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Building a Third Space: How Academic Language Knowledge Helps Pre-Service Teachers Develop Content Literacy Practices

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**BUILDING A THIRD SPACE: HOW ACADEMIC LANGUAGE KNOWLEDGE
HELPS PRE-SERVICE TEACHERS DEVELOP CONTENT LITERACY
PRACTICES**

A Dissertation Presented

By

ERIK J. SUSSBAUER

Submitted to the Graduate School of the University of Massachusetts at Amherst
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

May 2013

School of Education

Teacher Education and School Improvement

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**BUILDING A THIRD SPACE: HOW ACADEMIC LANGUAGE
KNOWLEDGE HELPS PRE-SERVICE TEACHERS DEVELOP CONTENT
LITERACY PRACTICES**

A Dissertation Presented

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ABSTRACT

BUILDING A THIRD SPACE: HOW ACADEMIC LANGUAGE KNOWLEDGE
HELPS PRE-SERVICE TEACHERS DEVELOP CONTENT LITERACY PRACTICES

MAY 2013

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Though attention to academic language is a key component of the Teacher Performance Assessment and the new Common Core Standards, little has been researched regarding how pre-service teachers build academic language knowledge and integrate it into their practice teaching experience. This study focuses on the construction and delivery of academic language knowledge to pre-service teachers in a one year immersion teacher preparation program. It studies the pre-service teachers' use of academic language knowledge in their planning, teaching, and assessment throughout a practicum and clinical experience, as well as their use of academic language knowledge as part of reflective practice. Through analysis of classroom observation notes, interviews, and artifacts, the data show that after receiving instruction on academic language concepts in the areas of content-area terminology and language use, reading, and writing, pre-service teachers consciously integrated an attention to the terminology and language use of their content area into their practicum experience. However, faced

with understanding themselves as teachers while navigating their mentor teacher's expectations, learning the curriculum they are teaching, and developing classroom management skills, etc., attention to academic language instruction in reading and writing was limited. Recognition that content-area terminology and language use is key to accessing content, though, influenced reflection on how content knowledge is accessed. This conscious understanding of the role terminology and language use plays in accessing content knowledge opened the door for a deeper reflection on the role academic language plays in the classroom. And, during their post-practicum clinical experience, these pre-service teachers were able to more knowledgeably reflect on how to integrate specific content-area reading and writing instruction into curriculum. These conclusions suggest that an introduction to academic language concepts and practices can reveal "blind spots" that enable pre-service teachers to better address content-area literacy in their future practice. They also suggest that more focus in academic language instruction in teacher education programs could help pre-service teachers more efficiently learn the complexities of their new role.

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CHAPTER 1

INTRODUCTION

There are basic inherent ideas [about ELA] I'm just now reaching back and analyzing. It's like one of those Russian stacking dolls, where I've been at the smallest doll for the last 10 years, and now I'm looking back at the bigger dolls, and I haven't looked at them for so long that I've forgotten that they all fit together.

ELA Student Teacher from Bridges to the Future 2011-2012 Cohort

Background

An elusive goal for educators has always been how to teach the content of their courses when their students' literacy abilities vary so widely. This issue has taken on new gravitas in recent years as the nation's students continue to rank lower than other countries in education. Therefore, in an effort to force changes, accountability across educational systems has been at the forefront of discussion for the past several years from government education boards as they seek hard data from which to make tough decisions in a weak economy on how to improve education, for K-12 to teacher education programs. For example, the federal *Higher Education Act* calls for university evaluations to be partially based on graduates' performance and test scores (Darling-Hammond, 2006), and the National Council for Accreditation of Teacher Education (NCATE) requires programs to align pre-service teacher instruction and assessment with teacher accreditation standards (Darling-Hammond, 2006). Similarly, K-12 school systems

continue to work on teacher evaluation systems that include data from standardized test scores based on new Common Core Standards, standards that are to be implemented by 2014 in Massachusetts schools.

In teacher-education programs this has translated to a search for better ways to assess pre-service teachers—ways that include data that show these teachers are prepared for the classroom. The assessment that has gained a great deal of traction is the Teacher Performance Assessment (TPA), a comprehensive portfolio assessment originating at Stanford University. At the University of Massachusetts, the TPA has been piloted for two years, and the university has tentative plans to implement it fully within the next two years. This implementation poses many complicated problems and challenges as teacher-educators face the daunting task of evaluating their own practices to assure their curriculum is aligned with the standards set by the TPA. An area of the TPA that has caused some particular confusion is the concept of academic language.

Academic language, a concept that has been around since the 1970's in one form or another in ESL and ELL circles as a key component to helping students achieve success in content areas, is somewhat of a foreign concept to teachers outside of these areas and special education. However, even though academic language is a new concept for mainstream academic teachers in K-12 and a new concept for many teacher educators, the fact that pre-service teachers will nevertheless be assessed on their knowledge of it suggests it is a knowledge that new teachers are expected to have. And, though attention to academic language is a key component of the Teacher Performance Assessment, and its synonymous content-area literacy is a key component of the new Common Core Standards, little has been researched regarding how pre-service teachers build academic

language knowledge in their content areas and integrate it into their practicum experience. Therefore, the goal of this study is to peek into that door and learn how pre-service access, understand, and implement this knowledge.

Purpose of Study

Because academic language/content-area literacy is an integral part of new standards and assessments across education, and assessments on these new standards will be a significant portion of teacher evaluations, there is clearly a need for research on how pre-service teachers know and understand the language of their content area and how to teach it. A significant part of this is differentiating *when* student teachers access knowledge of their content area literacy from *when* and *how* they integrate this knowledge into their teaching.

Context

This research was conducted through a one year immersion program. Because the pre-service teachers in this program participate in a year-long teacher residency, how academic language knowledge was utilized could be studied over a whole year versus the fourteen or fifteen weeks of a traditional teacher preparation program. The pre-service teachers in this program take a full load of university coursework for the year as they achieve a master's degree, while simultaneously completing a teacher residency in a rural or suburban middle or secondary school. The participants cycle through three phases of practice teaching during their residency. The pre-practicum phase occurs in the first one to two months of the school year, where pre-service teachers observe their mentor teacher and begin to participate in some aspects of teaching. The practicum phase follows from the middle of October to the midpoint of the secondary school year, as teachers take over

full teaching responsibilities while being mentored by their mentor teacher and a university supervisor. In the final clinical phase, occurring for the full second half of the K-12 school year, pre-service teachers continue to take on full teaching responsibilities and continue to work closely with their mentor teacher.

The particular university course that was observed, and in which academic language lessons were taught, was chosen because the full cohort of students, from multiple subject fields, took this class. Additionally, this cohort of pre-service teachers was selected to be participants in a national pilot of the Teacher Performance Assessment.

Research Questions

The main questions for this study are:

1. How do pre-service teachers build academic language knowledge through instruction in a university teacher preparation course designed to facilitate implementation of the Teacher Performance Assessment?
2. How do pre-service integrate academic language knowledge into their planning, instruction, assessment, and reflection at various stages of their fall teaching practicum?
3. How do pre-service teachers integrate academic language knowledge into planning, instruction, assessment, and reflection in their clinical teaching phase?

4. What influence on planning, instruction, assessment, and reflection does academic language knowledge have, as reported by pre-service teachers, throughout their immersion experience?

Rationale and Significance of Study

Data from TPA pilot studies and text from the TPAC shows that understanding how to teach academic language knowledge is easier said than done. Linguists have demonstrated through genre-based pedagogy that there are clear linguistic differences in content specific texts, and that these language moves have to be unlocked in order for students to make meaning. And as the new Common Core standards (2011) and the Teacher Performance Assessment standards demand, all teachers have to be literacy teachers. While, as Heath (1983) and others have noted, a small percentage of students come into school with skills for decoding academic language through their home experiences, most do not, and need to be taught these content-specific language and literacy skills. Therefore, pre-service teachers need basic academic language knowledge as they go into practice. The question is how to teach this rather abstract concept. Since there has been little research done on how pre-service teachers acquire and utilize the language of their content area, study must begin here. As with most assessment and standards roll-outs, however, that do not provide time to do proper evaluation, the work of understanding how to integrate academic language knowledge into teacher education must be done while assessments such as the TPA are actively rolled out and changes to the Massachusetts Comprehensive Assessment System (MCAS) that reflect the Common Core Standards are implemented. Therefore, time is of the essence. The design of this study, therefore, takes these parameters into account as the researcher seeks to understand

how pre-service teachers respond to knowledge of academic language while completing student and clinical teaching. Following Galguera's (2011) call "to prepare teachers capable of effecting specific learning outcomes, namely, furthering students' proficiency in using language for academic purposes" (p. 86), this study aims to shed light on how pre-service teachers understand, learn, and use academic language knowledge. Since reflective practice is at the philosophical core of teacher education, the points at which academic language knowledge is accessed in pre-service teachers' development as reflective practitioners will also be emphasized.

The results of this study will have implications regarding how academic language should be integrated into teacher education in order to best meet the content area literacy knowledge needs for both new teachers and their students.

Definitions of Terms

1. **Academic Language:** For this study the concept of academic language is broken into three specific areas to facilitate a more specific understanding of how pre-service teachers access the knowledge.
 - **Language and terminology** refers to the words and syntax used to communicate knowledge to students, what Zweirs (2008) calls the "bricks and mortar" of the classroom. The "bricks" refer to the content-specific terminology and vocabulary, while the "mortar" refers to the linguistic moves commonly used to convey meaning, or the simple word choices that, in the context of the content area, take

on new meaning. This is most often associated with oral communication with students, or with the phrasing of written instructions or questions.

- **Reading** instruction specifically refers to teaching the specific organization and presentation of information in content-specific texts such as a lab report in science, a speech in history, or a poem in English language arts, both in terms of information and linguistic constructions.
- **Writing** instruction specifically refers to teaching how information is organized in specific genres of writing based on the work of Knapp and Watkins (2005), both in terms of information and linguistic constructions. Instruction in this area also refers to modeling specific genres of texts.

2. **Common Core Standards:** These are the new comprehensive standards for literacy and mathematics that have been adopted by a majority of states, with Massachusetts as one of those states. In Massachusetts, these standards replace the Massachusetts State Frameworks that have been in place for the past fifteen years. Highlights of these new frameworks include a focus on “College and Career Readiness” in literacy and math, and in the case of literacy, a strong focus on informational texts. Additionally, the English Language Arts standards include specific literacy standards for science and history. Common Core standards are to

be implemented in schools awarded “Race to the Top” funding in 2013, and other schools by 2014.

3. **Expert Blind Spots:** This is a term Nathan and Petrosino (2003) use to define the skills and processes of accessing knowledge in a particular content area of teaching that the teachers do unconsciously and therefore do not realize that their students need to be taught this skills.
4. **Fund of Knowledge:** This is a term Moje and Ellis (2004) use to describe the sets of knowledge used by teachers as they reflect on their practice.
5. **Genre:** This term refers to the type of academic reading or writing students are asked to do, as defined by Knapp and Watkins (2005). For example, they identify common types of academic writing such as explanation, description, and narrative, with each having their own unique organization and linguistic structures.
6. **Immersion Program:** This refers to a specific teacher education program model that is one year in length. Students in this program are apprenticing in a secondary school or middle school for the entire school year, while concurrently taking a full load of university coursework. The apprenticeship consists of three distinct phases:
 - The **Pre-practicum** phase starts the first day of the school year and lasts until mid to late October. The students

initially observe their mentor teacher, and gradually take on teaching mini-lessons and full lessons, building up to taking on full teaching responsibilities.

- The **Practicum** or Student Teaching phase begins when the mentor teacher transitions responsibility of day to day teaching to the student teacher. This phase starts in mid to late October, and lasts until the individual secondary school's natural break in January. Pre-service teachers also have a **university supervisor** at this stage who also offers support and feedback via observational visits, and also fills out an evaluation form of the candidate for the university.
- The **Clinical** phase begins where the practicum leaves off. Student teachers take over full teaching duties of new classes on day one, and continue under the mentor's tutelage for the rest of the year.

7. **Massachusetts Comprehensive Assessment System (MCAS):**

MCAS is the primary assessment of the Massachusetts state frameworks that assess English, math, and science. Students take these tests a number of times during their k-12 career, culminating with the tenth grade assessments in English and math (ninth for some science assessments). Students have through their senior year to pass all of them, and in fact must pass them in order to receive a high school diploma.

8. **Teacher Performance Assessment (TPA):** This is the comprehensive assessment tool being piloted or implemented by teacher education programs across the country. This assessment requires students to reflect deeply on a specific “teaching event,” a connected series of lessons that they also video record. Students are required to reflect on this teaching event by responding to a variety of prompts within four “Task” groups (samples of which are in the Appendices). Task 1 focuses on the context of the class and planning, Task 2 focuses on instruction and includes writing prompts on the video clip candidates submit, Task 3 focuses on assessment, and students must include student work, and Task 4 focuses on an overall analysis/reflection of themselves as teachers. The teaching event itself was expected to be taught and recorded during the latter third of their practicum in the fall semester, and the documents submitted by February.
9. **Traditional teacher-educator program:** This refers to the more common two year teacher education program, where students spend their first three semesters in university or college coursework, and also may do a pre-practicum in a school classroom. During the final semester of this program the student does their practicum, commonly referred to as student teaching. It is important to note that while the apprenticeship in the immersion program follows the length of the secondary school year, the

practicum here follows the university schedule. This means that the student teacher practices teaching for ten to fifteen weeks, as opposed to the twenty five to thirty weeks of practice by the teacher candidates in the immersion program.

Limitations of the Study

This dissertation study is limited in its size and scope. It is focused on a small cohort of pre-service teachers (fourteen) in a one year immersion program in rural middle and high schools, and more intensely on seven students from this cohort. In the immersion program, students spend the entire year in their school, completing pre-practicum and practicum work in the fall semester while taking courses at the University, then completing a clinical session of teaching in the spring while continuing coursework. This accelerated schedule poses some unique challenges to the pre-service teachers as they grapple with educational theories while concurrently teaching for the first time. Further, the fourteen students represent a mix of science, history, and English teachers. While this will be a benefit by providing insight into the different disciplines, the limited numbers in each subset will make some conclusions far from definitive.

Another limitation that may have had some influence on the Teacher Performance Artifact data in particular is the fact that implementation of the TPA is in a pilot stage. As with any pilot assessment where the outcome does not count, some participants may not have put as much effort into its completion. Also, there were some campus-based and faculty protests over TPA implementation that emerged during the study.

CHAPTER 2

REVIEW OF RECENT RESEARCH

Introduction

Literacy is an underlying issue that influences every learning experience, but a rather complex concept to teachers in a classroom. Recognizing the intricacies of content area literacy for the teacher in that content is similar to a fish being aware of water; they are so immersed in their field that the language that accesses knowledge is second nature. Teaching it, therefore, becomes a matter of recognition that this language exists, and then understanding how it operates at such a level that it becomes part of reflective practice. Of similar complexity is how teachers develop this skill. This review of research, therefore, summarizes recent study in academic language, as well as other areas such as reflective practice and assessment of student teachers in order to more fully understand the variables of building academic language in the secondary classroom.

History of academic language

The idea that language is a very important factor in whether or not students learn in the classroom is not a new concept at all. In a 1989 Handbook titled *Reflecting on Teaching to Promote Academic Language Use*, Wiley and Fickle review Douglas Barnes' work from 1976 on the importance of language in the classroom, specifically discussing how language is a means of learning and not just a communication system; that the linguistic medium chosen *is* the message. This suggests that language spoken or read is not in a bubble—context must be understood. Barnes goes on to identify three roles of

language that teachers should know: (1) how students formulate and process language, (2) how they relate it to their previous knowledge, and (3) how they use it for their own purposes (Barnes, 1976, p. 19, as cited in Wiley & Fickle, 1989). All of these roles, while largely pertaining to spoken language in Barnes' work, require understanding the context in which each student receives language, and is similar to the concept of academic language described in the *Teacher Performance Assessment Handbook* (2011) and also in the new Common Core Standards (2011).

Cummins (1984) writes more specifically about reading academic texts, describing academic language as cognitively demanding. He further writes that one prominent feature of the language in academic texts is that it is relatively de-contextualized, relying on a broad knowledge of words, syntax, grammar, and common conventions for expression, understanding, and interpretation. Fillmore & Snow (1999) analyzed a prototype standardized test used in 26 states and found that regardless of what content area was being assessed, a general competence in academic English was necessary to pass. They went on to note specific commonalities in the linguistic register of the test that students needed competence in, such as using linguistic cues to interpret and infer a writer's intentions in order to summarize a text and analyze texts by assessing a writer's use of language. In writing, students need to be able to replicate academic English by using various linguistic devices to write coherent texts, devices that are often specific to content areas (Fang & Schleppegrell, 2008). The general conclusion here is that student success on standardized tests is not necessarily based on their content knowledge, but rather their ability to read and write in the register of academic textbooks and content areas.

While Cummins (1984) notion of academic English as de-contextualized seems to contrast not only Barnes (as cited in Wiley & Fickle, 1989) but the linguistic theory of Halliday (1996) that specifically discusses that all language is understood in context, this is not necessarily the case. Rather, Systematic Functional Linguistics (SFL) researchers go further to look at these linguistic conventions in the context of the content area and the classroom, with the underlying belief that all language, regardless of the medium, is received in context; in context of the players involved, and in context of the content area. For the classroom, the context is the teacher and the student and the linguistic backgrounds and understandings of each, both in terms of knowledge and of culture. For example, Gebhard, Willet, Jimenez, and Pierdra (2010) describe an interaction with a sixth grade student in a science class. The student asked for feedback on her report explaining which brand of bubble gum would yield the biggest bubble. In reviewing this student's report, the researcher drew the girl's attention to the last sentence that read, "So, in the end, we decided that Trident Sugarless Gum is best." The researcher said that scientists do not usually use "so" in their writing and that they do not use language that suggests they decided the results of their experiments. She suggested the following alternative, "In conclusion, the data suggest that Trident Sugarless Gum is best for bubble-blowing." The student laughed and said, "There is no way I'm talking like that! What do you think I am, a geek!" This response shows the interesting social contexts that are at play in the classroom regarding language and how linguistic features are not only tied to specific content areas, but also to understandings of identity. It shows that language is a social process, an "arrangement of language as grammatical structures or constructions that are formed by individuals in social contexts to serve specific social

needs and requirements”(Knapp & Watkins, 2005, p. 16). Teachers, therefore, need a deep understanding of language in their content area and in their classroom, and an ability to recognize how these interact with each other in order to create instruction that teaches literacy as well as content.

Moje and Ellis (2004) call this integration of knowledge and discourses drawn from different spaces the construction of “third space,” a merger of knowledge from the students’ “first space” of home and community with their “second space” of classroom discourse. They feel this merger of knowledge is important for teachers to recognize because “literacy is a complex construct, and secondary content area literacy learning and its use are particularly complex” (p. 38). They go on to explain that being literate in content areas requires both interpretive and rhetorical skills within the content area to gain meaning beyond general comprehension. Similarly, writers in content areas must use strategies of writing that not only require content knowledge, but knowledge of “how knowledges are constructed and organized in the content area, an understanding of what counts as a warrant or evidence for a claim, and an understanding of the conventions of communicating knowledge” (p. 45).

In their study of secondary science teachers, they note that their goal was not to “represent the construction of third space on the part of the teachers” (p. 44) they worked with, however, because teachers generally do not do this efficiently in their classrooms. They say that, for most teachers, it is “difficult to distinguish content learning and content literacy learning” (p. 45), because for the content scholar, these two concepts are blended together. This contrasts with how it is taught, as they also note that generic literacy

strategies for teachers are often taught in single courses rather than embedded across the curriculum.

Knapp and Watkins (2005), a primary reference in the TPA literature on academic language, discuss content-specific literacy through genres—not the genres one would find in a book store like mystery or romance, but by purpose. For example, a technical description has different distinguishing linguistic features than a piece of fiction or a letter to a friend because the purpose of the writing is different. Put another way, instructions on how to use a new toaster oven will not contain clauses whose subjects are various characters, or words that invoke emotion in the manner of an editorial. Each of these purposes carries a set of linguistic features that serve as reading signals (Knapp & Watkins 2005) that orient the reader to the content. Fang and Schleppegrell (2008) specifically write about many of these signals specific to content areas, such as the way technical vocabulary embedded in science and history texts, and the way history texts are commonly “constructed to present and then repackage new information” (p. 5), suggesting in the latter case that students can learn to recognize this pattern of information flow if attention is paid to content literacy.

The fact that most teachers don’t recognize content literacy as an essential part of their curriculum could be because they do not see the signals, have what Nathan and Petrosino (2003) call “expert blind spots.” Jeff Zwiers (2008) uses the analogy of birdwatching to explain this phenomenon:

An analogy might be a novice birdwatcher going birdwatching with several experienced birdwatchers. The experienced birdwatchers know which birds are common to the area and do not take note of them. To the novices, most of the birds are new, and they have difficulty picking out the rare birds (p. 44).

Similar to veteran teachers, pre-service teachers in content areas likely have the experienced birdwatcher knowledge of their field's linguistic characteristics of writing deeply embedded, so that identifying the reading signals is second nature. As suggested by the notion of the "first space" (Moje et al., 2004) as home and community, it is critical for teachers to be conscious of these blind spots, since research suggests that content literacy, learning the discourse of the "second space" (Moje et al., 2004), may be a key obstacle for student learning.

It has been well documented that ESL and ELL students who perform poorly in school have been raised with a variation of English that differs from the language of mainstream teachers and curriculum (Heath, 1983; Cook-Gumperz, 1986; Wells, 1986, as cited in Zwiers, 2008). Additionally, economic class can dictate the type of language students are accustomed to. Heath (1983) found that middle-class mainstream students are often also socialized to identify and use these linguistic features of various genres from home. For example, home-based practices like parental questioning during storybook reading correlate strongly with academic success (Cook-Gumperz, 1986; Wells, 1986, as cited in Zwiers, 2008). These differences in reading proficiency are quite pronounced once students enter secondary school, where many students are unable to read the dense and often complex texts of content areas and therefore aren't prepared for the challenges of college and workplace reading (Fang & Schleppegrell 2008). Fang and Schleppegrell (2008) go on to cite a number of statistics that support the need for more work on literacy. For example, they cite findings from a United States Department of Education study by Perie, Grigg, and Donahue (2005), write that:

More than eight million students in grades 4-12 are struggling readers, and 26 percent of eighth graders and 23 percent of twelfth graders are unable to demonstrate an overall understanding of what they read, with fewer than one-third of eighth and twelfth graders read at levels necessary for school success (as cited in Fang & Schleppegrell, p. 2).

These particular statistics, besides demonstrating the general need to support these students, also show that students are doomed if they are not up to academic language standards by eighth grade. The slight difference between the percentage of eighth and twelfth graders may indicate that literacy in content areas is simply not being addressed in secondary classrooms. This notion is shown in science classrooms by Carnine & Carnine (2004) who found that in some secondary schools, 75-80 percent of the students struggle with academic texts. The fact is “few secondary teachers have the expertise needed to help their students develop ‘advanced literacy’” in content areas (Schleppegrell & Columbi, 2002). As Fang and Schleppegrell (2008) quote from Berman and Biancarosa (2005 p. 8)

Often middle school and high school teachers view themselves as content specialists. They sometimes ignore the problems of their struggling readers or compensate for them by giving students notes from a reading assignment or reading a text aloud instead of helping students learn to extract information from a text themselves. These teachers do not have the training or knowledge to do more, and they are often frustrated that remediation services are less available and less effective for their struggling adolescent students than they are for struggling young readers. (p. 2)

The National Council of Teachers of English (NCTE) also recognizes the need for literacy instruction across disciplines and that each content area contains its own unique language characteristics. In 2006 they note:

The academic discourses and disciplinary concepts in such fields as science, mathematics, and the social studies entails new forms, purposes, and processing demands that pose difficulties for some adolescents. They need teachers to show them how literacy operates within academic disciplines. In particular, adolescents

need instruction that integrates literacy skills into each school discipline so they can learn from the texts they read (p. 5).

Further, the NCTE wrote that teachers of adolescents need more support and professional development that allow them to teach literacy in their disciplines and create environments that teach students to engage in critical study of texts as they deconstruct and re-construct language to make meaning. These comments and statistics add to the research concerning second language learners in demonstrating a need for secondary teachers across all content areas ability levels to teach literacy.

These studies lead to the conclusion that teachers, in order to serve all their students linguistic needs, must have a meta-linguistic awareness (Pratt & Grieve, 1984, as cited in Zweirs, 2008, p. 65), a process of reflecting on the nature and functions of language in a particular setting. This is a tough road to build, considering the fact that, as Filmore & Snow (2000) note, “by now, several generations of teachers have gone through the public schools having little opportunity to study the structure of English or to learn another language, and as a result, they do not feel very confident talking about language” (p. 11). Therefore, veteran teachers and pre-service teachers do not have academic language awareness as part of any of their “funds of knowledge” (Moje et al, 2004), the areas of learning and experience that teachers access when reflecting on their practice. While they unconsciously recognize the literacy signals when engaging in reading and writing within their content areas, they do not know how they do it, and therefore how to teach those skills.

At the root of a meta-linguistic awareness of language is an understanding of grammar. In schools, Traditional grammar, inherited from the Greeks and Romans,

consists of the study of parts of speech and prescriptive rules regarding correct usage (Gebhard & Martin, 2010). School grammar of this kind has been scorned by many for a number of reasons. Students often find the experience of having their “grammar” corrected objectionable because it takes the focus off of meaning and imposes arbitrary rules. Further, it does not necessarily lead to better ways of reading and writing (Gebhard & Martin, 2010). Of grammar, progressive educator Peter Elbow (1981) wrote in *Writing with Power*:

Learning grammar is a formidable task that takes crucial energy away from working on your writing, and worse yet, the process of learning grammar interferes with writing: it heightens your preoccupation with mistakes as you write out each word and phrase, and makes it almost impossible to achieve that undistracted attention to your thoughts and experiences as you write that is so crucial for strong writing (and sanity). For most people, nothing helps their writing so much as learning to ignore grammar (p. 169).

As a result of this backlash against traditional grammar, many progressive educators and policymakers have worked to remove grammar instruction from state frameworks and teacher education programs altogether (Kollin & Hancock, 2005). This situation has created quite a challenge for educational linguists trying to get knowledge about language back into schools, since the only grammar that is less effective than traditional school grammar in fostering literacy development is no grammar at all (Gebhard & Martin, 2010). It also makes assessment of writing problematic. In a research study of writing assessment in secondary English, teachers reported knowing their students’ writing has improved by “feel” (Sussbauer, 2010) rather than any quantifiable data. The comments on student work showed an attention to language use; the teachers’ description of assessing by ‘feel’ suggests not necessarily a lack of

understanding of language, but rather a lack of a meta-language to teach this level of discourse. Additionally, it further demonstrates that this meta-language needs to be taught in their classrooms. Schleppegrell (2007) suggests systematic functional linguistics provides just such a meta-language, because the grammar analysis of SFL specifically teaches grammar in terms of function in the context of the piece of writing and genre, rather than in isolation.

One of the few studies specifically looking at how pre-service teachers build pedagogical language knowledge through a pre-service course, Galguera (2011) argues for a shift in definition of teaching practice for teachers and teacher educators away from “English learners” toward “language use for academic purposes,” therefore liberating academic language from an ELL and ESL-only discourse. Further, rather than prepare teachers for a particular type of student, Galuera (2011) says “we ought to prepare teachers capable of effecting specific learning outcomes, namely, furthering students’ proficiency in using language for academic purposes” (p. 86). In his action research through one of his classes, he consciously integrated language instruction as he modeled learning tasks, and researched how his students responded to this instruction. His conclusions were generally positive, finding that most pre-service teachers responded well via reflections, saying that this type of instruction helped in their access of the content.

Reflective Practice

In order to fully understand how content area literacy currently operates in the pre-service teacher’s classroom, it is also important to recognize how their reflective practice lives. Much has been written and studied regarding the efficacy of developing

reflective practice in pre-service teachers, and reflective practice is well documented as a strong indicator of teacher effectiveness (Danielson, 2008) and effective for pre-service teachers (Valli, 1997, Minott, 2009).

A key is to make reflection systematic. Teachers often reflect in the moment (Schon, 1983); for the purpose of reform and study it must also be a “conscious and systematic mode of thought” (Valli, 1997). As Valli (1997) writes, reflection can mean “deciding how to achieve educational goals, evaluating our progress, and determining what factors help or hinder goal attainment” (p. 68). Embedded in this statement is the need for teachers themselves to evaluate their goals and how to achieve them. In practice, teachers draw from “funds of knowledge” (Moje et al., 2004), the sets of experiences and learning they have had previously that relate to the current situation, and can therefore help them understand a situation and move forward.

For pre-service teachers starting out in their practicum, the classroom is there “third space,” (Moje et al., 2004), and they go through a process of building this new space as they concurrently build this space for their students. Reflection, therefore, is an important skill to learn, and in teaching one that goes through many stages as the new teacher’s third space becomes a fund of knowledge to draw from. According to Valli (1997), a reason for the popularity of reflection in teacher education programs is to help pre-service teachers develop ways of thinking about their classrooms, ways of carefully looking back on their actions, and ways of reflecting on their own knowledge and preparation. Teachers must learn how to recognize weaknesses in their teaching so their students will be more able and motivated to learn. (p. 72)

This process itself comes in many forms, and also evolves over time. In her literature review, Valli (1997) defines five different types of reflection that teachers engage in. These include: (a) technical reflection, in which teachers reflect on general instruction and management behaviors that match their own performance to external guidelines; (b) reflection-in-action, in which teachers reflect on their own teaching performance based on the context of the situation; (c) deliberative reflection, in which students reflect on a whole range of teaching issues, including curriculum, instructional strategies, and organization of the classroom, and weigh different viewpoints and research in this reflection; (d) personalistic reflection, in which teachers reflect on their own personal growth and relationships with students; (e) critical reflection, in which the focus is on the social, moral, and political aspects of schooling (p. 75).

Embedded in her definitions is the suggestion of a hierarchy of sorts, or at least a growth in sophistication. For example, matching one's teaching to an external set of guidelines as suggested in technical reflection is clearly more limited than a deliberative reflection that brings much more information into the reflection process. With regard to pre-service teaching, inherent in this hierarchy is the limited funds of knowledge pre-service teachers enter their practicum with; while many have taken education courses and engaged in educational theory, much of that is learned out of context or learned in the context of them reflecting on their own experiences as students. Early on, they therefore refer to the cooperating teacher's standards, guidelines, and modeling, as well as their own experiences. As noted earlier, since content area literacy—academic language—has not been part of main stream educational discourse, it is therefore not in any funds of knowledge student teachers access.

They also will reflect in the reflection-in and on-action category, reflecting on their performance in the context of their classroom, which in many cases means the management of student behavior. Schon (1992) defines reflection in action as intuitive, spontaneous decisions made during the act of teaching, and an important type of reflection for teachers based primarily on practical knowledge derived from experience. However, in the case of student teachers, their practical teaching experience is generally limited and not enough to be anchored. Therefore, this type of reflection can be flawed if not followed with feedback from someone with more experience. And even then, it is limited to the funds of knowledge of the experienced teacher, who, as noted earlier, is likely to have the same expert blind spots, and therefore does not include content literacy in their reflection.

For other types of reflection, the supervisor and cooperating teacher, as well as university courses, are keys to providing impetus, because they provide context. For example, the content of deliberative reflection is far reaching: it speaks to curriculum, instructional strategies, rules, and organization of the classroom (Valli, 1997). These elements are hard to reflect upon without prior knowledge of teaching, because they generally require comparison to previous experience. Therefore, for pre-service teachers the surrounding network of support provides support until the pre-service teachers gain enough knowledge to do it on their own.

The other two types of reflection Valli (1997) outlines, personalistic reflection and critical reflection, also can be modeled by the supervisor, but more so by the cooperating teacher. Because these types deal with personal relationships with students and moral and political dimensions of schooling, the ability for pre-service teachers to

reflect on these in a meaningful way is enhanced when they reflect with someone familiar to the context, and then draw from additional theoretical knowledge from coursework.

So much reliance on the mentor teacher as a source of knowledge for reflection can be detrimental for the student teacher, however, because, as Valli (1997) writes,

not all teachers function as this type of professional. Some waste valuable time, do not know their students or subject matter very well, blame children for not learning, or have low expectations for student performance (p. 72).

Given this, many pre-service teachers will not gain the valuable insight into teaching or reflection if they are with a teacher who does not value reflection either, or simply uses it to justify their actions rather than change practice (Loughran, 2002). This notion can also apply to the expert blind spots. If the mentor teacher is providing feedback and is a primary fund of knowledge for reflection on teaching content, and content-specific literacy is not part of the discussion because it is one of the primary blind spots, then reflection on this will take a lot longer to occur. Where that will be, and how that will happen, are principal questions for this study.

Teacher Performance Assessment

The Teacher Performance Assessment is a comprehensive assessment tool for new teachers developed in California during the past 10 years (Pecheone & Chung 2006), largely at Stanford University, though other schools have written their own versions, such as Fresno State University (Torgerson, Macy, Beare, & Tanner 2009), to assess teacher candidates' thinking and reflective processes at all points of a teach event (defined as a series of three to five connected lessons). Of the eleven rubrics for scoring the TPA, two specifically assess the students' understanding and application of academic language concepts (Stanford Center for Assessment, Learning, and Equity, 2011). Unlike the

other nine rubrics that focus on specific areas of students' portfolios, the two academic language rubrics are to be scored based on assessment throughout the portfolio (Pecheone & Chung 2006). In essence, this suggests that attention to academic language should underlie all elements of the teaching event, acting as a bridge for learning new material. This presents a number of new questions for pre-service programs: What exactly is academic language? How do we assess it? And, most importantly, how can it be taught to pre-service teachers? Literature on development of the TPA does not reveal a great deal on what research the academic language assessments are based, other than reference to Knapp and Watkins book *Genre, Text, Grammar: Technologies for Teaching and Assessing Writing (2005)* in defining academic language for pre-service teachers. The specific idea focused on in this book is the attention to genre; not genre in the horror movie versus romantic comedy sense, but rather genre as a piece of text written for a specific purpose, such as a description or argument or narrative, that has a specific set of linguistic moves associated with it.

The limited research done thus far on the effectiveness of the TPA does not reveal much regarding academic language, either, except that pre-service teachers have not fared particularly well on that element of the TPA in pilot studies, and that teacher preparation programs largely do not yet know how to address it through curriculum. In a study of a TPA pilot in California (Pecheone, R. L., & Chung, R. R. (2006).), researchers noted that scores on the academic language pieces of the assessment were lower than any other scores, writing:

Scores from the 2003-04 pilot indicate that candidates across all subject areas tended to perform at a higher level on the Planning and Instruction tasks than on

the Assessment and Reflection tasks. In addition, candidates tended to perform at a lower level of performance on the Academic Language related rubrics (p. 6).

However, the study does not offer any conclusions of why. In another study on the California pilot (Okhremtchouk, Seiki, Gilliland, Ateh, Wallace, & Kato, 2009), the research was primarily focused on the effect this assessment had on teacher candidates. Using a set of open-ended survey questions, the research team asked about how the assessment process affected pre-service teachers' planning, teaching, classroom management, and other university study, among other areas. Similar to what this researcher heard anecdotally in classroom conversations and conversations with university faculty implementing the TPA pilot at the University of Massachusetts, this research study found pre-service teachers frustrated with things like accessing video cameras and the excessive amount of writing and time the assessment took to accomplish. However, the majority found the assessment beneficial in reflecting on their own practice. While the study isolates other facets of the assessment tool, it does not isolate the academic language piece; there is no mention of academic language in the research instrument. Likewise, while it does provide valuable data for organizing implementation of the assessment, the research does not offer anything in the way of guidance for teacher educators regarding how pre-service teachers involved in the TPAC (Teacher Performance Assessment Consortium) understand academic language, or how to teach teachers to address the academic language needs in their classrooms.

Literature that is given to TPA scorers shows the confusion of academic language is understood by TPA developers, and that the concept is still in a process of evolution.

The document titled “The Thinking Behind the Rubrics” (Stanford University, 2011) in the scoring documentation defines academic language in a paragraph, then states:

Academic language (also known as English Language Development when tailored to the needs of English Learners) is an area of growth for many programs, and many faculty/supervisors are engaging in professional development to better understand it (p. 14).

From this language, it seems that it is up to the participating universities to define exactly what the concept means to each of them, and more importantly how to teach it to their pre-service teachers.

There is similar confusion among k-12 teachers regarding Common Core implementation. The confusion lies in the new emphasis on reading more non-fiction texts, or “informational texts.” With English Language Arts classes traditionally being the primary source of reading and writing instruction, those teachers fear they are losing much of their fiction and poetry oriented curriculum to non-fiction. Similarly, k-12 principals are asking ELA teachers to adapt. However, according to developers of the Common Core Standards (2011), the principle that 70 percent of reading by high school students should be informational does not refer to English classes alone, but across content areas. History, science, and math teachers will be required to teach the literacy of their content area. So, while given different names and carrying nuanced differences in definition, there is a clear emphasis throughout education on teaching deeper literacy skills to teachers, an emphasis that will require a great deal of new knowledge for instructors.

This is not to suggest, however, that inclusion of academic language/content-area literacy standards or assessment is misguided; while very little has been researched

regarding language needs in the mainstream classroom, much has been done in ESL and ELL and the impact Halliday's (1978, 1996) work on the linguistics of school has on these students. Gebhard et al. (2010) define the theory of Halliday's work in the sense of why it should be taught to teachers:

From an SFL [Systematic Functional Linguistics] perspective, language learning is not understood as a set of de-contextualized rules teachers should drill and practice as a way of teaching students to use language "correctly" or "properly." Nor do they view academic language as something that will develop naturally over time. Rather, SFL scholars view language as a dynamic system of linguistic choices that students learn to use to accomplish a wide variety of social, academic, and political goals in and out of school (New London Group, 1996). Therefore, from an SFL perspective, the job of the teacher is to heighten students' awareness of the importance of linguistic variation and broaden students' ability to use language more expertly across a variety of social and academic contexts to accomplish specific kinds of work (p. 7).

This definition makes clear the notion that academic language is not a set of rules, but an overall awareness of how language works. And, it is in line with both the TPA notion of academic language as an underlying conceptual framework for the various areas of teaching, and the Common Core Standards' emphasis on literacy instruction across content areas. Regarding genre and the variation among texts, linguists in the SFL school of grammar from Australia and the United States have dissected enough texts from all areas of school instruction to show that there are clearly different linguistic needs for students (Fang and Schleppegrell 2008; Christie & Deriawanka 2008). Further, these researchers have looked at student writing in different areas and at different ages to show a progression of writing and the linguistic moves from a functional perspective as students transition from writing that is speech-like to writing that is appropriate to the genre (Knapp & Watkins, 2005). However, the actual practical use of Halliday's

approach to grammar and literacy in secondary mainstream classrooms has not been researched nearly as often. Programs such as the California History Project (Achugar, Schleppegrell, & Oteiza, 2007) in California and the Access to Critical Content and English Language Acquisition (ACCELA) Alliance (Gebhard, et al. 2010) in Western Massachusetts, while focused on teaching teachers the value of SFL instruction for teaching ESL and ELL students, has also collected data that suggests teachers who take the initiative and risk in changing their pedagogical stance on grammar to SFL have had positive results. Achugar, Schleppegrell, and Oteiza (2007) cite data from Gargani (2006) that states:

students whose teachers participated in CHP institutes made significantly greater gains on the California History-Social Science test (a standardized measure) than students whose teachers had not participated in the workshops (p. 8).

Additionally, researchers found that students whose teachers used strategies learned in the CHP (California History Project) institutes also wrote more effectively, developing a thesis and supporting it with evidence and analysis (Schleppegrell, Gargani, Berman, de Oliveira, & McTygue, 2006). These programs, however, are complete teacher professional development in SFL instruction. ACCELA participants are primarily in-service teachers who receive a masters degree at the end of their participation (Gehard, et al., 2010) The California History project, while not a degree program, is an intensive summer institute of SFL instruction for teachers (Achugar, Schleppegrell, & Oteiza 2007). Is the expectation, then, that this sort of instruction is part of teacher education programs? Integrating full courses into the already full and intense teacher preparation courses, along with the financial burdens of doing so, may be unrealistic. Additionally, the technical and theoretical nature of deep linguistic study

may simply be too daunting for those without an affinity for the field. And, the fact that academic language attention should be present throughout the teaching process, according to the TPA literature, shows that perhaps individual coursework on this topic is not strong modeling. How, then, do teacher-education programs teach academic language? One thought is to integrate the concepts into another course or courses.

CHAPTER 3

DESIGN AND PROCEDURES

Introduction

As suggested in the review of literature around academic language, research has been limited regarding how new teachers understand the language of their content area and utilize that knowledge to communicate to their students. In fact, as Moje, et al. (2004) suggests, veteran teachers are not strong in this area, either. Understanding and teaching the language of the content-area is a clear gap in common teaching practice that research suggests could provide access to knowledge for a large number of students that, to this point, have been lost. Nathan and Petrosino (2003), with their notion of “expert blind spots,” suggest that this literacy is known by the content-area teachers, but at an unconscious level. And since it is unconscious, they do not see the knowledge of academic language in their discipline as a fund of knowledge (Moje, et al., 2004) their students need. An important place to start research, therefore, is to make this fund of knowledge conscious for new teachers going into the field so they can then integrate it into their practice. After bringing this fund of knowledge to the consciousness of pre-service teachers, the important work of determining how this knowledge of content-area literacy is understood in the context of teaching can be studied.

Research Questions

The main questions for this study are:

1. How do pre-service teachers build academic language knowledge through instruction in a university teacher preparation course designed to facilitate implementation of the Teacher Performance Assessment?
2. How do pre-service integrate academic language knowledge into their planning, instruction, assessment, and reflection at various stages of their fall teaching practicum?
3. How do pre-service teachers integrate academic language knowledge into planning, instruction, assessment, and reflection in their clinical teaching phase?
4. What influence on planning, instruction, assessment, and reflection does academic language knowledge have, as reported by pre-service teachers, throughout their immersion experience?

Methods

This study will combine a number of qualitative methods in order to gain a fuller picture of how pre-service teachers learn, understand, and apply academic language knowledge in theory and in practice. These methods will include participatory action research in a university classroom, observations of pre-service teachers in the field, interviews based on these observations, artifact data from both the university classroom

and from the teacher candidates' own classrooms, and assessment data via the Teacher Performance Assessment.

Participants

The participants included a selection of pre-service teachers from a one year immersion program at a land grant university in the northeastern United States that locates pre-service teachers into rural public schools. While these students come from a variety of educational backgrounds, all had similar pre-service study at the University due to the rigidity of the program. Three students from science, three students from English Language Arts, and one student from history were selected for case studies. All of these participants did their practicum teaching and clinical teaching in rural and suburban high schools of Western Massachusetts, including North-Central regional, Green Acres, Valley regional, Mountain regional, and River Falls regional. All of the participants were also in their mid-twenties, with teaching being their first career.

Participatory action research

The researcher participated as a non-evaluative teaching assistant throughout the University course *Reflective Seminar in Teaching* with the immersion program's coordinator (who is also the course instructor). The instructor was building a new curriculum for this course in order to support and facilitate elements of the TPA, so lessons were designed to define and build academic language knowledge for the pre-service teachers within this new curriculum. The curriculum was modeled after the teaching event defined in the TPA as a planning-teaching-assessment cycle, with reflective practice and pedagogical academic language knowledge skills built in throughout the cycle. Academic language lessons were based on the genre-based

pedagogical framework of the Teacher Performance Assessment and the Common Core Standards, which in-turn are derived in part by systematic functional linguistic theories originating from the genre-based pedagogy of Knapp and Watkins (2005). The curriculum for these lessons and the instructor reasoning and expectations served as the first set of data, establishing the instructor understanding and expectations for attention to academic language, and also serve as a point of comparison to student understanding.

While there was a concentration on academic language throughout the course, three specific lessons were designed to introduce and focus on three distinctive areas of academic language:

1. Defining the language of the content-specific classroom
2. Reading in content areas
3. Writing and assessment in content areas

Lessons were co-designed and co-taught with the instructor. While the researcher taught the lessons associated with academic language, he was not responsible for assessment. Additionally, the primary summative assessment for this course was the Teacher Performance Assessment. All other assessments were formative and used to build curriculum from week to week.

The first of these lessons was taught during their pre-practicum period, the time prior to their practicum teaching when they are active observers in the classroom. Students were split into content area groups and asked to do a series of brainstorming and reflective tasks around the basic question “what is the language of the (content area) class?” Students were encouraged to consider word based language as well as non-

verbal language of the classroom. From these activities, students were asked to consider the impact their conclusions could have on their students as they enter the classroom.

The second lesson on reading in content areas was taught when students were generally in the first two or three weeks of their practicum. In this lesson, examples from common texts from science, history, and ELA were shown to students, along with corresponding linguistic patterns, in order to teach students how to identify key language skills needed for their own students to access a text in their content areas. Then students were asked to practice these skills with samples of text from their own classrooms. Additionally, students were asked to read excerpts from both Zweirs (2008) and Fang and Schleppegrell (2008) that specifically focus on the students' individual content areas.

The third lesson focused on academic language was taught mid-way through the practicum experience, and looked specifically at writing and assessment. These two items were put together in part because through formative assessment, it was clear that the pre-service teachers needed direct instruction in assessment, and because more often than not, having their students write was the predominant form of assessment. This lesson, therefore, focused not so much on intricate writing instruction as it did understanding what teachers ask their students to write and how this type of writing should be taught and modeled. It also allowed students to reflect on the expectations they have from their students' writing. Based largely on the work of Knapp and Watkins (2005) genre-based approach to writing, students were shown many samples of writing prompts from classrooms in all content areas (these prompts were from teachers as well as from their own work in their classrooms). Students deconstructed the prompts themselves to identify what inherent genres of writing were present before exploring how

these writing skills could be taught in the classroom (or how the prompts could be re-written to better match the expected writing genre).

Throughout the semester, observation notes were taken during classes, as well as data from free-writes and other formative assessments designed to know how students understood academic language.

Classroom observations

Six of the nine participants were observed twice in their teaching environment (one in history, two in ELA, and three in science) in order to see what their academic language knowledge looked like in practice, in order to better understand how their knowledge and practice relate in this area. The researcher was not able to observe the other English participant due to a variety of conflicts. The first observation occurred in the latter part of the practicum experience, and the second occurred in the latter half of the clinical teaching experience. The second also included observations based on the participants own reflections on their teaching from their Teacher Performance Assessment responses, since all had completed their assessment by that time, and the researcher analyzed and coded data from those responses prior to the second observation. Detailed observation notes were taken specifically regarding the three areas of academic language identified. For those participants not observed in practice, analysis was based on university classroom data, TPA data, and interview data.

Interviews

Two interviews were conducted with each participant either immediately after observations, or soon after. Additionally, three participants who were not observed were

interviewed in the spring to gain more rigorous data. A semi-structured interview method was used in which participants responded to open-ended questions from the interviewer, and then were provided opportunities for additional thoughts. The interviewer also asked follow-up questions to illicit more thoughtful reflection when the opportunity arose.

The interview protocols were designed around a variety of interrelated topics:

- What issues are part of their reflections on their work
- How participants defined and understood academic language
- How participants have attempted to consciously integrate academic language instruction in their classroom
- Where they have seen models of academic language planning and instruction outside of the University classroom
- Specific questions regarding the observed lesson
- Specific questions regarding their TPA responses in association with their clinical teaching experience after completing the assessment (spring only)

These areas of inquiry were designed to elicit data to triangulate with classroom observations, their university learning, and their TPA responses in order to get a fuller picture not only of their academic language understanding at those particular points in time, but also how the knowledge evolves over the course of their year-long pre-service teaching experience and is drawn from in their reflective practice. This data was transcribed and coded by the researcher to identify moments of academic language understanding and use in the three areas addressed in their University classroom lessons (words and terminology, reading, and writing), the extent to which the function of

language was addressed in these areas, and the influence unique student teaching experiences had in integrating academic language. Data was also coded in terms of types of reflection as defined by Valli (1997) in order to analyze how and when the pre-service teachers access academic language knowledge. The goal from this data is to determine not only how student teachers understand academic language, but also from what funds of knowledge they gain this knowledge, and when they are able to access those funds as part of their reflective practice.

Case studies

From this data case studies were built and analyzed both as a whole cohort and in specific content areas. Analysis of data in both these areas was conducted in order to gain a broader understanding of the ways content-area literacy fits into the teacher education process as a whole and within the content areas themselves.

About the Researcher and Researcher Bias

I am a fifteen year veteran English teacher in a rural public high school in western Massachusetts, and have also been a university supervisor for pre-service teachers for the past three years. This latter experience, as well as working closely with the program's coordinator, provides strong contextual information for identifying variables that may influence the pre-service teachers, and also helps understand the limitations they may have in the teaching cycle (and thus countering biases—"expert blind spots"-- about teaching I may have as a veteran teacher). Use of Teacher Performance Assessment rubrics and Common Core Standards, as well as various other research from my doctoral

work, aided in code development, and assisted in the removal of biases as a veteran teacher who is responsible for transitioning to the Common Core Standards in the classroom.

CHAPTER 4

FINDINGS

Introduction

This chapter represents the findings of the dissertation study in the form of a series of case studies organized by content area. All of the pre-service teachers profiled were interviewed and observed in their university classrooms, and were also observed in their middle or high school classrooms. Additionally, all of the participants' TPA responses were used as artifact data, and also informed the second interviews. The case studies are organized in content areas in order to show commonalities among participants in these areas (with the exception of history, since there is only one participant in that area).

Science

The primary theme of science teachers regarding academic language was how to teach students to access the vocabulary of science and use it in meaningful ways. From the beginning, the pre-service science teachers recognized this element of academic language as most crucial for their teaching. This is in line with Fang and Schleppegrell (2008), who write that science texts contain “technical vocabulary that constructs specialized content”(p. 5) that “challenges students to understand densely organized information”(p. 6). They also related the language element of academic language as a tool for engaging students during their practicum. When addressing academic language prompts on their TPA based on lessons written and taught in December or January, they

wrote more often about vocabulary than other elements of academic language. By May, however, many months after they had done their TPA lessons, they were also interested in other science literacy elements, with writing being of particular interest in their reflections of what they would like to do in their own classrooms in the future. What follows are profiles of each of the three science participants and how they used and understood academic language over the course of the school year.

Sarah

Sarah, a pre-service biology teacher teaching ninth grade biology, was, from the beginning, very thoughtful and reflective in her teaching. She understood academic language to be the specific language of science, and that it went well beyond vocabulary; it included texts, writing, filling out graphs and charts—all the language used in the domain of science. However, it was the domain-specific vocabulary, including common words that carry different meanings in science, that she was most focused on during her first fifteen weeks of student teaching. For example, in response to a question about what she reflects on after lessons, she said:

I tend to really put a lot of thought into ‘if I say this are they going to understand it’ like today I said ‘what’s that word replicate mean?’ because I feel like that is an obvious word but a lot of them were like ahhhh. they didn’t know. So I really try to define everything—every word that could be questioned I circle it, and ask what does this mean, or what am I looking for? And a lot of times I let them know how I’m going to assess them on it so what sort of thing are they going to have to give back to me, to put their knowledge into a language they can give back.

This comment shows how the function of language is already squarely part of Sarah’s reflective practice at this early stage of teaching, and also how this focus is in response to her anxiety of whether or not her students are “getting” what she is teaching. While the quote shows some miss-understanding of the role of assessment in identifying

items students will “have to give back,” and shows how concerned she is with the back-and-forth exchange of knowledge with her students through the use of first person pronouns, she nevertheless recognizes the importance of the language.

In the observation of the class referenced above, Sarah similarly demonstrated an understanding of the basic function of oral academic language in helping students access content, as well as the importance of modeling (via Power Point). In her lesson on identifying and understanding parts of a cell, she frequently used body metaphors to help students understand the meaning of the scientific words (“the nucleus is the brain”), and to therefore access learning of the process of action in cells. Additionally, she had all students in the class repeat important words to further strengthen their owning the academic language. Though her responses to questions such as “what does academic language mean to you” are peppered with qualifiers such as “I’m not sure if this is what it means, but,” she has nevertheless internalized the idea of attention to language as an important part of the teaching process, at least at the novice level, as defined by TPA rubric literature (Assessment Handbook, 2011), as “oral and written language used in school necessary for learning content.” In this case Sarah is reflective of the oral language she uses, as well as the language she writes in instructions and in lessons.

In her responses to TPA prompts, which are based on lessons she did about two weeks after the first observation and interview, Sarah has a similar focus on vocabulary. In the Instruction narrative, she speaks eloquently about vocabulary as the primary academic language learning need. At one point, Sarah reflects on why particular students did not perform as well as expected on an assessment, citing academic language as a particular area to improve on:

I feel like the high achieving one [student] tends to feel confident in his knowledge but I think I need to ensure that he truly understands the language at hand, and have individual conversations with the group he is in, where I ask probing questions to assess his understanding. The lower achieving student needs more support in terms of rephrasing the academic language and allowing him to make the necessary connections. For him, I hope to spend a lot of time with his group talking about the material in the form of analogies, and helping them link academic language with analogous descriptions.

In this passage Sarah focuses not simply on vocabulary, but syntax, explaining that she should have looked for ways to rephrase the language for the student to make meaning.

Though vocabulary is at the heart of her goals regarding academic language, understanding the vocabulary is not an end in itself, but a step in making connections to other scientific concepts to build content knowledge. In her first interview she also spoke about the need for students to be able to put scientific words into categories and understand how the terms as concepts work together to make meaning, and she reflects on needing to figure out how to address this. So there is some deeper understanding for the classroom here than simply “here is a list of terms to know”—she is viewing learning the words as part of the process of learning the content, which is showing a more complex knowledge of what language funds the students need in order to access content and build their third space.

Regarding other literacy skills, she does note in the first interview doing a reading assignment with her students and recognizing that the reading level of the article was far beyond the students’ reading ability, identifying the need to use articles at a more appropriate reading level. So, there is some awareness of the complexity of scientific reading, though there is not any similar evidence in her TPA responses of teaching

reading or writing. Further, when asked if she had addressed this issue, she said that she had not had time to do so. Stating that she would find different texts to use rather than teach students how to access the language in the text she used demonstrates some reluctance or perhaps lack of confidence in writing lessons in that area. Part of this lack of confidence could be the fact that the funds of knowledge she is accessing at this time do not include models of how to teach reading in science. When asked if teaching reading of scientific texts had been covered in her methods of teaching science course or modeled by her mentor teacher, she said it had not. So it makes sense that, in response to her recognition that the reading was too difficult for her students, she chose to find easier texts rather than seek to identify and teach the skills necessary for her students to access the original ones.

Her focus on academic language elements evolved significantly in her second observation and interview in May. At this point she reported that she had re-written her article-reading lesson, and spoke in detail about her frustrations of teaching writing in science. For the reading activity from the TPA that she wrote about as not working well due to her lack of language awareness, she reported that as the introduction to genetics, she found a number of different articles on the topic that were more grade-level appropriate in terms of reading complexity, and had students work together to read and make meaning. Students were put into groups and had to form an opinion of the issue presented in the article, which was later brought to the class. This lesson demonstrates a large leap in teaching academic language, as she designed a lesson that specifically had students working collaboratively, differentiating instruction to help students learn to

comprehend science texts. Sarah said that during this lesson, she circulated among the groups to help students make meaning of the texts as necessary.

While Sarah reflected on some success in reading science and saw positives to build on, writing had been more frustrating. She said she tried to have students write a compare/contrast essay, but that it failed miserably because, as she states “I assumed they knew how to set it up.” From this reflection, she noted that she should have had students do something like this before hand, and model it so they had an idea of how to do it. This was a paper she tried a couple months prior to the May visit, and she noted that she had not had a chance to try more writing “because of MCAS and CSL [community service learning, one of their university projects] I wasn’t in class as much and it got chopped up.” So, she does demonstrate understanding and reflection on reading and writing in science and how to teach it, which is not reflected in the TPA text because this recognition, for the most part, came long after the TPA was completed. However, the reflection does not necessarily lead to implementation due to challenges of standardized testing and teaching her mentor teacher’s complete curriculum.

When questioned more about teaching writing, and specifically whether she had seen teaching writing in science modeled, she said ‘no, not at all.’ She had not seen it taught by her mentor teacher, nor had it been addressed in her university classes. Additionally, she said that while she wanted to have students do more writing, she did not feel she could this year because she was already behind in the mentor teacher’s curriculum, and felt the need to continue in that vein. Interestingly, when asked if she felt the way she taught was largely modeling her mentor teacher, she said, “because these kids started out with those patterns of doing things, I just sort of go with it.” She said she

felt like she would do things much differently in her own classroom, but that would be for next year.

The reflection on these reading and writing topics, which was not present in the fall, coincides with a shift from what Valli (1997) calls technical reflection on her planning and management skills, as well her reflection on-action, reflecting on her own performance, all in the context of whether what she is doing is “right.” This new reflection is what Valli (1997) labels “deliberate reflection,” where the reflective practice, as seen in Sarah, is focused on many other issues outside of the singular focus of whether she was doing things correctly, with a particular focus on literacy skills that need to be added to the curriculum.

Kevin

Similarly, another science candidate interning at the middle-school level found the basic idea of there being a specific ‘language’ of science to be a key component in his planning and instruction during his practicum work when visited in December. Also common with Sarah, the focus was more specifically on vocabulary in communication and understanding the words of science early on, while shifting to a more complex focus of looking for ways to teach students how to connect words with other words to better understand the systems of science as his teaching experience increased. In the spring Kevin’s definition of academic language did not change, but his reflective practice expanded greatly as he recognized a need to include more direct reading and writing instruction specific to science.

When visited in December, Kevin was teaching a unit on weather which included a powerpoint, video, and a question and answer period. Throughout the lesson, it was evident that Kevin focused on vocabulary, frequently defining words or asking students for a definition. This coincides with his own understanding of academic language at the time, which he explained as “language that could be miss-construed out of layman’s terms.” He continued by giving an example of the word “variable,” saying that he had been using it for a while before realizing that no one understood what it meant in science. So, similar to Sarah, the idea of academic language as the language of the content area and of the classroom, a part of academic language covered in the university class before beginning the practicum, was clearly embedded as part of his fund of knowledge accessed for teaching. When asked about what elements of his University courses were finding their way into his classroom, he verified this notion, saying:

We’ve been talking about language this entire year and I’ve made it a point to tell the kids, you know, that we’re in science, and some words they might use in everyday life are something different in science.

Additionally, he noted that he is similarly aware of the language he uses on assessments, making sure to use language students will understand in the context of science. Interestingly, this candidate also noted that his mentor teacher was very interested in the idea of academic language when he discussed it with him; it was a new idea that the mentor teacher embraced and worked with Kevin on as they talked about teaching science.

However, also similar to Sarah, reading and writing instruction was not as apparent in the fall. When asked, for example, if he had tried to integrate knowledge from a lesson on identifying content-specific text patterns taught in class, he responded

that he did not fully understand it and that it was “late in class.” He reported that they had not discussed academic language in his Method of Teaching Science course, either, noting that they had primarily focused on scientific inquiry methods to that point. It is important to note that this lesson was done after students had begun their practicum experience. Similarly, besides paying attention to words used in writing prompts, he said there was not any direct writing instruction up to this point.

His TPA, written about a series of lessons conducted a few weeks after the first observation and interview, was in line with interview data regarding the presence of academic language in instruction and reflection. His responses to academic language prompts primarily focused on vocabulary. For example, in this response to the prompt about how a lesson promoted academic language development, he wrote:

If you look at the work sample from student 3 you can see in the first 3 paragraphs there is evidence of scientific language. For example “A tornado is capable of extreme damage because it packs very high wind speeds into a compact area. Tornadoes are rapidly spinning column of air formed in severe thunderstorms. The rotating column or *vortex* forms inside a *cumulonimbus* cloud, and then grows downwards until it touches the ground.

In this passage “scientific terminology” is used synonymously with “academic language,” and the focus of the response states that evidence of promoting academic language is due to the fact that the student used scientific vocabulary words in their response.

However, much of the reflective discussion for other prompts on the lessons concerned students not knowing how to write like a scientist, though he does not directly state that this issue is an issue of academic language. He had conducted a lesson in which students viewed the film *Twister* and were asked to write a compare and contrast essay,

explaining specifically what science the film gets right, and which it gets incorrect. He was quite disappointed with the results. As he stated in task IV of his TPA on what he would do again, he stated:

The main edit I would make is to include a lesson on scientific writing. One trend that I noticed across the 80 students that I teach is that there is little to no knowledge on how to write a scientific paper. What student showed in their papers was the ability to summarize as well as point out the obvious inaccuracies in the movie. These include such statements as: a heavy object will be lifted off the ground by the wind but lighter objects nearby will not be lifted. This statement may be an inaccuracy but it is not followed by any indication of wind speed, type of tornado or the ability of that tornado to cause what type of destruction. A scientific report is a piece of writing that should display that the author completely understands the scientific workings of the topic. Secondly I would develop a clearer path from observation to academic language. The lesson presented in the video has observations scattered throughout the lesson that lead to academic language as a review

Even though Kevin demonstrated in the earlier quote that academic language was science terminology, here he clearly identifies a key teaching element of academic language in science through his discussion of writing a scientific paper. As defined on slide 4 of the TPAC instructional webinar for scoring the TPA regarding content-specific emphasis (2012), they state that in science one piece of academic language attention is to “support students in developing their abilities to use science concepts and scientific inquiry to explain a real-world phenomenon.” Kevin’s writing assignment and discussion of it is clearly aligned with this definition. However, according to the scoring instructions, students score higher on the academic language rubric if they are specifically talking about their lessons in the context of academic language instruction. Kevin writes about academic language here as terminology, separate from the assignment, even though the assignment itself, and his desire to model and teach scientific writing, addresses the broader definition of academic language. Therefore, he

would not score as high as his practice indicates. Also present here is an assumption that students knew how to write this sort of paper; not having direct instruction in this area, he drew from his own experiences and understandings of students' literacy skill-set in making this assumption and in these reflections. It is important to note that Kevin handed his TPA in much later than other participants, so the teaching event he reflects on occurred during his clinical teaching phase.

When interviewed in the spring, Kevin showed even more growth as a teacher who clearly understands the need to integrate academic language into his teaching, recognizing this knowledge as important for his students to access scientific knowledge. This is despite the fact that his definition of academic language still focused on terminology (in the spring interview he said that his spring courses had not addressed academic language, so it makes sense that his definition had not changed). When questioned about his TPA responses, he more clearly explained how he would like to go about structuring lessons for teaching scientific writing, which includes much more reading and understanding the structure of a scientific paper. He said,

Well first I would show them—compare and contrast a paper written for English and a paper written for science and show them examples of scientific reports from the high school level and maybe build up from there and show them a college report and further, a journal, so they can, even though they won't get it, see how much information is packed into one sentence and kind of show them that gradual change so they know what they are aiming for. I think the basic problem was they didn't know what a scientific paper was; they'd never been taught that before.

In this statement, Kevin not only addresses the clear understanding that his students should know the structure of a scientific paper, but talks about them recognizing “how much information is packed into one sentence.” This latter point focuses on

interpreting texts from a deep reading perspective. His understanding of academic language needs had evolved to include reading and understanding the specific language issues for students in science as defined by Schleppegrell and Fang (2008).

Finally, when asked if he had tried to integrate some of this writing or reading instruction into his lessons, he said he had not. He cited the fact that he was already behind the schedule defined by the curriculum of the mentor teacher, and that MCAS testing was going to cut into his time with students.

With regard to his growth as a reflective practitioner, during the first interview in the fall his statements suggested that he was in that technical reflection and reflection on action stage. For example, when asked specifically what he reflects on about his teaching, he stated:

It's also really important to me that they're enjoying class, rather than just sitting here learning, so if you have a happy student you have a happy teacher. The main thing I've been thinking about is am I making this too easy for them, because there is a difference between a good class and an easy class, and I really want to be on the good class side.

This statement clearly shows a specific focus on how he is being received as a teacher by students, and whether he is doing it correctly in terms of challenging them. There lacks a sense of deliberative reflection on curriculum and broader goals in the classroom that clearly are present in the spring when he spoke confidently about students needing instruction on reading and writing scientific articles. Overall, the arc of growth in both reflection and academic language understanding followed a similar path to Sarah's.

Aaron

Similar to the other science participants Aaron, a pre-service teacher in chemistry, saw science terminology to be synonymous with academic language while in the practicum phase of his practice teaching. He stated that his understanding is that academic language refers to communication between student and teacher, and their understandings of words. In the spring, however, he added that this definition is in any form of language—reading, writing, oral, etc., recognizing then that it refers to all elements of literacy. Additionally, while he focused on terminology on the TPA prompts regarding academic language, he talked extensively in a May interview about trying to integrate scientific writing instruction in the classroom, showing a more comprehensive reflection on academic language not necessarily shown in his TPA responses.

In an early observation and interview a month into Aaron's practicum, he was already recognizing the need to be acutely aware of words and communication with students. In the observation of his lesson that was also video recorded and written about in his TPA responses, Aaron identified particular terminology such as "quantitative analysis" that he would "break-down" for students. He also noted using real-life examples to further teach the terminology in this unit on drugs. After the lesson, Aaron also expressed some frustration that he did not use enough analogies in explaining terminology, and also did not allow the discussion to go "off-topic;" he did not recognize at the time that students asking questions about drugs was their way of putting it in context for themselves for making meaning. So observation of the lesson that was written about in the TPA was similar to what Aaron expressed in writing regarding academic language; a focus on understanding the terminology and communicating that to

students. Additionally, his specific focus on getting “off topic” suggests the insecurity as a new teacher that he was feeling, focused on the technical aspects of teaching and reaching his students in a way similar to other candidates early in their teaching, rather than reflecting on the broader curriculum issues.

In the interview in May, however, Aaron, like Kevin, showed he was addressing academic language much more broadly in his practice, and his definition of academic language had broadened to include reading and writing. And, he showed frustration in the curriculum he had to teach because it didn’t include specific, formal lab-report writing instruction. When asked if he would like to do more reading and writing instruction, and if he had seen it modeled, he said,

I’d love to do more. That is one thing I don’t agree with how she [mentor] does it. She does a lot of informal lab reports, and I feel they kind of do the report and then answer all the questions and there isn’t any thinking about it. I think sometimes when they have to write it, it’s a pain in the butt for me, and more work for them, but sometimes with those essays and writing it they can get more out of it. So I would start it a lot earlier, with more time to do it. To be able to read and understand scientific literature is extremely important. You have to be able to do that. But I don’t see that much here.

Clearly embedded in this response is the frustration with the curriculum he has to teach in the class because of its lack of focus on scientific reading and writing. And, like the other science participants, Aaron showed a much more complex level of academic language understanding in his clinical phase of teaching than he did during his practicum. Also, the fact that he is focused on these broader curricular issues is evidence that his reflective practice has evolved to include deliberative ideas; he is able to draw from his own formative assessments based on a full practicum and half a clinical teaching experience. He shows a deeper understanding of student needs on a skill basis,

deliberately discussing curricular issues rather than his earlier anxiety of how students respond to his lessons.

English

As the primary literacy teachers, the assumption seems that English teachers would most readily recognize the importance and relevancy of academic language. However, as with other content areas, their “expert blindspots” (Nathan & Petrosino, 2003) and general assumptions about students made their integration of academic language arc similar to that of science. They certainly spent the extra time to clarify vocabulary and terminology in their classroom, and taught the function of words and parts of speech in texts and how they make meaning. However, they struggled to take extra steps in the areas of reading and writing—to move beyond the traditional model of reading a text and talking about it to a deeper-reading model that puts more emphasis on the form of the text. Similarly, different forms of writing are not attended to, or attended to infrequently. This is a particular instance where the teacher candidates don’t really recognize the need for instruction until after the fact. But, they do not have access to resources to gain a deeper understanding of this. The three English teachers in this study all report that they had little instruction on academic language other than in their *Reflective Seminar in Teaching*, did not see attention to academic language modeled, and did not have any conversations with mentor teachers.

Kenny

Kenny is a thoughtful, reflective student teacher of freshmen English whose academic language understanding followed a similar arc of the previous candidates, starting with a focus on language of an English classroom, and moving to a much more

clear and in-depth knowledge of it in theory by the spring semester, and who, in fact, demonstrated some of this, to a greater degree than most candidates in the cohort, on the TPA documents. However, his actual integration of that knowledge seemed to lag significantly, due largely, in his opinion, to his feeling that he could not integrate his ideas due to the rigidity of his mentor teacher's curriculum requirements, as well as the general pressures placed on educators due to standardized tests such as MCAS. The spring observation and interview, therefore, was a very thoughtful conversation that demonstrated a strong understanding of attention to literacy, but riddled with a tone of frustration that he was not qualified to address those needs.

In the first observation early in December he, as all other candidates interviewed across disciplines, had a clear understanding of there being a language specific to content area, and was particularly cognizant of word choices and making sure communication was clear. When asked to define academic language in his own turns, he explained that, "there's an entire lexicon of words and phrases and terms that just exist only in this academic bubble, in this school building," going on to discuss how recognizing these terms and phrases that he defined as "collegy" was important to making sure students understood things in class. He said he tried to use the words and define them, so that students get used to using them. This was evidenced during a segment of the interview regarding an assessment he wrote based on the short story "The Sniper." On this assessment prompt, the language clearly shows an effort to clarify language:

Analyze the end of the story in 5-7 sentences and address the following questions: What do you think the author means when he uses the word "brother?" Do you think it is meant figuratively or literally (in other words, do you think that the author means for the other (Free-Stater) sniper to actually be the Republican sniper's biological brother or do you think that the word "brother" is being used in

another way?)? Explore your feelings about the ending. This will help you to better analyze your own reading of the story.

Kenny explained in great detail the word choices he made on the document, pointing specifically to a parenthetical that re-defined the question for clarity.

At this point the practice of academic language integration was focused on clarity in the questions, but he was not aware of the concurrent need to be aware of form, asking students to “analyze” (a cognitive process) rather than explain or describe (writing genres, based on Knapp & Watkins, 2005). This example also shows that while academic language attention at the terminology level was understood, academic language attention regarding reading and writing was not.

When asked, for example, what he was specifically looking for in these quizzes, he said

Did they show me their own personal ideas; the sentence minimums are just there so that they don't give me two words. If one kid gives me 7 sentences but I ask for 8 and the answer is great, I'm not going to count him off for that, and for me, the actual number grade is so secondary to giving them more time to write. Yeah, so I mean if they develop any of their own ideas, if I can tell that they didn't just regurgitate things they heard me say, and maybe they reference something I say, but still go into something in their own head of their own opinions, then that is going to be a better essay than someone copies something from the end of the story or something.

By focusing on students' own ideas rather than “regurgitation,” Kenny is focused not so much on academic reading and writing skills, but critical thinking. When asked about rubrics, he was not very clear, more or less saying he looked for patterns that led him to scores. Additionally, he said he was not checking for spelling or anything like that, just ideas. From this, it seems he was in some ways doing formative assessment—learning where the students were regarding their skills, and recognizing areas of

weakness in reading and writing. His notion of teaching English seems to be, in fact, on a college-course level, saying

It just seems to me to be more important for them to be talking about how they feel, what they think, and that they are comfortable disagreeing with me or their classmates. I try to make it a big deal that my opinion means nothing when thinking about a story, and I try to say that a lot because I find that if I don't they just say "in class we said this and this and this about this" and that is the answer, but there shouldn't be an answer.

Not only does this statement reflect a lack of understanding regarding literacy instruction at this point, it also shows his focus on how students respond to him in the classroom. He is working to develop the third space for his students via emotional comfort rather than discipline discourse, while also defining his own third space similarly. As with other student teachers, his focus was largely on how students were responding to him, rather than on broader curriculum issues.

This focus on technical reflection (Valli, 1997) was also shown in his frustration regarding university studies. When asked if strategies had been modeled for reading and writing instruction, he said,

We're supposed to be taking a methods course, and my expectation, and I don't know if this is realistic or not, was that a lot of that would be how to lesson plan. To be honest, we haven't done any of that—it should be the "philosophy of teaching English—that is what it should be. That is all we talk about.

He went on to say that he did not mind this were it not for his expectations, noting that they are "big, important questions." However, because of this, he said that "I find I store a lot of the stuff I learn from UMass classes for later." This is due, additionally, to the real pressures of teaching in someone else's classroom. While this became a much more detailed focus in his spring interview, he did note that he felt a bit awkward as an

intern because everyone knew it, and the particular pressure of his mentor and the school he was in to focus on MCAS-specific skills, which often translates to test-taking skills.

When Kenny was observed in the spring, his in-class attention to academic language had not changed significantly; in fact it perhaps declined. The bulk of the class involved him reading a segment of *To Kill a Mockingbird* out loud and asking questions intermittently about plot and theme. However, there was no evidence of teaching reading and writing skills. This observation turned out to not be indicative of his knowledge regarding academic language, though, because his TPA responses were among the strongest in this area, showing a strong depth of understanding. For one of the reflection prompts on Task IV of the TPA regarding how he would change his lessons on the play *Romeo and Juliet* to promote academic language instruction, he wrote:

If the students have a limited sense of how to develop opinions and articulate arguments about their own personal readings of the play, then the study of the play becomes plot exploration rather than a sophisticated study of a complex piece of literature. I think that I have not spent nearly enough time honing basic writing skills and developing strategies for taking a microscopic look at the language and conventions of Shakespeare's writing. Basically, I think that I would expand my timeline for teaching *Romeo and Juliet* to include numerous and extensive writing exercises that not only strengthen basic writing skills, but that address close reading skills and strategies. Although many of my students are able to make basic connections to the text and to construct rudimentary written arguments, I think it would be much more effective for them if they are learning how to become better readers and not just better readers of Shakespeare.

Here he goes to great length in explaining how he would like to better attend to the language needs of his students. Of particular interest is how his earlier focus on the big ideas presented by the story has been replaced to some degree by more "close reading skills and strategies." There is a very strong sense of deliberative reflection (Valli, 2007) here, with a focus on writing curriculum to reach students' needs. When asked if he was

trying to make some of these changes in his current unit, though, he essentially said no. He cited a number of reasons, which mostly came down to the culture of the school and teaching pedagogy of his mentor teacher, as well as his own lack of preparation to teach basic reading and writing skills.

When he talked about the *To Kill a Mockingbird* unit, he said he was reading it out loud because earlier in the year students simply were not reading at home, so this was the only way to get them to read. Additionally, he said that he was trying “flex his wings” regarding reading and writing instruction within the flawed context of his intern assignment, and a specific school culture in which,

there is this sort of unwritten understanding that if in freshmen standard [as opposed to honors] you can get them to stay in their seats, success!, or we’ll save the real stuff for AP and advanced; I get this real sense that there is a shutting down by teachers to the standard kids, and that’s why we give them so many throw-away assignments, or plot based study guides. . . the expectations here are so low, if you can get the kids to do anything, put anything on paper, that’s a win for the day. My 9th grade class is designed that you will get a good grade if you turn in everything; it doesn’t matter how good it is.

From this, he said that when he suggested changes or different types of assignments, the response from his mentor was “good luck,” or that any failure was met with a bit of sarcastic knowing. To counter this, instead of creating plans that spoke to his own understanding of academic language, he instead “improved” lessons done by the mentor teacher that were tied tightly to MCAS testing strategies. He said his mentor teacher “loved these.” By the end of this portion of the conversation, he, somewhat dejectedly, said that his teaching has been mediocre, but that at that point he was “going with it,” too tired to do otherwise.

Within his frustrations with the system, an issue common to others in the cohort, time constraints due to MCAS preparation, immersed. From the very beginning he was teaching “this parallel curriculum running beside mine [that] I have to break into once in a while.” Additionally, he was required to do MCAS practice at least once a week with segments directly from previous tests. So, MCAS was a particularly strong constraint that also prevented him from addressing some of the academic language needs he had identified in his TPA responses and in interviews.

Ultimately, though, his understanding of academic language as deep literacy instruction immersed during his clinical teaching—understanding that was not present in the fall. He summed up his understanding rather eloquently when asked about a TPA response where he wrote about the need for scaffolding writing instruction. He said:

You have to let go of the feeling of assuming students learned what they needed to know the year before. You have to assume square one. If they blow through it, then great. But don't assume they should know how to write a five paragraph essay. I foolishly had that assumption. None of them can write a five paragraph essay. None know how to do that. They can hardly write a paragraph. And if I had the time and support of people who watch me, I would have started with paragraphs, or how to write a sentence about what we just read. And if they can do that, how to put it into a consolidated paragraph, then a paper. I did the five-paragraph essay for a week and a half, because that is when I was told to do it. But it has to be piece by piece. I feel there is this belief that once you can start talking, you should be able to write out ideas, but it is more than that. A complex art and science. There are basic inherent ideas I'm just now reaching back and analyzing. It's like one of those Russian stacking dolls, where I've been at the smallest doll for the last 10 years, and now I'm looking back at the bigger dolls, and I haven't looked at them for so long that I've forgotten that they all fit together. And the kids are just now getting to the doll phase, so I've had to completely retro-fit my understanding of the writing process because I've completely taken it for granted as second nature, and I feel unqualified.

This assessment of his experience shows, albeit in a rather defeated manner, a clear understanding of what new teachers need to in order to teach literacy—to

deconstruct those expert blind spots (Nathan and Petrosino, 2003) in order to find where students are in their learning and teach literacy in a logical manner. However, he says at the end that he felt unqualified to do it. When asked why, he harkened back to notions he stated in the fall, that he was not taught these things as part of the program. He reiterated that the only place academic language had been explicitly discussed was in the Reflective Seminar in Teaching course. He did say that an Advanced Methods Course had begun to address some issues, specifically looking at how elementary school teachers taught. He found this to be an enlightening experience that helped him recognize his own deficits for teaching literacy.

Julia

Julia, a student teacher of English Language Arts working with juniors and seniors, has a strong understanding of the complexity of academic language, recognizing that it is “multi-faceted, in that it’s not just that each subject has its own language.” However, until spring she did not tackle many of those complexities in her teaching, needing to first focus on how to address “big ideas” in her classroom and reach her students. Additionally, while she had a much stronger understanding of academic language and its role in her classroom, obstacles such as the curriculum she was tied to and a lack of models prevented her from acting on some of her thoughts in this area.

After the first observation in December where she was in the midst of a short story unit and working with different literary devices, she showed some depth of understanding regarding academic language, defining a facet of it, for example, as “having them dissect the text so they can recognize the patterns of that language so they

can better understand it.” However, while understanding the complexity in theory, she admittedly was not ready to integrate it into her curriculum. She said,

I feel like it’s something I have in the back of my mind, but I can’t really be an expert in implementing right now. I’m focused so much now on getting across the big idea that once I feel successful in that then I can break it down even further and [focus on] how we use text in that way to get us even closer to the big ideas. So first its broad and then it gets smaller—I think it’s something I can get more focused on later but something I’m still struggling—I’m still in the awareness phase.

As part of this discussion she also referred to a lesson done in her Reflective Seminar in Teaching course regarding reading instruction, saying that she understood it in theory, but was not able to focus on it. This statement, besides suggesting a traditional English classroom of analyzing the larger themes of a text, also led to further discussion of where she was in her reflective process. Her focus was on the technically reflective aspects, looking primarily at behavior management and her own performance. In talking about her growth in that area and reflecting on an observation by her university supervisor, she said,

In the beginning of the year I felt like I mostly thought about classroom management, and my emotional response to why students were doing certain things and why they were acting the way they were. Yesterday I noted after my observation that I felt like I’m at a different place now in my reflections. I think more critically about how I’m delivering content. So now I think I beat myself up more about the content than their behavior because I know that the kids that are going to fall asleep are always going to fall asleep, so it really has nothing to do with what I’m doing. Sometimes it does—I can gauge whether they’re totally checked out or bored, but I don’t take it as personally anymore, so that doesn’t consume my attention. If someone’s talking it doesn’t consume my attention, I just get a little annoyed and say something but now I’m really more concerned with how I’m presenting my lesson.

This reflection, while stating a focus on content, is still more concerned with student behaviors in the context of the content and how she is delivering it. The fact that

she is so critical of herself in this area shows why trying content that may not be as familiar to her, such as deep reading instruction, may not make sense.

In fact, she demonstrated some frustration when asked about how much of her university study had found its way into her classroom, saying:

I think they are more or less separate experiences. I think at times I can take little pieces of things we do in class and reflect and put them into my practice here—particularly academic language, I find myself always thinking about the words that I’m using, things like that. In terms of methods my methods class was pretty much a philosophy class. We didn’t learn English methods—if I had to give it a title it would be the philosophy of education.

She went on to explain how discussion of classroom management came long after it was useful in her practice, and that having an on-line presence was not practical in the particular classroom she was in. More importantly, the statement emphasizes that she was in a space similar to the other candidates of the study, a space where the vocabulary element of academic language made sense to them in their immediate experience, but that in the heat of being a new teacher, other elements outside of their own funds of knowledge were put aside, potentially for later. However, like most of the other candidates, her comfort level and depth of understanding regarding academic language had grown by spring, though her ability to integrate much of that understanding had not.

Interestingly, when visited in May, Julia was teaching the same short story unit to a new class. The growth was quite evident: her classroom felt much tighter in its general function, and she had a much stronger sense of confidence. The lesson involved integrating some elements of an advanced methods course at the university involving reading out loud. However, the basic premise of the “big idea” was still evident, and in fact she said she had “forgotten” some of the academic language study from the fall.

However, rather than being overwhelmed when reminded of the notion that each text has its unique language function, and that teaching reading in this way can help access the text, she said she should work on that, and enthusiastically asked about ways to do it. Her reflective practice had clearly moved into a deliberative space that involved focus on curriculum, and while she had forgotten about the detailed elements of academic language and reading, she was enthusiastic. Attention to academic language in writing instruction was not very prevalent in her classroom, either, but according to Julia, this was due more to the confines of the curriculum she was given to teach and the methods used by the mentor teacher. In her Teacher Performance Assessment Narrative, while addressing a question of what she would do differently in reference to an teaching an essay, her answer was to spend more time teaching students how to craft a thesis and use textual evidence. She also mentioned wanting to use student drafts as models for teaching. When asked more specifically about what she would do, she said,

I would love, before writing an essay, to have an essay-writing workshop and go through expectations, criteria, this is how you write an essay, because the kids write plenty of essays—I know they write in history and in other classes, but they actually don't know how to do it. They are being told to do assignments and they know we assume they know how to do it, but I know they don't. I gave one essay to 11th graders, and with the exception of a few, they were so bad, I didn't want to assign another essay without having a few classes to go over how to do that.

Like Kenny, by spring she had recognized the need for this type of deep instruction involving writing, and that it should be a longer process. Additionally, she recognized the fact that teachers tend to “assume” students know more than they do regarding academic writing.

However, when asked if she had taken steps to increase instruction in this area, she said she had not, because there was a particular curriculum she had to teach and get

through, and that her mentor did not focus on academic essays, choosing to teach narratives and other creative genres of writing instead. This moved her to say, “you’re mentor does completely effect how you run your classes; I was thinking the other day how different I would be with a different mentor.” She went on to explain that she had not seen any models of teaching reading and writing at such a detailed level, and, more specifically, that she had not had instruction in how to integrate academic language into her reading and writing lessons, nor had she had conversations about this or seen it modeled by her mentor. She said that academic language essentially lived “in a bubble” in the one course in her teacher education program.

While the Teacher Performance Assessment rubrics for academic language and the training for scoring emphasize an attention to the function of language for reading proficiency, the type of instruction Julia reflects on for future teaching is in line with the joint construction-modeling techniques emphasized in Knapp & Watkins (2005). In fact, Julia showed an overall growth in understanding of academic language in her reflections on teaching, though not as much so in practice, from the time in January when she did the lessons reflected on in her TPA and the time she was observed and interviewed in May.

Jackie

Jackie is a student teacher working primarily with remedial freshmen and sophomore students. Because of a number of unforeseen circumstances, observations of her teaching were not able to occur by the researcher. Therefore, data was analyzed from her TPA responses, university classroom responses and artifact data, and an interview conducted in the spring.

From her TPA responses on prompts concerning academic language, it was relatively clear that her understanding of academic language was largely in the realm of vocabulary. For the prompt “Explain how planned instructional supports will assist students to understand academic language related to the key language demand to express and develop their content learning” from the Planning Task of the TPA, she wrote primarily about her attention to vocabulary and explaining instructions to students clearly. For example, she wrote,

Much of what I need the students to understand in the classroom is based off the use of academic language. Academic language in English is very specific and tailored to what I would be looking for. I did not say, “find descriptive words in the text,” but chose to be more specific and say, “Find the parts of speech in the text -- they will either be nouns, adjectives, or verbs.

In this response Jackie describes her use of academic language as replacing the word “descriptive” with the more specific “parts of speech,” and adding the three parts of speech in question. Later in this response, she writes that “after asking, ‘I want you to use very descriptive language in your own writing,’ I would ask, ‘Does everyone know what I mean by that?’” This further demonstrates the notion of academic language as the specific vocabulary of her content area, a skill taught in her university class in the first month of classes, during her pre-practicum.

A similar attention to terminology needs is shown in other prompts concerning academic language throughout her TPA, giving the impression that during the practicum phase of teaching, her understanding of academic language was comfortably at the word level. For example, in discussing the academic language support in a lesson on Shakespearean sonnets, she wrote,

By giving the students specific examples of what we were going to discuss in class, I also provided them with the means of understanding the academic

language necessary for each assignment. For example, in order to actually study sonnets and the principles of writing them, we needed to first understand what the terminology was in referring to poetry. Specific words such as rhyme scheme, meter, iambic pentameter, scansion, couplets, and quatrains are examples that are needed to fully understand how to break down and analyze poetry and more specifically, sonnets.

In this response, she once again ties student need for academic language understanding specifically to the terminology of concepts needed for poetry scansion.

Even though her direct reflections on academic language prompts are focused on terminology, she did show some attention to other academic language elements. For the lesson on parts of speech, for example, she had a goal of teaching students the function of those words in descriptive writing rather than simply the definition of the parts of speech. In this case, she makes a point of mentioning that this focus went beyond the “daily drills” on grammar she had to do as part of her mentor teacher’s curriculum, which involved identifying the parts of speech only. Additionally, she wrote in reflections on what she could improve that she would spend more time modeling and joint construction of writing for students, a teaching strategy that reflects the work of Knapp and Watkins (2005). This particular piece from Knapp and Watkins was shared in her university course in an academic language lesson on writing. As it was not called academic language in her discussion, it is difficult to know whether she understood it as such.

When interviewed in the spring, Jackie’s general understanding of academic language continued to be based on the terminology of content area. An understanding, however, that other areas of academic language, such as specific reading and writing skills, were of particular importance, had grown. Additionally, there is evidence that her reflective practices had grown in a similar fashion to other participants.

Her response to the question of how she would define academic language was in-line with that shown in her TPA in its focus on terminology, saying its “language specific to content areas. I remember going over this for English, we’d say things like syntax, grammar. I always thought of that as the academic language for English, where history has different, math has different. . . “ In discussing how she had worked to improve writing instruction, though, she said she was providing students with many more models to use, which she reported was resulting in some improvements in their writing. For reading comprehension, she also reported providing more detailed worksheets to help them learn deep reading. Because she could not show those worksheets due to the fact that the interview was not done at her school, it is impossible to know the context of the questions and whether the structure of the questions indeed provided guidance in this regard.

Her reported models for learning to access academic language were similar to the other candidates in their scarcity. As previously mentioned, she said she took the initiative to focus daily grammar instruction on the function of words rather than rules, showing that in fact her mentor was not a strong model in this skill area. When specifically asked if she had seen any academic language instruction modeled, she had a complex observation that in some ways mirrored the other English candidates. She said,

Sort of, when they’d teach writing I’d see it more. Explaining step by step what they should be doing, or using examples, close reading. But it was an honors class I was observing so I felt they were able to pick up on those concepts more, where as the general class, not so much. And they need it more—it was more like “we just need to get them to write” but the honors knew how to write so they could develop more.

The distinction here between the honors class and general class suggests that the mentor teacher sees close reading, use of examples, etc.—the underlying elements of content area literacy, as a higher level skill. However, Jackie recognizes that this notion is flawed by saying the students of the general class “need it more,” and in doing so showing she recognizes the limitations at this point of her mentor regarding academic language understanding. Her observation implies that her mentor teacher’s notion of an academic language focus is a higher level skill rather than a means to gain higher level skills. She also implies that there is a more pressing ethos to “get them to write” that was also expressed by Kenny. Besides her mentor, she said that in her university classes outside of the one studied, there was a little instruction on academic language, but that the instruction there also focused primarily on content-based vocabulary.

Though she was not observed or interviewed in the fall, her TPA reflections were written at the end of the fall semester, providing some insight into her reflective state at the time. Within her TPA reflections there are references to students being “bored” by specific lessons, and that this behavior was a driving force for adapting instruction. This suggests she was in a similar space of technical reflection at the time. When asked if her TPA responses would have been different if they had been written in the spring, she said,

One of my biggest gripes with the TPA is I was barely a teacher in the fall, learning how to talk in front of a class, never mind conducting a lesson. Now it is so different, I wish I could do it now. The context is so different. I was watched like a hawk in the fall. There is not as much pressure now, which would make the TPA different.

This response shows her own recognition of how limited she was in the fall, and how self-conscious she was in the new situation of student teaching, including the pressure of surveillance-“being watched like a hawk.” This statement, along with her

curriculum changes based on student needs for accessing curriculum rather than “being bored” that she reported doing during her clinical teaching represents a reflective growth similar to the other candidates.

History

Due to a number of circumstances outside of the researcher’s control, only one of the history candidates was observed and interviewed in both the fall and spring. One other participant was interviewed in the fall only, while a third participant was interviewed in the spring. All of their TPAs were read, and university classroom observations and artifacts were also taken into account to develop a better understanding of what academic language means to pre-service history teachers. Because the value of the data with the candidate who was interviewed in fall only (before he had fully started his practicum) is limited, profiles of Richard, the candidate interviewed twice, and Mary, the candidate interviewed in the spring, are included here.

Richard

Richard is a history teacher candidate teaching sophomore and junior United States history courses. From the beginning of his practicum experience, he was particularly frustrated with what he considered antiquated teaching methods of his mentor teacher and her unwillingness to allow him to try different approaches. Also, he was very self-conscious about himself as a teacher during his practicum, expressing in his University class and in his fall interview an heightened anxiety about whether he was engaging his students. In the spring, while still frustrated with the confines of the curriculum he was given and the mentor teacher’s methods, he was at a much more comfortable space as a teacher, and more reflective of how students were accessing

material rather than whether they liked him. Additionally, he talked a lot about flaws in the current history curriculum and frameworks because of an over emphasis on breadth of content and a limited emphasis on critical thinking and formulating a strong argument.

In the fall Richard was very anxious about his teaching and whether he was “doing it right,” as though there was a script or set of rules to follow. During his interview, he said the thing he reflects on the most was “whether I’m a good teacher. I question if I’m doing things like I should be doing, or could be doing.” When asked how he defined “good” he responded, “being able to keep the students engaged in the material” and to have them “thinking.” Additionally, he had concerns about classroom management, wondering at one point if he was “missing any tips.” All in all, he was very squarely in Valli’s (1997) technical reflection, focused completely on what he was doing as a teacher and how students were responding to him. When talking about curriculum, he only discussed how much he had to cover, and worried how he would possibly do that.

With academic language, he understood it to be “how we communicate with students.” Beyond the terminology-only understanding of some other participants, he understood that there were some structural elements of language, too. He said,

I could read something that has language that is complicated and I understand it, but when I deliver the same prompt, if it has that same language, then there isn’t going to be that same understanding of it. So it’s kind of a way of re-examining how we word things, how we structure our prompts, how we go about speaking to our students, and the pieces in which we give to our students.

Embedded in this statement is an understanding that academic language is more than terminology, but in the context of how Richard the teacher communicates to students. He specifically focuses on examining prompts that he provides to students for

discussion or writing. This focus connects with his overall reflection of how students perceive him as a teacher, and whether he is in fact reaching his students.

In the class observed in the fall he was trying to put some of this language knowledge into practice. The day of the observation was two days after a university class session where this researcher had done some instruction on academic language and writing, specifically looking at how writing questions are presented and the genre of writing students are being asked to write. He said that had influenced him to work at making prompts better, but he was still focused on engaging students, with his focus on being “not so verbose” (though given his intense anxiety regarding how well he was doing as a teacher, and therefore his need for positive feedback, his focus on this topic the day of the visit could very well been for the researcher’s benefit). He had a number of questions, too, in looking for affirmation that he was “doing it right.” In looking at his lesson plan he asked students to consider the different approaches to civil rights that Malcomb X and Martin Luther King, Jr., take, he did provide a model for writing a letter to the editor, but the prompt did not make it clear that they were to write an argument. So, while he said that the previous university class had got him thinking about teaching writing more effectively, it was actually in the context of his anxiety regarding engaging his students; he did not have a strong understanding at this point of teaching writing in a historical context. Similarly, he did not provide any instruction in how to read the text, in this case Martin Luther King, Jr.’s “Letter from Birmingham Jail,” or make any mention of teaching reading in his classroom.

It happened that his TPA writing was in response to this series of lessons regarding the civil rights movement, and specifically Martin Luther King, Jr., and

Malomb X. In these responses, his definition of academic language was more limited than during his interview, viewing academic language primarily as terminology (further showing that perhaps the lesson during observation was perhaps designed for the benefit of the researcher). He stated, for example, that to address the academic language needs of the students he wrote terms and their definitions on the board. He also stated that his students had “limited academic language mastery,” and therefore miss-interpreted or did not completely understand the material. Here again he seems to refer to the vocabulary of the text. However, at a different section of the TPA, he writes that he modified the reading for special education students by providing excerpts. While this could be seen as attention to academic literacy regarding reading in the same way as Sarah had, though because it was for special education students only, it more likely was part of the Individual Education Plans [IEP] of the students. It is important to note here that Richard was one of the students particularly outspoken in his disapproval of having to participate in the pilot of the TPA. At one point in his spring interview, when asked if he had anything else to mention, said “we should burn Pearson.” So, it is difficult to determine the nature of discrepancy between his academic language definition during his interview as compared to the TPA responses, given that he wrote the TPA after the observation and interview. It could be that he did not completely understand and was trying to respond in a way he felt the researcher wanted to hear, or that he simply did not care enough when doing the TPA to show a stronger understanding.

Richard was also a bit critical of his university program in general. When asked how much of his classes were showing up in his teaching, he said “not much,” explaining that the timing of issues brought up in his methods classes particularly were off; he

explained that had already been teaching and had to figure out particular aspects on his own, so by the time they came up in class he was already on to a new issue.

In the spring Richard seemed much more sure of himself as a teacher, and like participants in other content areas had entered a broader level of reflection that focused more on curriculum and ways to teach students, rather than ways to control or “engage” them. He had not let go of his frustration with the state of history teaching, though; he still struggled with wanting to teach less content and focus more on teaching critical thinking skills, which went against the general ethos of his mentor teacher. Additionally, he mentioned wanting to create a sense of empathy in his students several times. This notion of empathy in the classroom was a strong notion among the six history candidates in the program during class discussions, often focusing on the democratic classroom and developing students who think critically about social issues. Finally, similar to other participants, he more clearly spoke of wanting to teach writing skills in the classroom; he spoke of his own future classroom including less content or more focused instruction on writing an argument.

In order to help his students access content, Richard adjusted his lessons to include shorter excerpts of primary sources to meet the reading skills of his students beyond students with special education services. He did this in the spring class I observed, and also spoke of this methodology when asked how he had changed his teaching since the last observation and his TPA writing. He said that to strike a balance between “developing empathy for the individuals participating in it, and I also want them to better understand the curriculum,” he gave the students only key excerpts. He also explained that he did more pre-reading activities to introduce the topic, such as video, and

also had students underline different types of information with colored pencils. So, though he did not identify this practice as addressing academic language needs, and his goal in this lesson, according to his lesson plans, was to have students understand the historical concepts and think critically about them, his lessons were in fact teaching the reading of history (and perhaps would do this more comprehensively if he were aware of this). Additionally, his description of the lessons was focused on students gaining knowledge rather than students engaging in his lessons.

In this conversation he also alluded to his continued struggle with teaching critical thinking and so much content simultaneously, and in doing so mentioned again his conflict with his mentor teacher, who was focused on content first. [It is important to note that the particular school Richard worked in was working under some strict guidelines from the state during the school year because of a lack of success on MCAS testing. Because of this, they were required to post daily lesson plans connected to state standards in a computer program.] However, he was much more at ease, and rather than venting, discussed how he had been able to alter the curriculum to develop student writing skills more comprehensively. Specifically, he spoke again about developing the particular skill of making an argument essay rather than an essay for informational purposes only.

He integrated a lesson in which he modeled making an argument through instruction of some new material prior to students writing their own essays. He was very proud of this, explaining,

I did an example of this with a new battle, so I was still teaching more content, and demonstrating what I'm looking for in presentation. That way I'm getting more of the curriculum in while demonstrating a writing and research skill.

In this lesson he was able to reconcile the tension between breadth of curriculum and his own drive "to make sure they got the important idea of writing an argument and supporting it with evidence." Additionally, this shows a much more deliberative practice of reflection where he is focused on meeting the academic needs of his students through curriculum and lesson planning rather than tricks of the trade. When asked specifically about academic language, though, he did not associate this writing curriculum with academic language. Rather, he continued to define it as the language of communication between teacher and students. For example, he noted his clarity in the writing prompts as attention to academic language, but not the lessons on writing.

Finally, when Richard was asked if he had seen teaching reading or writing in social studies modeled, he said he had not. He did discuss how he observed an English teacher teaching Dr. Seuss's *The Lorax* as a way to introduce a number of reading skills. However, he had not been successful in integrating this into history, saying "maybe it's a flaw of history." He continued, when asked if these skills had been addressed in his methods class, to explain,

It doesn't seem to be a point that is stressed anywhere in history. From what I've seen—it's strange because you need to have a background of how to understand this text, or reading this text, to get the full effect, and I think that is one of the biggest flaws (in history) because if we understand the text, then we can better understand the concepts. . . we were more focused on essential questions/enduring understandings and conducting discussions, and how to make a democratic classroom vs. how to examine a text. It emphasized using primary source documents, but not how to go about examining them.

Here he shows that much of his drive for a democratic classroom and to have students engage in critically thinking about history is present in how he learned about teaching

history at the university, which seems to match his own views of teaching history (and perhaps his own experiences in history classes). However, within this, there is also recognition that learning content-area literacy regarding reading and writing is in fact very important to teach so students can have greater access to the material.

CHAPTER 5

CONCLUSIONS

Introduction

The following chapter includes conclusions drawn from this data and suggestions for more study. Because of the limited number of participants in this study, there are no definitive answers to the questions surrounding academic language. However, there are many clear patterns that strongly suggest the clear role academic language can have in the development of pre-service teachers as content-area literacy teachers. Conclusions from the study will be discussed first, followed by a discussion of the implications and topics for future research.

Accessing Funds of Knowledge

This study set out to explore how pre-service teachers understand, access, and integrate academic language knowledge in their reflective practice. Academic language was broken into three basic areas: terminology/language, reading, and writing. The data point to the conclusion that for student teachers, academic language knowledge can unlock an understanding of how they know and access the content they are teaching, and lead to a stronger reflective practice that recognizes the need for literacy instruction in the classroom. The pre-service teachers in this study did not begin to integrate content area reading and writing into their reflective practice until the clinical teaching phase, some twenty five weeks into their pre-service teaching experience and long after their student

teaching practicum was over. However, they began using academic language as the language of communication in their content area early in their student teaching practicum, which appears to have had strong short-term and long-term benefits for their own reflective practice.

The reason for this phenomenon is that the concept of academic language was not part of their prior knowledge, nor part of their mentor teacher's knowledge, and not a point of emphasis in their university study other than in the one course focused on in this study. Further, the data show that the pr-service teachers were very focused on a technical type of reflective practice, worried about whether they were being accepted by their students, and that they were doing right by their mentor teacher. Due to these pressures, the concurrent coursework they participated in serves more as a support system, and the actual theoretical perspective they were presented there was only accessed when it served a specific practical need for engaging students in their classroom, and when the theoretical perspective specifically supported ideas already present in their dominant funds of knowledge.

In the case of academic language, the language of the classroom paid an immediate dividend by helping to communicate with students and engage them in the content being taught. Conversely, content area reading and writing skills were not a part of pre-service teachers' funds of knowledge, and therefore not easily accessed. Further, these skills involved a deeper understanding of language outside of content knowledge in order to integrate into lessons and curriculum, echoing the observation of Moje, et al., (2004) that it is difficult for teachers to distinguish between content learning and content literacy learning. For these new teachers, the terminology of their content area was in

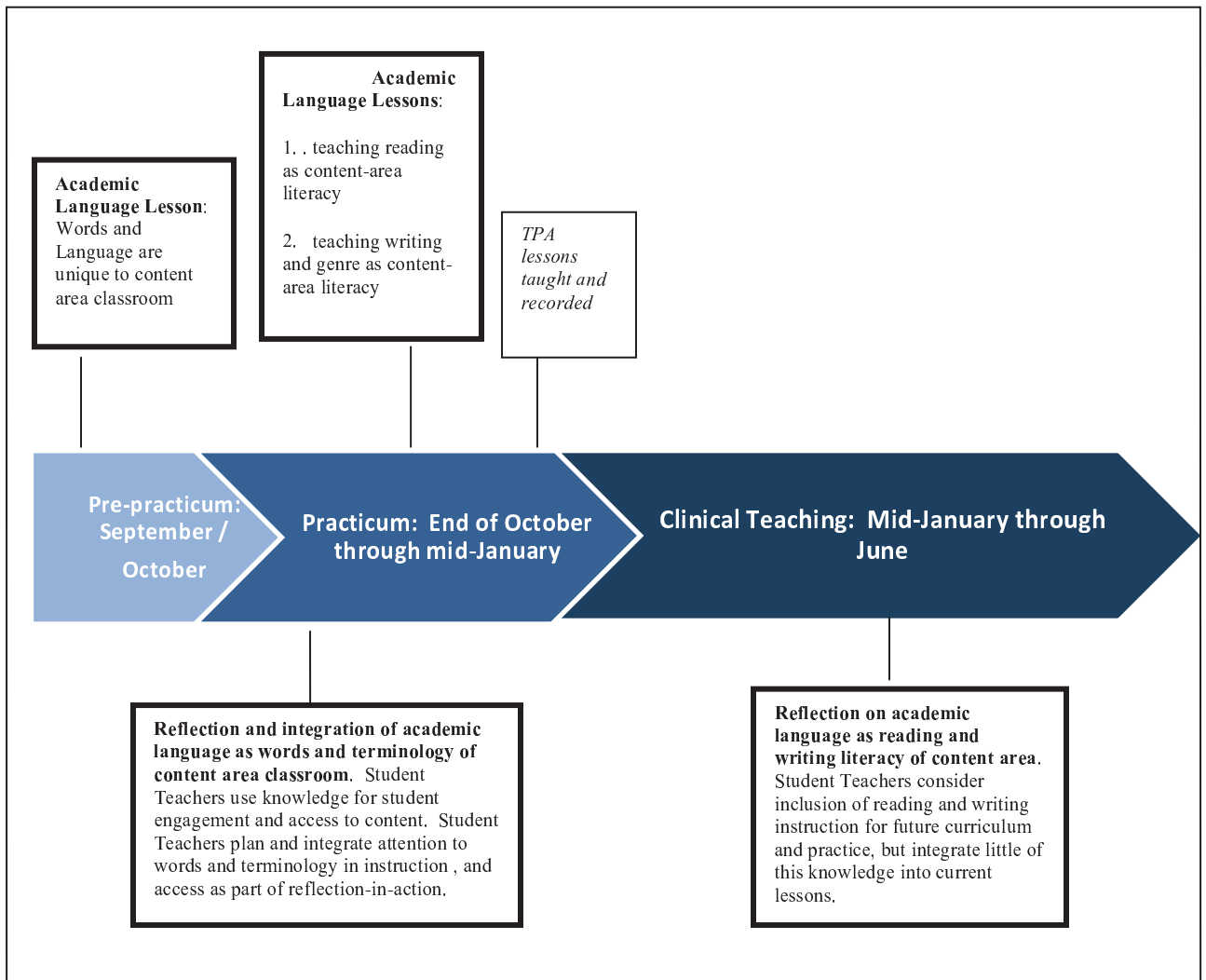
their *content knowledge* and therefore part of their accessible funds of knowledge, while reading and writing were part of *content literacy knowledge*, an area in which they were not confident. And, since the act of writing curriculum and teaching content they *do* know was overwhelming already—a new discourse they were learning as they built their own third space, the data show they had to move past these issues before thinking about reading and writing in their content area as part of their reflective practice. The pre-service teachers' integration of academic language knowledge in reflection and practice in relation to the phase of their teaching apprenticeship and lessons on academic language can be seen in Figure 1.

In their work regarding the third space in content literacy, Moje, et al. (2004) write,

for youth to comprehend, interpret, or challenge the texts of classroom disciplinary Discourse communities, they need access to a complex set of assumptions, an awareness of how Discourse operates and knowledge is produced in both their everyday and school lives, and support in learning how to navigate and cross the sets of assumptions they encounter and the identities they construct in those different spaces. (p. 46)

The pre-service teachers in this one-year immersion program were not much different than the secondary students discussed above whom they were teaching; they were students entering a new disciplinary discourse community, and they needed access to a complex set of assumptions as they constructed a new identity as a teacher, their own third space. And they needed access quickly, since teaching is not a passive profession. Where the secondary student brings knowledge from their home and community lives when interpreting classroom study, pre-service teachers bring their own experiences as

Figure 1: Student Teachers' Lessons on Academic Language Vs. Reflection and Integration of Academic Language Knowledge over Time



strong students of their content area, their experiences as a secondary student, and their home and community experiences into this new space. In the six to eight weeks of pre-practicum experience, where they observe their mentor teachers, they build a new fund of knowledge to draw from when they then transition to student teaching. And, this is a fund they build on as they continue to observe and work with their mentor teacher in the mentor teacher's space. This space, as these participants demonstrated, is a dominant

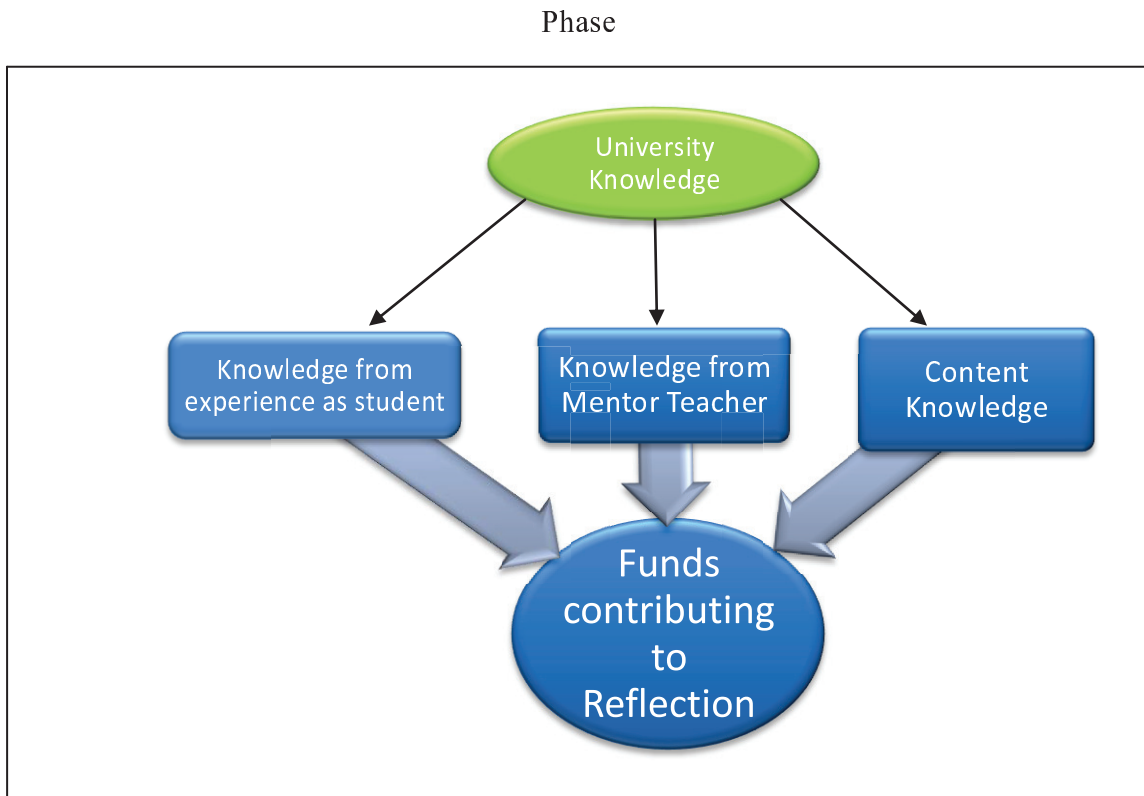
focus since they feel a strong obligation to teach their mentor teacher's curriculum, and also to show their mentor teacher that the students will learn the curriculum from them.

In the case of these immersion participants who began their work in the classroom concurrently to their teacher-education study and also completed a semester-long clinical teaching phase after their student teaching practicum, they gained two other funds of knowledge to draw from in their new space: the students they taught and their general practicum experience, and their university coursework. The university coursework is included as a new fund for their clinical teaching with regard to content literacy instruction because the data here suggest that pre-service teachers did not access a great deal of knowledge from their university studies during their practicum. When they were asked specifically about how much of their university work made it to the classroom, the answer was some form of "once in a while" or "not much," with Richard and Julia adding further that even issues such as classroom management were covered after they needed that knowledge, suggesting that their university study was not in-line with their practice teaching. The pre-service teachers in this study had to demonstrate their new knowledge in action—creating lessons and delivering curriculum that tried to take into account the needs of their students while they themselves tried to interpret this new space that they were in. So, not only did they have to understand the *literacy of teaching* in their content area in theoretical terms, they also had to put it simultaneously into practice.

Because academic language was not in any fund of knowledge other than a single university course, the concept with regard to reading and writing was simply not accessible in the fall. The pre-service teachers, in the pressure to adapt, understand, and

succeed in their very real experience of teaching, accessed their most available funds of knowledge in their practicum and initial reflective practice, the capital most comfortable to them. When the new knowledge that could fill the gaps left by their expert blind spots (Nathan and Petrosino, 2003), which includes content area reading and writing, was not present in their more dominant funds, it was ignored or put aside for later. Both Kevin and Julia, for example, noted that though they were interested in the reading lesson taught, they could not think about trying to implement the concept. Figure 2 demonstrates this phenomenon: the University knowledge hovers above and beyond the dominant funds of knowledge, filtered through the dominant funds of knowledge and accessed only on occasions when that university knowledge adds to information that is already known.

Figure 2: Funds of Knowledge Contributing to Student Teacher Reflection, Practicum



In the spring, this phenomenon shifted slightly as pre-service teachers accessed their own practicum experience as a more dominant fund of knowledge, with their own experiences as students drawn from less frequently. However, university knowledge remained in a supportive role. Because they had added more to their other funds of knowledge over time, they dipped into the university fund more often, but it was still not as dominant as the others and needed more concrete context from their classroom to be meaningful.

Discovering Blind Spots

The data suggest that for these pre-service teachers, academic language regarding reading and writing was one of those pieces of knowledge that lived outside their dominant funds of knowledge in the fall, and was therefore not accessible. However, recognizing the role specific terminology and language use in their content area plays in understanding the content was a factor in their early reflective practice, and in the spring during their clinical teaching phase.

In the fall during their practicum teaching, the pre-service teachers were most successful in understanding and integrating academic language at the terminology and language use level in all areas of teaching—planning, instruction, and assessment, even in the early stages of their fall practicum. Given that terminology in particular was part of their content knowledge rather than content literacy knowledge, this phenomenon makes sense. The university study of academic language developed an awareness of content specific language, at least at the level of communication and terminology, as a conscious part of reflection; the pre-service teachers recognized their own elevated fund of knowledge regarding content area language and how this knowledge is a key for accessing content. Some of the spaces that were previously blind spots were exposed. This recognition, in turn, allowed them to help their students build their third space. They were able to integrate access to the content area discourse into their lessons, helping their students access content.

The extent to which this was the case, however, varied across the three content areas studied. In science, the candidates were acutely aware of the importance of terminology and language use in their classrooms from the beginning, seeing this part of

academic language knowledge as a key teaching tool for students to access material. This was also the case, to a lesser extent, in social studies, though in Richard's case it was more in communicating what he was looking for to students than for accessing content. It was the English teachers, surprisingly, where academic language at the terminology and language use level was not seen as quite so important. This is perhaps due to the fact that academic language was seen as teaching such concepts as symbolism or theme, which is standard practice in English classrooms anyway. It could also be due to the fact that academic language at the language level in English is not so heavily laden with terminology for teaching content; English Language Arts is often teaching interpretive skills, and therefore the blind spots lie more in the reading and writing areas than in terminology. However, knowledge of the concept was still helpful; Julia, for example, recognized the needs of her students to build that third space. In her first interview she shared a story of the previous day when an un-planned debate over the meaning of the word 'theme' occurred in her classroom. Both she and her mentor teacher were surprised that the students were not clear of the meaning, and how many variations of a definition they had heard. This discussion prompted Julia to be more aware of the fluidity of English terminology as she wrote subsequent lessons.

Another factor in pre-service teachers latching onto words and terminology could be that this was one of the first lessons they had in their pre-service teaching coursework, the academic language instruction they received prior to their practicum. The lessons regarding reading and writing instruction occurred once some participants had started teaching lessons as part of their pre-practicum. As was seen in the profiles of each candidate, the participants did not directly relate content area reading and writing

instruction to academic language integration, even though the connection was made in all three lessons. In the anxiety and stress of their practicum and building their own new space in their classrooms, concepts that were not of immediate use were put aside. As was seen in the profiles, integration of academic language in reading and writing instruction was too overwhelming once they had started planning and teaching.

As noted above, one explanation of the participants recognizing language use and terminology as important factors to be aware of is that these were in their content knowledge, and therefore part of a dominant fund accessed early in their practicum. In this case, instruction in their coursework made this unconscious knowledge conscious and applicable to their practice. An additional factor here is their level of reflective practice at this time. Awareness of the function of language at the syntax and terminology level directly influences communication of content to students. Since the pre-service teachers, during their practicum, reported that their strongest concerns were whether what they were teaching was reaching students and whether their students saw them as teachers, it is no surprise that they readily identified the words they were using in their content areas as a key component for accomplishing these goals. It was a piece of knowledge from their university study that, like classroom management theories, was easily accessed and clearly seen as assisting them in the broader goal at that time of understanding how to reach students. Additionally, the university work added to their understanding of this knowledge; it was not a new idea that there were specific skills for managing students, nor was it a new idea that the terminology of their content area was important to understand. Further, while understanding academic language at this level was important in helping the pre-service teachers build their own third space by

recognizing the role this knowledge plays for engaging students, it also served the dual role of providing insight into what knowledge their students needed to access the knowledge of the classroom. This conscious reflection of language early on in their teaching helped them build their students' third space, and may also have been the gateway for later recognition of other literacy needs in the spring.

Content Area Literacy

Integrating academic language instruction in reading and writing involved lesson planning and instruction in areas not part of the participants' funds of knowledge, in areas they were not comfortable with and had no other context for. Therefore, they did not integrate content area literacy into their practicum. Teaching reading and writing skills in science and history has not been a traditional pedagogy, so the pre-service teachers did not have their own experience to draw from, nor could they draw from their mentor teachers. Similarly, many assumptions about students' ability to read and write in the English classroom have made instruction in the areas of reading and writing limited here, too, other than traditional grammar-rule instruction and identification of tone and theme in a piece of literature. In all of the English classes observed the students were reading fiction, and the general discussion facilitated by the pre-service teachers was focused on major themes of the text, with little attention to the words, phrasing, and structures that the author used to establish those themes, particularly in the fall. Additionally, because this knowledge lives in the area of content literacy knowledge, and all the participants have been immersed in their disciplines for so long, they have expert blind spots in these areas.

The majority of participants, in fact, demonstrated some surprise and frustration in their students' inability to read or write at the level they expected. By spring, during their clinical experience, this frustration led participants to reflect on the need for more instruction in reading and writing in their content areas rather than blame the students' work ethic or other outside factors, explanations they had eluded to in the fall. This indicates that making the initial conscious link between content area language and access to content knowledge was a bridge to deeper recognition of the importance teaching content area literacy has as a part of their teaching. This suggestion is further emphasized by the fact that, as reported by the participants, their mentor teachers did not necessarily make this same conscious link, nor did they include reading and writing instruction in their curriculum. None of the participants reported having any conversations or models of academic language awareness, including language. Kevin, in fact, reported that his mentor teacher was himself excited about the idea, and Julia's mentor teacher was as surprised as she was at the revelation that their senior English students had only vague notions of English terminology. Given this, it seems that even the limited instruction of academic language in the fall, and even more limited understanding of it as being primarily the language of the classroom, opened the door for pre-service teachers to recognize the discourse they need to teach their students, the discourse for them to build a third space in their classroom.

Similarly, writing instruction in all content areas was used more frequently as assessment rather than as part of instruction. As was found in a previous study of veteran English teachers, that writing is generally not taught in great depth and used most often for assessments (Sussbauer, 2010), writing instruction in all of the classrooms studied,

including English, was limited to this same function. The participants showed a more thorough recognition of the need for specific reading and writing instruction in their content area in the spring, however, though their enthusiasm was more muted. Kenny was particularly frustrated, saying that he did not feel qualified to teach the reading skills his students needed to access texts. Julia, while not as outwardly frustrated with the educational system, revealed similar anxiety, wondering how to teach the necessary reading and writing skills, given the full plate of curriculum in English. Participants in science and history noted similar frustrations, wishing the curriculum of their mentor teachers included more specific writing instruction specific to their content area, and also blaming standardized testing schedules for taking kids away from the classroom and not allowing this instruction to be integrated.

Implications of Research

Teacher Education Programs

The fact that all of the participants showed a more comprehensive understanding of the need for more reading and writing instruction in the spring during their clinical experience, after some twenty-five weeks of teaching, suggests some important issues about building content literacy and student teaching. The first is that, when faced with a classroom of secondary students, the pre-service teachers are in a very technical phase of reflection (Valli, 1997) that in many ways equates to a survival mode, and they access the content knowledge they know the best (their own educational experiences), or they think has worked (the mentor teacher's curriculum or best practices found on-line). These are

the spaces, or funds of knowledge, they draw from. Like the suggestion by Moje, et al (2004) that in order to fully reach their students, secondary teachers need to understand the two spaces their students are drawing from in order to help them build their “third space,” the university program must play a similar role. As was seen in this study, the participants’ university studies in many ways ran almost parallel to their classroom experience, with students drawing from that knowledge when it was applicable. A number of the participants noted with frustration, however that their university work frequently seemed to have little to do with their practicum experience in the fall as a general phenomenon. Similar to the secondary teachers in Moje’s work, the university program may not be aware of what is in those dominant funds of knowledge, and therefore not providing the knowledge pre-service teachers need in order to build their third space. As noted with academic language in association with their fall classroom experience, the participants understood and implemented the concept of academic language with regard to communication of content with language use and terminology because these were also part of their content knowledge. The university study uncovered this blind spot of their content knowledge, and this seemed to act as a gateway to later reflection on reading and writing content literacy. However, they were never able to implement that aspect, because they were not taught how in the spring when they were ready to access that knowledge and move to that new space.

As discussed in the profiles, the pre-service teachers generally moved into deliberative reflection (Valli, 1997), accessing their new knowledge as experienced teachers, in the spring during their clinical teaching phase. They had generally adapted to their new role and had a better understanding of what their goals were for their students,

considering what the students were learning over a period of time versus what students were doing that day, and not concerned if students would “like” the lesson. Their general demeanor was more comfortable and at ease, and they spoke about their teaching and thoughts about academic language and curriculum without qualifiers like “I’m not sure, but” and “maybe,” and fumbled less when explaining their thoughts. With this confidence, now that they had accessed the new discourse of teaching in their third space, they were more able to consider those other funds of knowledge, such as reading and writing instruction in content areas, which had been put aside in the fall. Had that content literacy knowledge been provided to them through their university study, they likely would have used it.

It was more in reflection than in practice that the pre-service teachers applied academic language knowledge regarding reading and writing, however. While Richard reported altering curriculum to support teaching argument writing, and both Sarah and Richard took into account reading levels when assigning articles, the participants mostly discussed teaching content-area literacy with an eye toward their futures, and with frustrations within their current situation. While they recognized the need for more writing instruction, they did not feel like they could implement that instruction into the curriculum they were given due to time constraints or the wishes of their mentor teachers. While the time constraints and mentor teacher’s curriculums could certainly impede experimentation, the fact that the pre-service teachers were in this deliberate phase of reflection and specifically reflecting on content area literacy indicates that if they had received direct instruction in these areas, there may have been at least some initial implementation. A conscious recognition of what the pre-service teachers are ready for

at specific times during their program could lead to much stronger instruction in how to address content area literacy in classrooms.

This data also suggest that in order to fully prepare pre-service teachers for their careers as educators, and more specifically in the area of content literacy knowledge, the traditional fourteen week student teaching apprenticeship is simply not long enough. The participants here did not reach the deliberative phase of reflection until well after their practicum, and it was not until that time that they were able to add content area literacy to their reflective practice.

During this study there was one participant that was originally considered for an in-depth case study, but later dropped in that capacity due to potential biases and conflicts. He was a pre-service teacher in my classroom in the spring and coming from a traditional two-year program. What is unique here is that we were also in a linguistics course together and applied theories by Knapp and Watkins (2005) and Fang and Schleppegrell (2008) as part of group projects, so he came into his fourteen week apprenticeship with considerably more theoretical knowledge regarding academic language than most student teachers. However, he was not able to integrate this knowledge into his practice any more than the participants focused on in these case studies. His arc of reflection and learning the discourse of teaching was similar to the others during his practicum experience, except that he never reached that deliberative reflection while in his apprenticeship because it ended after fourteen weeks. This example further demonstrates the fact that fully understanding and implementing content literacy takes more time to learn than the traditional student teaching program allows. It also suggests that the full year of apprenticeship in the immersion program, if the

coursework is aligned more rigorously to the pre-service teachers' needs for building their third space, could be a very strong way to train teachers in this area.

A final implication is with regard to the mentor teachers. Since the mentor teachers provide such a deep well of resources during the student teaching process, they can undermine the student teachers' building of discourse regarding issues like academic language if they themselves misunderstand the issue. As mentioned earlier, a couple of participants revealed that their mentor teachers thought deep reading skills were part of advanced content-area knowledge rather than skills for accessing knowledge. In this case, a more thorough vetting process could alleviate this issue, as well as provide more continuity for all the pre-service teachers. Another possibility is the university to more actively invite mentor teachers into the process.

The Teacher Performance Assessment

Given the fact that academic language literacy in their content areas with respect to reading and writing was outside their dominant funds of knowledge as pre-service teachers in their first fifteen weeks of teaching, it is no surprise that, as the data shows, the actual integration or even understanding of content reading and writing skills as important parts of the classroom—an attention to these aspects of academic language—occurred in the spring, long after their Teacher Performance Assessment had been completed. At the time participants had to video-record their teaching events for the TPA, they were generally eight to ten weeks into their practicum, and all were rather overwhelmed; they were focused largely on classroom management and writing plans they felt comfortable delivering, and that they felt their students and their mentor teachers would respond favorably to. Because reading and writing skills in content areas were not

modeled for them anywhere, including from their mentor teachers, and it generally was not part of their prior knowledge, this area of knowledge studied in coursework did not reach their reflective practice.

There is nothing short of time that can move student teachers to this new space, so perhaps the implication here is that the timing of the Teacher Performance Assessment is not the best for assessing the teacher candidates' level of understanding in how to integrate academic language. Pecheone and Chung (2006) found academic language scores to be lower than the others in a TPA pilot. This could very well be due to what was seen with the participants of this study, that in the present educational system, academic language knowledge regarding reading and writing does not fit into the pre-service teacher's arc of learning the discourse of teaching until after that first student teaching phase is over. As seen in the data, all the candidates were at a much more comfortable space as teachers in the spring, and reflecting on a much broader array of curricular concerns as compared to during their practicum, one of these being reading and writing in content areas. The fact that this more comprehensive reflection correlates to a more in-depth regard for the need to teach reading and writing skills universally among the participants suggests not only that the little instruction in this area was something for them to hang meaning on, but also that they were not ready to attend to academic language at this level ten weeks into their student teaching, neither in practice nor in responses to Teacher Performance Assessment prompts.

This could change over time if the broader educational system adjusts its attention to academic language as an integral part of teaching content to students. Since none of the candidates reported any real modeling of how to teach these skills from their mentor

teachers or from their professors suggests that this concept is something new to education in general, and clearly not in the funds of knowledge of many experienced educators. It will take time for these experienced educators to learn the function of academic language in their own disciplines before sharing this knowledge with pre-service teachers. Certainly the new Common Core frameworks will start to change this in the coming years as veteran teachers adjust, and perhaps similarly influence student teachers.

However, this may take a while. I was teaching my own secondary English Language Arts classes over the two years of research seen here, writing and delivering curriculum that was heavily influenced by my research, in order to gain a more real understanding of what it means to integrate this level of literacy into practice. It was very revealing, challenging a great deal of what I had grown to know as a teacher of English Language Arts. One of the most challenging aspects was committing to it, particularly when it was clear that some of the units I traditionally taught would have to be cut in order to give deeper attention to reading and writing skills. Many of the participants noted a pressure to keep up with their mentor's curriculum, who in turn felt pressure from standardized testing to cover a broad swath of content. As one of those teachers, it was a challenge to leave my comfort zone with standardized tests looming, and only did so because my academic language fund of knowledge was strong due to this research. So, for the short term it will take a stronger commitment from teacher educators to universally acknowledge the importance of content literacy, recognize when pre-service teachers are ready to access that knowledge, and train their pre-service teachers in this vein—to build and reinforce this fund of knowledge with much more vigor so that student teachers recognize the value and utilize it earlier in their practice teaching.

The data here also suggests some uncertainty regarding the Teacher Performance Assessment's ability to assess students' knowledge *and integration* of academic language. Besides the fact shown already that students in a one-year immersion program have a much stronger grasp of literacy instruction in their content area in the spring after twenty five weeks of teaching than they do after twelve weeks, when they did the assessment, there may also be a gap between knowledge shown on the assessment and actual practice. Since the training video for scoring the TPA (2012) specifically discusses that students must explicitly state they are attending to academic language in order to score well, some participants in this study would not necessarily have scored high even if they had done the assessment in the spring. This is due to the fact that even though some did demonstrate academic language attention regarding reading and writing, because they did not associate these new concerns with academic language, it may not have been considered in the scoring. For example, in the spring Kevin talked at great length of wanting to teach students how to write a scientific argument, but still defined academic language as the words and communication of the classroom. Richard showed a similar gap when discussing argument writing. This speaks to a need for teacher educators to have an awareness of the academic language of education and the need to address it with their students. While it is professional training, pre-service teachers are primarily students in a new discourse, and should be regarded that way. However, on the other hand, this brings into question which is more important—recognizing the need to teach reading and writing skills in content areas, or knowing that it is called academic language in order to perform better on a standardized assessment.

Another potential gap in the validity of the TPA in regard to academic language was suggested specifically by Kenny, who wrote rather articulately about academic language on his TPA, but did not show any real attention to it in practice. In this case, his scores according to the academic language rubrics may be higher than his actual ability to practice attention to academic language, since he had not had, in his view, the opportunity to practice in his pre-service teaching situation. In talking with mentor teachers and frequently being one, mentor teachers are generally quite accommodating for student teachers when they need to spend a day or two doing something for their teacher education program. Therefore, even a candidate like Kenny, who was very tied to his mentor's curriculum, could be given the opportunity to step away from the curriculum for a class for a video session. But without consistent practice, it is uncertain whether a candidate like Kenny could actually teach literacy well in their future teaching, since their habits will be set, and to this point it seems that attention to academic language has only been integrated into schools in small pockets where the Common Core standards have been fully implemented.

Further Study

This study offers many suggestions for further research, both in the context of teacher education, and with veteran teachers. Regarding teacher education, conducting a similar study to this with participants not introduced to the concept of content-area literacy would provide comparison for the impact of teaching it even at the terminology and language use level. In a pilot study prior to this one with a single participant from an immersion program, academic language had been introduced to pre-service teachers in

the spring semester (the introduction was of far less depth than in this study). In observations and interviews of this participant in the spring, her integration of the knowledge was far less rigorous than any of the participants in this study showed in *the fall*, suggesting a particular importance not only of the depth, but also of the timing of instruction.

Piloting the Teacher Performance Assessment in relation to the timing and rigor of academic language instruction would also be valuable data for determining how well pre-service teachers in immersion programs understand academic language, since they would be reflecting on a broader base of experience.

Finally, in order to fully understand how academic language can become a more rigorous part of K-12 education, research must be done with veteran teachers to determine their understanding and misconceptions of content-area literacy. When the participants of this study were asked about how their mentor teachers used academic language knowledge in their teaching, the answers revealed an interesting misconception of academic language by some veteran teachers. Besides the interest by Kevin's mentor, Jackie and Kenny both mentioned that their mentor teachers thought the deeper reading and writing skills associated with academic language were better suited for the curriculum of honors and advanced students. This idea points to a belief that academic language is a separate piece of content knowledge, rather than an underlying knowledge needed to access content. The misconception also suggests that more research is needed to understand veteran teachers' knowledge of content area literacy. This data could influence not only teacher education, but also professional development programs in school systems as they integrate the Common Core Standards.

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