strategies. Again, this reflects my own conceptual understanding of authorial stance marking in writing.

Excerpt 5.9 part 3:

34 DW: it it [pu(h)shes the e(h)ssay] in a direction, so there i:s (.) it's not completely
35 objective, that's just not not possible, but-

36 Anna: [(laughter)]

37 Anna: yeah, right. right.

38 DW: and **maybe another thing you could talk about is hedging**, you know

39 Anna: uh: hedging?

- 40 DW: yeah, **so kind of, I mean (.) the (.) "perhaps one reason that people believe**
 41 **this stereotype is because"**
- 42 Anna: **oh, he- right, right, discourse analysis(h)**
- 43 DW: yeah, right?
- 44 DW: so, or- so not the kind of- **and maybe talking about different ways of doing**
 45 **hedging, so one way to do hedging is to make it personal, "I think, in my**
 46 **opinion,"** but that's (.) probably not (.) that's not very academic sounding and **it**
 47 **doesn't sound very objective, but saying you know um, (.) "the his- the**
 48 **political history between China and Japan may be a reason why blah blah**
 49 **blah, this stereotype exists"** or something like that, so that kind of <may be,
 50 **it's possible, one interpretation i:s>**
- 51 Anna: right, y:es, yes
- 52 DW: that **might be another way to sort of help them to: (.) if not make it totally**
 53 **unbiased at least make it more balanced** and sort of less (.) egh!
- 54 Anna: yes, less. **right right. less direct?** (Anna, interview 3, 10/18/2013)

In this section, I introduce the related scientific concept of hedging as another way to help students create an objective stance in their analytic essays. When I first suggest the concept (line 38), Anna is initially unfamiliar with the term (line 39). I respond by providing an example of a hedged statement (lines 40-41). From this example, Anna is able to recognize the concept as one she has encountered in a separate context – that of her academic study of “discourse analysis” (line 42). My subsequent explanation of hedging (lines 44-49) emphasizes the “different ways of doing hedging” that can result in either a subjective or objective tone (lines 45-49). As before, my explanations include multiple examples of the concrete realization of hedging as it might sound in actual student writing (line 45, lines 47-49). Anna again signals her receptivity to this new conceptualization by paraphrasing my own attempts to articulate the concept (line 53).

Overall, the mediation I offer in this interchange externalizes my own expert PCK. In my questions and suggestions to Anna, I consistently reframe the issue of objectivity in writing from an all or nothing conceptualization – a paper is either objective or subjective – to an understanding of authorial stance as existing on a

continuum. Moreover, I reframe objectivity as not only the absence of subjective language but something that the author actively creates through the many ways they mark their stance in writing. Throughout this interaction, my questions to Anna push her to concretize her understanding of objectivity into its everyday instantiations in written discourse, and my own repeated use of examples further embed objectivity in concrete textual realizations.

Throughout these excerpts, Anna demonstrates her receptiveness to this new conceptualization of authorial stance in writing through her frequent positive responses, but simply agreeing with a new interpretation does not necessarily constitute conceptual development. Evidence for Anna's development of this concept is rather exhibited in how she begins to use these new concepts in the remainder of the interview. At the beginning of the interview, before this interaction, Anna identified being objective as one of her goals for her students learning in the unit. In particular, she described that her students, "need to try to be as (.) objective as possible on this issue, so I want them to to analyze things without personal (.) uh (.) person- and just objectively analyze things" (Anna, interview 3, 10/18/2013). Here, Anna orients toward the concept of objectivity as both largely categorical in nature and also primarily the absence of subjectivity. Her emphasis on the need to be "as objective as possible" demonstrates her initial understanding of objectivity as categorical. While she acknowledges that her students may not be able to be completely objective, total objectivity is still the ultimate goal. Similarly, her emphasis on the need "to analyze things without personal" opinions or perspectives shows her conceptual understanding of objectivity as primarily the absence of subjectivity.

In the concept map, after our interaction on the nature of objectivity, Anna describes objectivity in very different terms. While she still wants her students to be objective, she now describes it as "being objective, maybe as objective as enough, and this gonna uh have several different way to achieve that" (Anna, concept map 3, 10/18/2013). Rather than positioning complete objectivity as the goal, Anna now orients to objectivity and subjectivity as existing on a continuum. Her goal is no longer for her students to be "as objective as possible" but "as objective as enough," indicating her understanding that some subjectivity is unavoidable and indeed unproblematic in the

analytic essay. Additionally, her note that there are “several different ways to achieve” objectivity in the analytic essay, which Anna also marked visually by adding several horizontal lines next to the word “objectivity” on the rubric in the concept map (figure 9), show a shift in Anna’s understanding of authorial stance marking. Rather than seeing objectivity as merely what is left over after all subjective statements are removed, Anna now orients toward it as a rhetorical effect that is achieved through the active shaping of the text by the writer. These changes demonstrate that Anna is at least beginning to internalize the concepts introduced in this interaction and to use them to think about and plan her instruction.

Reconceptualizing Genre and Content: Classroom Interactions with Students

As Anna taught the unit, her interactions with students, and the subsequent guided reflections on these interactions in the stimulated recalls worked together to further mediate Anna’s developing concept of the analytic essay genre and how to teach it. One way in which Anna’s understanding of the genre changed through the course of her teaching was her integration of topic choice into her understanding of the genre of the analytic essay. In her initial descriptions of the genre, Anna did not focus on the importance of content or how certain types of topics might be better suited to the analytic essay than others. It was only after she began teaching, and specifically as she interacted with individual students about their proposed topics, that Anna began to reconceptualize the genre of the analytic essay to include a focus on topic choice. The following sections will examine the development of Anna’s PCK of the analytic essay unit as she engaged in the activities of teaching and through reflections in the stimulated recall sessions.

Defining the analytic essay 10/23

On this first day, Anna focused on introducing the analytic essay unit. In particular, she defined the genre and the assignment for the students using a variety of methods. Anna began the class by asking the students to predict “what you think is analytical essay” based on what they could infer from the name and also from the model essay that had been assigned as homework. Students volunteered that an analytical essay involved “taking the topic in depth” and giving “stats and figures” to support a point – all

contributions that Anna readily accepted (Anna, 10/23). Following this discussion, Anna asked her students to speculate on the purpose of the analytic essay.

Excerpt 5.10:

- 1 Anna: what's the purpose of this sort of essay?
2 S5: **seeing the topics from all of the views**
3 Anna: **all the views?**
4 S5: I mean who, how, (.) why, where
5 S6: **an analysis of (.) a single view and like exploring it completely or very**
6 **thoroughly?**
7 Anna: yeah, **combine you two's answer, that's (.) exactly what it is.** (Anna,
8 10/23/2013).

In this excerpt, Anna's students offer two different interpretations of the purpose of analysis. Anna initially questions (line 3) S5's position that the purpose of analysis is "seeing the topics from all the views" (line 2). S5 then elaborates what he means by "all the views" as being (line 4) and S6 offers his own interpretation that the purpose is exploring a single viewpoint in depth (lines 5-6). Anna responds positively to both students answers, telling them to "combine" their answers and "that's exactly what it is" (line 7).

In the stimulated recall, I asked Anna to reflect on this exchange, particularly focusing on how she understood the two students' responses.

Excerpt 5.11:

- 1 DW: were those good answers for you? or what do- **what do those answers**
2 **show you about how your students understand analysis at this point?**
3 Anna: I guess the the one who answered that to look at things at so many
4 different view point of view? they: are: u:m thinking to: comprehensively
5 analyze something like from the beginning to the end, like from the
6 beginning to the end, from the reason to the effect, but **I think that's (.) is**
7 **(.) a way of analysis**, uh, and also the other one is like to uh look at one
8 thing, one issue or one- from one point of view in depth? **I also think that**
9 **should be (.) right? because I will tell them what is analytical essay,**

10 **specifically for this class**, so as long as they are telling me what what they
11 think about the analysis (.) uh, I am pretty open to their answers cause I
12 feel they they understand what it is, and **in the future they may have to**
13 **write things like that, like what they said, instead of like exactly what**
14 **they dealing with in this class**, so I'm- I accept their answers. (Anna,
15 stimulated recall 1, 11/2/2013)

In this reflection, Anna explains that she believes both students' interpretations can be considered right because both describe "a way of analysis" (line 6; line 8). Anna then differentiates the definition of analytical essay that she is providing them as being "specifically for this class" (lines 8-9). Moreover, Anna notes that the students may be asked to write different types of analytical essays in their futures (lines 11-13). Because of this, she accepts both answers, demonstrating her relatively broad understanding of the genre at this point in the class, as well as her concern with issues of her students' ability to transfer their knowledge of the genre to other classes.

Following this discussion of the purpose of the analytic essay, Anna transitioned into a guided analysis of the model essay, "Stuck on the Couch" by Gupta (2012) which the students had been assigned to read as homework. Her questions to students regarding this essay focused on the intended audience and purpose and the use of sources. Following this discussion, Anna introduced the analytic essay more directly. As with her own understanding of the essay, she began by telling the students that "the fourth major assignment is argumentative essay and that is completely different from what we are doing now" and asking them to speculate on "what differentiates this essay from an argumentative essay?" (Anna, 10/23/2013). S7 responded that the analytical essay was written "to one point and from one view, but argumentative essay, you look at the two views and how they are opposing each other" and, when Anna prompted him to "go one step further" noted that in the argumentative essay, "you go with one." S8 added that in the argumentative essay you "give your opinion" and S9 expanded that "the the argumentative should be kind of (.) uh (.) subjective," all answers which Anna affirmed.

Anna then transitioned to a more formal definition of the analytic essay genre, which she also displayed on the screen. Figure 10 shows the definition of the analytic essay that Anna presented to her students.

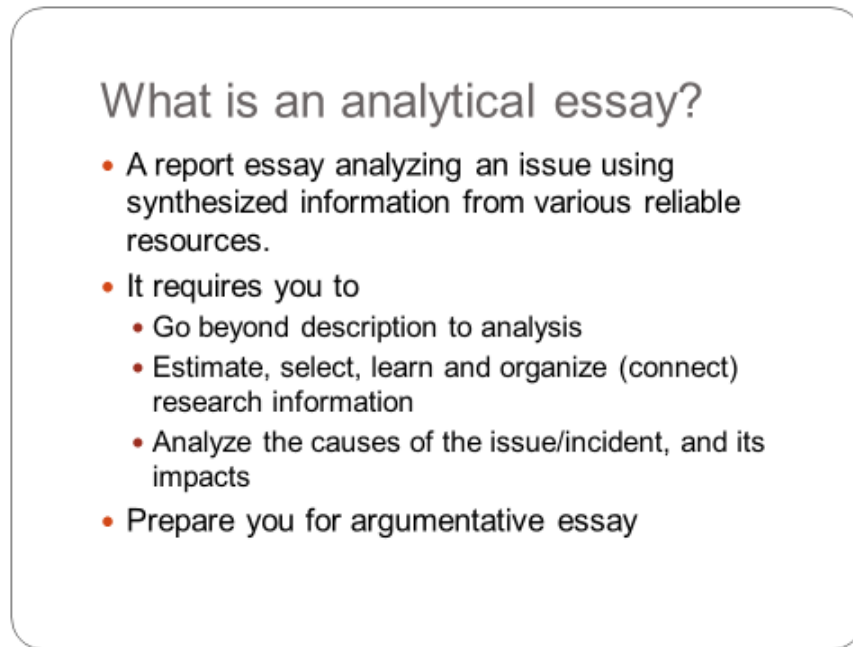


Figure 10: "What is an analytical essay?" Anna, class presentation slide, 10/23/2013

In her verbal explanation of this definition to her students, Anna highlighted most of the information included on the slide, particularly emphasizing that the assignment involved “analyzing an issue, not descri- not describing an issue” providing students with the example of the model essay they just read, noting that it “is not describing (.) why exercise is important, (.) but it is analyzing why people know exercise is important but they didn't do it” (Anna, 10/23/2013). She additionally emphasized the point that the analytic essay is designed to prepare students for the argumentative essay. While Anna highlighted most of the information on the slide in her verbal explanation, there was one point that she neglected to mention. She did not verbally mention the point that the analytic essay requires students to “Analyze the causes of the issue/incident and its impacts.” In her reflection on this class session in the first stimulated recall, Anna brought up her neglect of the point regarding cause and effect, noting that her understanding of the centrality of this point changed during the class itself.

Excerpt 5.12:

1 Anna: so I have this definition for analytical essay, but I didn't include cause and
2 effect there? no. I forgo(h)t to include cause and effect there so I feel- **I**
3 **mean, in that class, I feel, well, I guess it's a really like (.)**
4 **comprehensive one, definition for the final, but later on I feel, no, no.**
5 **it's an important point missing.** (Anna, stimulated recall 1, 11/2/2013)

In the class itself, Anna notes, though she realized that she had forgotten to mention cause and effect, she felt that the definition was a “comprehensive one [. . .] for the final” (lines 3-4). In other words, though Anna was aware she had not highlighted cause and effect, she did not initially see this as a problem because she was orienting toward a broader conceptualization of the analytic essay. As the class progressed, however, she began to recognize that “it’s an important point missing” (line 5).

The cause for this change in her evaluation of the importance of the cause and effect element of the analytical essay came at the end of class when Anna gave the students time to brainstorm possible topics for the analytic essay. As the students were working independently, Anna circulated the classroom talking to students individually about their topic ideas. Through these conversations, Anna’s understanding of the analytic essay was challenged and her methods of explaining it became gradually more and more defined as she abandoned the broad conceptualization of the analytic essay genre in favor of a more concrete, and contextualized, explanation.

Reconceptualizing content: One on one interactions with students

The first noteworthy interaction with a student occurred early in the dedicated brainstorming time. As Anna circulated the classroom, she approached S2 to review his ideas for an essay topic.

Excerpt 5.13

1 Anna: any ideas?
2 S2: can we like analyze like (.) argumentative techniques in a poem or
3 something?
4 Anna: you wanna analyze the technique of a poem.
5 S2: yea(h)h

6 Anna: eh:? ((gazes at presentation screen)) (4)

7 Anna: [wait, I need to readdress that.]

8 [((walking away from student toward podium))] (Anna, 10/23/2013)

In response to Anna's question of "any ideas?" (line 1), S2 asks whether or not he can analyze "argumentative techniques in a poem" (line 2). After confirming that she has understood the question (line 3), Anna marks her uncertainty with the elongated and questioning "eh:?" (line 5). Anna then turns her gaze away from the student to look at the slide currently displayed on the screen (line 5). She maintains this gaze for a full four seconds (line 5) and does not turn her gaze back to the student before saying "wait, I need to readdress that," while simultaneously beginning to walk back toward the podium (lines 6-7).

What Anna was looking at when she gazed at the screen for those four seconds was a slide containing directions to students about how to choose and narrow down a topic (Figure 11).

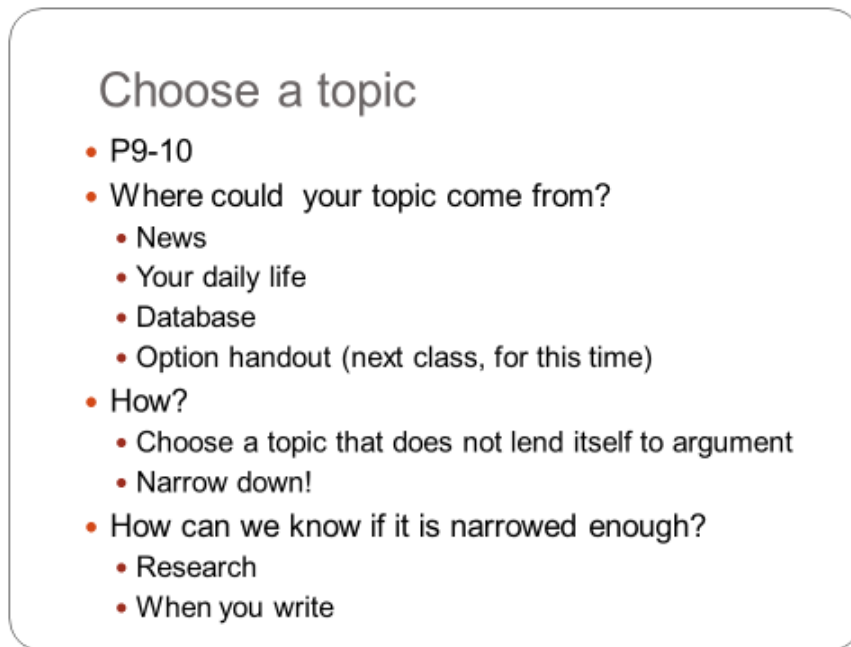
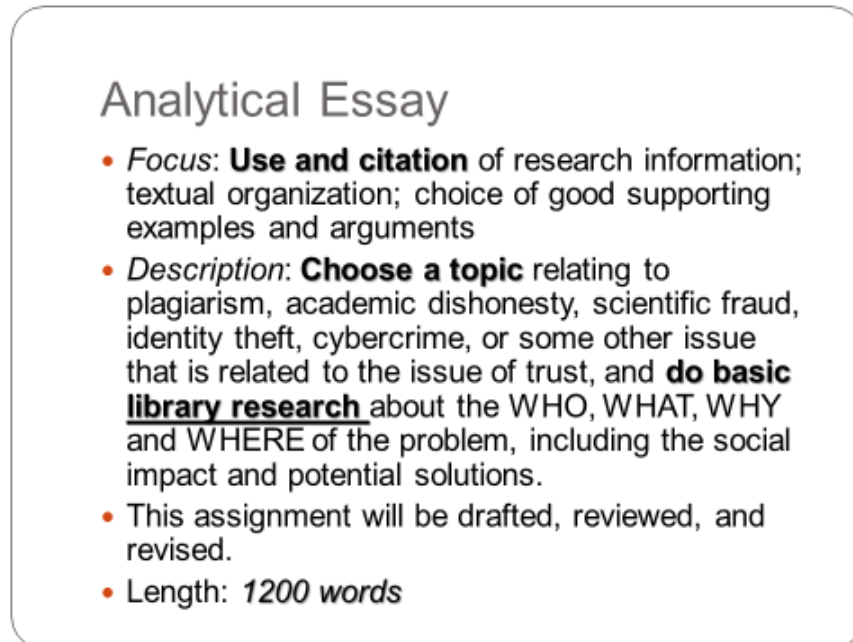


Figure 11: "Choose a topic," Anna, class presentation slide, 10/23/2013

The content of this slide focuses on where students can think of ideas for topics, how to choose a topic, and how to know if a topic is narrowed down enough. When Anna

gazed at this slide while considering S2's question regarding his proposed topic, she was presumably looking for a way to answer his question or for justification for her intended answer. What Anna saw, or did not see, in this slide that caused her to see the need to "readdress" something related to choosing a topic becomes clearer in the next excerpt.

When Anna reached the podium, she reversed the presentation to the slide describing the analytical essay assignment (Figure 12).



Analytical Essay

- **Focus: Use and citation** of research information; textual organization; choice of good supporting examples and arguments
- **Description: Choose a topic** relating to plagiarism, academic dishonesty, scientific fraud, identity theft, cybercrime, or some other issue that is related to the issue of trust, and **do basic library research** about the WHO, WHAT, WHY and WHERE of the problem, including the social impact and potential solutions.
- This assignment will be drafted, reviewed, and revised.
- Length: **1200 words**

Figure 12: "Analytical Essay," class presentation slide, Anna, 10/23/2013

This slide, unlike the slides in Figures 10 and 11, specifically addresses what sort of topic the students should choose. The topics related to fraud and dishonesty were suggested in the teachers' handbook, though Anna did not enforce these topic limitations on her students very strictly. After finding this slide, Anna addressed the entire class.

Excerpt 5.14:

- 1 Anna: okay so this is the suggested topic ((touching screen by "Choose a topic"))
2 uh this is the:- on the syllabus, s:o: um (.) **you'd better choose a topic**
3 **that you can analyze its (.) um causality? or cause or effect, (.) that's**
4 **preferred** (4) and here's some suggestions ((touching slide)) and also next

5 class I will give you options of topics you can choose from (Anna,
6 10/23/2013).

In this explanation, Anna emphasizes that her students should choose a topic that lends itself to an analysis of “cause or effect,” noting that this sort of analysis is “preferred” for the assignment (lines 2-3).

In fact, in her subsequent interactions with individual students during the class, Anna emphasized the need to analyze cause and effect as not merely a “preferred” element of the essay, but as a central component. For instance, in an interaction with a student (S3) who wanted to know if “sports and soccer and midfielders” were an appropriate topic, Anna responded that “you need to um (.) make sure you can analyze the reasons or effect of this (.) topic” and encouraged the student to “ask yourself why this is the most famous sport or why this is popular, (.) instead of just telling me this is popular” (Anna, 10/23/2013). At a later point, when a student (S13) directly asked her “what’s the point of the analytical essay,” and particularly whether it was “to analyze one point,” Anna responded that the purpose was “to analyze the cause (.) of one point or the effect of that point” (Anna, 10/23/2013). Through the course of this class period, Anna went from accepting very broad student contributions regarding the purpose of the analytic essay as in excerpt 5.10 and not emphasizing the cause and effect aspect of the assignment in her verbal explanation of figure 10, to making cause and effect a central element of the purpose of the analytic essay.

In her reflections on this change in emphasis from analyzing an issue more broadly to specifically analyzing the cause or effect of the issue, Anna cited her students’ choices of topics as the primary cause of this change.

Excerpt 5.15:

1 Anna: **before this I didn't realize they they they could be misled by this one**
2 [the original definition without emphasis on cause and effect], but then **at**
3 **the end of this class I realized when they are choosing their topic there**
4 **are huge issues**, because they are not analyzing cause and effect. they are
5 just analyzing a general things, (Anna, stimulated recall 1, 11/2/2013)

As Anna explains, prior to her one-on-one interactions with students regarding their topic choices, she had not realized that they “could be misled” by the open ended nature of the definition of the analytic essay she had created for them (line 1). It was only “at the end of this class” as she was discussing their individual topic choices with them that she realized “there are huge issues” resulting from this open-endedness (lines 2-4). These reflections show an important development in Anna’s PCK, particularly regarding her understanding of her students. Regardless of what model one chooses to consult, a major component of PCK is the teacher’s knowledge of her students’ potential difficulties and misunderstandings as they learn a given concept. While Anna had not anticipated that her students would struggle to choose topics that are appropriate for the assignment prior to teaching this class, her interactions with her students quickly revealed that this was indeed an issue that she needed to consider.

However the change in Anna’s PCK is even more fundamental than gaining a greater understanding of the difficulties the genre would pose for her students. Her further reflections on this realization of her students’ confusion reveal that it is not only her understanding of her students’ concept of the analytic essay that is developing here, but Anna’s own concept of analysis is developing through these interactions with her students. This change can be seen in excerpt 5.16. In this excerpt, Anna is again discussing her changing knowledge of the analytic essay and how to teach it that emerged through her conversations with students about their topics.

Excerpt 5.16:

1 Anna: there's a guy sitting here asking me about "if I can analyze the
2 machinery?" I mean how to how to like (.) how to- (.) I mean this is a
3 process analysis, so that's- **at that time it's occurred to me that p-**
4 **analysis could be analyzing a lot of things**, and for this specific
5 assignment is probably just ask the student to analyze the cause and effect.
6 **so I feel, maybe I shouldn't (.) uh confine the analytical essay uh**
7 **definition to only (.) uh an- analyze cause and effect, but I need to**
8 **emphasize cause and effect in this class**, that's why- I mean I did the
9 whole thing, I don't remember exactly, but I I did- uh I said, "well, I add

10 this thing here, because for this assignment I want you to do this" I hope
11 they got it. (Anna, stimulated recall 1, 11/2/2013)

The specific example Anna mentions here of a student asking if he “can analyze the machinery” (lines 1-2) is one that, unfortunately, is not included in the data. Presumably this interaction occurred in Anna’s other section of the class. However, even without being able to see this interaction itself, Anna’s reflections on it make it clear that it not only impacted her knowledge of her students, but her underlying concept of the analytic essay itself. As Anna notes, it was in the midst of this interaction that it “occurred” to her that “analysis could be analyzing a lot of things” (lines 3-4). This points to the fact that what is changing in Anna’s PCK is not merely how she chooses to represent the concept of the analytic essay to her students, but how she herself conceptualizes the genre. The interactions Anna had with her students as they attempted to concretize the scientific concept of analysis into specific topic choices pushed Anna to recognize the potential breadth of analysis as a rhetorical mode – something she had not been aware of before.

This excerpt also points to a new distinction between the analytic essay *genre* and the analytic essay *assignment* in Anna’s thinking. Anna notes that she was reluctant to “confine the analytical essay definition” to merely the analysis of cause and effect (lines 5-6). At another point in the stimulated recall, as she was reflecting on excerpt 5.10, Anna noted a similar reluctance to limit the definition of the analytic essay because in the future students may have to write a wide range of analyses “instead of like exactly what they dealing with in this class” (Anna, stimulated recall 1, 11/2/2013). In other words, Anna cites transferability of learning as the primary reason for keeping the analytic essay broadly defined for her students. At the same time, here Anna also notes that her interactions have led her to “emphasize cause and effect in this class” (line 6) as part of her immediate goal of helping the students successfully complete the assignment.

This emerging separation between Anna’s understanding of the genre and her representation of the genre in a specific assignment represents an important step in her developing PCK. The most basic underlying premise of the concept of PCK is that teachers do not directly teach disciplinary concepts, but transform those disciplinary

concepts into forms that are pedagogically appropriate for the abilities and needs of specific students. This implies that teachers possess two different understandings of the content that they teach – their own expert understanding and their transformed pedagogical understanding. Here, we can see Anna’s understanding of the analytic essay begin to demonstrate this split. While Anna still understands the genre of analysis in broader terms than just cause and effect, she has transformed that understanding into a much narrower interpretation of analyzing cause and effect in particular response to her students’ difficulties choosing topics.

The following class day, Anna began the class with a review of the analytic essay definition that incorporated some of her new insights (figure 13).

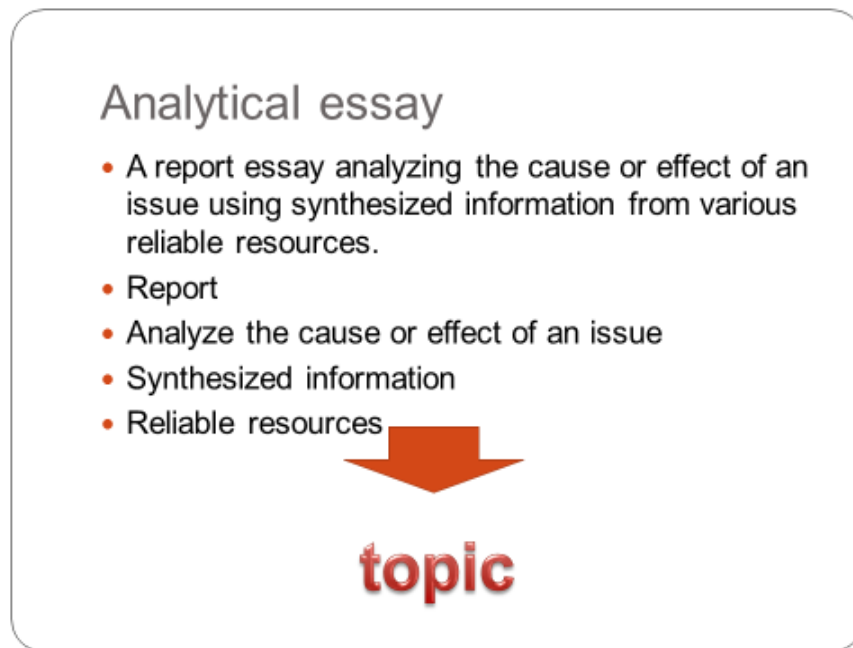


Figure 13: "Analytical essay," Anna presentation slide, 10/25/2013

Whereas Anna’s initial definition from the day before had defined the analytic essay as “a report essay analyzing an issue using synthesized information from various reliable resources” and had only included cause and effect as an un-emphasized subtopic, this definition incorporates cause and effect into a central place in her explanation of the genre, defining the analytic essay as “a report essay analyzing the cause or effect of an issue using synthesized information from various reliable resources.” In her verbal

explanation of this slide to the students, Anna strongly emphasized the elements of cause and effect, telling students “you need to analyze the cause or effect of issue you're choosing, it is not describing a process (.) of the outcome, that is not really what I am looking for here.” Instead, she told students they need to “first have an issue in mind and then you need to analyze what caused it and what the issue influenced on the society or individual involved” (Anna, 10/25/2013).

Through her conversations with her students about their possible topics over the course of these two days of class, Anna's PCK developed in several ways. First, her awareness of her students' difficulties understanding of the analytic essay changed. Prior to teaching, Anna anticipated that her students would easily comprehend the basic idea of analysis, though successfully writing one would be difficult. However, through her interactions with the students, Anna saw multiple examples of her students struggling to grasp the concept of analysis. Additionally, these interactions with her students changed Anna's own concept of the analytic essay. Prior to teaching, Anna had not considered the importance of topic choice as an element of the genre. The broad range of topics her students chose led her to realize the wide variety of topics that could be analyzed. While Anna recognized that this wide variety of topics could in fact be appropriately covered in the analytic essay, she believed that these topics were inappropriate for the assignment. This led her to differentiate between the genre and the assignment, seeing the genre as a much broader conceptual category and the assignment as a specific instantiation of that category.

Reconceptualizing Description and Analysis: Interpreting Student Texts

Another major source of mediation in Anna's developing PCK of the analytic essay came through reading and reflecting on her students' analytic essay drafts. These texts provided yet more concrete examples of the analytic essay. By examining these texts in light of her developing concept, and her developing concept in light of these texts, Anna's understanding of the analytic essay became more explicit and nuanced, particularly in regards to the relationship between analysis and description.

The first instance in which we can see the mediational effect of student texts on Anna's developing PCK occurs during the second stimulated recall. While on two

occasions in the stimulated recalls, I asked Anna to bring in sample essays to discuss, in this case we were not initially discussing specific student drafts, but instead were talking about a class period in which Anna had reviewed introductions with her students. As part of her presentation in this class, Anna had selected several examples from students' writing that exemplified common problems in their introductions, particularly a lack of coherence between the initial anecdote and the thesis statement. She had presented these introductions anonymously and asked the students to evaluate them. As the wrap-up to this exercise, Anna had described another common problem in her students' writing.

Excerpt 5.17:

1 Anna: you need to make sure (.) your (3) whole th- the whole thing is on topic, so
2 we are writing about analytical essay, you need to analyze the cause or
3 effect (.) of an issue, **so if the introduction paragraph is perfect (.) for**
4 **any other kind of academic writing (.) but the analytical essay (.) it is**
5 **not a good introduction paragraph.** u:m (.) for example (.) **you are**
6 **writing a perfect introduction paragraph for extended definition**
7 **essay, (.) I see some of these examples. but that is not applied to (.)**
8 **analyzing the cause and effect of an issue, (.) like for (.) this**
9 **assignment.** so make sure (.) from the very beginning of your writing to
10 the very end of your writing is about the analytical essay, do not give me
11 (.) something that is not (.) leading you to the right direction. (Anna,
12 11/6/2013)

Anna's concern regarding her students' introduction paragraphs is that their introductions are not appropriate for the analytic essay, thus making an otherwise good introduction unsuccessful (lines 3-5). This concern stemmed from what she saw her students doing in their paper drafts –writing introductions more appropriate to an extended definition essay than an analytic essay (lines 5-8).

In the stimulated recall, I asked Anna to reflect on this problem in her students' drafts. During these reflections, Anna came to the conclusion that this problem “is not the problem about introduction, that is a problem about the whole thing, right from you choose the topic and then outline it” (Anna, stimulated recall 2, 11/14/2013). In other

words, though the problem was immediately visible in the introductions, Anna came to believe that the problem was actually much larger and relates to her students understanding of the concept of analysis. In response to this comment, I asked Anna to speculate more on what her students' understanding of analysis might be. She responded that she could see that her students "understand clearly that analyze should be break things down to smaller part and maybe I should just (.) describe each part a little bit? (.) that's analyzing" (Anna, stimulated recall 2, 11/14/2013). As in her previous interactions with students, Anna was conflicted about how to evaluate this response, explaining that "I mean, that's right. (.) but this is pro- this is not (.) uh what this essay about" (Anna, stimulated recall 2, 11/14/2013). As an example of this problem, Anna described an essay about Jack the Ripper written by one of her students. The discussion of this essay led Anna to reconceptualize the relationship between analysis and description.

Excerpt 5.18 part 1:

- 1 Anna: so he's writing about (.) the who- a lot of um (.) like assumption of his
2 identity, so (.) **Jack the Ripper is the whole, and he's uh breaking**
3 **down the identity into so many different part**, and for each part he gave
4 a like reason, so why this is why I think- we think he's son of a(h) (.)
5 whore? and then this is why we think he's a left-handed person, and this is
6 why we think he has this kind of high education background a little bit, so
7 that is what he does. **I (.) feel it's valid for him to think so? because it's**
8 **kind of analyzing the the identity of this person, but that is neither a**
9 **cause nor an effect.**
- 10 DW: mm (.) so you would consider that an analysis just not (.) [right for the
11 assignment.
- 12 Anna: [not-
- 13 Anna: **right, I consider that- right? I don't know [I feel that-**
- 14 DW: [I don't know I didn't read it
- 15 [(laughter))
- 16 Anna: [(laughter))

17 DW: but I do think this is an interesting issue because I feel like this came up in
 18 all the classes I was in is that there was lot of confusion about [the line
 19 between description, analysis, and argument
 20 Anna: [about what
 21 is analysis
 22 Anna: right!
 23 DW: a:nd u:m
 24 Anna: it's hard (.) (I don't know)
 25 DW: **yeah. cause I agree with what you're saying that an analysis is taking**
 26 **something big and complex and breaking it into pieces, (.)**
 27 Anna: hm:
 28 DW: [but
 29 Anna: **[but the next step is describing each pieces, it's like a description.**
 30 DW: uh huh. yeah, so it's at [that level that it becomes a description?
 31 Anna: [it's hard
 32 Anna: **I feel it could be.**
 33 DW: uh huh
 34 Anna: **and it must be I think.** (Anna, stimulated recall 2, 11/14/2013).

By considering the specific case of the Jack the Ripper essay and engaging in collaborative reflection on it, Anna begins to reconceptualize the relationship between description and analysis. The fact that Anna herself brings up the example of the Jack the Ripper essay demonstrates that it was a memorable instance of the analytic essay for her. The significance of the essay to Anna's thinking seems to stem from the fact that it cannot be easily categorized as either analysis or not analysis within Anna's current understanding of the genre and assignment. On the one hand, it clearly displays some of the features of analysis. It takes a complex whole, the identity of the serial killer Jack the Ripper, and breaks this whole into smaller pieces (lines 2-3). This fits within Anna's definition of analysis. While it does not analyze cause or effect (line 8), which Anna adopted as her functional definition of the assignment after the first day of the unit, it also does not analyze a process, which was the problem most of her students faced. Finally,

the fact that Anna brought this example up in the course of a conversation about the distinction between analysis and description, shows that for her this essay also displays some features of description rather than analysis.

In evaluating this essay as an example of analysis, Anna again shows some conflict between her understanding of the genre itself and the expectations of the assignment as she is crafting them. She notes that “it is valid” for the student to think that this is an analysis, though it is not analyzing cause and effect (lines 6-8). Later, however, she shows her insecurity with this distinction. When I ask her whether she would “consider that an analysis just not (.) right for the assignment” (lines 9-10), Anna first begins to respond affirmatively before interrupting herself to question her own response, “right, I consider that- right?” (line 12). This question, presumably aimed at me, shows Anna’s ongoing confusion about how define the analytic essay as both a genre and an assignment.

In the subsequent sections I affirm Anna’s confusion (lines 16-18), noting that she was not the only teacher I was working with who was experiencing similar problems drawing clear relationships between these related genres. In lines 23-24, I paraphrase Anna’s explanation of her students’ understanding of the genre as being a process of “taking something big and complex and breaking it into pieces.” This time, however, Anna extends this concept, saying that “but the next step is describing each pieces, it’s like a description” (line 27). In the next few seconds, Anna considers this new insight into the relationship between description and analysis, first acknowledging the possibility of this interpretation, “I feel it could be” (line 30) before finally adopting a much stronger position on this relationship, “it must be I think” (line 32).

This transition represents the start of a new understanding of the relationship between description and analysis. Whereas initially, Anna saw these as separate and contrasting genres, through her analysis of her students’ writing, and particularly this boundary-bending essay on Jack the Ripper as well as through the opportunity for guided reflection afforded by the stimulated recall, Anna begins to reconceptualize description as a necessary component of analysis. This reconceptualization of the relationship between description and analysis continues in the ongoing conversation.

Excerpt 5.18 part 2:

32 Anna: and it must be I think.

33 DW: so how would you make it an analysis then, so you **have this complicated**
34 **thing, (.) you break it into pieces, and then [what do you do with those**
35 **pieces?**

36 Anna: [this is (a hard one)]

37 Anna: I mean, **h:ow they break this into pieces, I guess that's important part.**
38 **right? so I can break this into pieces as the superficial, like an apple**
39 **can be half of thi(h)s apple and half of that apple,**

40 DW: yeah?

41 Anna: **but the apple could be (.) like so many story after- behind this apple,**
42 **like I break this apple into this apple's history, geography, and why it**
43 **has this color, so how they break these things down, it matters, instead**
44 **of (.) what they do to describe each part.** (Anna, stimulated recall 2,

45 11/14/2013)

Following Anna's realization that description "must be" an element within analysis, I push Anna to further articulate the relationship between description and analysis by asking her how her students could turn their description essays into analytic essays (lines 33-34). In response to this question, Anna creates a spontaneous metaphor using an apple she had in her backpack at the time of the interview. Just as an apple could be broken down in "superficial" and descriptive categories or into the "many stories [. . .] behind this apple" (lines 37-38), so too Anna concludes that "h:ow they break this into pieces, I guess that's important part. right?" (line 36). In this way, Anna articulates a more nuanced understanding of the relationship between description and analysis that builds on her previous insight. While Anna concluded in the previous excerpt that description is a necessary component of analysis, here she identifies the difference between acceptable and unacceptable uses of description in analysis. It is not so much "what they do to describe each part" but rather "how they break these things down" that creates the distinction between an analytical essay that uses description and an essay that fails to move beyond description into analysis (lines 43-44).

While student writing that was difficult to categorize in terms of Anna's existing concept of the genre was certainly a highly influential source of mediation in Anna's thinking, successful student essays also functioned as an important mediational tool when used for reflection. In the final stimulated recall, Anna was asked to select three of her students final drafts to discuss – one that was a successful example of an analytic essay, one that was unsuccessful, and one that was somewhere in the middle. The successful essay Anna chose qualified as a good example for two reasons. First, the essay demonstrated the writer's familiarity with "Americanized writing" because even though it "is not so creative but every time the framework is really clear" (Anna, stimulated recall 3, 12/3/2013). More importantly, Anna saw this as a good example of the genre of the analytic essay. She explained that as she read the essays, "the first thing I'm looking for is are you analyzing something, so need to be a cause and effect and social issues must be something there." This student's paper was an examination of "the kind of the demonstration of female in those fairy tales in Disney films how those things create the image and how this image influence the kids," which Anna saw as a good example of analysis (Anna, stimulated recall 3, 12/3/2013).

Although this successful essay did not cause Anna to reconceptualize the analytic essay, it did help her to concretize her understanding of the genre. In the post-unit interview, Anna was again asked to describe a successful analytic essay. As she answered this question, she remarked that "I'm thinking about that pape(h)r," referring to the successful analytic essay we had just discussed (Anna, interview 4, 12/3/2013).

Post-Teaching PCK

Following the last stimulated recall for the analytic essay unit, I asked Anna to again draw a concept map of her understanding of the analytic essay unit curriculum, this time looking forward to how she might think about and teach the unit in future semesters. Anna's second concept map (figure 14) is drastically different than her first and reveals how her knowledge of pedagogy developed significantly through the process of teaching the unit and reflecting on it in the through the data collection activities.

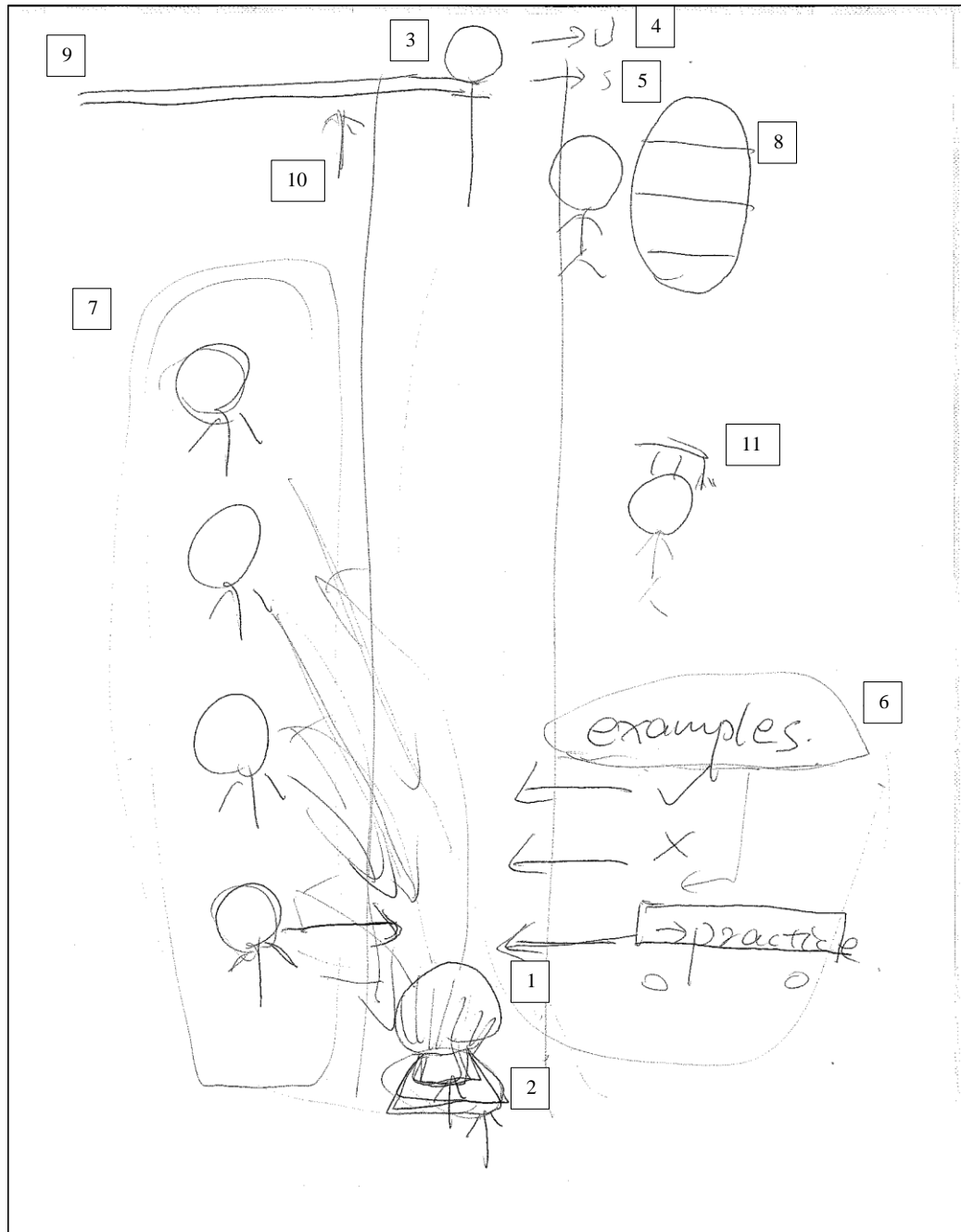


Figure 14: Anna post-teaching concept map, 12/3/2013

In this version of her concept map, Anna uses the metaphor of a journey to illustrate her new PCK. In the image, Anna explains, we are taking the perspective of a “bird viewing a road.” The figure on the road (1) represents Anna herself. Anna notes that in this journey she is wearing “a backpack” (2), which represents “knowledge I have

about the analytical essay” prior to teaching. At the end of the road is her goal for the unit (3) which Anna divides into two parts: to “help students first understand what it is [(4)] and then write a successful analytical essay”(5). She furthermore noted that she believed “I can't have a- I- have a- like one standard for all student” (9). Instead, she believed that “for each student I should- I need to see they have improved. they show me the understanding of what I- of what they learned” (10).

As she travels toward her goal, Anna notes that she needs “to have more (.) resources and examples, I feel this is rea(h)lly important, to show my students (.) what it is should be, what it shouldn't be (.) and use examples to help them practice” (6). These examples come from “the previous writing from my student” which Anna can repurpose as resources “to help them practice during this way” (6). Anna contrasts this new approach of using resources and examples with her previous strategy, “s:o (.) instead of just telling them what to do, next step on their paper, I probably gonna add more practice for them.”

In addition to the resources and examples, Anna included her students (7) as a part of the journey, explaining that “they constantly add things to the road, to my pocket- to my backpack. because I need to talk to them, review their drafts (.) to see (.) what things I need to emphasize in class.” Anna specifically identifies this as something she learned through teaching because prior to teaching the class “I didn't really realize they probably have some problem I can't think of (.) at the beginning.” Anna emphasized the knowledge she gained from her students as being “a big part” of her learning over the semester. As she explained it, she had come to realize that “I need to learn so much from my student in order to (.) teach them, so it's more like (.) income from the student and then co- outcome to: (.) output to the student.”

Finally, Anna includes conversations with her colleagues (11) as an important aspect of the journey noting that “I also need to constantly talk to my colleagues [. .] who know this already, um (.) and ask them how they gonna do this kind of thing and how they envision their students' problems” so that she would be able to “address a little bit in my class as well.”

Overall, Anna’s new PCK as revealed in the concept map focuses on her own learning through teaching as the central element of her conception of the unit. Within her metaphor, Anna explained that “the major components of this journey is my pre- prior knowledge (.) a:nd the resources I collected from this semester, this teaching experience (.) and things I want to add in.” Through the things she learned through her teaching experiences, Anna explained that “at the beginning, the backpack it's just a little bit and from this semester I learned something, this is bigger (.) and at the end it's probably (.) gonna become a really big one” (8).

Discussion of Changes in Anna’s Knowledge

Anna’s post-unit concept map along with her other comments in the post-teaching interview reveal several significant changes in her PCK of the analytic essay unit. This section will examine these changes, including Anna’s own reflections on her learning during the analytic essay unit.

The first apparent change has to do with Anna’s understanding of the genre of the analytic essay itself – her content knowledge. When asked in the post teaching interview to describe a successful analytic essay, she included several elements that emerged in her teaching.

Excerpt 5.19:

1 Anna: right, so **first they need to have appropriate topic.** that is what I think.
2 **cause some topic is not (.) applicable for this genre. so they need to**
3 **have some issue (.) mm: that could have a cause or effect to the society**
4 **and individual. I didn't think of that before.** u:m and also they need to
5 have enough resources from reliable (.) enough information from reliable
6 resources, whatever. and I think they need to be able to link these sources
7 effectively and put them in a organized order. u:m (.) and (.) they need to
8 follow the basic structure of an essay, like intro, thesis statement, different
9 paragraphs that um have topic sentence, just a really basic thing of
10 analytical essay [. . .] so in this one it is more like an American academic
11 writing, like formal writing, so I guess they need to follow the basic
12 framework. I feel I didn't really think about this before, **um, they need to**

13 **distinguish from- distinguish (.) analysis from description, but I feel (.)**
14 **um (.) I didn't (.) give them really effective example about how to**
15 **distinguish these two because to analyze something (.) we need to use**
16 **description**, so (.) and a successful one, for this assignment per say, they
17 need to cite things correctly. they need to get to know the APA style (.)
18 MLA style.

19 DW: mm:

20 Anna: what else? (.) **I'm thinking about that pape(h)r.** (Anna, interview 4,
21 12/3/2013)

Anna's response here includes many of the themes that came up during her teaching and in the stimulated recalls. She notes that a successful analytic essay must begin with "an appropriate topic [. . .] that could have a cause or effect to the society and individual" (lines 1-3). This focus on topic choice as a central element of the analytic essay was not present in her pre-teaching concept of the analytic essay. She herself notes this change, saying that she "didn't really think about that before" (line 4).

Another element of Anna's post-unit concept of the analytic essay that demonstrates a meaningful change is her understanding of the relationship between description and analysis. As Anna explains, a successful analytic essay does need to "distinguish analysis from description," but she now recognizes that this task is made more difficult by the fact that "to analyze something we need to use description" (lines 12-15). This new understanding of the relationship between analysis and description is one that Anna developed through her interactions with her students' texts and through the guided reflections in the stimulated recalls.

In her pre-teaching PCK of the analytic essay, Anna also emphasized the contrast between analysis and argumentation. However in her post-unit explanation of the genre Anna does not address this issue. This is likely due to the fact that her students did not struggle with this distinction to the same extent as they did with the relationship between analysis and description. Though Anna had anticipated that her students' would struggle to refrain from arguing, in her reflections as she compared the pre-teaching and post-unit concept maps, she notes that her students didn't "have a problem with argument and

analysis, not a lot of them” (Anna, concept map 3 and 4 comparison, 12/3/2013). Because this distinction proved to be unproblematic for her students, it has ceased to be a central component of her current PCK.

Her final comment, that as she is describing this successful essay she is “thinking about tha(h)t paper” (18) refers to the example of a successful analytic essay written by one of her students that Anna brought to the final stimulated recall session. This essay provided her with a concrete realization of the abstract concept of the analytic essay genre that she can now use to describe the genre.

Anna’s concept map and comments in the post-teaching interview both demonstrate that her knowledge of her students also changed significantly during the semester. Prior to teaching, Anna had a very high view of her students’ ability to easily comprehend the concept of the analytic essay. The problems she anticipated were not so much conceptual as they were issues of linguistic control. After teaching, however, Anna realized that her students had much more difficulty with the conceptual side of the assignment than she had anticipated.

Excerpt 5.20:

1 Anna: when I step in that classroom I feel, well I- right now I sort of know what
2 is an analytical essay so **all I need to do is just tell them what it is, and**
3 **they can just go with it and do whatever I ask them to do, but actually**
4 **after this unit, I didn't really expect that they would have so many**
5 **problems at that.** I didn't think about, well so this is part- this is a part
6 that I really need to repeat and emphasize a lot. (.) **before I saw their uh**
7 **writing.** so that is really an important lesson to me. actually I have a
8 checking list, and I write that **next time just emphasize what is**
9 **analytical essay, give them examples, a lot of examples.** I feel I didn't
10 give them enough examples. (Anna, interview 4, 12/3/2013)

As Anna explains, prior to teaching the unit, she believed that as long as she was able to “tell them what it is” her students would be able to “just go with it and do whatever I ask them to do” (lines 2-3). After teaching however, and particularly after seeing her students’ writing (lines 5-6) she found that her students had far more trouble with the unit

than she had anticipated (lines 3-4). The trouble her students had with the essay was not relegated to issues of linguistic control, as Anna had anticipated, but instead included their more conceptual understanding of the nature of the analytic essay genre. This led Anna to resolve that the next time she teaches the genre, she will “emphasize what is analytical essay” and be sure to provide students with “a lot of examples” to help them conceptualize the genre (lines 8-9).

Although Anna’s development in terms of her knowledge of the content and her students is impressive, it is the changes in her underlying conception of the nature of teaching and learning—her knowledge of pedagogy, that is the most dramatic change evidenced in her post teaching concept map. In this map, Anna has completely flipped many of the preconceptions she had regarding the nature of pedagogy prior to teaching the unit. In the pre-teaching concept map, her students were positioned as both the central characters and the primary learners. In fact, the teacher is not even represented visually in the pre-teaching concept map. In the post-teaching concept map, Anna conceptualizes the unit as a learning journey and positions herself as the learner.

As a result of this shift in perspective, the post-teaching concept map also presents a radically different understanding of teaching and learning as the transfer of information. In the pre-teaching concept map, Anna conceptualized teaching and learning through the metaphor of input and output. Specifically, she saw her teaching, and particularly her curricular materials such as sample essays and the rubric as a “kind of the input” for students (Anna, concept map 3, 10/18/2013). Learning then was a process in which students “see the rubric as a material and the sample and the idea are going to go into their brain” (Anna, concept map 3, 10/18/2013). In this post-teaching concept map, Anna retains the input/output metaphor, but completely flips it.

Excerpt 5.21:

- 1 Anna: I feel I need to learn so much from my student in order to (.) teach them,
- 2 so **it's more like (.) income from the student and then co- outcome to:**
- 3 **(.) output to the student.** (Anna, concept map 4, 12/3/2013)

Now, rather than teaching being a process of providing input to the students in the form of curricular materials and expecting output from the students in the form of writing.

Anna conceptualizes teaching as *receiving* input from the students, explaining that her students “constantly add things to the road, to my pocket- to my backpack,” which metaphorically represented her knowledge of the analytic essay. Teaching then, becomes a process of using that input from the students to craft output in the form of pedagogical explanations and activities (lines 1-2).

After completing the post-teaching concept map, Anna was shown her pre-teaching concept map and asked to comment on any changes that seemed significant to her. Her response focused on this new understanding of pedagogy and the importance of student input. She explains that the first concept map was “more like a systematically (.) transforming my knowledge to my students” while the post-teaching concept map “is more like a journey so we have a lot of things going on” (Anna, concept map 3 and 4 comparison, 12/3/2013). It is interesting that here Anna uses the very metaphor of transformation that Shulman and others have used to describe the process teachers use to adapt their expert disciplinary knowledge into pedagogically appropriate forms, in other words, to create PCK. While Anna uses this metaphor, she rejects it as insufficient to describe her actual process of knowledge construction through teaching. Instead of a solitary process of “transforming my knowledge to my students,” as she conceptualized it prior to teaching, Anna now sees teaching as “a journey.” This conceptualization of teaching as a learning journey, as Anna later reflects, is built on her new awareness that “teaching (.) is more about the students than I thought.” (Anna, concept map 3 and 4 comparison, 12/3/2013) and her realization that the “teaching of this unit could enrich my own experience and enrich my own (.) um (.) uh knowledge about writing and teaching” (Anna, concept map 3 and 4 comparison, 12/3/2013).

The factors that mediated this drastic reconceptualization of the nature of learning and teaching in Anna’s PCK are not as straightforward to identify as those that pushed her to reconceptualize the relationship between the analytic essay genre and essay content, for example. This change cannot be traced to a specific event, but rather to consistent elements of the stimulated recalls. In every stimulated recall in which we examined student contributions to the class, I always asked the participants the same question as part of the conversation: What does this example show you about how your student understands the concept you are teaching? Through repeatedly being directed to

focus and reflect on the insight that could be gained by considering student contributions carefully, Anna not only reconceptualized many aspects of her understanding of her students and the content she was teaching, she also came to reconceptualize teaching itself as an ongoing process of learning and adjusting based on student contributions and understanding. In other words, Anna not only experienced changes in the content of her PCK, but also came to reconceptualize knowledge for teaching as an ongoing process of learning with, from, and about her students.

Conclusion

While Anna began the analytic essay unit with a lower assessment of her own knowledge and considerably more anxiety than the other teachers in the study, she not only made it through the unit successfully, but demonstrated the most significant development of any of the teachers in terms of the sheer breadth of her learning. From the moment when she began preparing to teach the unfamiliar genre of the analytic essay to handing back the final paper, Anna's understanding of the genre, her students' ability to understand and write the genre, and the nature of writing pedagogy all changed significantly.

In this process of development of Anna's PCK, two sources of mediation proved to be significant and to work together in important ways. First, Anna's students' emerging conceptions of the genre of the analytic essay as demonstrated through their classroom contributions, questions, and drafts mediated Anna's own emerging knowledge of the genre and the assignment. Rather than entering the classroom with a pre-determined and defined understanding of the genre, Anna and her students effectively invented the analytic essay through their negotiations and interactions in the classroom. In this way, the subject matter knowledge in this classroom "exists as much among participants in the field (the teaching of a subject in schools) as it does within them" (Ellis, 2007, p. 458).

A second important source of mediation in Anna's developing PCK proved to be the research methods themselves. The mediation I offered through the research methods ranged from relatively explicit, as when I offered my own expert understanding of the concept of authorial voice marking when asked, to the more implicit mediation through the opportunities for exploratory talk the interviews, concept maps, and stimulated recalls

offered. In particular, the repeated questions regarding how Anna understood her students' contributions in relation to the concepts she was trying to teach seems to have contributed to her reconceptualization of the nature of teaching as learning from students that characterized the post-teaching concept map.

CHAPTER 6: SERGEI: NON-DEVELOPMENT AND THE IMPACT OF UNDERLYING CONCEPTS

DW: u:m, so I- my first question is overall do you think you've learned anything through teaching this unit. (.) so about writing, about the genre of analysis, about your students:, etcetera?

Sergei: oh yeah, I- I think that happens (.) in every class, every teacher (.) teaches, if:: he or she is willing (.) to learn.

The opinion Sergei expresses in the above quote is both a hopeful and commonly held belief among teachers. This belief posits that time and willingness are the only two factors required for teachers to learn from their teaching experiences. Indeed, if we think of learning as the acquisition of discrete pieces of information, then perhaps there is some truth to this automatic view of learning from experience. If, however, by learning we mean conceptual development, the relationship between teaching experience and teacher learning becomes much more confusing and much less straightforward. As Grossman (1990) observed in her study of the development of PCK among beginning English teachers, “learning from experience is neither as automatic nor as effortless as new teachers might like to believe” (p. 106). Willingness and experience may be necessary conditions for teacher learning, but they are not sufficient.

Sergei’s story is a story of non-development. In the course of teaching the class during the semester of study, Sergei encountered many opportunities for learning and did in fact acquire useful pieces of information about his students and new instructional tricks, but none of this knowledge acquisition led to conceptual development. His most foundational knowledge and beliefs about writing, students, and teaching remained unchanged throughout the semester. Stories such as Sergei’s are uncomfortable for teacher educators, but they are crucially important for us to understand. Sergei’s case illustrates that teaching experience, and even mediated teaching experience as in this study, does not necessarily lead to development. Just as it is important to examine stories of development in order to determine what factors contribute to that development, it is equally important to examine the process of non-development and what factors contribute to such non-development.

In this chapter, I will trace Sergei’s case of non-development. In particular, my analysis will focus on two major factors that contributed to Sergei’s lack of conceptual change. In this analysis I will demonstrate how two of Sergei’s underlying concepts about writing and about pedagogy interacted in ways that ultimately restricted Sergei’s ability to learn through his teaching experience. Additionally, I will also demonstrate how the differing orientations Sergei and I had to the activity of the stimulated recall sessions further limited the effectiveness of the mediation of my research methods and of our interactions. I will close this chapter with a discussion of the implications of Sergei’s case for our understanding of teacher development and for our practices as teacher educators and supervisors.

Overview of Data Collected

Sergei devoted five days of in-class instruction to the analytic essay and collected two drafts of the essay. Table 6.1 shows his schedule for the unit with the corresponding instructional focus of each day of the unit as well as the dates of the two interviews, two concept maps, and three stimulated recalls.

Date	Data Collection or Instructional Focus
10/15	<ul style="list-style-type: none"> • Interview 3 • Concept map 3
no10/17	<ul style="list-style-type: none"> • Introducing analytic essay genre and assignment • Creating working thesis statements
10/22	<ul style="list-style-type: none"> • APA citation style • Formatting the reference page
10/23	<ul style="list-style-type: none"> • Stimulated Recall 1
10/24	<ul style="list-style-type: none"> • Defining plagiarism • Writing with sources • Time for students to work independently on papers, work with peer review partners, and get instructor feedback on thesis statements • FIRST DRAFT DUE – INSTRUCTOR COMMENTS, UNGRADED
10/29	<ul style="list-style-type: none"> • Review of common problems from first drafts • Time for students to work independently on papers, work with peer review partners, and consult with instructor
10/31	<ul style="list-style-type: none"> • Transitions and effective sentences review • Short review of observed grammar problems • Citation, references, and plagiarism review

11/05	<ul style="list-style-type: none"> • FINAL DRAFT DUE – EVALUATIVE INSTRUCTOR COMMENTS, GRADED
11/07	<ul style="list-style-type: none"> • Stimulated Recall 2
11/20	<ul style="list-style-type: none"> • Stimulated recall 3 • Interview 4 • Concept map 4 • Concept map 3 and 4 comparison

Table 6.1: Sergei's analytic essay unit schedule

Sergei's Pre-Teaching PCK of the Analytic Essay

In the pre-teaching concept map (figure 15), Sergei focused on his goals for his students' learning as well as the connections he saw between these goals. Sergei added very little commentary on his concept map, either while he was drawing or afterwards. This lack of commentary may be related to his often expressed dislike of the concept map activities. Throughout the study, Sergei was very vocally and consistently resistant to the content map activities, frequently commenting how much "I really dislike that type of thing" (Sergei, interview 1, 9/4/2013). Sergei's response to the pre-teaching concept map for the analytic essay was no different. While introducing the task, I thanked Sergei for his willingness to complete the activity even though I knew that he didn't "particularly like doing concept maps" (Sergei, concept map 3, 10/15/2013). Sergei replied that his feelings regarding the concept map activities went "past not being particularly liked" and joked that his antipathy might be "because I have to think too much" (Sergei, concept map 3, 10/15/2013). Sergei's lack of commentary may have been at least partially a result of his general distaste for the activity, as well as the difficulty of such tasks for him. The lack of commentary makes the analysis of Sergei's concept maps more difficult, however, the commentary that Sergei did provide, as well as the visual form of the concept map itself, and an analysis of Sergei's process of drawing it are still able to provide some important insights regarding how Sergei conceptualized the analytic essay unit prior to teaching it.

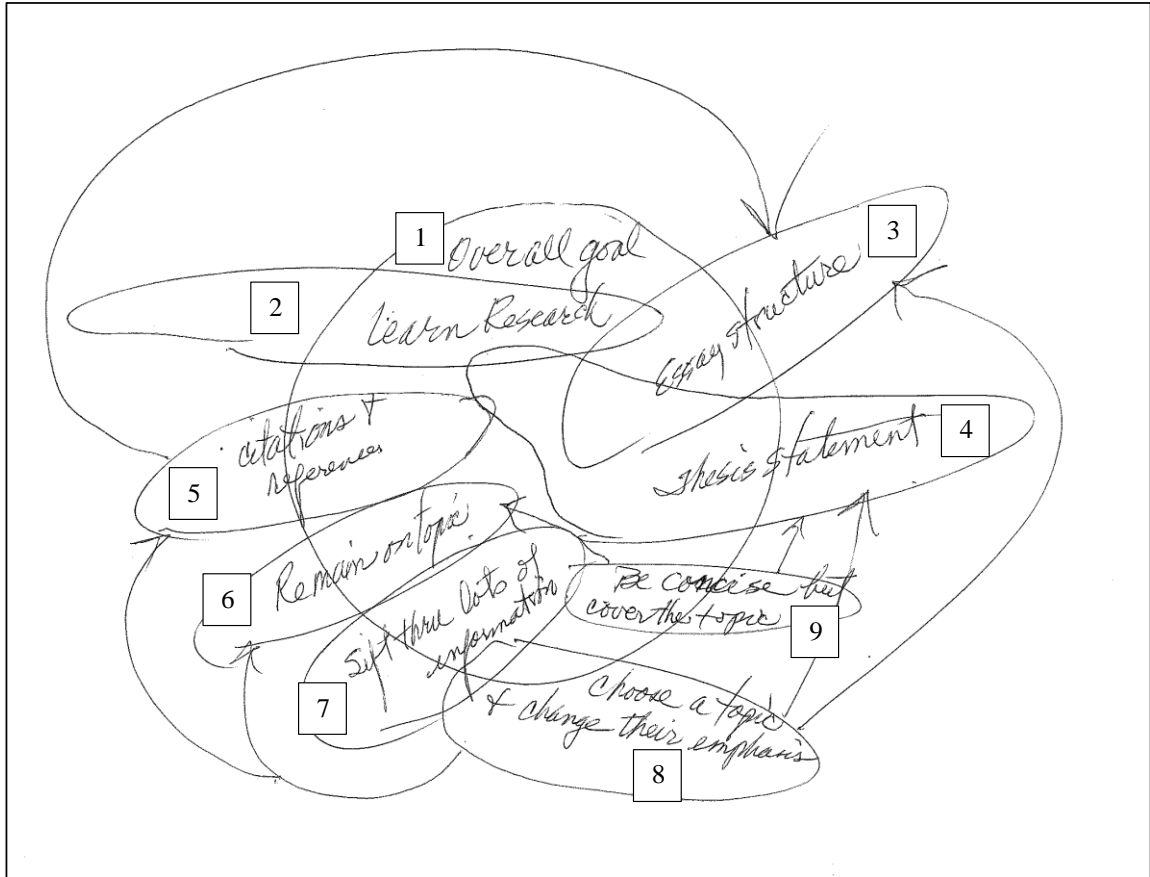


Figure 15: Sergei pre-teaching concept map 10/15/2013

Sergei began his concept map by drawing a large circle which he labeled as “overall goals” (1). He then began to fill in more specific topics and goals in the smaller circles. These goals included “learn research” (2) and “essay structure” (3) and “thesis statements” (4) and “citation and references” (5). Sergei provided no commentary on these elements of his concept map aside from saying the terms out loud as he wrote them. For the final four elements in the concept map, “remain on topic” (6), “sift thru lots of information” (7), “choose a topic + change their emphasis” (8), and “be concise but cover the topic” (9), Sergei verbally added that these were all things that “I want them [the students] to be able to” do. Finally, for the element “choose a topic + change their emphasis,” Sergei did provide some verbal commentary, adding that, “In other words if they're looking at writing about this and they do a lot of research (3) and they find something else that's interesting, or they don't see enough about the topic they chose and I want them to be able to (1) change whatever they're writing about.”

While Sergei did not explain much about the various elements he included in his concept map, the way in which he drew the circles around these elements seems to be significant for him. In particular, after writing “thesis statement,” Sergei began to draw a circle around it, but paused with the circle partially finished before extending the circle to overlap with the “learn research” and “essay structure circles.” Similarly, when he added the circle for “citations and references” (5) Sergei initially drew the circle around it in such a way that it did not overlap “thesis statement.” After a lengthy pause in which he did not draw, but looked at the map, Sergei went back and extended this circle to overlap with the “thesis statement” circle. These overlaps seem to indicate that these concepts were in some way related for Sergei, though again he provided no verbal commentary on the nature of these connections.

The arrows Sergei drew connecting one element to another also appear to demonstrate some sort of relationship Sergei saw between the elements. When he drew the arrows connecting “choose a topic + change their emphasis” (9) to the other elements, Sergei commented that this this element “would (3) relate to all these other things.” As before, however, Sergei did not provide any deeper explanation of the nature of these connections that he saw.

While his lack of commentary makes the task of analysis more difficult, Sergei’s concept map paired with his comments in the interviews provide a picture of his PCK of the analytic essay unit at this point in the semester. In particular, his comments in the first three interviews illuminate some particularly powerful underlying concepts Sergei held about the nature of good writing and the nature of teaching and learning. Though Sergei, like the other teachers in the study, encountered many opportunities to learn from his teaching activity, these underlying concepts profoundly shaped how Sergei interpreted and took up these opportunities.

Underlying concept one: Good writing is grammatical and structural accuracy

The first underlying concept that had this effect on Sergei’s development relates to his understanding of good writing. In particular, Sergei conceptualized good writing almost exclusively in terms of structural and grammatical accuracy. All other elements of writing, including genre differences, content, and critical thinking, were rarely mentioned in his talk either in the classroom or in our conversations in the interviews and stimulated

recalls. This focus on structure and de-emphasis of content and rhetorical purpose can be seen even in Sergei's concept map which focuses on generic elements of academic essays such as thesis statements, structure, and references and basic research skills. Sergei does not include any elements of content or rhetorical purpose as a focus in his plans for teaching the analytic essay.

This is not to say that Sergei had no concept of the genre of the analytic essay as distinct from other types of essays. When directly asked to describe his understanding of the genre of the analytic essay in the context of an interview, Sergei did explain the analytic essay in terms of genre variation and rhetorical purpose.

Excerpt 6.1:

1 DW: do you feel like you have a good picture in your mind of like what you-
2 what an analytic essay is, (.) to you?

3 Sergei: I'm not sure.

4 DW: okay

5 Sergei: **I think I have somewhat of a one.** I think what they need (.) **what it**
6 **requires (.) is the ability to research (.) a certain subject (3) and write**
7 **about it. (5) not (.) argue about it. you know not pick sides and do**
8 **that. (.) to a certain extent it's almost like a uh (3) not quite, but**
9 **almost like a newspaper article.** (.) they're telling what they found. (.)
10 um

11 DW: what makes it different than a newspaper article, if it's not quite a
12 newspaper article

13 Sergei: **well newspaper article short sentences, (.) uh: language is different** um
14 (.) uh: I think I read one time that newspaper articles are written on about a
15 8th or 9th grade level. (.) **short sentences short paragraphs in a**
16 **newspaper article um (.) u:m less formal language uh not exactly**
17 **broken down into uh (.) um (.) the three parts the introduction the**
18 **body and the conclusion. but more of straight reporting of what**
19 **happened.** and to a certain extent that's what this is, they're reporting on
20 what they have found. and uh (2) **but they're trying, th-they need to**

21 **pu:ll information together from different sources. (.) whereas in a**
22 **newspaper article that's not always what is needed.**
23 DW: **so how do you understand then um the idea of analysis. is that what**
24 **an analysis is? or is that more just the structure of the paper. [what**
25 **does it mean] to analyze something to you**
26 Sergei: [that's
27 more the-]
28 Sergei: **they have to be able to tell me (.) what something means (2) and back**
29 **it up (.) with citations. (.) it can't be just their opinion.**
30 DW: okay
31 Sergei: **they have to look at all these- ever how many papers, (.) take**
32 **information from all of them to: (.) convey (.) an idea to me. (.) now**
33 **that may be that may not be exactly what the strict definition is, (2) and I**
34 **will review that before I go into class. (Sergei, interview 3, 10/15/2013)**

Sergei’s initial explanation of the analytic essay in this excerpt focuses on conceptualizing the genre of analysis in terms of related genres. Sergei explains that analysis is distinct from argument (lines 6-7) and similar to the newspaper article genre (line 8). This strategy of defining the essay in relation to other more familiar genres was a common one among the teachers in the study and demonstrates that Sergei does have some understanding of the analytic essay as a distinct genre. When asked what differentiates the analytic essay from a newspaper article (lines 10-11), however, Sergei’s answer focuses almost exclusively on surface level differences in language use and structure, noting that newspaper articles often use “short sentences” (line 12) and “less formal language” (line 15). Moreover, newspaper articles have a different structure and are typically “not exactly broken down into uh (.) um (.) the three parts the introduction the body and the conclusion” (line 15-16). Sergei does make a nod toward differences in content, noting that in the analytic essay writers “need to pu:ll information together from different sources” (line 19) whereas a newspaper article is “more of straight reporting of what happened” (lines 16-17). When prompted more specifically to focus his attention on the rhetorical purpose of the essay (lines 21-23) Sergei could further articulate that the

analytic essay required that students “be able to tell me (.) what something means (2) and back it up (.) with citations (.) it can't be just their opinion” (lines 25-26).

Sergei's comments in this interchange point to the fact that though Sergei did have some genre knowledge of the analytic essay that included rhetorical purpose, some focus on content, and a sense of the relationship between the genre and other related genres, he only expressed this sort of understanding when directly asked to focus on these elements. His default understanding focused on structural and language features. This default orientation toward structure and language becomes even more pronounced when Sergei is talking about his pedagogical goals and instructional plans for the analytic essay unit.

Excerpt 6.2:

- 1 DW: okay, um so what I'd like to talk about today is basically your plans that
2 you have so far, about the analytic essay, um I know based on what I've
3 talked with other people about that um: some people have really detailed
4 plans some people just have sort of general idea of where they're going
5 Sergei: I right now I have a general idea. um: I am going to put up some ((clears
6 throat)) homework assignments for them tonight, um: I'm going to (.) put
7 up the detailed um um schedule for them, cause I've only gone through
8 week eight which is this week. um: then I'm going to do an introduction (.)
9 well probably a little bit more than an introduction I'm going to get them
10 started on (.) on the essay on Thursday. umm (.) and then (.) **there are s-**
11 **sections that I need to teach. I'm gonna teach (.) about plagiarism, I'm**
12 **gonna teach about um you know a little bit more about (.) what the**
13 **structure** (.) uh (.) I-I'm really surprised at how (5) how may- I don't
14 know whether they don't listen to me, when I explain the structure (.) or
15 what (.) but um (.) so I **I need to work more on (.) well th-the three**
16 **parts of the structure you know the introduction, (.) the body and the**
17 **conclusion. I need to work a lot more on (.) the uh thesis statement, [. .**
18 **.] I need to really stress that (.) and stress again that (.) everything in the**
19 essay has to point toward what you say you're going to talk about.
20 DW: has that been a problem (.) in the previous essays?

21 Sergei: yes. (.) I am- **we're not supposed to work very much on grammar, but**
22 **I am going to teach one grammar class.**

23 DW: mhm. what uh do you think will be the topic there?

24 Sergei: **it'll be mainly articles** (.) and let's see what was the other one? (6) not
25 vocabulary they do pretty good on that. so ma-mainly on uh (.) **present**
26 **tense and present perfect** (.) and how to use those. those are the things
27 that (.) that would be most pertinent to the article, (.) uh some of them are
28 very good with their grammar some are not, (.) um (2) **but they need**
29 **work also on on the articles.** (Sergei, interview 3, 10/15/2013)

When planning for actual instruction, Sergei's already cursory focus on the rhetorical purpose and content of the analytic essay disappears entirely. His instructional plans focus exclusively on teaching "sections" (line 10) related to generic features of essay structure such as thesis statements and the "three parts of the structure" of an essay (lines 14-16). Additionally, Sergei's instructional plans include an explicit focus on grammar, particularly articles and verb tenses (lines 20-27). Sergei himself notes that this focus is a small rebellion against the priorities and instructions given by the ESL 015 program, which has told the instructors that they are "not supposed to work very much on grammar" (line 20).

Sergei's focus on structure and grammar in the context of the analytic essay unit both reflect a deeper underlying concept of grammatical accuracy and structural conformity as being the primary features of excellent writing. Sergei expressed this belief most explicitly in the context of the first interview when he was asked to "describe a really good college level paper, an excellent college level paper" (Sergei, interview 1, 9/4/2013). His response to this question shows the centrality of grammar and structure to his overall understanding of good writing.

Excerpt 6.3:

1 DW: so if a student in your ESL 15 class asked you to describe a really good
2 college level paper an excellent college level paper what would you say,
3 what do you think you might emphasize to that student?

4 Sergei: **[the program director] has said we don't have to (.) to correct**
5 **grammar, I have a hard time not doing that, but (.) I think a paper**

6 **has good grammar.** (1) now there are good papers with bad grammar (.)
7 and I've seen it in journals, (5) and there are probably bad papers with
8 good grammar, (.) so I would say (.) **a good paper good grammar, good**
9 **sentence structure, tran-** **a good beginnings introductions (.) with a**
10 **thesis statement (.)** or you know two or three sentences, (.) **a good**
11 **transition between all the paragraphs from one paragraph to the next**
12 **each paragraph contains (.) a mini thesis statement so to speak** and
13 the:n a good summary with a restatement of the thesis and and what the
14 paper has been about or or what is the next step [. . .] **but a good**
15 **beginning, a good body, a good summary or conclusion, with good**
16 **transitions and thesis statements, and (.) good grammar and sentence**
17 **structure a:nd something that will dr:aw at the very beginning will**
18 **draw the person into reading it and keep them interested.** (Sergei,
19 interview 1, 9/4/2013)

Sergei's explanation of the features of an excellent academic paper focuses almost entirely on grammatical and structural concerns. While Sergei notes that it is possible for a good paper to have bad grammar and vice versa (lines 6-7), he still sees good grammar as a core feature of good writing. Moreover, he notes that his belief in the importance of grammar conflicts with the advice being given to him by the program director (line 4). Beyond grammar, most of Sergei's comments focus on traditional generic features of an essay. He notes the importance of the three part structure of introduction, body, and conclusion (lines 13-14) as well as the importance of thesis statements (lines 9, 14), transitions (lines 10, 14), and topic sentences (line 11). Although Sergei does mention the importance of attending to audience needs through creating an attention-getting introduction (line 15-17), his overall primary focus is on basic features of essay structure.

This underlying concept of good writing as grammatical accuracy and generic essay structure had a strong impact on both Sergei's teaching within the semester of study and, more importantly, his ability to learn from his teaching activity. Part of what made this concept, and particularly his focus on grammar, so resistant to change was the way in which it was bound up with some of Sergei's other most foundational beliefs about his students' future writing needs and his own ideal self-image as an ethical teacher. For

Sergei, correcting grammar in his student paper part of his ideal image of himself as a teacher, or his “ideal language teacher self” (Kubanyiova, 2012). Being asked not to correct grammar, as Sergei believed the ESL program was asking him to do, became a significant source of conflict for Sergei. A particularly poignant example of such conflict came up in the context of the second interview. In the midst of a discussion on his syllabus, Sergei independently brought up the subject of this difficulty, particularly questioning whether he should grade his students based on the same standard he would use to grade native speakers taking a similar course.

Excerpt 6.4:

- 1 Sergei: **the thing I struggle with is** (4) they're going to have to work in an
2 American academic (.) community. **am I doing them an injustice if I**
3 **don't show them what their problems are? (.) and how to correct**
4 **them. and if I- if I give them (.) a b+ or an a- with horrible grammar**
5 **(.) what's that going to do to them in the future (.) when they're**
6 **writing?**
- 7 DW: yeah. would you consider that- cause one of my questions I'm going to ask
8 you but we can talk about it now though is would you consider that
9 something that you anticipate will be a challenge for you?
- 10 Sergei: yes.
- 11 DW: this semester?
- 12 Sergei: yes. but I will probably treat them not as native speakers or not not- (.) I
13 **probably will grade them higher than I would if I graded them as**
14 **native speakers, but along with that I think I am doing them an**
15 **injustice. (3) because I am not (.) showing them what it's going to be**
16 **like out there.** and as I read a few uh journals in their field I've seen that
17 problem. (2) and I **think their instructors did them an injustice.**
- 18 DW: mhm (.) are- when you talk about grading them as a native speaker are you
19 primarily thinking of grammar? [or other issues.]
- 20 Sergei: **[grammar and sentence] structure (.)**
21 **and um well e- um the whole gamut. cause I don't th- there'll be a few**
22 **of them who will be able to grasp (2) you know uh the transitions and**

23 **the thesis statements and all that**, but I don't think all of them will. (2)
24 and I think their writing is going to suffer, (.) because if I don't grade them
25 way down because of that they're not going to learn, they're not going to
26 have a desire to learn. [. . .] **but I will go with what I have been told, (2)**
27 **and that's not to consider grammar, (3) but I will work with with**
28 **sentence structure and things like that but I th- I think they're not**
29 **getting the whole story.** (Sergei, interview 2, 9/4/2013)

As this excerpt shows, Sergei's "struggle" (line 1) was tied up in deeply held beliefs about what was just and right for his students and his sense of his own moral responsibilities as a teacher. Because Sergei believed that grammatical correctness was a central feature of good writing, he worried that not marking his students' grammar errors and not grading them down for such errors would be "doing them an injustice" by "not showing them what their problems are" (lines 2-3). Without such grammar correction, Sergei believed his students would remain unprepared for the realities of "what it's going to be like out there" (line 14) beyond the confines of their ESL classes. In fact, Sergei believed that his students' prior instructors who had neglected such grammar correction fact already perpetrated such injustices on them.

Sergei's conflict also shows his uneasy relationship with the prescribed curriculum and policies of the ESL 015 program and program director. It is important to note that these comments represent Sergei's interpretation of the program policies, not the policies themselves. In fact, the actual program policies allow teachers to provide some feedback on grammar, but emphasized that this should not be their primary form of feedback (Verity, 2013). Moreover, grammar was included as an aspect of the evaluation criteria on the sample rubrics provided to the teachers, but focused primarily on the extent to which any grammar errors impeded the readers' comprehension of the text (Verity, 2013). Sergei however, interpreted these policies as being orders "not to consider grammar" (line 25) and to "grade them higher than I would if I graded them as native speakers" (line 12-13). Though Sergei verbally committed to following these policies (line 24-25), they conflicted with his own standard of ethical behavior for teaching.

When asked whether these beliefs about the injustice of failing to grade his students like native speakers of English was only an issue of grammar (lines 17-18)

Sergei responded that his concerns actually ran “the whole gamut” (line 20). What Sergei gives as examples of non-grammar issues of concern, thesis statements and transitions (lines 21-22), are both instances of generic essay structure. As before, Sergei makes no mention of rhetorical intentions or effect, nor of genre-differences in either of these responses. This further reveals the centrality of the underlying concept of good writing as grammatical and structural accuracy to Sergei’s emerging PCK.

Underlying concept two: Teaching is telling and learning is remembering

Another underlying concept that had a powerful impact on Sergei’s potential for development was his pedagogical knowledge. In particular, Sergei consistently conceptualized teaching as giving information and learning as remembering information. This view is somewhat present even in the concept map by virtue of what is absent. Sergei’s PCK of the unit as demonstrated in the map focuses entirely on the particular topics to be taught, but includes no focus on methods of teaching. In other words, his PCK of the analytic essay, at least as depicted in the pre-teaching concept map, is focused entirely on the *what* and not at all on the *how* of teaching and learning.

Certainly the most emblematic feature of Sergei’s conception of teaching as giving information and learning as remembering information comes from his many mentions of the Ebbinghaus forgetting curve (Ebbinghaus, 1855/1913). Experimental psychologist Hermann Ebbinghaus’s forgetting curve depicts the rate at which humans forget information over time, showing that people forget approximately half of all newly learned information within a matter of days unless they take active measures to review it. Ebbinghaus’s forgetting curve was a concept Sergei referred to extensively in the data, and one that he shared with his students. Sergei first mentioned the forgetting curve in the context of the second interview as he was explaining the importance of critical reading skills in the syllabus.

Excerpt: 6.5

- 1 Sergei: I think critical reading skills, it is very important because they're going to
- 2 be doing paper:s (.) based on what they have studied a:nd what other
- 3 people have written. (.) so they're going to need (.) critical reading skills.
- 4 **I've gone I've taken them through it (.) once (.) but I will do it again**
- 5 **and probably again.**

6 DW: ok. so this is one you think you'll [teach multiple times?]
7 Sergei: [yeah I would- yeah] I will emphasize
8 that (.) becau- (.) uh **one of the things I taught in the academic summer**
9 **camp and I have taught in other classes is Ebbinghaus's forgetting**
10 **curve, (3) and how-**
11 DW: is that the, you know you forget [(.) ninety percent of what you're told
12 Sergei: [**you you forget- you you need to be**
13 **reminded** and and learning a language, (.) you know uh I I do some things
14 online and and that's built into- to the learning and so they need- **one of**
15 **the things I want them to understand is that needs to be built into all**
16 **of your learning, (.) you need to review, (.)** and you need- and so I
17 would use the critical reading skills (.) to help teach them that. (Sergei,
18 interview 2, 9/4/2013).

The concept of Ebbinghaus's forgetting curve, which Serge conceptualized as forgetting and needing to be reminded (line 10), was one that he had brought with him from his experience teaching classes in agriculture in his previous career as an agronomist (lines 7-8). Sergei used the concept of the forgetting curve in designing instruction, using it as the conceptual basis for deciding to teach the same concept multiple times as a means of reinforcing students' memory of the content, in this case critical reading skills (lines 3-4). Sergei also wanted his students' to become aware of the principle of the forgetting curve, and particularly the importance of review, as a concept they could use to direct their future learning (lines 12-14).

The forgetting curve, and the underlying understanding of teaching as telling and learning as remembering that it represented, was a very influential and frequently mentioned concept in Sergei's PCK. In particular, Sergei consistently used the idea of the forgetting curve to interpret his students' difficulties in the class. When his students failed to meet his expectations for their learning and performance in their papers, the forgetting curve offered Sergei a simple way to explain this breakdown in learning.

Underlying Concepts and the Development of PCK

Throughout the course of teaching the analytic essay unit, Sergei encountered moments in which his teaching knowledge and practices were challenged or questioned.

These moments, and the discussions he and I had about them, held the potential to function as sites of development. The first noteworthy moment in which Sergei's PCK was challenged came in the form of a student question in the first day of the analytic essay unit. On this day of class, Sergei explained some of the basic features of the analytic essay, introduced the assignment, and gave the students time to brainstorm a topic and draft working thesis statements. In his explanation of the analytic essay, Sergei mostly focused on the role of library research and academic citation, describing an analytic essay as "a report based on research, in which you read a lot about a given topic, your stereotype in this case (.) and report what you have read, (.) using academic citation, attribution, paraphrasing, quotes things like that" (Sergei, 10/17/2013). Sergei also emphasized that students were to avoid including personal opinions except in a short reflection on their learning that they were to include in the conclusion of the essay.

Unlike the other teachers in the study who all asked their students to choose a social problem or other general topic and analyze it, Sergei based his assignment on the second model analytic essay assignment in the teacher handbook. This assignment, as described in the handbook, asked the students to identify a cultural stereotype and analyze it, particularly focusing on its historical origins (Verity, 2013). While Sergei provided an un-revised version of the assignment sheet to his students via the course website, his in-class explanations of the assignment had a different focus. Instead of analyzing the historical origins of a stereotype, Sergei asked the students to write papers that described the cultural stereotype and then explained the "truth" about the social group being stereotyped. As an example, Sergei described the stereotype that "American's are arrogant and selfish" and contrasted it with the "truth" that "American's are [one of, if not] the most generous people in the entire world" (Sergei. class presentation slides, 10/17/2013). Sergei explained to the students that their essays should follow this model with regard to stereotypes from their home countries, explaining that the stereotypes, "in your countries will have this same type of thing (2) there'll be something that people believe (2) about a group of people, (.) or about (.) all of (.) the people in your country, (.) and then there'll be some truths (2) and that's what we want in your paper" (Sergei, 10/17/2013). As the class was working on drafting working thesis

statements following this model, one of the students asked a question regarding the analytic essay that signaled her fundamentally different orientation toward the essay.

Excerpt 6.6:

- 1 S1: um
- 2 Sergei: yes
- 3 S1: it have to be a positive and a negative one?
- 4 Sergei: there has to be a positive and a negative part
- 5 S1: (or) I I mean um: (.) **shouldn't we just um I mean we should ((punches**
- 6 **palm)) break the stereotype (and that) (.) and (.) and the truth maybe**
- 7 **is not positive- opposite [as the stereotype]**
- 8 Sergei: [okay well that'd be fine] that'd be fine
- 9 S1: yeah:
- 10 Sergei: so you're saying maybe a negative one but the truth is not exactly positive
- 11 it might- but it is something different
- 12 S1: yeah [it's- becau-]
- 13 Sergei: [that's fine]
- 14 S1: **because if it's a negative one and a positive one I think it's not critical**
- 15 **enough ((coughs)) critical, (.) I I mean it's not (.) objective?**
- 16 Sergei: okay
- 17 S1: so the truth is not look like-
- 18 Sergei: **as long as the truth is different (.) from the stereotype that's what**
- 19 **counts.**
- 20 S1: okay (Sergei, 10/17/2013).

This student's question and her subsequent explanations of her reasoning contain a subtle critique of Sergei's formulation of the analytic essay as an assignment. In line 3, S1 asks Sergei whether she must include both a positive and negative in her essay. Her question seems to be referring to the negative stereotype and positive truth about Americans that Sergei included in his model. S1 further elaborates the reasoning behind her question, explaining that if the purpose is to "break the stereotype," the "truth" about a stereotyped group may not actually be "opposite as the stereotype" (lines 6-7). Even after receiving a positive answer from Sergei, that it is fine for her to take this more

middle position in her essay (line 8-13), S1 still continues with her explanation of her reasoning. She explains that simply providing a truth that is the direct opposite of the stereotype is “not critical enough” and “not objective” (line 14-15). In this way, S1 offers a covert critique of Sergei’s explanation of the analytic essay as insufficient.

S1’s question and tacit critique of Sergei’s explanation of the analytic essay assignment focuses on the rhetorical purpose and tone of the analytic essay. While Sergei’s explanation focused mostly on form and presented a simplified representation of content, S1’s question focuses on the rhetorical purpose of the analytic essay. Moreover, she introduces the concept of criticality, which Sergei did not mention at all in his explanation of the genre. S1’s orientation toward the genre in this interaction, with her focus on rhetorical purpose and the necessity of a critical perspective, is markedly different than Sergei’s orientation toward the genre.

Because of this difference, this interaction has the potential to serve as a source of mediation that could assist Sergei in reconceptualizing the genre, or at the very least expand his knowledge of his students’ orientation toward the content. In the first stimulated recall session, I asked Sergei to reflect on this classroom episode along these lines. However, Sergei’s underlying conception of good writing as being primarily about grammatical and structural accuracy limited his ability to see the critique and alternative conception of the genre of the analytic essay present in this student’s question.

Excerpt 6.7:

- 1 DW: so I was curious about um how you interpreted that question.
- 2 Sergei: **I interpreted it as (2) being a question as to whether (3) we had to**
- 3 **have a negative and a positive or a positive and a negative or could it**
- 4 **be something in between, (.) that's the way I looked at it. now I could**
- 5 **be wrong, but that's the way I looked at it.**
- 6 DW: okay and does- **do you think that um her question gives you any**
- 7 **insight, about how your students are understanding this idea of**
- 8 **analysis? or at least how this student is understanding (.) like kind of**
- 9 **the goal of the essay.**
- 10 (5)

11 Sergei: at the time, **I did not think** (.)anywhere along those lines **I just-** (.) my
12 **idea or my thought was** (.) uh (.) **that sh- that she was thinking about**
13 **something a stereotype that was not- that did not fit those two neat**
14 **categories, and she wondered if that would be okay that that's the way**
15 **I took the question.** (2) does it have to be a negative stereotype with a
16 positive truth or vice versa. and to me she was asking (.) does it have to be
17 that way. can I- do I have to write about one or the other or can I write
18 about something that's a little bit different

19 DW: **okay, um looking at it now do you feel like it gives you any different**
20 **insights about how she understands (.) the assignment?**

21 (3)

22 Sergei: **it might be that she did not quite understand the assignment,** (.) not in
23 the writing but in what she could choose to write about? (.) um so I think
24 probably was asking for clarification there, (2) um

25 (2)

26 DW: **when you envisioned the assignment originally did you think positive**
27 **and and negative or like two opposite p- poles? or did you think more**
28 **like what she was saying when something kind of- where the truth is a**
29 **little bit comp- [complicated.]**

30 Sergei: **[I I I] did not consider that at all when I was doing th-**
31 **eh- things.** I looked on the internet (.) about (.) uh at a lot of different
32 stereotypes. this- this one came from (.) a radio station that put out the top
33 ten stereotypes about Americans, but I- I looked at others. and this one
34 was very clear cut. (3) and so that- as a- as a difference, and that's why I
35 chose that one to- to show them. (2) um, **but I did not consider (4) I I I**
36 **did- I did not think okay here's a positive,** (3) uh here's a negative with
37 a positive, but there are negatives:- (.) negatives with pos- or th- there are
38 negativ:e (.) okay there are positive stereotypes (3) that ar:e (2) where the
39 truth is (2) negative, (2) **I did not think about those- that type of thing**
40 **at all, I did not think about you know there's some stereotypes that (3)**
41 **are not as clear cut as what I have. I just used that as an example to**

42 **show them.** um (2) as I look back, I **don't think I thought about it at the**
43 **time**, but as I look back now I think I probably thought this is an example
44 (3) during the class we will work out any differences. as I look back, but
45 **at that time I did not think that. I just thought okay I've got an**
46 **example**

47 DW: mhm (2) go from there,

48 Sergei: go from there. (Sergei, stimulated recall 1, 10/23/2013).

In this interaction, we can see my attempt to use this student's question as a way to mediate Sergei's understanding the genre of the analytic essay. Sergei, however, does not demonstrate any uptake of my attempts to guide his thinking, offering instead a literal recounting of his thinking with no reconsideration. Sergei's response to my initial question of how he interpreted this student's question (line 1) is a literal paraphrase of what the student initially asked without any deeper reflection on what this question might signal about the students' conceptual understanding (lines 2-5). In the following interactions, I attempt to calibrate my mediation by narrowing the question in an attempt to direct Sergei to consider how his students "are understanding this idea of analysis" or "the goal of the essay" (lines 6-8), asking him to engage in hindsight reflection about "any different insights" he could glean by reflecting on this interaction (lines 17-18), and directly asking whether he considered issues of criticality and content when designing the assignment (lines 24-27). Sergei is unresponsive to all of these attempts. Instead, he repeatedly asserts that he "didn't think anywhere along those lines" (line 10) and "did not consider" these issues (line 28) and continues to offer his literal paraphrases of the student's question (lines 10-16).

Sergei's inability to see the critique in his student's question and his lack of uptake of my attempts at mediation point to two underlying factors that help to explain his overall lack of conceptual development in the class. The first, is his previously noted underlying concept of writing as structural and grammatical accuracy. The influence of this concept is indirect. Sergei does not overtly note anything about the need for structural and grammatical accuracy. Rather it was his lack of his orientation toward content and purpose that prevented him from seeing the critique in his student's question. Though Sergei did have some awareness of writing as involving more than just grammar

and structure, elements such as rhetorical purpose and a critical orientation to the content were not to major components of his PCK, yet these are precisely the dimensions of writing that S1's question concerns. The exclusion of these elements of writing in Sergei's PCK resulted in a conceptual blind spot. He did not perceive his student's concern and critique because his conceptual framework for the content of the class had no place for issues of criticality and rhetorical purpose. As a result, Sergei interprets her question as a request "for clarification" (line 22) regarding the procedural requirements of the assignment, rather than a conceptual question regarding the rhetorical function of the genre.

While Sergei's underlying concept of writing as structural and grammatical can explain his initial lack of understanding of the conceptual import of this students' question, an additional factor contributed to his continued lack of uptake of my attempts at mediation through the stimulated recall session. This additional factor does not related to his PCK of the class but rather to his expectations regarding the purpose of the stimulated recalls and our respective roles within them. While all the teachers in the study were given the same information when they were recruited for the project, their purposes for participating and their orientation toward our respective roles differed. Some of the teachers, most notably Anna and Sonja, clearly oriented toward the study as an opportunity to develop their knowledge and teaching practice. Sergei did not share this orientation. Instead, he seemed to view the purpose of the research as more descriptive, and thus defined his own role as an expert informant and my role as an objective recorder of his insights. From this perspective, my ongoing efforts to create a mediational space in which to push his developing understanding of the content became a source of confusion for Sergei. This initial mismatch in expectations of the purpose of the stimulated recalls was further compounded by my own shifts in footing between researcher and teacher educator within in the stimulated recalls.

Sergei's orientation toward his role as an expert informant reporting on his thinking is evidenced by his frequent repetition that his thinking did not include issues of content when designing this class. He emphasizes this fact many times in our interchange, explaining that he "did not consider" (line 28, 32-33), "did not think," (line 33, 41-42), "did not think about," (lines 36, 37), doesn't "think I thought about it at the

time,” (line 39). This repeated insistence that this was something he had not thought about seems to be an attempt to justify his lack of present and future oriented reflection. If his role in the interaction is to report his reasoning, rather than reflect on his teaching with the goal of future development, then the fact that he did not think about these questions at the time should be the end of the conversation.

The mismatch Sergei and I experienced in our orientations to the activity of the stimulated recall was not entirely of his making. Both how I set up, or more accurately failed to set up, the activity of the stimulated recall, and my talk within the stimulated recalls themselves contributed to the growing confusion Sergei expressed as the stimulated recalls went on. While I explained the procedure for the stimulated recalls to Sergei, I failed to make explicit that as part of my role I would be pushing him to not only recount but to reflect on and perhaps even reconsider his understanding of the content and his teaching. Instead, I represented the stimulated recalls as a much more neutral space than they actually were. This can be clearly seen in our interaction prior to the first stimulated recall.

Excerpt 6.8:

- 1 Sergei: **okay, before we start (.) what what what do you want out of me?**
- 2 DW: alright I’m gonna tell you that right now.
- 3 Sergei: okay
- 4 DW: um (.) so let me just explain kind of how I went about doing this so you
- 5 have a sense of this (.) so we won't be watching random selections, (.) I
- 6 have an interest in um in what I’m looking for in these, so basically my
- 7 research interest are related broadly to how teachers understand and teach
- 8 content.
- 9 Sergei: okay. [so you're] cherry picking
- 10 DW: [so h:-]
- 11 DW: I am. I am.
- 12 Sergei: okay. which is okay,
- 13 DW: yeah, as long as you acknowledge it in the methods (.) it's not possible for
- 14 me to do a random selection. so what I've done is gone through the tapes
- 15 (.) gone through the tapes and I have selected moments um where the

16 content becomes somehow relevant. so a student asks questions, about
17 what ki- what is this essay? or about (.) whatever the content is that you're
18 teaching at that moment. because of that most of my excerpts are from the
19 first class because that's when you were explaining the essay and doing a
20 lot more of that kind of stuff, whereas the second class I saw was mostly
21 about citations which is a little more straightforward and there weren't as
22 many student questions um (.) so that's what I'm looking for so **what I'll**
23 **do is I'll just play the excerpt for you you can ask me to stop it in the**
24 **middle if you want, or you can start talking over it and I'll just pause**
25 **it and we'll uh discuss it**

26 Sergei: okay so (.) y- you want me to:

27 (1)

28 DW: **I want you to comment on what yo:u um- just reflect on what you**
29 **were doing here on what you were thinking about. so I have questions**
30 **that I'll ask you**

31 Sergei: okay

32 DW: **but you can also just think about my general questions are things like**
33 **(.) what were you thinking about at this moment um what was your**
34 **purpose for doing this particular assignment**

35 Sergei: [okay]

36 DW: **[what did] you hope the students would get out of it or whatever it**
37 **was you were talking about if it's a student question, how did you**
38 **understand what the student asked you. um do you maybe understand**
39 **it differently now that you're able to watch it again, and it's not in the**
40 **moment.** (Sergei, stimulated recall 1, 10/23/21013)

Though it was always on my agenda in all the stimulated recalls to introduce the activity to the teachers, in this interaction, Sergei beat me to it, asking me to explain “what do you want out of me?” in the session (line 1). My initial response to this question focuses on justifying how I chose the excerpts we would watch (lines 4-20). The only reference I make in this initial explanation to the actual content of the stimulated recalls is that after watching a video clip of Sergei’s teaching “we’ll uh discuss it” (lines 21-23).

This explanation is clearly insufficient for Sergei who again asks for me to clarify his role and my expectations, asking “so (.) y- you want me to:” (line 24). My responses, that Sergei should “just reflect on what you were doing here on what you were thinking about” (lines 26-27) and my listing of general questions he could consider (lines 29-36) do not clarify the shift in focus toward development. The questions I list were indeed questions I used to start the conversation about the excerpts for all the teachers before following up with more strategic probes depending on teachers’ answers. However these questions with their focus on recalling past reasoning – “what were you thinking” (line 30), “what was your purpose” (line 30), “what did you hope the students would get out of it” (line 33), and “how did you understand what the student asked” (lines 34-35) – do not preview the actual nature of most of the stimulated recall which focused not on Sergei’s past understanding, but on using past events to develop new understandings. In fact, the only question I give as an example that could hint at this shift in focus toward development is that Sergei should consider whether he understands a student question “differently now that you're able to watch it again, and it's not in the moment” (lines 35-36).

In addition to the way this introduction framed the stimulated recalls as a relatively neutral research activity, my ongoing talk within the stimulated recalls served to frame our activity and our respective roles within the activity in ways that ultimately confused Sergei. Some aspects of my talk, including my reluctance to directly give my own opinions on his teaching, my initially open-ended conversational starters, and my frequent positive feedback of Sergei’s talk all communicated an open-ended and non-evaluative tone to the stimulated recall sessions. At the same time, however, the developmentally-focused mediation I attempted to provide to Sergei through increasingly probing and pushing questions gave the interactions a much more teacher-to-student atmosphere. This hybrid nature caused significant confusion for Sergei.

Sergei’s grammatical and structural concept of writing and our differing orientations toward the stimulated recalls both came to a head during an extended interaction about the thesis statements of two essays Sergei had chosen as examples of a high-graded (essay A) and middle-graded (essay B) analytic essay. Both essays examined stereotypes associated with Asians. In particular, my conversation with Sergei focused on

the thesis statements of the two essays. While both essays listed several specific stereotypes about Asians, the thesis statement from essay B also identified reasons these stereotypes persisted and closed with the formulaic statement that “This essay will talk about the origin of the stereotype and why it remains to today.” Essay A, in contrast, included no discussion of causes or effects, but instead simply listed the stereotypes without any analysis. In Sergei’s written comments on the drafts, he had praised essay B’s thesis, saying that the writer “had a good Thesis Statement, and in the body you generally stuck to what you said you would write about” while the writer of essay A was told that, “you needed a little more in your Thesis Statement” (Sergei, paper comments, 11/20/2013).

From my own genre-based perspective, I also identified essay B’s thesis as better because it included an element of analysis by examining the historical causes of the stereotype rather than staying at the level of straight description as in essay A. Sergei’s own positive evaluation of this thesis statement made me wonder whether or not Sergei himself was orienting to the analysis aspect of the thesis statement as the reason for its strength. In the stimulated recall, I asked Sergei to explain his evaluations of the thesis statement of essay B first.

Excerpt 6.9:

- 1 DW: okay. I wanted to look up a:t: (.) the thesis statement, since you said this
- 2 was a good example of the thesis statement kind of as a [contrast (and)-]
- 3 Sergei: **[okay, I hope it**
- 4 **really is,] I hope I just wasn't tired [and picked it]**
- 5 DW: [((laughter))] ((scrolling through
- 6 paper)) u::m, alright, so here.
- 7 (7) ((Sergei reading paper))
- 8 Sergei: oh, yeah, okay. (2) **you know it could be worded maybe a little bit**
- 9 **differently, tightened up a little. but he sai:d, (2) what he's gonna talk**
- 10 **about, it- (2) and what is causing it to- to remai:n, and then the fact**
- 11 **that that's what I'm going to cover in here. but- but it could've probably**
- 12 **tighten up some. but he got- he got the essential information out there.**
- 13 DW: mhm mhm (.) [okay]

- 14 Sergei: **[I think.] whatdyou think?**
- 15 DW: **I mean I haven't read the whole essay [so it's hard for me] to say,**
- 16 **right?**
- 17 Sergei: [oh okay] (Sergei, stimulated
- 18 recall 3, 11/20/2013).

Sergei's response shows two important aspects. First, while Sergei does paraphrase the thesis statement's analytic element, that it included, "what is causing it to remain," his positive evaluation of the thesis statement is still structural in nature. The thesis statement is good, Sergei notes, because "he said, (2) what he's gonna talk about" and "he got the essential information out there" (lines 9, 11-12). Thus, for Sergei, the primary criteria for evaluating this thesis statement is whether or not it comprehensively previews the content of the essay. Sergei does not seem to focus on the rhetorical move of analysis that was also present in this essay as anything more than an aspect of this previewing.

The second noteworthy element in Sergei's response is his emerging uncertainty and hedging about his answers. Sergei prefaces his response to my question about why he "said this was a good example of the thesis statement" (line 1-2) by hedging his positive evaluation of the thesis statement, saying that "I hope it really is, I hope I just wasn't tired and picked it" (lines 3-4). This hedge reflects Sergei's uncertainty regarding his explanation or at least his uncertainty regarding how I was likely to respond to it. It also serves to give him an "out" should his initial evaluation of the thesis statement prove problematic. He may have been mistaken in his initial positive evaluation of the thesis statement because he was "tired" from grading so many essays. The additional hedge "I think" that follows his explanation of his reasoning and his request for me to give my opinion (line 14) further testifies to his uncertainty about his answer and perhaps the face-threatening nature of this activity. My refusal to give an opinion on the thesis statement on the grounds that "I haven't read the whole essay" (line 15) was a nod to my role as a researcher trying to elicit Sergei's reasoning rather than provide my own.

Following our discussion of essay B, I asked Sergei to reflect on the thesis statement in essay A. This conversation further reflects his structural orientation to the essay in general and the thesis statement in particular. It also further illustrates Sergei's

growing confusion regarding our roles and how my talk in the stimulated recalls contributed to this confusion.

Excerpt 6.10 part 1:

- 1 Sergei: ‘kay, um thesis statement wa::sn't quite up to standard, and I-
- 2 DW: shall we look at it?
- 3 Sergei: =**it might be they needed (.) a little bit more information, it might be**
- 4 **they just needed to expand u::h to another sentence [or two]**
- 5 DW: [let's look at it]
- 6 Sergei: ‘kay
- 7 DW: m:h, where is it: ((scroll through paper)) is that it?
- 8 (15) ((Sergei reading paper))
- 9 Sergei: yea:h, I think that's it. (3) **probably the only thing (.) that I would talk**
- 10 **about (.) here is okay they say Asians are genius, they list three things,**
- 11 **uh, (2) the only other thing I might have wanted to (.) put in, okay,**
- 12 **“I’m going to cover those,” (.) words to the effect “that's what we are**
- 13 **going to do. I’m going to talk about it in this essay.” just a little bit**
- 14 **more (2) information to draw the: (.) the reader in. (2) u:m, (3) in other**
- 15 words, you- you've said this, now what're you gonna do about it. (2) kind
- 16 of makes it a transition into the body of the talk. **in my opinion. now, I**
- 17 **could be completely wrong, but that's (.) my opinion. which is what**
- 18 **you want. right?**
- 19 DW: yeah, of course
- 20 Sergei: okay. (Sergei, stimulated recall 3, 11/20/2013)

Sergei’s evaluation of the problems in the thesis statement focus on the lack of the sort of formulaic phrase that the thesis statement in essay B included. He notes that “the only other thing I might have wanted to (.) put in, okay, “I’m going to cover those,” (.) words to the effect “that's what we are going to do. I’m going to talk about it in this essay” (lines 10-13). This addition would have functioned as “just a little bit more (2) information to draw the: (.) the reader in” (lines 13-14). Conspicuously absent from this evaluation is any recognition of the fact that this thesis statement is not analytical and instead stays at the level of description.

Also evident in this excerpt is the increasing tension between my orientation to the stimulated recall as a developmental space and Sergei's orientation toward it as space for reporting his expertise. This is evident in the transition into the discussion of the thesis statement. Prior to this interchange, I have asked Sergei to offer his general impressions about what he saw as good and in need of more work in the essay. To aid his reflections, I show him the end comment he wrote for the paper as a whole. As part of his general reflections, Sergei notes that "thesis statement wa::sn't quite up to standard" (line 1). When I ask "shall we look at it?" (line 2) Sergei initially ignores my question, instead continuing on in his general reflections about what "might" have been the problem with the thesis statement (lines 3-4). I, in turn, ignore Sergei's resistance to my initial question and instead of repeating the question, offer the directive, "let's look at it" (line 5). The latching in both Sergei's turn in line 3 and my turn in line 5 indicate our mutual lack of alignment to the contributions and preferences of the other party within this interaction. The tension and confusion this lack of alignment caused become clearer later in the interaction. Following his explanation of the problems he sees in the thesis statement, Sergei offers the caveat that these are the problems "in my opinion. now, I could be completely wrong, but that's (.) my opinion" (line 16) before explicitly asking "which is what you want. right?" (line 17). Sergei's acknowledgement that his opinions could be wrong, paired with his question regarding my goals for the interaction further indicate our different orientations to the activity of the stimulated recall. My conciliatory response of "yeah, of course" to Sergei's question was meant to mitigate the face-threat I saw as inherent in the activity, but it does nothing to address Sergei's underlying question about the role I am taking and the role I am calling him to take through this line of questioning.

Immediately following the interaction in excerpt 11, I ask Sergei to compare the thesis statements from essay A and B. As this discussion progresses, I become increasingly direct and explicit in my attempts to push Sergei to move beyond his structural view of the thesis statements to consider them from a genre and rhetorical purpose point of view.

Excerpt 6.10 part 2:

18 DW: yeah, of course

19 Sergei: okay.

20 DW: so comparing this one to the one from the previous essay, [do you think-]

21 Sergei: [the the]: u:h

22 **this one [essay A] is not quite as good as as the one in the previous**

23 **essay, because the one in the previous essay [essay B], essentially**

24 **made that transition between (.) there are these things, (.) and I'm**

25 **going to cover them, or I'm gonna mention them in (.) in here. made that**

26 transition- now I guess I kinda looked at that as a transition statement into

27 the body of the talk.

28 DW: yeah, if I remember it also had, let's go back, and look at it just for, (2)

29 comparison, (1) cause **it also has here: (2) right, so it has the**

30 **stereotype and then it has (2) "what really causes this stereotype."**

31 Sergei: =yeah.

32 DW: was th[a:t-]

33 Sergei: **[a little bit] more information in there.**

34 DW: okay

35 Sergei: **I'm gonna talk about, okay they have these (2) stereotypes, (.) and one**

36 **of the things they were supposed to do is to talk about what caused it.**

37 **so he- this person put it in.**

38 DW: mhm mhm

39 Sergei: [u:h]

40 DW: [(and then)] this one,

41 Sergei: **and that one did not,**

42 DW: so this one just lists what the stereotypes are

43 Sergei: =thi- **this one [essay A] was a little bit more condensed.**

44 DW: mhm mhm

45 Sergei: **so I guess I'm saying it's [essay B] expanded a little, give us more**

46 **information, transition us into actually talking about them.**

47 DW: okay,

48 Sergei: **you are very agreeable. (.) and I'm here- I'm sitting here trying (to)**

49 **"what's going on in her mind (.) [while I'm saying this.]"**

50 DW: [((laughter))] (1) well [I want to hear
51 what you think.]
52 Sergei: [you are
53 supposed to] (.) you're supposed to be non-biased, right?
54 (2)
55 DW: **mhm**
56 Sergei: kay. and,
57 DW: =I am.
58 Sergei: **a:: u::h (3) (this-) the term is not neutral, (1) researcher, but**
59 DW: **no, not neutral, because I'm asking you questions about things I want**
60 **to know about, so there is no:-**
61 Sergei: **so you are involved.**
62 DW: **=I'm not just sort of like letting things happen, but, (.) u:m, (.) yeah, I**
63 **guess my question then would be: (.)** which I've sort of already asked I
64 think, u:m, but how important is that second step for you- of like what
65 really causes this. (.) thinking again this is an analysis paper (Sergei,
66 stimulated recall 3, 11/20/2013)

Sergei's initial comparison to between the two thesis statements is entirely structural in nature, focusing on how the thesis statement in essay B is better because it "essentially made that transition between (.) there are these things, (.) and I'm going to cover them" (lines 21-24). This analysis of the difference between the thesis statements, though accurate and potentially useful, only considers the structural differences between them. In lines 28-29, I attempt to direct Sergei's attention to the analytical element of essay B's thesis statement, directly pointing out that "it has the stereotype and then it has (2) 'what really causes this stereotype.'"

In his response, Sergei acknowledges this difference and even notes that "one of the things they were supposed to do is to talk about what caused it," (lines 34-35). Yet at the same time, he still frames this difference as one of putting "in a little bit more information" (line 32) and making the thesis statement "expanded a little" (line 45) rather than a more significant difference in rhetorical purpose and genre. Thus, though Sergei notes the difference between the two thesis statements, his underlying structural

orientation to good writing leads him to assign different meaning and significance to this difference than I, with my rhetorical and genre-based orientation to writing, am attempting to push him to see.

This excerpt also provides further evidence of Sergei's continuing confusion regarding the activity of the stimulated recall and our respective roles within it and particularly how my talk within the interviews contributed to this confusion. After my non-committal response of "okay" to his answers (line 46), Sergei interjects that my "very agreeable" responses are confusing to him, and that as he engages in this interaction, "I'm here- I'm sitting here trying (to) 'what's going on in her mind (.) while I'm saying this'" (lines 47-48). Sergei's comment regarding my "very agreeable" responses might refer to the frequent back channeling I provided in all the interviews and stimulated recalls. This constant background of "mhms" and "okays" generally signaled both my engagement as a listener and encouraged the teacher to continue talking. However, in at least this moment, these verbal markers when paired with the increasingly probing nature of my questions seemed to increase rather than allay Sergei's anxiety by obscuring my opinion on what he was saying.

Sergei's direct questioning of my role as a researcher, "you're supposed to be non-biased, right?" (lines 53-54) was clearly unanticipated by me. This fact is reflected in the two second pause before my minimal answer of "mhm" (lines 52-53). In the moment, I interpreted Sergei's question not as evidence of his confusion, but as a critique of my research methods, particularly that I was not being the objective researcher Sergei thought I was supposed to be. Because I interpreted his question in this face-threatening way, I attempted to shut down this line of conversation as quickly as possible, acknowledging that, yes I am supposed to be non-biased (line 55), but no, that did not mean my perspective was absent, and now let's please get back to talking about the thesis statements (line 57-60). It was only much later as I began analyzing this interaction that I began to see Sergei's question as reflecting his honest confusion about the activity of the stimulated recall sessions.

While I was quick to shut-down what I perceived as the critique of my research methods, I did respond to Sergei's anxiety about not being able to tell what I was

thinking. In the third part of excerpt 13, I make my opinion of the thesis statement more explicit while still couching it in terms of questions to Sergei.

Excerpt 6.10 part 3:

63 DW: =I'm not just sort of like letting things happen, but, (.) u:m, (.) yeah, I
64 **guess my question then would be: (.) which I've sort of already asked**
65 **I think, u:m, but how important is that second step for you- of like**
66 **what really causes this. (.) [thinking again this is an analysis paper**

67 Sergei: **[I- I- (.) I- it is- it is- it is not the most**
68 **important part. the person got the most important part here [essay**
69 **A]. thi- this is what I'm gonna talk about. but (.) I've also pushed (.)**
70 transition words and you know, pronouns, and transition sentences, (3) to
71 the next paragraph. and **to me there is no: transition, (3) well he's got**
72 **there firstly, wha- "firstly, one of the stereotypes," that's kind of a- of a**
73 **very short transition. but there, to me it's just- (.) it- (3) there's just not a**
74 **smooth flow between that paragraph and this one, and the next one.**
75 **and I'm not sure I know how to explain that. and I think that statement**
76 **about, I'm going to co- e:h that- that essentially says not ex- it doesn't**
77 **always have to say or it doesn't have to say that exactly (.) but that (.)**
78 **sentence that (.) sa:ys that now we're gonna talk about this, (.) a:nd (.) in**
79 **fact that e:h that would be the big (.) part of tha::t, (.) that I would want**
80 **more of, and I can even do without what the other one ha:d in there**
81 **abou:t the what causes it. [but it would've been better] if it'd been**
82 **there.**

83 DW: [is it still:]

84 DW: **is it still an analysis if it just says wha- if it just describes what the**
85 **stereotype is? (2) I guess that's what- I'm trying to (.) get at is you know**
86 **is there something about the one that says these are the real causes**
87 **that is more analytical than one just says people believe (.) a, b, c, (.)**
88 **about Asians. (.) or was that not (.) your focus in this assignment**

89 Sergei: I- I- I- **it wasn't my focus, (1) it may have been subconscious**

90 DW: for you, or for the (.) students

91 Sergei: =for- for me, whe- when I read the other one, (5) 'cause I- I actually
92 **like the other one [essay B] much more than this one [essay A]. (3) and**
93 **by saying that I don't mean I think this is a bad one, I just think this**
94 **la:cks (.) that (2) that something (.) that made the other one good. and**
95 **part of it is that transition to the next paragraph, (2) now we're gonna**
96 **do this, or this is what we're gonna do:, ((clears his throat)) a:nd the fact**
97 **that the other one did have that statement in there, and we're gonna,**
98 **we're not only gonna talk about (.) these three stereotypes, but we're**
99 **gonna look at (.) what (.) caused them to happen, caused them to come**
100 **into being, I like that. (.) I'd like to put that one on top of this one in**
101 **place of this one. (Sergei, stimulated recall 3, 11/20/2013).**

After pulling the conversation back from the questioning of my research methods, I even more explicitly try to draw Sergei's attention to the question of the genre of the two papers, asking "how important is that second step for you- of like what really causes this" and reminding him "again this is an analysis paper" (lines 65-66). Sergei responds that the element of analysis was not important to him, even saying that "I can even do without what the other one ha:d in there about the what causes it" (lines 78). Instead, both students "got the most important part" of saying "this is what I'm gonna talk about" (lines 67-68). What made the thesis statement of essay A not as good as that of essay B, he explains again, is that it didn't contain a transition, the result being that "there's just not a smooth flow between that paragraph and this one, and the next one" (lines 72-73).

Sergei's inability to see the rhetorical and genre aspects of his students' writing continues through the remainder of our interaction. In a final explicit attempt to get Sergei to orient to the thesis statements through a genre perspective, I ask "is it still an analysis if it just says wha- if it just describes what the stereotype is?" and "is there something about the one that says these are the real causes that is more analytical than one just says people believe (.) a, b, c, (.) about Asians," though I also provide Sergei an out by asking "or was that not (.) your focus in this assignment" (lines 82-86). Not surprisingly, Sergei takes my proffered out, explaining yet again that "it wasn't my focus" (line 87). This time, however, he also adds that while a focus on genre wasn't a focus for him, it may have played a "subconscious" role in his assessment of the two

thesis statements (line 87). At an intuitive level, Sergei concedes that “I actually like the other one [essay B] much more than this one [essay A]” (lines 89-90). However, Sergei still lacks the language to explain this preference, saying that the thesis from essay A “la:cks (.) that (2) that something (.) that made the other one good” (lines 90-92). His further comments reveal that part of the “something” that Sergei liked about the thesis in essay B was the fact that it said “we’re not only gonna talk about (.) these three stereotypes, but we’re gonna look at (.) what (.) caused them to happen, caused them to come into being” (lines 94-98), yet he does not take up my attempts at mediation and name this move as analysis.

In our interactions in the stimulated recalls, I often had the feeling that Sergei and I were talking past each other. The detailed analysis of our interactions in this section makes it clear that this impression was largely accurate. Both the content and form of my attempts at mediation were not effectively calibrated to Sergei’s developmental level. My mediation throughout these interactions attempted to push Sergei to consider his student’s questions and papers from a genre and rhetorical perspective. However, Sergei’s own underlying conception of writing as structural and grammatical accuracy did not include these elements and thus these attempts at mediation found no purchase in his existing conceptual framework. Even more fundamentally, Sergei and I demonstrated markedly different orientations to the activity of the stimulated recall and our roles within this activity. While I oriented to the interactions as creating a space for conceptual development, Sergei seemed to view the activity of the stimulated recall as an objective research space, and his own role within this space as the research informant who recalls and retells thinking but does not reexamine or reflect on that thinking in developmentally motivated ways. Sergei’s conception of the stimulated recalls, which I inadvertently encouraged through aspects of my talk, clashed with my own orientation to the activity and caused the increasing confusion displayed in our interactions.

In addition to the role Sergei’s underlying concept of writing as grammatical and structural accuracy played in his lack of conceptual development, his underlying understanding of teaching as telling and learning as remembering also served to limit his conceptual development. While the idea of redundancy in teaching and the importance of review in learning are certainly valuable pedagogical concepts, how Sergei applied these

concepts to his pedagogical thinking and activity worked to short-circuit many opportunities for his own conceptual and professional development. This negative effect can be seen even as early as the second interview. In the course of this interview, Sergei expressed his surprise and confusion over his students' inability to apply his explanations of the three part structure of an essay (introduction, body, conclusion) in their own writing, wondering aloud, "whether they don't listen to me, when I explain the structure or what" (Sergei, interview 3, 10/15/2013). This expression of cognitive/emotional dissonance signals a site of potential developmental for Sergei. By attending to and reflecting on this dissonance, Sergei could potentially be assisted in reconceptualizing his teaching. However, when I asked Sergei to reflect further on the nature of his students' difficulties applying this concept to their writing, his reflections did not lead to conceptual development. Instead, his underlying concept of teaching as giving information and learning as remembering remained unchallenged.

Excerpt 6.11:

1 DW: **what do you think is for- hard about that for your students. (3) or I**
2 **mean maybe what are you- what do you imagine might be the reasons**
3 **that that's difficult for them.**

4 Sergei: **o:ne thing might be their ability to understand the English well**
5 **enough**

6 DW: wh-what- the what they read, or what you say or

7 Sergei: what I say and what they read

8 [. . .]

9 Sergei: umm (.) **they're foreign students. our way of writing in the Western**
10 **world, is quite a bit different, from their- from what they have been**
11 **taught**

12 DW: have you talked about that with them?

13 Sergei: we've talked a little yes. (4) I'm **finding that (2) as with the students this**
14 **summer, you have to (3) tell them again and again.** one of the things
15 I'm kind of afraid of- (2) **I-I taught them about Ebbinghaus's forgetting**
16 **curve.**

17 DW: okay I'm not super fa-is that the like you forget this percentage of things
 18 [that people tell you this percentage yeah?]

19 Sergei:
 20 [mhm yeah the graph] the graph looks kind of like this ((draws graph with
 21 finger)) over time and how much you forget. **and so I've tried to get**
 22 **them to revisit (.) everything, cause I told them (.) two days from now**
 23 **if you don't do anything you will have forgotten (.) I think it's at least**
 24 **two-thirds, maybe seventy percent of what I've told you today. (5) and**
 25 **then I went over how to keep that from happening, you revisit.**

26 DW: mhm mhm **are you assigning that to them? or are you hoping they'll**
 27 **do that on their own?**

28 Sergei: no I'm I **guess I'm hoping they would do it on their own.** (3) but now
 29 we do: (.) we do do exercises sometimes in my class where I have asked
 30 them either outside of class to read something and then we talk about it a
 31 little inside class (.) or I uh once or twice I've had them read in class (.)
 32 and talk about it,

33 DW: how did you find those activities worked (.) in terms of the forgetting
 34 curve

35 Sergei: my guess is (3) that they think (.) I know I'm putting words into the hea-
 36 mouths, (.) **my guess is that they think (.) they don't have to worry**
 37 **about studying (.) this class as much as they have to worry about the**
 38 **others. [. . .] okay. what else? (8) I- (4) m-maybe they feel confident**
 39 **enough in their ability: in their abilities in English, (.) bu:t and so they**
 40 **don't study and so they don't pick it up (.) as well or they don't (.) uh,**
 41 **maybe they don't listen, maybe they miss words** they don't have the
 42 vocabulary (.) uh (.) **maybe what I need to do is (.) tell them something,**
 43 **you know do like um (3) the essay is supposed to be I tell them what**
 44 **I'm going to tell them, then I tell them, then I tell them what I told**
 45 **them. (.) but in different words.** (Sergei, interview 3, 10/15/2013)

Sergei identifies several possible reasons as to why his students might find the three part structure of the essay to be difficult to master. These potential reasons focus on

students' receptive language proficiency (line 4, 34-35) and differences between western and non-western rhetorical traditions (lines 8-9). One major reason that Sergei identifies for his students' difficulty applying the three part structure of essays to their own writing again has to do with Ebbinghaus's forgetting curve. In this interpretation, students struggle to apply the three part structure of the essay because they forget what Sergei has told them and fail to independently review the information (lines 18-21). Sergei attributes students' failure to review the information presented to them in class to issues of motivation and investment in the course relative to their other classes (lines 30-34).

What is noteworthy about all of these explanations is how little they implicate Sergei or his teaching in his students' difficulties. Students' failure to understand is attributed almost exclusively to their own intrinsic characteristics – their language proficiency, their culture, and their motivation for the course. While Sergei's knowledge of his students is clearly a factor in his assessment of their difficulty, his underlying conception of pedagogy also factored into his lack of development. Sergei essentially believes that teaching is telling, or as he often described it, giving or covering “information” and learning is remembering that information. Because Sergei has already given his students the necessary information, having told them repeatedly that they need to write essays with the three part structure, he has fulfilled his portion of the teaching/ learning process. Any failure to learn, then, must be attributed to his students' lack of understanding of his explanations or to their forgetting the information as a result of their failure to review. In fact, the only change Sergei considers making to his teaching as a result of this difficulty is not to change the nature of his explanations, provide more opportunities for his students to practice the concepts he teaches, or any other change in overall approach. Instead, he plans to redouble his efforts to remind his students of the information he gives by telling “them what I'm going to tell them, then I tell them, then I tell them what I told them” (lines 35-38).

Following his introduction to the analytic essay assignment on the first day of the unit, Sergei devoted two days of class to teaching students how to cite their resources in APA citation style and avoid plagiarism. In both of these two days of instruction the majority of instruction consisted of relatively monologic, teacher-fronted lectures. The first day, which focused on APA citation style, included detailed explanations of how to

cite specific types of sources such as newspaper articles, selections from edited anthologies, websites, and other common sources used in undergraduate research papers. While Sergei did include some interactive elements, such as showing students two citations and having them vote by a show of hands to identify which citation was accurate, the majority of the class was lecture. The second day, which focused on avoiding plagiarism, was also very heavy on lecture. Again, Sergei did include some interactive elements, asking students to offer their own definitions of plagiarism before providing his own and soliciting verbal suggestions for how to paraphrase a sample sentence. Moreover, though Sergei had prepared an in class activity in which pairs of students would read sample paraphrases and decide whether they were plagiarized or not, in the actual class Sergei decided not to do this activity and instead devoted the remaining hour of class to meeting individually with some of the students to review their working thesis statements while the other students in the class worked independently on their research and writing.

When I observed these two classes, I was struck by the sheer volume of information Sergei was presenting to his students. Because of the highly detailed and technical nature of the content and the nearly complete lack of opportunity to practice applying the content in the class itself, I believed that even the most industrious of note-takers in Sergei's class would likely struggle to apply what Sergei was teaching to their own writing. In this stimulated recall of these two class periods, my assessment of the likely problems students would face guided how I asked Sergei to reflect on these classes. I started the stimulated recall by asking Sergei what were his goals for teaching his students about plagiarism.

Excerpt 6.12:

- 1 DW: u:m (.) so then your goals for covering plagiarism are: (.)
2 Sergei: to burn it into their brains that i:n (.) western academic work you do not
3 ever plagiarize.
4 DW: **do you think, this may be a leading question, but I'm gonna ask it**
5 **anyway. do you think the problem for them is that they don't**
6 **understand what plagiarism i:s, or that they understa:nd it, but they**
7 **are not able to (.) avoid it in their own writing.**

8 Sergei: =yes.

9 DW: wha- what does yes mean? that was a either or que(h)stion. ((laughter))

10 Sergei: **both are.**

11 DW: both of them?

12 Sergei: [yes.]

13 DW: [okay,]

14 Sergei: I had (.) in the very first essay, one girl turned in a plagiarized paper, (2)

15 because she: **she knew better, (.) but she ran out of time to do it with**

16 **all the other things she had to do.** and her roommate said, "hey, I was in

17 the class last year. use mine." (.) so, [yes

18 DW: [do you think she didn't know that

19 **that was unacceptable?**

20 Sergei: I think she knew, because at that time we had- (2) we had barely

21 covered it a little. and we m:ay have- (2) I think by that time we had

22 had our library (.) course, which (.) briefly mentioned it. so yes. (.) but

23 I thi:nk (.) there is (2) maybe a slight misunderstanding as the how

24 strict (.) American academics (3) uh is- [. . .] and (.) I (3) I want them to

25 do well, and be able to avoid it, (2) **and then there's the (2) you know if**

26 **you (keep) something one time, over time people forget. (2) if you**

27 **reinforce- (2) it goes back to that Ebbinghaus's forgetting curve.**

28 DW: yeah. (.) so I see you reinforcing u:m (2) especially like you said by

29 teaching this again, **my question is like do you think- so it seems to me**

30 **when I watched this you were giving them a lot of information, but I**

31 **wondered if they're able to actually take that information and use it in**

32 **their papers. (.) do you feel like that's an issue?**

33 Sergei: =no.

34 DW: no?

35 Sergei: **because I covered different things. a lot of this is just a reminder,**

36 **there might be a little new information there. (.) but they've been ri-**

37 **reminded a couple of times before so.**

38 DW: and so you don't see any problems [with] these things in their writing.

39 Sergei: [nope.]

40 Sergei: nope. (Sergei, stimulated recall 2)

My acknowledgement that the question I am about to ask “this may be a leading question, but I’m gonna ask it anyway” (line 4) signals a change in my stance from relatively objective researcher to a more active role in Sergei’s thinking. My question itself is indeed leading, highlighting my own perception of the likely source of the students’ difficulties – that Sergei had given them information but provided them with no opportunities to practice applying that information (lines 5-7).

Despite the leading nature of my question, which was clearly designed to encourage Sergei to answer that the problem may in fact be that his students understand the content but don’t know how to apply it, Sergei does not respond in an expected way. Instead of choosing one of the two options and particularly the second option as the question prompted him to do, Sergei simply responds “yes” (line 8) and then explains that “both” understanding and applying that understanding are problems for his students (line 10). Sergei’s story about his student who turned in a plagiarized paper despite knowing that plagiarism is not acceptable in the U.S. academic context is presumably meant to be an example of his answer that both issues contribute to his students’ difficulties (lines 14-17). However, the details of this story, that the student “knew better” but under the pressure of the deadline plagiarized anyway (lines 15-16) paint a picture not of a failure of knowledge, but of application of knowledge. My follow up question of whether this was actually an issue of knowledge (line 18) again attempts to push Sergei to reconceptualize the relationship between knowing something and applying it.

Sergei’s response confirms that he does in fact believe the student in question knew that turning in her roommate’s paper was unacceptable because this information had been covered in class, though she may not have been aware of how serious an issue it was (lines 19-23). His explanation for why her performance failed to live up to her knowledge, however, relies yet again on his underlying concept of learning as remembering. Because of the principle of Ebbinghaus’s forgetting curve, Sergei reasons, she may have forgotten what was covered in class. Sergei’s solution, and the reason he is

teaching about plagiarism again, is to “reinforce” this knowledge through repetition (lines 23-26).

In my response, I offer an even more direct challenge to Sergei’s interpretation, explaining that “when I watched this you were giving them a lot of information, but I wondered if they're able to actually take that information and use it in their papers” (lines 28-30). When I ask Sergei whether this could be an issue in his class (lines 28-31), he simple responds “no” (line 32). The latching of his response to my question, the brevity of his response, and the falling, sentence final intonation of the response all underline his certainty and confidence in his interpretation. His explanation for this strongly negative response that this is not an issue “because I covered different things. a lot of this is just a reminder” and that though “there might be a little new information there” his students have already been “reminded a couple of times before” (lines 34-36) reflect his underlying conception of teaching as giving information and learning as remembering information. Though Sergei acknowledged that his students sometimes failed to apply what they knew, as in the case of the student who plagiarized even when she knew it was inappropriate to do so, he did not use these observations to make substantive changes to how he was teaching. Instead, his conception of teaching as telling and learning as remembering functioned as an “intuitive screen” (Goodman, 1988) through which these instances of student difficulty became not a source of conceptual dissonance causing him to reexamine his teaching, but confirming evidence for his need to “reinforce” the content he was teaching through repetition.

Sergei’s reasoning about the class, and particularly his speculations about his students’ difficulties followed a similar pattern throughout the semester. When faced with evidence that his students had failed to apply something that he had taught, Sergei was able to speculate on a variety of possible explanations but in the end attributed students’ difficulty to their failure to remember what he told them or failure to independently review the information. This underlying conception did not implicate Sergei’s instructional approach as being in any way connected to student performance. As a result, though Sergei noted his students’ difficulties, he did not use these observations to make any substantive changes to his pedagogy. Instead, his pedagogical response was limited to “reminding” students about his directions through repetition and review.

It is only at the very end of the semester, in the final interview that Sergei begins to question this underlying orientation. In reflecting on the his students' difficulties over the semester, Sergei recounts a case in which his strategy of "reminding" his students about the content, in this case the organization of the compare contrast essay, failed to lead to essays that applied the content.

Excerpt 6.13:

1 Sergei: mhm, uh and then a few of them would put a one-line- (.) one short
2 sentence about the differences. (.) but I went over- I I probably showed- I
3 know I showed them at least two (.) different compare and contrast (.)
4 essays. and how they were put together. and I I had slides on (.) you know
5 each point and how to do that, and I had examples for each one, on at least
6 two different subjects, maybe (.) maybe three. (.) they had a hard time
7 with that. **so I don't know what I would do different yet, because I did**
8 **spend a lot of time on it, I don't think I could spend any more time, I**
9 **could justify- I don't think I could justify that, but I would have to do**
10 **something different to help them to understand. and I'm not sure yet**
11 **what that would be.** (Sergei, interview 5, 12/5/2013)

Sergei expresses considerable confusion here over how his students could fail to remember the structure of the compare contrast essay, despite the fact that Sergei "did spend a lot of time on it" (line 7) and used a variety of methods for presenting the information (lines 2-6). In thinking about how he might teach the essay again in a hypothetical future semester, Sergei seems to be at a loss because he can't "spend any more time" on the concept (line 8). This confusion signals a moment of emerging dissonance in which Sergei becomes aware that his approach of telling and reminding students may not be feasible within the time constraints of his class. This dissonance, in turn, leads Sergei to reconsider his own pedagogy, concluding that "I would have to do something different to help them understand" though he is "not sure yet what that would be" (lines 8-10).

This moment of dissonance represents a potential site of future development. While Sergei had in fact been experiencing discomfort all along as his expectations and goals for his students conflicted with their actual performance, this was the first time that

his own activity as a teacher has been implicated in the conflict. The fact that this realization occurred in the final interview of the study, and the fact that Sergei did not teach the class again makes it impossible to know if or how this realization that he “would have to do something different to help them understand” would have been incorporated into Sergei’s pedagogical reasoning and thinking. The rest of the data from the final interview itself is mixed. When asked what he might do differently were he to teach the class again, Sergei explained, “I would have more work in class. I would probably (scale) back just a little bit on what was taught, (.) and do a lot more class work” (Sergei, interview 5, 12/5/2013). This emphasis on an alternative pedagogical strategy of including more in-class application activities is promising. However, when asked, “what do you think that would (.) do for your students,” Sergei’s pedagogical reasoning still focuses on the underlying conception of learning as remembering. His primary reason for in class activities is to “force them, to: actually do some of the things that they haven’t been doing” (Sergei, interview 5, 12/5/2013). In other words, Sergei’s new plans for in class activities do not represent a new conception of teaching and learning, but rather a simple movement of the “reviewing” aspect of the learning process from the students’ own time at home to class time. In fact, when asked what he would most like his students to retain from his class five years in the future, Sergei responded that his first goal is that they would remember “the forgetting curve,” showing that his underlying concept of learning as remembering was alive and well at the end of the semester.

Post-Teaching PCK

At the end of the unit, Sergei reflected on what he had learned through the semester and again completed a concept map representing his PCK of the unit. Sergei’s concept map demonstrates some important changes in both content and form. These changes largely consist of incorporating new pedagogical strategies such as in class work into his teaching.

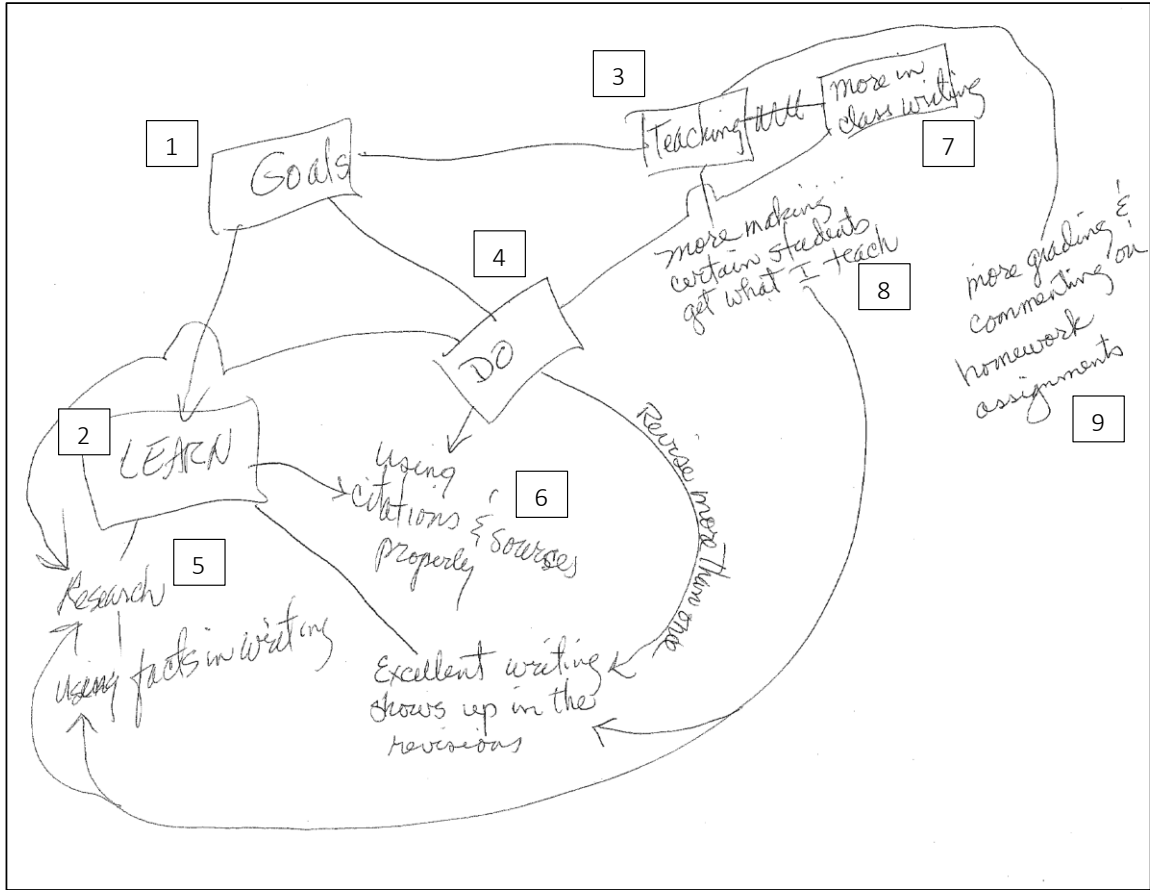


Figure 16: Sergei, post-teaching concept map, 11/20/2013

Sergei’s post-teaching concept map displays some promising differences from his pre-teaching concept map. The most immediately noteworthy difference is his division of his goals (1) into the three categories of learn (2), teach (3), and do (4). While they were separated visually, Sergei explained that “all three of them kind of (.) tied up (.) together.” As an example of these connections, Sergei used the concept of research (4). In a future version of the class, he explained he would want his students to “learn how to do research, but then they actually, (3) do:: (3) better research than- than some of their paper show” (5). Similarly, for the concept of citations (6), he not only wanted his students to learn “how to (.) make (1) citations and (.) sources, (.) how t- how fix those problems” but also to “actually do them.” To aid his students in doing what they were learning, Sergei thought that he might include “more class practice writing” (7) so that a typical instructional pattern could be described as “when I teach a concept, (.) have them practice it. (2) u::m::, (.) and make more double checking to make sure they get- they’re

understanding of what I teach” (8). Part of this double-checking would involve having more demanding expectations and grading criteria for the students’ homework assignments. Whereas in the semester of the study, Sergei had given completion credit for homework and journals, in future semester, Sergei explained that he might “look at (.) at structure, and an (.) an an (.) and what you say and how say it rather than just (.) okay you turned it in” (9).

When compared to Sergei’s pre-teaching concept map, the increased complexity is immediately apparent. While his pre-teaching concept map had focused entirely on the content of the goals and objectives and had not included any representation of *how* Sergei would teach this content, in his post-teaching concept map, Sergei considers pedagogical strategies such as in-class writing and homework assignments and can articulate how these strategies will contribute to his goals. The division of “learn” and “do” in the post-teaching map also points to a growing awareness of how students interact with his instruction, acknowledging that what students do in their writing and what students have learned (or at least have been told) in class are not identical.

Both of these changes represent important additions to his knowledge of pedagogy, yet it is also clear that these new pedagogical strategies do not represent any deeper conceptual development. They do not, in other words, indicate that any of Sergei’s underlying conceptions of writing, his students, or teaching were affected by his experiences in his semester of teaching the course. Evidence for this lack of conceptual development can be seen even in Sergei’s own reflections on the differences between his two concept maps. When I asked Sergei to compare his pre and post-teaching concept maps, he jokingly noted that his pre-teaching concept map “looks like a mess, doesn’t it.” In his further reflections, he noted differences in content between the two concept maps, particularly that his pre-teaching map had included essay structure, while his post-teaching map had focused more on revision and included the change to include “more scrutiny of their journal articles.” Despite these differences in focus, Sergei believed that all the topics and strategies in both the concept maps are “good things” and that “I would probably, (.) in the end, (2) put them both together.” Sergei’s focus on surface level comparisons in content and his mildly positive evaluation of both of them as collections of good and compatible elements that could easily be incorporated with each other shows

his own orientation to his learning in the semester as the addition of helpful tricks rather than any fundamental restructuring of beliefs and knowledge. This additive orientation to his own learning becomes even clearer in his comments in the post-teaching interview, in which I explicitly asked him to reflect on what he had learned through teaching the unit.

Excerpt 6.14:

- 1 DW: u:m, so I- my first question is overall do you think you've learned anything
2 through teaching this unit. (.) so about writing, about the genre of analysis,
3 about your students:, etcetera?
- 4 Sergei: **oh yeah, I- I think that happens (.) in every class, every teacher (.)**
5 **teache:s, if:: he or she is willing (.) [to learn.]**
- 6 DW: [yeah?] can you think of anything specific you've
7 learned? (2) or that [you're aware of learning]
- 8 Sergei: **[I have] (2) I have lea::rned to: (3) that if I would teach this**
9 **class again, I would probably, (3) hold off on my: uh (.) student**
10 **meetings, we were- we were told we need to have one- one conference, at**
11 **least with a student. I'd probably hold off a little bit more, (.) until I got a**
12 **better idea of what they were doing, so that I could (.) make them mo:re**
13 **personal, I- I held my- (.) mine fairly early in the year, um, (2) I think that**
14 **would help, (2) I th::i:nk (6) I might actually give (4) perhaps (.) slightly**
15 **less (1) lecturing, and slightly more (1) now I did this to a certain**
16 **extent, but- okay. we've learned this, now I want you to write me a**
17 **paragraph that shows it.**
- 18 DW: what do you think that would (.) accomplish,
- 19 Sergei: **I think it would help to cement it in their minds**
- 20 DW: mhm
- 21 Sergei: a little bit more. (2) **I would probably ha:ve the:m (.) work with their**
22 **peer partners, have their peer partner read it, (1) and they- and they**
23 **discuss: (.) that. (3) they're supposed to take everything through, before**
24 **they turn the paper in, they are supposed to (.) meet with their peer**
25 **partner. (.) I haven't (.) been a:s (.) focused on making sure that happens,**
26 **so I think if I were to teach again, I would spend more time on that. (2) to**

27 make sure. and I'd- I did have them: (.) I've had them do a little in class
28 with that, and I've had them do: (1) I had them turn in a: u:h homework
29 piece on- (.) on their meeting with their u:h peer (1) partner. so that's one
30 thing I've learned. (Sergei, interview 4, 11/20/2013)

Sergei is quick to confirm that he has indeed learned through teaching this semester and even articulates his belief that such learning is a natural part of teaching and that “happens (.) in every class” provided the teacher “is willing (.) to learn” (lines 4-5). The content of Sergei’s reported learning is made up entirely of procedural changes. He discusses how he might change the scheduling of the required student meetings (lines 8-9), how he might lecture less and use more in-class writing (lines 13-16), and how he might enforce the peer-reviewing assignments more strictly (lines 20-22). In my subjective analysis of Sergei’s teaching, all of these hypothetical changes would indeed likely improve his teaching and benefit his students. Yet, when I ask Sergei to explain what his new focus on written applications of his lessons “would (.) accomplish” (line 17), Sergei’s response that “it would help to cement it in their minds” (line 18) demonstrates that he views this new pedagogical strategy not as an alternative to his conception of teaching as telling and learning as remembering, but as a new strategy for helping his students to remember what they are taught.

Conclusion

It would be both inaccurate and unfair to say that Sergei learned nothing through his teaching. Both his post-teaching concept map and his comments in the post-teaching interviews demonstrate that he did indeed gain meaningful insights through his teaching. However, these insights remained at the level of helpful tips and tricks and did not represent deeper conceptual development in Sergei’s PCK. Instead, Sergei’s underlying concepts of writing as structural and grammatical accuracy and teaching as telling and learning as remembering allowed Sergei to (perhaps unintentionally) circumvent conceptual development in favor of surface level learning that not only allowed his existing concepts to remain intact but even strengthened them.

Sergei’s case of non-development has several important implications for teacher education research and practice. First, Sergei’s case powerfully demonstrates the crucial importance of examining teachers’ underlying values related to the content that they

teach and their conceptions of teaching and learning more generally (Gudmundsdottir, 1990) not only on how they teach but on how they learn from their teaching experience. In Sergei's case, his conceptions of writing as grammatical and structural accuracy and learning as remembering impacted not only how he planned for instruction, but crucially how he made sense of the efforts and responses of his students. Moreover, these conceptions were bound up with Sergei's ideal self-image as a teacher (Kubanyiova, 2012). The strong connection in Sergei's thinking between grammar correction and his own sense of morality and ethical teaching behavior made his grammatical and structural orientation to writing extremely resistant to change, even when Sergei intellectually assented to other conceptions of writing and language he encountered in his graduate coursework.

Secondly, Sergei's case demonstrates the need for teacher educators to carefully and strategically target mediation. In Sergei's case, though he received ample mediation, he did not respond to it. Part of the ineffectiveness of the mediation in Sergei's case had to do with his overall orientation to the activities of the stimulated recalls. While the researcher viewed the stimulated recalls as hybrid space in which teachers' conceptualizations of their teaching were both elicited and pushed to develop, Sergei oriented to the stimulated recalls as a retrospective activity in which he recalled, but did not rethink, his pedagogical conceptions and reasoning. While part of this confusion was clearly related to the structure of these particular research activities, this difference in orientation on the part of Sergei and the researcher points to a broader issue in teacher education. Reflective practice (Schön, 1983) has become a central feature of most teacher education programs. The outward activities of reflective practice often involve a backward gaze as teachers are asked to remember their past experiences. Yet despite this past-oriented gaze, the goal of reflective practice is future-oriented and relies on the abilities of the teachers to re-see, re-think, and re-interpret their past experiences as the basis for future action. While for many teachers, this simultaneously past and future orientation of reflection poses no problem, for some teachers, particularly those who tend to favor concrete and literal thinking, this dual focus, if not properly explained and supported, may not engage in reflective activities as reflection, but rather as recollection.

CHAPTER 7: DISCUSSION AND IMPLICATIONS

Summary of the Findings

This study has examined the development of four teachers' content knowledge and pedagogical content knowledge through their experiences teaching an L2 first-year writing course for the first time. This study was motivated by both the need for research examining the experiences, beliefs, knowledge, and learning of L2 writing teachers (Borg, 2006; Hivela & Belcher, 2007; Lee, 2010) as well as the need for research in the teacher knowledge framework that more completely accounts for how teachers' knowledge, and particularly their knowledge of content, develops in and through the activities and social contexts of their professional lives (Sockett, 1987; Cochran, DeRuiter, & King, 1993; Shulman & Shulman, 2004; Ellis, 2007; Park & Oliver, 2008). Accordingly, this study sought to answer three research questions:

1. What is the nature of post-secondary L2 writing teachers' pedagogical content knowledge?
2. How does the pedagogical content knowledge of post-secondary L2 writing teachers develop in and through the activities of teaching?
3. What factors mediate the development of post-secondary L2 writing teachers' pedagogical content knowledge?

To answer these questions, a Vygotskian sociocultural approach was adopted (Vygotsky, 1986; Wertsch, 1985; Lantolf & Thorne, 2006; Johnson 2009). Sociocultural theory's focus on studying human cognition in development, as emerging from social interaction, and as mediated by cultural tools proved to be uniquely suited to explaining the process of teachers' development of PCK through teaching activity.

Overall, the findings from this multiple case study demonstrate the highly contingent and emergent nature of teachers' PCK. As the writing teachers planned, taught, and reflected on their teaching, both their underlying content knowledge and pedagogical content knowledge developed in overlapping ways. Moreover, this development was mediated by a variety of factors. Among these factors, teachers' underlying value-laden conceptions of writing and teaching, the required first-year writing curriculum, their students' emerging understandings of the content they were teaching, and the activities and interactions involved in the research methodology all

mediated the teachers' developing conceptualization of the content of the class and how to teach it to this particular group of students. In the remainder of this chapter, I will examine these findings in more detail and discuss the implications of these findings for both L2 writing and teacher development and supervision more broadly. The chapter will close with a brief discussion of some of the limitations of this study and suggestions for future research.

Nature of L2 Writing Teachers' PCK

The question of what constitutes L2 writing teachers' pedagogical content knowledge is indeed a large one that this particular study cannot answer fully. Much more research that examines what L2 writing teachers know, believe, and think about their work is needed to more fully address this under researched population. However, the current study does provide some important insights into the nature of L2 writing teachers' PCK that can provide important insights for writing researchers and writing teacher educators as well as pointing to future directions for needed research.

Teaching Unknown Genres

One important finding from this research is that the teachers in the study did not come into the classroom already possessing equal levels of knowledge and expertise regarding the genres they were being asked to teach. Instead, the teachers in this study approached teaching the analytic essay with diverse levels of knowledge and previous experiences ranging from Jennifer's confidence based on her own writing experiences as a literature major, to Sonja's intuitive knowledge, to Sergei's uncertainty, to Anna's nearly complete lack of familiarity with the analytic essay genre.

While the experience of being asked to teach an unfamiliar genre may be more common for novice teachers, it is important to recognize that it is not restricted to novices. Writing teachers, and perhaps particularly L2 writing teachers, are often called upon to prepare students for writing tasks and futures with which the teachers have little to no familiarity. This experience is particularly common for teachers working in English for Academic Purposes (EAP) and English for Specific Purposes (ESP) contexts as teachers work to prepare students to function in discourse communities in which the teachers are not members.

The wide range of prior knowledge of the analytic essay genre displayed by the four teachers in this study points to the fact that as teacher educators, we cannot take writing teachers' subject matter knowledge for granted (Ellis, 2007). Even when writing teachers are highly competent and effective writers, their attitudes towards and explicit knowledge of writing, particularly specific genres of writing, may vary quite highly. This lack of knowledge and confidence in their writing abilities may contribute to the negative attitudes and low self-confidence reported by so many pre-service and novice writing teachers (Gardner, 2014; West, 2014; Bausch, 2010; Frager, 1994; Street, 2003; Winer, 1992; Shin, 2002, 2003; Lee, 2010, 2013). This lack of knowledge and the attendant issues with teachers' self-confidence may have an especially strong impact on graduate student instructors who often find that the new demands of graduate school on their writing abilities and practices leave them deeply ambivalent about writing and about their skills as writers (Restaino, 2012). To address this issue, teacher educators and writing program directors must "overtly acknowledge and teach toward a slower, more recursive, and more extended learning process for new writing teachers" (Estrem & Reid, 2012, p. 450) by providing ongoing opportunities for teachers to externalize their knowledge and beliefs about teaching writing and receive ongoing dialogic mediation.

Developing Specialized Content Knowledge

An additional finding from this research that has important implications, particularly for genre-based approaches to writing instruction, is that even separate from the need to transform their knowledge of the analytic essay into pedagogical forms for their students, the teachers also had to "unpack" their largely implicit and contextual knowledge of the genres into the *specialized content knowledge* needed for teaching (Ball, Thames, & Phelps, 2008). This finding was particularly clearly demonstrated in the case of Jennifer. Though Jennifer came to teaching with a high level of both confidence and experience as a writer of analytic essays, in the process of preparing to teach the unit, she was confronted with the necessity to unpack her writing knowledge. For Jennifer, this process involved synthesizing her many individual experiences writing analytical texts, expanding her understanding of the genre through reading descriptions of analysis from educational and research sources, and imaginatively projecting herself into her students'

writing futures. The resulting knowledge of the genre she developed represented a different sort of genre network than the genre networks described in the literature on genre knowledge which has tended to focus on intergenre relationships within particular activity systems and discourse communities (Devitt, 2004; Swales, 2004). Jennifer's PCK of the genre of the analytic essay, in contrast, involves the creation of a genre network that crosses the boundaries of particular discourse communities. This synthesized knowledge of the features of the genre across contexts and discourse communities represents a form of genre knowledge unnecessary for writers producing and using the genre within a single discourse community but crucial for teachers who must prepare students to use and adapt the genre to their unique future contexts.

This finding has significant implications for genre-based approaches to writing instruction. In addition to demonstrating the benefits of such instruction for students, proponents of genre-based writing instruction have also argued in favor of genre-based writing pedagogies on the basis of what these pedagogies provide to writing teachers. Unlike process pedagogies, which deemphasize the authority and expertise of teachers, genre pedagogies empower teachers by positioning them as knowledgeable experts in their classrooms (Hyland, 2003, 2007; Martin, 2009) and provides them with unique opportunities to develop critical language awareness (Ramanathan & Kaplan, 2000). At the same time, researchers have also noted that, by placing teachers' knowledge at the center of classroom instruction, genre-based pedagogies demand far greater levels of content knowledge from teachers than process pedagogies (Gebhard, Chen, Graham, & Gunawan 2013). Teachers who lack such deep content knowledge may find the prospect of enacting genre-based pedagogies intimidating (Hyland, 2007) and may as a result avoid the fluidity and flexibility of genres, focusing instead on highly prescriptive presentations of genres through restrictive templates (Johns, 2011).

Yet while the importance of writing teachers' genre knowledge has been acknowledged theoretically, it has not been the subject of extensive empirical investigation. The findings of this study suggest that research examining what L2 writing teachers know about and think about the genres that they teach and how they learn about these genres may be quite fruitful indeed. The kind of unpacked and generalized genre

knowledge Jennifer in particular developed for teaching differs substantially from the movement toward increasingly tacit and contextualized forms of genre knowledge that characterize expertise in writers (Berkenkotter & Huckin, 1995; Beaufort, 2004; Tardy, 2009). This suggests that writing teachers may not only benefit from *more* genre knowledge, but may in fact need a qualitatively different form of genre knowledge that is more explicit, theoretical, and global than that of non-teaching expert genre users.

To prepare writing teachers for such a future of ongoing and expanded genre learning, teacher educators must focus on helping teachers develop the dispositions and analytical skills to engage in the ongoing and expanded genre learning they will be required to do. Because of the basically unlimited range of genres teachers may be asked to teach, as well as the inherent mutability of genres themselves, teachers simply cannot be formally prepared for every genre they will be asked to teach. Instead an approach that gives teachers opportunities to investigate, analyze, write, and reflect on diverse genres may be called for. In other words, teachers must be trained in genre analysis. Bentley's (2013) use of an unfamiliar genre project as a central activity in writing teachers' professional development and Reid's (2009) emphasis on the importance of assigning difficult and reflective writing tasks to prospective writing teachers are both examples of approaches to writing teacher education that serve to not only communicate to teachers that learning about new forms of writing is a necessary and central aspect of what it means to be a writing teacher but also provide teachers with the analytical and reflective tools to engage in such learning-for-teaching processes effectively in the future.

Developing PCK in Teaching Activity

In addition to examining the nature of L2 writing teachers' PCK, this study specifically sought to examine how L2 writing teachers developed PCK through teaching activity and what factors mediated this development. The results of this study demonstrate that teachers' content knowledge and PCK emerge in teaching activity and develop simultaneously as the teachers engage with the activities of teaching and particularly the requirements of the curriculum and the emerging understandings of their students. Additionally the experiences of the participating teachers point to the ways in which the research methods themselves functioned as a powerful source of mediation, not

only of their emerging understanding of the genre, but also of the process of learning from teaching experience. Finally, the results demonstrate the crucial role teachers' underlying concepts of both writing and pedagogy played in mediating their learning experiences. All of these findings have significant implications for both teacher cognition research and the practices of teacher education and supervision.

PCK and CK Emerging in Activity

The first major finding of this study is that both PCK and CK emerged in and through teaching activity. This finding was particularly illustrated by both Sonja and Anna's cases. For Sonja and Anna, many of the insights they gained through teaching the unit came not only from the process of preparing to teach or reflecting on teaching, but emerged in the classroom itself as they were engaged in the moment to moment activities of teaching. This finding both supports and complicates Shulman's (1987) model of pedagogical reasoning and action. In Shulman's model, the process of teaching particular content, assessing student learning, and reflecting on teaching can lead to teachers developing a new understanding of the content. In both Sonja and Anna's cases this clearly happened. The process of teaching the analytic essay did result in a new and deeper understanding of the genre.

However, their process of learning through teaching was much not nearly as linear and tidy as Shulman's model would suggest. Instead of moving through the process of comprehending the content, transforming the content into PCK, teaching the content, and assessing student understanding in a step-by-step fashion, Anna and Sonja both comprehended, transformed, and taught the content simultaneously. In this way, the teachers' subject matter knowledge did not necessarily precede their teaching. Instead, it was in and through the process of teaching that teachers developed, unpacked, and transformed their subject matter knowledge for instruction simultaneously. In essence, the content of these writing classes was largely being invented in the classrooms themselves and did not exist as a stable, *a priori* condition for teaching as has been tacitly assumed in much of the prior research on teacher knowledge, particularly in the PCK framework (Sockett, 1987, Cochran, DeRuiter, & King, 1993; Hashweh, 2005; Ellis, 2007; Park & Oliver, 2008).

This finding has major implications for both future research and teacher education practices. First, in terms of research, these results support the calls and arguments made by several critics of the PCK framework to take “teachers’ subject knowledge seriously, by [. . .] treating it as complex, dynamic and as situated as other categories of teachers’ professional knowledge” (Ellis, 2007, p. 447). Part of taking subject matter seriously, is to acknowledge that teachers are not simply the conveyers, or even transformers, of pre-existing subject matter knowledge. Rather teachers actively adapt, reconstruct, and even “produce knowledge for teaching through their own experiences” (Park & Oliver, 2008, p. 278). To say that teachers produce content knowledge through their teaching experiences is not to say that the content that is taught in writing classrooms has nothing to do with the scholarly disciplines, but rather to recognize that what constitutes disciplinary knowledge is constantly shifting and developing and to view classrooms as legitimate sites of knowledge creation.

In addition to the research implications, this result also has implications for teacher education and development. The separation of content and pedagogy has been noted as a problem in teacher education (Grossman, Wilson, & Shulman, 1989; Ball, 2000), and has been the impetus for many innovations such as case-based teacher education and subject specific methods courses (Nuangchalem, 2012; Monte-Sano, 201; Van Driel, Jong, & Verloop, 2002; Barnett, 1991; Bencze, Hewitt, & Pedretti, 2001; Kim & Hannafin, 2008; Lin, 2002). However, reports of efforts to support teachers’ simultaneous development of content and pedagogy in teaching activity are much more limited and have demonstrated that teacher induction programs can tend to ignore teachers’ need for content learning (Feiman-Nemser & Parker, 1990). The findings of this study demonstrate that all teachers, even highly experienced teachers like Sonja, continue to learn new content in teaching activity. To support teachers in the integrated learning of content and pedagogy in teaching activity, we must develop and investigate new models of teacher supervision and development that work to more fully integrate teachers’ developing understanding of content and pedagogy as it emerges in teaching activity.

Student Interactions as Mediation

Another important result of this study is that the students' own emerging conceptions of the content had a powerful mediating effect on the teachers' emerging PCK and CK. As the students in the class externalized their developing notions of the concept of the analytic essay through their questions and comments in class and in their essay drafts, the teachers adjusted their explanations of the concepts, taking up students' own language and addressing student misconceptions. This process of adjusting and readjusting explanations based on student understanding is an important element of teachers' PCK.

In some cases, the students' emerging understandings of the content and class contributions mediated not only teachers' pedagogical representations of the concepts being taught, but also the teachers' own understanding of the concepts. This is most evident in Sonja's and Anna's cases. In Sonja's case, both she and her students were attempting to articulate the undefined concept of *points of analysis* within the same class period. Within this process, the students' contributions and attempts to verbalize their own understandings also shaped Sonja's emerging conceptualization. For Anna, her students' sources of difficulty choosing topics both expanded her understanding of what could be considered an analytic essay and pushed her to begin to differentiate between her expert knowledge of the genre and the pedagogical representation of the genre she would be teaching. Additionally, for both of these teachers, students' essays, and particularly those essays that were in some way unexpected or hybrid realizations of the genre pushed them to reimagine the range of possible analytic essays.

This result points yet again to the need to study teachers' subject matter as not existing only in teachers' heads, but as shared between participants in the context of teaching. In the case of the analytic essay, neither Sonja nor Anna began the teaching of the unit with a fully pre-determined understanding of the genre or the assignment. Instead, the genre had to be invented between the teachers and students as they adjusted to each other's conceptions and worked to achieve a shared understanding. This process, as Anna noted, is not captured by the metaphor of a teacher "transforming" his or her subject matter knowledge into PCK. Instead, perhaps it is more helpful to think of CK

and PCK coming into existence between students and teachers in the teaching activity itself.

Research Methods as Mediation

One other major implication of this study is the extent to which the research methods themselves proved to be an important source of mediation for the teachers' developing PCK. The stimulated recalls in particular provided the teachers with multiple opportunities to externalize their developing understandings of the content they were teaching with the dialogic mediation of a knowledgeable other. This proved to be especially valuable as the teachers unpacked their intuitive, everyday concepts of the genre and how to teach it and abstracted scientific explanations from these intuitions.

Additionally, the questions in the stimulated recalls consistently drew the teachers' attention to the classroom and the learners as potential sources of content learning. By repeatedly asking teachers to reflect on what their students' contributions could show them about their understanding of the content, the stimulated recalls promoted the kind of reflection on students' contributions that led to opportunities for ongoing learning. This mediation resulted not only in a stronger understanding of this particular content—which would be rather limited in value given the many content concepts teachers need to learn in their careers—but also in the case of Anna contributed to a significant reconceptualization of teaching as learning from students. In other words, the stimulated recalls helped Anna to develop a new awareness of *how* to learn from teaching activity. This result suggests that such structured opportunities for co-reflection that focus on integrating and reflecting on content, students, and pedagogy might have significant potential as a form of teacher supervision and professional development, though Sergei's experience with the stimulated recalls also points to the need to not only provide teachers with opportunities for reflection, but to also investigate ways to more explicitly teach teachers *how* to effectively reflect on their practice. In the case of Sergei, though he encountered the same opportunities for reflective learning, he oriented toward these opportunities as primarily past-focused recollection rather than future-oriented reflection for the sake of development. For teachers with such an orientation, more

explicit modeling and support for the reflection-for-future-development process may be necessary for their reflective activities to become meaningful in a developmental sense.

Role of Underlying Concepts

Finally, the results demonstrate the crucial role teachers' underlying concepts of content and pedagogy play in their development. The conceptions of content held by the teachers were deeply value-laden and influenced not only how teachers planned for instruction but also how they interpreted and responded to their students' learning or lack of learning (Gudmundsdottir, 1990). In the case of Sergei, his conception of writing as grammatical and structural accuracy and pedagogy as a matter of giving and remembering information acted as intuitive screens (Goodman, 1988) through which Sergei interpreted his students' lack of learning in ways that failed to implicate his teaching and thus did not contribute to conceptual development. In contrast, Jennifer's underlying conception of both content and her teaching through her mantra of "there's more than one way" allowed her to readily incorporate new information about her students and her role as a teacher.

In studies of teachers' attempts to learn new content for teaching, several researchers have argued that part of what teachers need to effectively learn new content for teaching is a baseline level of conceptual knowledge of the content. This conceptual knowledge functions as a framework into which teachers can integrate new insights in useful ways (Grossman, Wilson, & Shulman; 1989; Grossman, 1990; Grossman & Thompson, 2008). Though we know that such a framework or foundation is necessary for the ability to learn from teaching, we have not yet reached any consensus on what that framework should be. Based on the results of this study, I would argue that at least part of the framework teachers need in order to successfully learn through teaching experience is a set of appropriate values related to the content they teach. As Sergei's case makes clear, even if we provide teachers with strong intellectual arguments for a particular orientation toward the content, if we do not address the moral and affective aspects of the content in ways that interact with teachers' ideal self-images as teachers, we are unlikely to achieve more than a passing intellectual assent to such new ideas. Future research could fruitfully

examine how such values promote or inhibit teachers' ongoing learning as well as investigating the sources and potentials for adjusting teachers' subject matter values.

Limitations of the Study

The results of this study have demonstrated the how L2 writing teachers' content and pedagogical content knowledge emerged in teaching activity. Additionally, this study has illuminated some of the factors that mediated this developmental process: such as the students' emerging conceptions of the content, the activities of the research methods, and the teachers' underlying, value-laden conceptions of writing and pedagogy. Although these results have a number of implications for future research and teacher education and supervision, it is also important to bear in mind the study's limitations. One limitation of the study is the relatively brief time period it encompassed. While it was possible to see significant development within the one semester of the overall study and the single instructional unit that has been the primary focus of this dissertation, it is not clear how the teachers' development would have continued or changed in subsequent semesters of teaching. Following the close of the data collection, I have had informal conversations with several of the participant teachers who frequently mentioned that they had continued to learn and refine their teaching significantly in the semesters following the study. A study that examines L2 writing teacher development from a more longitudinal perspective would likely yield new and interesting insights about if and how teachers continue to develop CK and PCK in classes that they have taught several times.

An additional limitation of this study relates to the relatively limited range of social interactions for which data were collected. The interactions teachers had in the classroom and with me in the research activities proved to be powerful sources of mediation on their developing PCK. However, in the course of interviews, the teachers also mentioned several additional sites of interaction that they identified as contributing to their development. The sites mentioned included official professional development meetings run by the ESL 015 program director, informal conversations with other teachers in the shared office space, conversations with family members, and graduate classes several of the teachers were taking in the same semester as their teaching. While researchers must always be selective in what data to collect, knowing that it is never

possible to capture a participant's entire experience, future studies that examined a broader range of the activities the teachers identified as contributing to their development, and particularly their interactions with fellow teaching colleagues, could provide an important additional perspectives on teachers' development.

A final limitation of this study is that the students' experiences and learning were not directly examined. In other words, we do not know what, if any, effect the teachers' developing PCK had on their students' learning. In the course of the analytic essay unit, several teachers, particularly Sonja and Anna, changed their explanations of the genre frequently and in some cases drastically from the beginning to the end. It is certainly possible that these changes could have confused or frustrated students who were attempting to produce a target genre that kept changing. Anna herself expressed this concern, worrying that in the process of coming to understand the genre through teaching she may have inadvertently confused her students. What effect these processes had on students remains, in this study at least, a matter of speculation since no data on the students' perspectives or performance in the class were collected. Future research that includes this student perspective would be valuable indeed.

Concluding Remarks

This study represents an important contribution to the small but growing literature examining L2 writing teacher cognition and learning. The findings highlight that teaching L2 writing, particularly for the first time, is a demanding task that requires teachers to externalize their existing often tacit knowledge as writers, to learn new and unfamiliar content, and to integrate their prior knowledge with the knowledge revealed and produced through classroom interactions with their students. The mental work teaching L2 writing represents deserves considerably more research attention. Additionally, this study addressed some of the critiques of previous teacher knowledge research by using a Vygotskian sociocultural approach to study teachers' pedagogical content knowledge as it develops in and is mediated by social activity. This approach has yielded insights regarding the "haphazard, dependent to a certain extent on chance" process of learning through teaching experience (Grossman, 1990, p. 49). It is hoped that this study can serve as both a guide for future research and inform efforts to prepare L2 writing teachers for

and supervise and support them in their futures of learning in and through the activity of teaching.

REFERENCES

- About NWP. (n.d.). Retrieved from <http://www.nwp.org/cs/public/print/doc/about.csp>.
- Analytical vs. argumentative research papers (n.d.) Retrieved <http://www.write.com/writing-guides/research-writing/organization/analytical-vs-argumentative-research-papers/>
- Arshavskaya, E. (2014). Analyzing mediation in dialogic exchanges in a pre-service second language (L2) teacher practicum blog: A sociocultural perspective. *System*, 45, 129–137. doi:10.1016/j.system.2014.05.007
- Arshavskaya, E., & Whitney, A. E. (2014). Promoting pre-service second language (L2) teacher learning via narrative: A sociocultural perspective. *Journal of Language Teaching and Research*, 5(4). doi:10.4304/jltr.5.4.731-741
- Ball, D. L. (2000). Bridging practices: Intertwining content and pedagogy in teaching and learning to teach. *Journal of Teacher Education*, 51, 241-247. doi:10.1177/0022487100051003013
- Ball, D. L. & Feiman-Nemser (1988). Using textbooks and teachers' guides: A dilemma for beginning teachers and teacher educators. *Curriculum Inquiry*, 18(4), 104-423.
- Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, 59, 389- 407. doi: 10.1177/0022487108324554
- Ball, D. L., & Wilson, S. M. (1996). Integrity and teaching: Recognizing the fusion of the moral and intellectual. *American Educational Research Journal*, 33(1), 155-192, doi: 10.3102/00028312033001155
- Barnett, C. (1991). Building a case-based curriculum to enhance pedagogical content knowledge of mathematics teachers. *Journal of Teacher Education*, 42(4), 263-272. doi:10.1177/002248719104200404
- Bausch, L. S. (2010). The power of teachers' writing stories: Exploring multiple layers of reflective inquiry in writing process education. *Journal of Language and Literacy Education*, 6(1), 20–39.
- Bawarshi, A. S., & Reiff, M. J. (2010). *Genre: An introduction to its history, theory, research, and pedagogy*. West Lafayette, IN: Parlor Press.

- Bazerman, C. (1994). Where is the classroom? In *Learning and teaching genre* (pp. 25–30). Portsmouth, NH: Boynton/Cook.
- Beaufort, A. (2004). Developmental gains of a history major: A case for building a theory of disciplinary writing expertise. *Research in the Teaching of English*, 39(2), 136–185.
- Bentley, E. (2013). Supernovas and superheroes: Examining unfamiliar genres and teachers' pedagogical content knowledge. *English Education*, 45(3), 218–246.
- Bencze, L., Hewitt, J., Pedretti, E. (2001). Multi-media case methods in pre-service education: Enabling and apprenticeship for praxis. *Research in Science Education*, 31, 191-209.
- Berkenkotter, C. & Huckin, T. N. (1995). *Genre knowledge in disciplinary communication: cognition, culture, power*. Hillsdale, N.J: L. Erlbaum Associates.
- Bishop, W. (1990). *Something old, something new: College writing teachers and classroom change*. Carbondale, IL: Southern Illinois University Press.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. New York: Continuum.
- Brachter, S., & Stroble, E. J. (1994). Determining the progression from comfort to confidence: A longitudinal evaluation of a National Writing Project site based on multiple data sources. *Research in the Teaching of English*, 28(1), 66–88.
- Brindley, R., & Schneider, J. J. (2002). Writing instruction or destruction: Lessons to be learned from fourth-grade teachers' perspectives on teaching writing. *Journal of Teacher Education*, 53(4), 328–341. doi:10.1177/0022487102053004005
- Calderhead, J. (1981). A psychological approach to research on teachers' classroom decision-making. *British Educational Research Journal*, 7(1), 51-57.
- Canagarajah, A. S. (2002). *Critical academic writing and multilingual students*. Ann Arbor, MI: University of Michigan Press.
- Casanave, C. P. (2004). *Controversies in second language writing: Dilemmas and decisions in research and instruction*. Ann Arbor, MI: University of Michigan Press.

- Conference on College Composition and Communication (1982). *CCCC position statement on the preparation and professional development of teachers of writing*. Retrieved from <http://www.ncte.org/cccc/resources/positions/statementonprep>.
- Childs, S. S. (2011). "Seeing" L2 teacher learning: The power of context on conceptualizing teaching. In *Research on second language teacher education: A sociocultural perspective on development*. New York: Taylor and Francis.
- Clandinin, D. J. (1985). Personal practical knowledge: A study of teachers' classroom images. *Curriculum Inquiry*, 15(4), 361-385.
- Clandinin, D. J. & Connelly, F. M. (1986). Rhythms in teaching: The narrative study of teachers' personal practical knowledge of classrooms. *Teaching and Teacher Education*, 2(4), 377-387.
- Clandinin, D. J. & Connelly, F. M. (1995). *Teachers' professional knowledge landscapes*. New York: Teachers College Press.
- Cochran, K. F., DeRuiter, J. A., & King, R. A. (1993). Pedagogical content knowing: An integrative model for teacher preparation. *Journal of Teacher Education*, 44(4), 263-272. doi:10.1177/0022487193044004004.
- Coxhead, A. & Byrd, P. (2007). Preparing writing teachers to teach the vocabulary and grammar of academic prose. *Journal of Second Language Writing*, 16, 129-147.
- Cumming, A. (2003). Experienced ESL/EFL instructors' conceptions of their teaching: Curriculum options and implications. In B. Kroll (Ed.), *Dynamics of second language writing* (pp. 71-92). Cambridge: Cambridge University Press.
- Devitt, A. J. (2004). *Writing genres*. Carbondale, IL: Southern Illinois University Press.
- Dierking, R. C., & Fox, R. F. (2013). "Changing the way I teach": Building teacher knowledge, confidence, and autonomy. *Journal of Teacher Education*, 64(2), 129-144. doi:10.1177/0022487112462893
- Dobrin, S. (2005). *Don't call it that: The composition practicum*. Urbana, Ill.: National Council of Teachers of English.
- Ebbinghaus, H. (1913). *Memory: A contribution to experimental psychology*. (H. A. Ruger & C. E. Bussenius, New York: Teacher's College, Columbia University. (1855).

- Ebest, S. B. (2005). *Changing the way we teach: Writing and resistance in the training of teaching assistants*. Carbondale, IL: Southern Illinois University Press.
- Elbaz, F. (1981). The teacher's "practical knowledge": Report of a case study. *Curriculum Inquiry, 11*(1), 43-71.
- Elbaz, F. (1983). *Teacher thinking: A study of practical knowledge*. New York: Nichols Publishing.
- Ellis, V. (2007). Taking subject knowledge seriously: From professional knowledge recipes to complex conceptualizations of teacher development. *The Curriculum Journal, 18*(4), 447-462.
- Estrem, H., & Reid, E. S. (2012). What new writing teachers talk about when they talk about teaching. *Pedagogy: Critical Approaches to Teaching Literature Language Composition and Culture, 12*(3), 449-480. doi:10.1215/15314200-1625253
- Evans, N. W., Hartshorn, K. J., & Tuioti, E. A. (2010). Written corrective feedback: Practitioners' perspectives. *International Journal of English Studies, 10*(2), 47-77.
- Farris, C. (1996). *Subject to change: New composition instructors' theory and practice*. Creskill, NJ: Hampton Press.
- Feiman-Nemser, S. & Parker, M. B. (1990). Making subject matter part of the conversation in learning to teach. *Journal of Teacher Education, 41*(3), 32-43, doi:10.1177/00224879004100305
- Fenstermacher, G. D. (1994) The knower and the known: The nature of knowledge in research on teaching. In L. Darling-Hammond (Ed.), *Review of research in education* (pp. 3-56). Washington, DC: American Educational Research Association.
- Ferris, D. (2007). Preparing writing teachers to respond to student writing. *Journal of Second Language Writing, 16*, 165-193.
- Ferris, D. R. & Hedgecock, J. S. (2005). *Teaching ESL composition: Purpose, process, and Practice* (2nd ed.). New York, NY: Routledge.
- Frager, A. M. (1994). Teaching, writing, and identity. *Language Arts, 71*(4), 274-278.
- Freeman, D. & Johnson, K. E. (1998). Reconceptualizing the knowledge-base of language teacher education. *TESOL Quarterly, 32*(3), 397-417.

- Galluzo, G. R. (1999). Consensus and the knowledge base for teaching and teacher education. In Rath, J. D. and McAninch, A. C. (Eds.), *What counts as knowledge in teacher education* (pp. 69–84). Stamford, CT: Ablex.
- Gardner, P. (2014). Becoming a teacher of writing: Primary student teachers reviewing their relationship with writing. *English in Education*, 48(2), 128–148.
doi:10.1111/eie.12039
- Gebhard, M. (2010). Teacher education in changing times: A systemic functional linguistics (SFL) perspective. *TESOL Quarterly*, 44(4), 797–803.
doi:10.5054/tq.2010.237335
- Gebhard, M., Chen, I.-A., Graham, H., & Gunawan, W. (2013). Teaching to mean, writing to mean: SFL, L2 literacy, and teacher education. *Journal of Second Language Writing*, 22(2), 107–124. doi:10.1016/j.jslw.2013.03.005
- Gebhard, M., Harman, R., & Seger, W. (2007). Reclaiming recess: Learning the language of persuasion. *Language Arts*, 84(5), 419–430.
- Golombek, P., & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education*, 39, 102–111. doi:10.1016/j.tate.2014.01.002
- Golombek, P., & Johnson, K. (2004). Narrative inquiry as a mediational space: examining emotional and cognitive dissonance in second-language teachers' development. *Teachers and Teaching: Theory and Practice*, 10(3), 307–327.
doi:10.1080/1354060042000204388
- Goodman, J. (1988). Constructing a practical philosophy of teaching: A study of preservice teachers' professional perspectives. *Teaching and Teacher Education*, 4(2), 121–137. [http://doi.org/10.1016/0742-051X\(88\)90013-3](http://doi.org/10.1016/0742-051X(88)90013-3)
- Grossman, P. L. (1989). A study in contrasts: Sources of pedagogical content knowledge for secondary English. *Journal of Teacher Education*, 40, 24–31.
doi:10.177/002248718904000504.
- Grossman, P. L. (1990). *The making of a teacher: Teacher knowledge & teacher education*. New York: Teachers College Press.

- Grossman, P. L. (1991). The selection and organization of content for secondary English: Sources for teachers' knowledge. *English Education*, 23(1), 39-53.
- Grossman, P. & Thompson, C. (2008). Learning from curriculum materials: Scaffolds for new teachers? *Teaching and Teacher Education*, 24, 2014-2026.
- Grossman, P., Wilson, S. M., & Shulman, L. S. (1989). Teachers of substance: Subject matter knowledge for teaching. In M. Reynolds (Ed.), *Knowledge base for beginning teachers* (pp. 23-36). Washington DC: American Association of Colleges for Teacher Education.
- Gudmundsdottir, S. (1990). Values in pedagogical content knowledge. *Journal of Teacher Education*, 41(3), 44-52. doi:10.1177/002248719004100306
- Gudmundsdottir, S. (1991). Story-Maker, story-teller: Narrative structures in curriculum. *Journal of Curriculum Studies*, 23(3), 207-218.
- Gupta, S. (2012). Stuck on the couch. In Rosa, A. & Escholz, P. (Eds.), *Models for writers: Short essays for composition* (11th ed). (pp. 535-538). Boston: Bedford/St. Martens.
- Hall, A. H., & Grisham-Brown, J. (2011). Writing development over time: Examining preservice teachers' attitudes and beliefs about writing. *Journal of Early Childhood Teacher Education*, 32(2), 148-158.
doi:10.1080/10901027.2011.572230
- Hammerness, K. (2006). *Seeing through teachers' eyes: Professional ideals and classroom practices*. New York: Teachers' College Press.
- Hashweh, M. Z. (2005). Teacher pedagogical constructions: A reconfiguration of pedagogical content knowledge. *Teachers and Teaching: Theory and Practice*, 11(3), 273-292.
- Hawkins, M. R. (Ed.). (2004). *Language learning and teacher education: a sociocultural approach*. Clevedon: Multilingual Matters.
- Heller, J. I., Daehler, K. R., Wong, N., Shinohara, M., & Miratrix, L. W. (2012). Differential effects of three professional development models on teacher knowledge and student achievement in elementary science. *Journal of Research in Science Teaching*, 49(3), 333-362. doi:10.1002/tea.21004

- Hill, H. & Ball, D. L. (2004) Learning mathematics for teaching: Results from California's mathematics professional development institutes. *Journal for Research in Mathematics Education*, 35(5). 330-351.
- Hill, H. & Ball, D. L. (2009). The curious – and crucial – case of mathematical knowledge for teaching. *The Phi Delta Kappan*, 91(2), 68-71.
- Hill, H., Blunk, M. L., Charalambous, C. Y., Lewis, J. M., Phelps, G. C., Sleep, L., & Ball, D. L. (2008). Mathematical knowledge for teaching and the mathematical quality of instruction: An exploratory study. *Cognition and Instruction*, 26, 430-511. doi:10.1080/07370000802177235.
- Hill, H. C., Rowan, B. & Ball, D. L. (2005). Effects of teachers' mathematical knowledge for teaching on student achievement. *American Educational Research Journal*, 42(2), 371-406.
- Hirvela, A. & Belcher, D. (2007). Writing scholars as teacher educators: Exploring writing teacher education. *Journal of Second Language Writing*, 16, 125-128.
- Hyland, K. (2003a). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing*, 12(1), 17–29. doi:10.1016/S1060-3743(02)00124-8
- Hyland, K. (2003b). *Second language writing*. Cambridge, UK: Cambridge University Press.
- Hyland, K. (2007). Genre pedagogy: language, literacy and L2 writing instruction. *Journal of Second Language Writing*, 16, 148-164.
- Hyon, S. (1996). Genre in three traditions: Implications for ESL. *TESOL Quarterly*, 30(4), 693–722.
- Johns, A. M. (2011). The future of genre in L2 writing: Fundamental, but contested, instructional decisions. *Journal of Second Language Writing*, 20(1), 56–68. doi:10.1016/j.jslw.2010.12.003
- Johnson, K. E. (2009). *Second language teacher education: A sociocultural perspective*. New York: Routledge.
- Johnson, K.E. & Arshavskaya, E. (2011). Reconceptualizing the micro-teaching simulation in an MA TESL course. In K.E. Johnson & P.R. Golombek (Eds.).

- Research on Second Language Teacher Education: A Sociocultural Perspective on Professional Development.* (pp 168-186) New York: Routledge.
- Johnson, K. E., & Golombek, P. R. (2003). "Seeing" teacher learning. *TESOL Quarterly*, 37(4), 729–737.
- Johnson, K. E., & Golombek, P. R. (Eds.). (2011). *Research on second language teacher education: a sociocultural perspective on professional development.* New York: Routledge.
- Johnson, K. E. & Worden, D. (2014). Cognitive/emotional dissonance as potential *growth points* in learning to teach. *Language and Sociocultural Theory*. doi:10.1558/lst.v1i2.125.
- Junquiera, L. & Kim, Y. (2013). Exploring the relationship between training, beliefs, and teachers' corrective feedback practices: A case study of a novice and an experienced ESL teacher. *The Canadian Modern Language Review/La Revue canadienne des langues vivantes*, 69(2), 181-206. doi:10.3138/cmlr.1536
- Kaplan, J. S. (2008). The National Writing Project: Creating a professional learning community that supports the teaching of writing. *Theory into Practice*, 47(4), 336–344. doi:10.1080/00405840802329391
- Khanalizadeh, B., & Allami, H. (2012). The impact of teachers' beliefs on EFL writing instruction. *Theory and Practice in Language Studies*, 2(2), 334–342. doi:10.4304/tpls.2.2.334-342
- Kim, H. & Hannafin, M. J. (2008). Situated case-based knowledge: An emerging framework for prospective teacher learning. *Teaching and Teacher Education*, 24, 1837-1845.
- Kinginger, C. (2002). Defining the zone of proximal development in US foreign language education. *Applied Linguistics*, 23(2), 240–261.
- Kozulin, A. (1998). *Psychological tools: A sociocultural approach to education.* Cambridge, MA: Harvard University Press.
- Kozulin, A. (2002). Sociocultural Theory and the Mediated Learning Experience. *School Psychology International*, 23(1), 7–35. doi:10.1177/0143034302023001729

- Krauss, S., Brunner, M., Kunter, M., Baumert, J., Blum, W., Neubrand, M., & Jordan, A. (2008). Pedagogical content knowledge and content knowledge of secondary mathematics teachers. *Journal of Educational Psychology, 100*(3), 716–725. <http://doi.org/10.1037/0022-0663.100.3.716>
- Krest, M. (1990). The reflective writing teacher and the application of knowledge. *The English Journal, 79*(5), 18–24.
- Kubanyiova, M. (2012). *Teacher development in action: Understanding language teachers' conceptual change*. New York: Palgrave Macmillan.
- Lantolf, J. P. (2004). Sociocultural theory and second and foreign language learning: An overview of sociocultural theory. In K. van Esch and O. St. John (eds.). *New insights into foreign language learning and teaching*. Frankfurt am Main: Peter Lang.
- Lantolf, J. P., & Beckett, T. G. (2009). Sociocultural theory and second language acquisition. *Language Teaching, 42*(04), 459. doi:10.1017/S0261444809990048
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. New York: Oxford University Press, USA.
- Lee, I. (2003). L2 writing teachers' perspectives, practices and problems regarding error feedback. *Assessing Writing, 8*(3), 216–237. doi:10.1016/j.asw.2003.08.002
- Lee, I. (2004). Error correction in L2 secondary writing classrooms: The case of Hong Kong. *Journal of Second Language Writing, 13*, 285-312. doi:10.1016/j.jslw.2004.08.001
- Lee, I. (2009). Ten mismatches between teachers' beliefs and written feedback practice. *ELT Journal, 63*(1), 13-23. doi:10.1093/elt/ccn010
- Lee, I. (2010). Writing teacher education and teacher learning: Testimonies of four EFL teachers. *Journal of Second Language Writing, 19*(3), 143–157. doi:10.1016/j.jslw.2010.05.001
- Lee, I. (2013). Becoming a writing teacher: Using “identity” as an analytic lens to understand EFL writing teachers' development. *Journal of Second Language Writing, 22*(3), 330–345. doi:10.1016/j.jslw.2012.07.001

- Lee, E., & Luft, J. A. (2008). Experienced secondary science teachers' representation of pedagogical content knowledge. *International Journal of Science Education*, 30(10), 1343–1363. <http://doi.org/10.1080/09500690802187058>
- Leki, I. (2006). The legacy of first-year composition. In P. K. Matsuda, C. Ortmeier-Hooper, & X. You (Eds.), *The politics of second language writing: In search of the promised land* (pp. 59-74). West Lafayette, IN: Parlor Press.
- Lin, P. (2002). On enhancing teachers' knowledge by constructing cases in classrooms. *Journal of Mathematics Teacher Education*, 5, 317-349.
- Locke T. (2015). *Developing writing teachers: Practical ways for teachers-writers to transform their classroom practice*. New York: Routledge.
- Lortie, D. C. (1975). *Schoolteacher: a sociological study*. Chicago: University of Chicago Press.
- Luhrmann, T. M. (2013, September 19). The violence in our heads. *The New York Times*. Retrieved from <http://www.nytimes.com/>.
- Martin, J. R. (2009). Genre and language learning: A social semiotic perspective. *Linguistics and Education*, 20(1), 10-21. doi:10.1016/j.linged.2009.01.003
- McQuitty, V. (2012). Emerging possibilities: A complex account of learning to teach writing. *Research in the Teaching of English*, 46(4), 353–389.
- Michigan Corpus of Upper-level Student Papers. (2009). Ann Arbor, MI: The Regents of the University of Michigan.
- Millican, J. S. (2013). Describing instrumental music teachers' thinking: Implications for understanding pedagogical content knowledge. *Update: Applications of Research in Music Education*, 31(2), 45–53. <http://doi.org/10.1177/8755123312473761>
- Min, H.-T. (2013). A case study of an EFL writing teacher's belief and practice about written feedback. *System*, 41(3), 625–638. doi:10.1016/j.system.2013.07.018
- Monte-Sano, C. (2011). Learning to open up history for students: Preservice teachers' emerging pedagogical content knowledge. *Journal of Teacher Education*, 62(3), 260-272. doi:10.1177/0022487110397842.

- Montgomery, J. L., & Baker, W. (2007). Teacher-written feedback: Student perceptions, teacher self-assessment, and actual teacher performance. *Journal of Second Language Writing, 16*, 82-99. doi:10.1016/j.jslw.2007.04.002.
- Mosenthal, J. H. & Ball, D. L. (1992). Constructing new forms of teaching: Subject matter knowledge in inservice teacher education. *Journal of Teacher Education, 43*, 347-356. doi:10.1177/0022487192043005004
- Newell, G. E., & Connors, S. P. (2011). “Why do you think that?” A supervisor’s mediation of a preservice English teacher’s understanding of instructional scaffolding. *English Education, 43*(3), 225–261.
- Nuangchalerm, P. (2012). Enhancing pedagogical content knowledge in preservice science teachers. *Higher Education Studies, 2*(2).
<http://doi.org/10.5539/hes.v2n2p66>
- Park, S. & Oliver, J. S. (2008). Revisiting the conceptualization of pedagogical content knowledge (PCK): PCK as a conceptual tool to understand teachers as professionals. *Research in Science Education, 38*, 261-284. doi:10.1007/s11165-007-9049-6
- Pella, S. (2011). A situative perspective on developing writing pedagogy in a teacher professional learning community. *Teacher Education Quarterly, 107–125*.
- Power, B. M. (1997). *Long roads short distances: Teaching writing and writing teachers*. Portsmouth, NH: Heinemann.
- Pritchard, R. J. (1987). Effects on student writing of teacher training in the National Writing Project model. *Written Communication, 4*(1), 51–67.
- Ramanathan, V., & Kaplan, R. B. (2000). Genres, authors, discourse communities: Theory and application for (L1 and) L2 writing instructors. *Journal of Second Language Writing, 9*(2), 171–191. doi:10.1016/S1060-3743(00)00021-7
- Reid, E. S. (2009). Teaching writing teachers writing: Difficulty, exploration, and critical reflection. *College Composition and Communication, 61*(2), 197–221.
- Reid, E. S. (2011). Preparing writing teachers: A case study in constructing a more connected future for CCC and NCTE. *College Composition and Communication, 62*(4), 687–703.

- Restaino, J. (2012). *First semester graduate students, teaching writing, and the challenge of the middle ground*. Carbondale, IL: Southern Illinois University Press.
- Rosiek, J. (2003). Emotional scaffolding: An exploration of the teacher knowledge at the intersection of student emotion and the subject matter. *Journal of Teacher Education*, 54(5), 399-412. doi:10.1177/0022487103257089.
- Saito, K. (2014). Experienced teachers' perspectives on priorities for improved intelligible pronunciation: The case of Japanese learners of English: Priorities for improved pronunciation. *International Journal of Applied Linguistics*, 24(2), 250–277. doi:10.1111/ijal.12026
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- Schön, D. A. (1995). Knowing-in-action: The new scholarship requires a new epistemology. *Change, November/December*, 27-35.
- Sengupta, S., & Falvey, P. (1998). The role of the teaching context in Hong Kong English teachers' perceptions of L2 writing pedagogy. *Evaluation & Research in Education*, 12(2), 72–95. doi:10.1080/09500799808666933
- Silva, T. & Leki, I. (2004). Family matters: The influence of applied linguistics and composition studies of second language writing studies—past, present, and future. *Modern Language Journal*, 88(1), 1-13. doi:10.1111/j.0026-7902.2004.00215x.
- Shi, L., & Cumming, A. (1995). Teachers' conceptions of second language writing instruction: Five case studies. *Journal of Second Language Writing*, 4, 87-111.
- Shin, S. J. (2002). Understanding ESL writers: Second language writing by composition instructors. *Teaching in the two year college*, 30(1). 68-75.
- Shin, S. (2003). The reflective L2 writing teacher. *ELT Journal*, 57(1), 3–11.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Shulman, L. S. & Shulman, J. H. (2004). How and what teachers learn: A shifting perspective. *Journal of Curriculum Studies*, 36(2). 257-271.

- Simmerman, S., Harward, S., Pierce, L., Peterson, N., Morrison, T., Korth, B., & Shumway, J. (2012). Elementary teachers' perceptions of process writing. *Literacy Research and Instruction, 51*(4), 292–307.
doi:10.1080/19388071.2011.557764
- Singh, G., & Richards, J. C. (2006). Teaching and learning in the language teacher education course room: A critical sociocultural perspective. *RELC Journal, 37*(2), 149–175. doi:10.1177/0033688206067426
- Smagorinsky, P., Cook, L. S., & Johnson, T. S. (2002). The twisting path of concept development in learning to teach. *Teachers College Record, 105*(8), 1399–1436.
- Smagorinsky, P., Rhym, D., & Moore, C. P. (2013). Competing centers of gravity: A beginning English teacher's socialization process within conflictual settings. *English Education, 45*(2).
- Smagorinsky, P., Wilson, A. A., & Moore, C. (n.d.). Teaching grammar and writing: A beginning teacher's dilemma. *English Education, 43*(3), 262–292.
- Sockett, H. T. (1987). Has Shulman got the strategy right? *Harvard Educational Review, 57*(2), 208-219.
- Stankevich, D. M. (2011). *Getting it in writing: Quests to become outstanding and effective writing teachers*. Charlotte, NC: Information Age Publishing.
- Streeck, J. (2013). Interaction and the living body. *Journal of Pragmatics, 46*(1), 69-90.
- Street, C. (2003). Pre-service teachers' attitudes about writing and learning to teach writing: Implications for teacher educators. *Teacher Education Quarterly, 30*(3), 33–50.
- Swackhamer, L. E., Koellner, K., Basile, C., & Kimbrough, D. (2009). Increasing the self-efficacy of inservice teachers through content knowledge. *Teacher Education Quarterly, 36*(2), 63–78.
- Swales, J. M. (2004). *Research genres: Explorations and applications*. New York: Cambridge University Press.
- Tardy, C. M. (2009). *Building genre knowledge*. West Lafayette, IN: Parlor Press.

- Verity, D. (Comp.). (2013). *Teaching ESL 015 Composition for American Academic Communication II: A handbook for instructors*. State College, PA: ESL/EAP Programs Department of Applied Linguistics, The Pennsylvania State University.
- Tobin, K. (1987). The role of wait time in higher cognitive level learning. *Review of Educational Research*, 57(1), 69-95. doi:10.3102/00346543057001069
- Tremmel, R., & Broz, W. (2002). *Teaching writing teachers of high school English & first-year composition*. Portsmouth, NH: Boynton/Cook.
- Tsui, A. B. M. (2003). *Understanding expertise in teaching: Case studies of second language teachers*. New York: Cambridge University Press.
- Tsui, A. B. M., & Ng, M. M. Y. (2010). Cultural contexts and situated possibilities in the teaching of second language writing. *Journal of Teacher Education*, 61(4), 364–375. doi:10.1177/0022487110364855
- Valencia, S. W., Place, N. A., Martin, S. D., & Grossman, P. L. (2006). Curriculum materials for elementary reading: Shackles and scaffolds for four beginning teachers. *The Elementary School Journal*, 107(1), 93-120.
- van Driel, J. H. & Berry, A. (2012). Teacher professional development focusing on pedagogical content knowledge. *Educational Researcher*, 41(1), 26-28. doi:10.3102/0013189X11431010
- Van Driel, J. H., Jong, O. D. and Verloop, N. (2002). The development of preservice chemistry teachers' pedagogical content knowledge. *Science Education*, 86(4), 572–590. doi: 10.1002/sce.10010
- Verloop, N., Van Driel, J., & Meijer, P. (2001). Teacher knowledge and the knowledge base of teaching. *International Journal of Educational Research*, 35, 441-461.
- Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Ed.). Cambridge, Mass: MIT Press.
- Welch, N. (1993). Resisting the faith: Conversion, resistance, and the training of teachers. *College English*, 55(4), 387–401
- Weigle, S. C. (2007). Teaching writing teachers about assessment. *Journal of Second Language Writing*, 16, 194-209.

- Wells, G. (1999). *Dialogic inquiry: Towards a sociocultural practice and theory of education*. New York: Cambridge University Press.
- Wertsch, J. V. (1985). *Vygotsky and the social formation of mind*. Cambridge, MA: Oxford University Press, USA.
- Wertsch, J. V. (1989). A sociocultural approach to mind: Some theoretical considerations. *Cultural Dynamics*, 2(2), 140–161.
doi:10.1177/092137408900200202
- Wertsch, J. V. (1995). The need for action in sociocultural research. In J. V. Wertsch, P. del Río, & A. Alvarez (eds.). *Sociocultural studies of mind*. Cambridge: Cambridge University Press.
- Wertsch, J. V. (2007). Mediation. In H. Daniels, M. Cole, & J. V. Wertsch (eds.). *The Cambridge companion to Vygotsky*. New York: Cambridge University Press.
- Whitney, A. (2008). Teacher transformation in the National Writing Project. *Research in the Teaching of English*, 43(2), 144–188.
- Whitney, A. E. (2009). Writer, teacher, person: Tensions between personal and professional writing in a National Writing Project summer institute. *English Education*, 235–258.
- Whitney, A. E., & Friedrich, L. (2013). Orientations for the teaching of writing: A legacy of the National Writing Project. *Teachers College Record*, 115, 1–37.
- Whyte, A. et. al. (2007). The National Writing Project, teachers' writing lives, and student achievement in writing. *Action in Teacher Education*, 29(2), 5–16.
- Wilson, S. M., Shulman, L. S., & Richert, E. R. (1987). '150 different ways' of knowing: Representations of knowledge in teaching. In J. Calderhead (Ed.), *Exploring teachers' thinking* (pp. 104-124). New York: Taylor & Francis.
- Winer, L. (1992). "Spinach to chocolate": Changing awareness and attitudes in ESL writing teachers. *TESOL Quarterly*, 26(1). 57-80.
- Woods, D. (1996). *Teacher cognition in language teaching: Beliefs, decision-making, and classroom practice*. New York: Cambridge University Press.

- Yang, L., & Gao, S. (2013). Beliefs and practices of Chinese university teachers in EFL writing instruction. *Language, Culture and Curriculum*, 26(2), 128–145.
doi:10.1080/07908318.2013.794817
- Yigitoglu, N., & Belcher, D. (2014). Exploring L2 writing teacher cognition from an experiential perspective: The role learning to write may play in professional beliefs and practices. *System*, 47, 116–124. doi:10.1016/j.system.2014.09.021
- Yancey, K. B., Robertson, L., & Taczak, K. (2014). *Writing across contexts: Transfer, composition, and sites of writing*. Logan, UT: Utah State University Press.
- You, X. (2004). “The choice made from no choice”: English writing instruction in a Chinese University. *Journal of Second Language Writing*, 13(2), 97–110.
doi:10.1016/j.jslw.2003.11.001
- Zembylas, M. (2007). Emotional ecology: The intersection of emotional knowledge and pedagogical content knowledge in teaching. *Teaching and Teacher Education*, 23, 355-367.

APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDES

Interview 1 – Teacher History, Goals for Student Learning

- What languages do you speak?
- What kind of teaching experiences do you have?
- What do you remember about learning to write?
- How would you describe yourself as an academic writer?
- What do you use writing for in your life now?
- If you ran into one of your students 5 years after they finished your course, what would you most want them to say about your class?
- Do you think writing is an important skill for your students to learn? Why or why not?
- If a student asked you to describe an excellent academic paper, what would you say?
- How do novices, like your students, become successful writers? What skills, abilities, attitudes, beliefs, etc. . . must they develop?

Interview 2 – Focusing on Curriculum

Please walk me through your syllabus and explain your thinking about the various elements of your course. You don't have to comment on everything in your syllabus, only those elements that you consider important to how you are teaching the course. Below are some questions to consider as you comment on these elements of your course. Don't feel like you have to use them or answer all of them for any element. Focus on what is most important to you as you think about this aspect of your course design.

- How do you understand this part of the assigned curriculum? Can you put it in your own words?
- What do you think is the purpose of this element of your course? What do you hope students will get from this element of the course?
- What potential challenges do you anticipate the students may have with this element of the course?

- What potential challenges do you anticipate you might face with this element of the course?
- How do you see this element connecting with the other elements in the course?
- Is this element of the course more or less important than the other elements in the course? Why?
- Do you have any lingering questions or doubts about this element of the course?

Interview 3 – Pre-Unit Goals and Curriculum

Explain to participant that we will be discussing their goals and plans for the analytic essay unit. While I have some questions, they are also welcome to bring up anything that they would like to talk through as they plan their unit. They should see this interview as part interview but also part co-planning of the goals of the unit.

- How is/are your class(es) going so far this semester? How do you think your students have interacted with your goals and your teaching so far?
- What are your goals for the analytic essay unit? What do you most hope your students will learn and be able to do by the end of the unit?
 - Can you describe the starting point for this unit? What do you think your students have learned so far in the course? What do you think they still need more work on? What will you be introducing in this unit?
- How would you describe a successful analytic essay? What are the features of this kind of essay that distinguish it from what the students have already written and what they will write next?
- How do you anticipate your students will respond to this unit? What do you think will be easy or challenging for them? Why?
- Let's look at the plans you have in place so far. Can you explain your thinking about these plans to me?
 - What are your goals?
 - What are you anticipating?
 - What do you still have questions about?

Interview 4 – Reflecting on the unit as a whole:

- Overall, do you think you have learned anything through teaching this unit (about writing, about analytic essays, about students, etc. . .)? If yes, what have you learned? As best as you can remember, what experiences contributed to this learning?
- Think back to the beginning of the unit.
 - What were your goals for the unit in terms of your students learning?
 - Do you think these goals were met?
 - The next time you teach this unit, what goals will you have for your students learning?
 - Are any of these goals different than those you had at the beginning of this unit?
 - What is different?
 - What do you think contributed to any changes in how you think about the goals of this essay?
- How would you describe a successful analytic essay now, after having taught the unit?
- What do you think was easy or challenging for the students in this unit? Was there anything about how your students responded to this unit that you had not anticipated? What? If/when you teach the unit again, will you do anything different based on what you learned about your students response?

Interview 5 – Post-teaching curriculum and goals reflection

Please walk me through your syllabus and explain your thinking about the various elements of your course. You don't have to comment on everything in your syllabus, only those elements that you now consider important or noteworthy elements of the curriculum. Below are some questions to consider as you comment on these elements of your course. Don't feel like you have to use them or answer all of them for any element. Focus on what is most important to you as you think about this aspect of your course design.

- How do you understand this part of the assigned curriculum now, having just taught the course? Can you put it in your own words? Do you feel that your understanding of this element of the course has changed from the beginning of the semester? How?
- If you were to teach this course again, what would you hope your students would learn from this particular element of the class? Is this different than your goals for this past semester?
- What challenges did your students have with this element of the course? Did you expect these challenges, or were they surprising to you?
- What challenges did you face as you taught this element of the course? Did you expect these challenges, or were they surprising to you?
- How do now you see this element connecting with the other elements in the course?
- Is this element of the course more or less important than the other elements in the course? Why?
- Do you have any lingering questions or doubts about this element of the course?

Reflecting on the course overall

- Think back on the course as a whole. What do you think your students have learned in your class?
- What do you think you have learned (about writing, students, teaching, etc.) through teaching the course this semester?
- If you were to teach this course again, what would you hope that your students would learn?
- Again, thinking toward future courses, do you think writing is an important skill for your students to learn? Why or why not?
- If a future student asked you to describe an excellent academic paper, what would you say?

- How do novices, like your future students, become successful writers? What skills, abilities, attitudes, beliefs, etc. . . must they develop?

APPENDIX B: CONCEPT MAP PROMPTS

Concept Map 1 – Pre-Teaching Goals for Student Learning

What are your goals for your students' learning? Draw a concept map that depicts what you want your students to learn in your class. Feel free to use circles, lines, and abbreviations.

Concept Map 2 – Curriculum Concept Map

Please draw a concept map of how you envision the curriculum of your course. In particular, please focus on how the elements of your course (i.e. assignments, policies, materials, etc. . .) connect with each other and with your goals and objectives for the course. Feel free to use abbreviations and shorthand as you draw, and to use your syllabus as a guide.

Concept Map 3 – Curriculum of Analytic Essay Unit

Please draw a concept map of how you envision the curriculum of this unit. In particular, please focus the connections between your overall goals for the unit (what you want your students to learn and be able to do) and the activities, topics, materials, etc that you are including in your schedule. Feel free to use abbreviations, shorthand, and other symbols as you draw.

Concept Map 4 – Curriculum of the Analytic Essay Unit – Post-teaching

If you were to teach this unit again, how might you envision the curriculum? Draw a visual representation of this curriculum. In particular, focus on the connections between your overall goals for the unit (what you want your students to learn and be able to do) and the activities, materials, etc. . . that you are including in your schedule. Feel free to use abbreviations, shorthand, and other symbols as you draw.

Concept Map 5 – Post-Teaching Goals for Student Learning

If you were teaching this course again, what would be your goals for your students' learning? Draw a concept map that depicts what you would want your students to learn in your class. Feel free to use circles, lines, and abbreviations.

APPENDIX C: STIMULATED RECALL QUESTION BANKS

Stimulated Recalls 1 and 2 Questions

Introducing my goals for the stimulated recalls:

My research interests are related broadly to how teachers understand and teach content. I have chosen some clips from the previous week of your teaching in which you and your students are engaged with the content of the unit. I am going to play these clips and then ask you to reflect on what you see happening in these moments. Some general things to consider are:

- What do you remember thinking about as you were engaged in these moments of teaching?
- What were you trying to accomplish (i.e. what were your goals) in this moment?
- How do you understand the concept you or your students are interacting with?
- How did you understand your student's comment or question in the moment?
- How do you understand that comment or question now?
- What does this moment show you about the nature of the concept you are teaching?
- What does this moment show you about how your students understand the concept you are teaching?

Stimulated Recall 3 Questions

Look at 1-3 commented drafts

- Can you tell me a bit about how you think about this essay and how you approached grading these essays?
- In what way(s) does this essay demonstrate that the student has learned what you hoped he or she would learn in this unit?
- In what way(s) does this essay demonstrate that the student has not learned what you hoped he or she would learn in this unit?

- Can you show me some examples of the comments you have made on the grading sheet in the actual essays?
- What does this essay show you about the nature of the concept you are teaching?
- What does this essay show you about how your student understands the concepts you are teaching?
- How might this essay influence what you do in the class in the future

APPENDIX D: TRANSCRIPTION CONVENTIONS

Broad Verbatim Transcription Conventions

(.) very short pause

(2) timed pause

[**word** overlapping talk

=**word** latching

(**word**) indicates a guess at unclear or unintelligible talk

() talk occurs but is completely unintelligible

((**laughter**)) paralinguistic elements like laughter, gaze, or physical actions

wo(h)rd indicates the word is expressed with laughter

wor- a word or stream of speech that has been cut off

wo:rd indicates elongation of a sound

word a stressed word or syllable

<**word**> speech is slower than surrounding

>**word**< speech is faster than surrounding

, slightly rising intonation

? strongly rising intonation

. falling intonation

gesture indicates a gesture in the absence of speech

{*gesture*} indicates a gesture overlapping with speech

Dorothy Worden

Curriculum Vitae

EDUCATION

Ph.D.	The Pennsylvania State University <i>Applied Linguistics</i> Chair: Dr. A. Suresh Canagarajah	August 2015
M.A.	Washington State University <i>English Composition and Rhetoric</i>	2008
B.A.	Whitworth University <i>English and Theatre</i>	2005

PUBLICATIONS

Worden, D. (in press). Developing writing concepts for teaching purposes: Preservice L2 writing teachers' developing conceptual understanding of parallelism. *The Journal of Second Language Writing*

Worden, D. (in press). The development of content knowledge through teaching practice. *Ilha do desterro: A journal of English language, literature in English and Cultural Studies*

Worden, D., Schreiber, B., Kurtz, L., Kaczmarek, M. & Lee, E. (2015). Graduate students creating a faculty development workshop on multilingual writing pedagogy. *Teaching/Writing: The Journal of Writing Teacher Education.*

Johnson, K. E. & **Worden, D.** (2014). Cognitive/emotional dissonance as potential *growth points* in learning to teach. *Language and Sociocultural Theory.* doi:10.1558/1st.v1i2.125.

Worden, D. (2013). Afterword: Reflections from the ground floor. In A. S. Canagrajah (Ed.), *Literacy as translanguaging practice: Between communities and classrooms.* (pp. 235-238). New York: Routledge.

Worden, D. L. (2009). Finding process in product: Prewriting and revision in timed essay responses. *Assessing Writing, 14*(3), 157-177. doi:10.1016/j.asw.2009.09.003

AWARDS AND HONORS

2015	Educational Testing Service Graduate Student Award, American Association for Applied Linguistics
2014	RGSO Dissertation Support Grant, College of Liberal Arts, Penn State University
2013	Gilbert R. Watz Graduate Fellowship in Languages & Linguistics, Department of Applied Linguistics, Penn State University
2011	Outstanding Instructor, Learning Edge Academic Program, Penn State University