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Patricia M. Durham

Sam Houston State University, pmd006@shsu.edu

Jolene Reed

Sam Houston State University, jreed@shsu.edu

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USING LITERACY AS A TOOL TO FOSTER UNDERSTANDING

Using Literacy as a Tool to Foster an Understanding of Content Language Literacy for Preservice Teachers

Patricia M. Durham and Jolene Reed

Sam Houston State University

Authors' Notes

Patricia M. Durham is an Associate Professor of Literacy Education, School of Teaching and Learning, Sam Houston State University. Dr. Durham coordinates the Masters in Reading and Language Arts program as well as the SHSU Dyslexia certificate and the Texas Reading Specialist certification. Her research interests include novice reading teacher pedagogical and professional identity, content language literacy, and metacognition. Patricia Durham is currently co-editor of the Journal of Literacy Research and Instruction.

Jolene Reed is an Assistant Professor of Literacy Education, School of Teaching and Learning, Sam Houston State University. Dr. Reed's research interests are emergent literacy, elementary literacy, teacher preparation, and content language literacy. She is co-chair of the

annual SHSU Joan Prouty Literacy Conference. Jolene Reed is active in developing and sustaining community literacy.

Correspondence concerning this article should be addressed to Patricia Durham, School of Teaching and Learning, Sam Houston State University, Huntsville, TX 77341.

Email: pmd006@shsu.edu

Abstract

In this qualitative study, data were collected on 60 junior level preservice teachers who utilized a semantic feature analysis chart over a 5-week summer semester study of content language literacy in elementary settings. Viewing literacy as a tool, participants analyzed strategies for the ability to support content language fluency through the use of multiple literacies (i.e., reading, writing, speaking, listening, and thinking). Findings indicate that use of the chart helped these preservice teachers build pedagogical content knowledge for the concept of content language literacy as well as to strengthen the ability to analyze teaching strategies that developed fluency in content language use. Over the course of the study, the preservice teachers also developed awareness of their growing confidence and ownership in selecting literacy strategies that would foster content language fluency in student learning.

Keywords: pedagogical content knowledge, content language fluency, literacy, preservice teachers, semantic graphic organizers

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Introduction

Preservice teachers have a formidable task of filling a metaphorical “jar” of knowledge with content about teaching in a relatively short period of time. From the start of their teacher education preparation to the completion of their novice years teaching, these individuals have roughly 5 years to build a foundation of knowledge which will help them grow into effective and proficient educators. Developing into a proficient educator would be one who can move past “second guessing” their content knowledge about pedagogy and into instinctive or “second nature” use of pedagogy. Schon (1983) uses the term “action of knowing” to theoretically explain this process (pp. 49-54). When a teacher has built a solid understanding for the content knowledge—and then they move from needing to “know” facts into instinctively “acting” on those facts—they combine pedagogy and content into ownership for their pedagogical content knowledge (Durham, 2012; Durham, 2013a; Durham, 2013b, Kansa’nen et al., 2000; Schon, 1983; Shulman, 1987). Reflection, replication, and reasoning is the trifecta for building this ownership. When an educator becomes curious and takes a reflective-inquiry-based perspective for teaching, they begin to move out of the novice level and into the realization that effective teaching is not the result of an accumulation of methods and facts, “but an art requiring the teacher to be able to search the situation for the best approach that matches the experience, the teacher, and the student” instantly and effortlessly (Durham, 2012, p. 56).

The intent of this research endeavor was to explore techniques and/or tools that might be effective in guiding pre-service teachers as they strive to develop autonomy and ownership

regarding their decision-making instructional practices. Through a qualitative analysis of preservice teachers' personal written reflections, we uncovered how the use of a semantic feature analysis chart supported their development of pedagogical content knowledge for content language literacy, aided in viewing these strategies as tools to strengthen students' content language fluency, and influenced their decision-making abilities to select impactful literacy strategies.

Significance for Exploration

In the 2018 International Literacy Association's Literacy Leadership brief, *Transforming Literacy Teacher Preparation: Practice Makes Possible*, a challenge is set to "Expand Perspectives" of reading methods courses to include more multimodal perspectives (p. 6). It specifically asks, "When can we begin to think about disciplinary literacies as something that should be topics of conversation in all classrooms and not just secondary curriculum? When will literacy become a tool and not a subject?" (p. 6). In this study, the authors additionally attempt to address these challenges by showing how preservice teachers can use literacy as a "tool" to build ownership for their developing pedagogical content knowledge of *content language literacy* as well as for developing reasoning and decision-making skills for selecting content language literacy strategies in lesson designing.

In the following section, the authors build a literary framework for the reflective thinking of pedagogical content knowledge and for the concept of *content language fluency*.

Literary Framework

Reflective Pedagogical Thinking. Durham (2012) refers to pedagogy as "the art, style, and knowledge of teaching one's chosen field of specialty" (p. 4). Reflection plays a large role

in this action of thinking about pedagogy as it helps move teachers toward purposefully asking questions to deepen their understanding. Kansa'nen et al. (2000) reviewed a model for their research on pedagogical thinking which explained a process for developing pedagogical reasoning in a more direct act through what is called “purposiveness” (p. 23). Teachers develop conscious awareness in their need to understand curricular goals before they can form ownership of their understanding of pedagogy. Reflection brings the awareness of responsibility for their development, “purposiveness may be an idealistic characteristic of the teacher’s thinking and action, but in any case it is the core of a teacher’s pedagogical thinking” (p. 28). Understanding pedagogy includes understanding the basic idea of conducting research. When teachers approach their teaching from a research lens, they increase autonomy and ownership by building theory from their own inquiry of their instructional practices.

Developing pedagogical content knowledge requires taking an inquiry approach to teaching. Utilizing what they know about teaching and then experimenting with this knowledge by adapting and evolving techniques, strategies, and approaches rely on a trial and error mentality as “it is through the experiences of success and failure that a transformative understanding of pedagogy can be formed” (Durham, 2012, p. 52). There is an ebb and flow effect throughout a teacher’s career. For the preservice teacher, knowing early on that as new pedagogy and new content emerge in the field, they, like all teachers, will move through this reflective cycle of pedagogical ownership in a give-and-take relationship of “knowing” and then “using” instinctively (Snow, Griffin, & Burns, 2005). Without this way of reflective “thinking,” a teacher runs the risk of holding onto a false notion that knowledge of skills alone develops pedagogical ownership rather than adaptation and reasoning from reflection of their pedagogical content knowledge (Kansa'nen et al., 2000; Shulman, 1987; Schon, 1983).

Understanding “content language fluency”. Grounding the concept of content language fluency is the notion that to learn content is to learn a language (Durham & Ingram, 2016; Gee, 2004; Rincke, 2011; Vygotsky, 1962; Wakefield, 1999). Working on the commonly accepted pillars of literacy, (i.e., reading, writing, speaking, listening, and thinking), Durham and Ingram (2016) argue that within the content areas are established ways of thinking and speaking through the pillars of literacy. Each content area grows its own lexical identity not just with its verbal and textual vocabulary but also with its way of “being” found in each situated community. Historians speak, look, and act uniquely to their field as do artists, mathematicians, scientists, and others associated to specific content areas. When teachers create environments where students can become immersed in the social community of the content being learned, they create a need to use and become fluent in the social language of that content,

Learners need to have intentional mentored instruction from those that have advanced experience in the academic language on the socially acceptable uses, terms, language patterns, and application for the academic language. Learners need to visualize and internalize what it sounds like and looks like to read, write, speak, think, and listen as an individual who owns the language. (Durham & Ingram, 2016, p.9)

In *Becoming Fluent in the Language of Content: Developing Strategic Readers as Critical Consumers of Information* (Haas, Durham, & Williams, 2016), becoming fluent in the language of content is likened to acquiring a second language. In this scenario, all five literacies (reading, writing, speaking, listening, and thinking) are used to become fluent speakers of that content language. The authors stated, “By not addressing content as a language we risk portraying that the learning of content is merely the acquisition of facts, rather than an acquired language that students can use to learn and grow in the understanding of society that uses that

language—even if the society is in their very own classrooms” (p. 3-4). To help develop teachers’ pedagogical content knowledge for “content language fluency,” Haas, Durham, and Williams (2016, pp. 14-18) developed a semantic feature analysis chart called “Content Language Checklist” to aid in developing a critical eye for strategies which best foster a learning environment to support students becoming fluent in the language of content. Through this semantic checklist, literacy is used as a tool to analyze strategies for its impact factor to engage the student in authentic reading, writing, thinking, speaking, and listening and as a means for becoming fluent content language users (see Appendix A, Haas, Durham, & Williams, 2016, p. 193). It was also designed to help build what Schon (1983) refers to as the “knowing” of content so that educators can move into the “using” of the content knowledge more proficiently. The semantic feature analysis chart creates an opportunity for what Kansa’nen et al. (2000) calls “purposefulness” as well as an inquiry-based approach to making informed decisions about literacy strategies to embed in content lessons. Haas, Durham, and Williams propose that the more literacy experiences a strategy can offer, the more opportunity the student has to practice building the language of the content.

Semantic feature analysis chart. Research has established the successful ability of a semantic feature analysis chart to assist in building new knowledge by analyzing major ideas, concepts, or terms for concrete descriptors or features (Anders & Bos, 1986; Johnson & Pearson, 1994). Semantic feature analysis charts serve as a visual graphic organizer that can “train the brain” to break down and build up knowledge of a concept. Users of semantic feature analysis charts develop decision-making abilities to discriminate new information into relatable categories or components to build new knowledge or semantic categories (Johnson & Johnson, 2011). For a preservice teacher, using semantic feature analysis charts can assist in defining the

concept of becoming fluent in the language of content. If a true acquisition of language model is used, students must have many opportunities to believe that there is a true “communicative purpose” for learning the structure of the content language behind the facts they are learning. Using the pillars of literacy as a tool for learning the concept of content language literacy seems to support such belief and increase confidence in decision-making abilities for preservice teachers. Literacy through this lens creates “topics of conversation in all classrooms” by using the language of content as the tool (ILA, 2018, p. 6).

In the following section, the method and procedures are presented that were used to explore the following:

1. Does the use of a semantic feature analysis chart support preservice educators’ pedagogical content knowledge for “content language fluency”?
 - a. Does the semantic feature analysis chart aid in viewing these strategies as tools to strengthen students’ content language fluency?
2. Is there an impact on participants’ confidence for decision-making abilities when selecting content literacy strategies, which offer opportunities to foster environments for developing content language fluency for students?

Methodology

Many in the field of education have put forth efforts to better understand the individual educator and what influences her/his identity and pedagogy through qualitative inquiry (Berci, 2006; Clandinin & Connelly, 2000; Shulman, 1992; Snow, Griffin, & Burns, 2005; van Manen, 1990). Qualitative research adds to a field of study by embracing the multiple perspectives individuals have to offer (Creswell, 2007). While the analysis of individual students’ written reflections was dominantly qualitative, quantified elements were included after themes were

discovered classifying this study as a partially mixed sequential dominant status design or QUAL→ quan (Leech & Onuegbuzie, 2009).

Participants

Participants were 60 junior level undergraduate students enrolled in two separate sections of a summer 5-week Multidisciplinary Literacy course at an East Texas public university. These students are identified as seeking early childhood through sixth grade teacher certification, and on average have one more semester before student teaching. On the first day of class, both researchers provided a consent form and presented the goals of the study which were to explore 1) the growth of preservice educators' pedagogical content knowledge and ownership for the understanding of "content language fluency," and 2) to uncover if this development had an impact on their confidence or ownership for selecting content literacy strategies which offer opportunities to foster environments for developing content language fluency for students.

Data Collection Procedures

Baseline/pre-data collection procedures. Prior to presenting course content, participants completed two reflective response questions and one survey question using the content literacy strategy "Quick-Write" that served as the pre-assessment data collecting tool. Data collected from this instrument establish a base line for knowledge and confidence for content language literacy. During the allotted five-minute Quick-Write, participants wrote their initial assumptions, comments, and knowledge about the following items:

- 1) Explain your understanding for the phrase "becoming fluent in the language of content" and "content language fluency". What might this term mean to you? Use the space below to write your thoughts.

- 2) Explain your criteria for selecting strategies for teaching content knowledge for subjects such as science, math, or social studies. Use the space below to write your thoughts.
- 3) At this moment, how confident do you feel about designing content lessons with literacy strategies that develop content language fluency?

1= little confidence 5= highly confident

1 2 3 4 5

Quick-Write item number 1 was used to collect data that might aid in answering the first research question. Quick-Write items numbers 2 and 3 were used to collect data that might aid in answering the second research question.

Intervention content. The intervention designed followed the regular course objectives for developing a framework for teaching multidisciplinary content through the five literacies. Over the five-week session, students were exposed to approaches, techniques, and strategies for:

Week 1-Developing a Framework for Teaching Nonfiction through the Five Literacies

Week 2-Selecting Strategies for Supporting Content Comprehension- Front Loading Lessons

Matching Nonfiction to Students' Interests and Needs Using Text Sets

Evaluating and Selecting Informational Texts- Access Features

Week 3-Navigating through Organizational Structures of Informational Text Strategies for

Reading Informational Text Reading and Writing Discovery Circles

Week 4-Discovering Digital Literacies and Navigating through Digital Literacies

Approaches for Writing Informational Text- Organizing for Research Exploring

Multigenre Approaches to Writing Informational Text

Week 5-Research Approaches- The Inquiry Process/ Gathering Data

Research Approaches and Writing Informational Text- Student Publishing Informational Text Deconstructing and Analyzing Finished Products

Approaches for Presenting Research Reports and Text Sets

Throughout the semester, participants utilized a semantic feature analysis chart found in *Becoming Fluent in the Language of Content: Developing Strategic Readers as Critical Consumers of Information* (Haas, Durham, & Williams, 2016) to develop a critical eye for analyzing and then selecting literacy strategies best suited for content lessons. As new strategies were introduced throughout the course, participants used the chart to categorize the strategy's attributes based on the five elements of literacy (see Appendix B for a completed student product). The following attributes or categories were available on the semantic feature analysis chart to select, and participants were encouraged to select all which applied:

1. Does the strategy engage the learning in authentic reading of the content?
2. Does the strategy engage the learning in authentic writing of the content?
3. Does the strategy engage the learning in authentic speaking of the content?
4. Does the strategy engage the learning in authentic listening of the content?
5. Does the strategy engage the learning in authentic thinking of the content?
6. Does the strategy help the learner to organize the content?

Post-data collection. On the last day of class, participants completed the same reflective 5-minute Quick Write activity administered on day one of the semester. This data collecting instrument assisted the researchers in exploring how students' pedagogical content knowledge for content language literacy evolved over the course of the semester as well as for change in the level of confidence for selecting strategies to develop content language fluency as a result of the course and semantic feature analysis chart.

Limitations

There were some obvious limitations to our study such as the population size and demographics. The study was limited to two sections of a summer course offering at one university and results may have been different with a larger population, which also represented various geographic locations. The study did not have a control group and therefore we are unable to confirm if the participants would have evolved their understandings for content language literacy or increased their confidence for selecting strategies with or without the intervention experience of this study. We also could not control for bias, as we were professors of the course as well as the researchers of the study. Last, the wording of the response questions were not validated for reliability and could be strengthened to offer more specificity.

Data Analysis

Method

For each of the student pre- and post-textual reflections we followed inductive data analysis procedures using a phenomenological lens (Moustakas, 1994, pp.120-121). From the individual textual reflections both for the pre- and post-assessments, we identified statements of value that were relevant to the meaning of the experience (i.e., of developing pedagogical content knowledge for content language fluency). Also called *horizontalization*, this is the beginning of the information reduction process. For each statement of value, there are distinguishable qualities of meaning for the particular experience. Going through this process eliminated unneeded text and minimized it to a structural description of the experience. It can be thought of as chunking information.

From these statements, we reduced once again more textual descriptions to create a single “cluster of meaning.” This can be a word or phrase that captured the essence of the statement and

provided a code for the essence. One might ask, “Does it contain a moment of the experience that is a necessary and sufficient constituent for understanding it?” Alternatively, “Is it possible to abstract and label it? If so, it is a horizon of the experience” (Moustakas, 1994, p. 212). The clusters of meaning become a label for that statement. Taking these labels, we then organized them into their commonalities. These groups of labels became an unnamed category and were repositioned until they formed a grouping resulting in a theme. From these themed groupings, the researchers quantified the statements with totals and rankings. Additionally, participants completed one Likert-scale question at the end of the written reflection relating to their confidence to make informed decisions for selecting strategies to develop content language fluency.

Baseline/Pre-Data Analysis

***Quick-Write Question 1.** Explain your understanding for the phrase “becoming fluent in the language of content” and “content language fluency”. What might this term mean to you? Use the space below to write your thoughts.*

Through the qualitative reduction process, seven themes emerged from the students’ written responses for pre-assessment Quick-Write question 1. As shown in Table 1, the most common theme represented by six identified “clusters of meaning” statements was that hearing the terms “content as a language” or “developing content language fluency” meant that the goal is to understand or comprehend. An example of a cluster of meaning taken from a participant’s written response was “reading or understanding content in various subjects.” The themes of “Ways of teaching or techniques” and “Connecting to reading” followed with four significant cluster statements each. These were followed by themes of “Communicating the content” and “Using the five literacies” both with three significant cluster statements. The theme of “Content

as its own language” tied with “Just didn’t know” as the lowest emerged theme (2 significant cluster statements) from the textual descriptions.

Of these seven themes, those most closely aligned with the literature on content language literacy presented in the Literary Framework of this article were “Using the five literacies” and “Content as its own language.” These two themes having a combined eight clusters statements out of 24, or just 33%, aligned with the literature on content language literacy (Durham & Ingram, 2016; Gee, 2004; Haas, Durham, & Williams, 2016; Rincke, 2011; Vygotsky, 1962; Wakefield, 1999). However, they did not emerge as the stronger themes uncovered based on the frequency measures. When looking at the seven themes, it became clear that students offered vague and overarching “catch phrase” statements rather than specific details to explain their thoughts such as “able to explain it to someone” or “developing fluency.”

Quick-Write Question 2. *Explain your criteria for selecting strategies for teaching content knowledge for subjects such as science, math, or social studies. Use the space below to write your thoughts.*

Table 1 shows that five themes emerged for the second question of the pre-assessment. The theme that emerged the most from the textual evidence for the second question about thoughts on selecting literacies strategies to enhance content lessons was that “Strategies support comprehension” which had nine clusters of meaning statements. One participant responded by saying it is a “Key factor in the child's comprehension.” The seven significant statements resulting in the theme “Strategies teach new vocabulary” followed this theme. These first two themes had sixteen combined significant cluster statements. The remaining themes were “Students exhibit comprehension through communication of subject matter” (5), “Multiple literacies need to be incorporated” (5), and “Learning new content is like learning a new

language” (3). These last two themes aligned with the literature used in the Literary Framework and were desired responses, but these themes did not emerge strongly with low numbers of significant statements (13 out of 29) and only represented 44% of the total emerged statement clusters. Student responses indicated that rather than thinking about “how” to select strategies and theory behind selecting strategies, students focused on the “what” strategies should include as evident in the participant’s written response “Teacher selects what strategies work for her and the students”.

Question 3. *At this moment, how confident do you feel about designing content lessons with literacy strategies that develop content language fluency?*

1= little confidence 5= highly confident

1 2 3 4 5

The third question on the pre-assessment gauged the level of confidence the participants had for designing content lessons with literacy strategies that develop content language fluency. Using a Likert-scale of one to five with one having little confidence and five feeling highly confident, the response for all participants averaged 2.8 out of 5 or 57% confidence rate (see Table 1).

After analyzing the two pre-assessment questions, the findings indicated that the majority of the themes did not align with the literature for content language literacy used for this research in the Literary Framework, and the level of confidence for selecting strategies was very low. It informed us that there was indeed an opportunity to provide an experience that could help develop their pedagogical content knowledge as well as for these novice pre-service teachers to take ownership for a “purposefulness” approach to their growth in developing teacher identity

through the use of the semantic feature analysis chart “Content Language Literacy Chart” utilized in the research plan.

Post-Assessment Data Analysis

Quick-Write Question 1. Through the qualitative reduction process, five themes emerged from the students’ written responses for post-assessment question 1. Referring to Table 2, the most common theme represented by seven identified “clusters of meaning” statements was that hearing the terms “content as a language” or “developing content language fluency” meant that the goal is to use a “Variety of five literacy strategies develops content language”. The themes of “Content has its own language” and “Becoming conversational about language” followed with six significant statements each. This was followed by the theme “To understand and engage with content” as it had five significant cluster statements. The last theme of “Strategies help become fluent in content learning” had four significant cluster statements.

Of these five themes, the researchers saw an increase in emerged themes aligning with literature on content language literacy presented in the Literary Framework of this article. With 100% of the emerged themes aligning with literature, it became clear that students offered specific details to explain their thoughts as indicated by 28 out of 28 identified significant cluster statements.

Quick-Write Question 2. Six themes emerged for the second question of the post-assessment (see Table 2). The theme that emerged the most from the textual evidence for the second question about thoughts on selecting literacies strategies to enhance content lessons was “Enhancing student comprehension” with 17 significant cluster statements followed by “Incorporation of 5 literacies” (14 significant cluster statements). The remaining themes were “Having students actively involved in their learning” (9 significant cluster statements), “This is

something I will use in my future classroom (8 significant cluster statements), “Student background knowledge needs to be activated (4 significant cluster statements), and “Content much be connected to the TEKS [Texas Essential Knowledge and Skills]” (3 significant cluster statements).

Of these six themes, those most closely aligned with the literature on content language literacy presented in the Literary Framework of this article were “Incorporation of 5 literacies” (14), “Having students actively involved in their learning” (9), and “Student background knowledge needs to be activated” (4). These three themes had a combined 27 significant clusters statements aligning with the literature out of 55, or 49%. While this is an increase of only 5% from the pre-assessment, what is significant to note is that the total number of detailed textual descriptions increased from 29 significant statements to 55. In the post assessment, the participants offered more details in the textual description that connected to the literature on content language literacy. Such a validating conclusion can be seen is one participant’s statement “select a strategy that will allow them to get the most out of the text” and in another participant response statement, “include 5 literacies as much as possible.”

Quick-Write Question 3. The third question on the post-assessment gauged the level of confidence the participants had for designing content lessons with literacy strategies that develop content language fluency after treatment of course knowledge and using the semantic chart. Using a Likert-scale of one to five with one having little confidence and five feeling highly confident, the response for all participate averaged 4.3 out of 5 or 86% confidence rate (see Table 2).

Interpretation and Discussion of Findings

Interpretation

Quick-Write Question 1 findings. As mentioned previously, from the pre-assessment data question 1, it became clear that students offered vague and overarching “catch phrase” statements rather than specific details to explain their thoughts as indicated by the fourteen clusters of statements. Most participants seemed to refer to technique rather than theory of practice. Additionally, participants connected content language fluency as just an act of helping students to read content. When compared to the post-assessment data, with 100% of the emerged themes aligning with literature, there is strong evidence that students offered specific details to explain their thoughts as indicated by 28 out of 28 identified significant cluster statements. After the intervention, participants interpreted the question as a way to enhance learning and teaching through developing content through the five literacies. Additionally, there was an increase in the participants’ understanding for the concept of teaching content as if teaching language. At the end of the study, participants indicated this understanding with statements referring to students needing opportunities to manipulate the content by using its vocabulary not just in reading and writing, but also in opportunities to use the language of the content when speaking and listening. This is a stance supported by Gee (2004) and Vygotsky (1962) as mentioned in the Literary Framework “that each content area grows its own lexical identity not just with its verbal and textual vocabulary but also with its way of ‘being’ found in each situated community.” A notable conclusion that participants’ assumptions became more theoretical in nature can be made when interpreting pre- and post-data. Participants indicated through their textual descriptions that using the concept of content language fluency enhances their teaching and student learning. This was a shift from an isolated “strategy” to implement towards an understanding that it is an approach or way of thinking to embrace.

Quick-Write Question 2 findings. Student responses from the pre-assessment indicated that rather than thinking about “how” to select strategies and theory behind selecting strategies, students focused on the “what” strategies should accomplish. Additionally, no participants mentioned that when selecting strategies, criteria should include having students actively involved in using the five literacies to enhance content language learning. Following the intervention, with 49% of the significant cluster statements in the post–assessment connecting to content language literature, there is evidence that participants realized that purposefully activating prior knowledge, selecting strategies that allowed students to use the content language, and engaging students with the content through the five literacies enhanced student comprehension and were vital. The increase in detailed textual description from 29 significant statements to 55 connected to the literature on content language literacy presented in the Literary Framework supporting this interpretation. Such is an example of what Kansa’nen et al. (2000) meant by “purposiveness” in regards to pedagogical thinking. When teachers take an inquiry and reflective approach to their teaching, decision making becomes more purposeful.

Quick-Write Question 3 findings. Student responses from the pre-assessment indicated a lack of confidence in their ability to design content lessons that contained literacy strategies to develop content language fluency. Following the intervention students indicated a marked increase (from 58% to 86%) in their confidence level to design content experiences with such literacy strategies embedded within the lessons. Students’ confidence levels increased over the course of the semester as their understanding of the terms “content as a language” and “content language fluency” developed. They became more confident in their ability to select and implement impactful strategies as they learned to recognize how such strategies utilized the elements of literacy and how those elements of literacy supported the learning of the content.

Discussion

Through a qualitative analysis of preservice teachers' personal written reflections, we uncovered that using a semantic chart, which used literacy as a tool, positively assisted the development of the 60 participants' pedagogical content knowledge for content language literacy as evident through the increase in significant statements from the post-assessment. We can also say that confidence increased in their decision-making abilities to select impactful strategies to strengthen students' content language fluency as indicated by the increase shown in Likert scale results. A conclusion can be made that using a semantic chart did develop a critical eye for analyzing their own pedagogical philosophies; and through this experience evolved their pedagogical content knowledge and ownership for the understanding of content language fluency.

As stated previously, the results support our theory that when pre-service teachers become self-aware of their informed teaching decisions, autonomy and ownership strengthens regarding their own personal practice in their future classrooms. What was not clearly concluded from the study was how exactly this evolved as we can only confidently report that it did in fact evolve. Possibly adding a fourth question to the participant responses relating to their insights on this part of question one could have addressed that part of the question.

Implications for Preservice Teachers Educators

The results of this research imply that teacher education preparation can benefit from organizing pedagogical content knowledge into its critical attributes through the use of semantic charts. This benefits the preservice teachers as it develops awareness for the importance of knowing criteria used for decision-making aspects of lesson planning. When specifically

developing content language literacy, teacher educators can support preservice teachers in the following ways:

1. Develop a mindset that teaching content is likened to teaching a second language in which they become the content language teacher for the content of math, science, or social studies, to name a few.
2. Address the challenge to present literacy as a tool by developing awareness for using the five literacies as a tool (reading, writing, speaking, listening, and thinking) to extending content knowledge. Viewing literacy as a tool helps preservice teachers see the importance of having a communicative purpose for learning content.
3. Incorporate the use of a semantic feature analysis chart like the one found in *Becoming Fluent in the Language of Content: Developing Strategic Readers as Critical Consumers of Information* (Haas, Durham, & Williams, 2016) as a way of developing critical attributes for strategies that develop content language fluency or other concepts. Use the semantic feature analysis chart as a tool for preservice teachers to rationalize how the incorporation of multiple literacies within a single strategy strengthens that strategy's impact on student learning.

Conclusion

As teacher education researchers, we are continuously seeking out ways to better prepare preservice teachers to be as successful as possible in their future classrooms by asking the how and why questions of teacher development. Routinely questioning and reflecting on techniques and tools used in our courses ensures that we are striving to use the most effective approaches to scaffold the building of pedagogical content knowledge as well as build confidence to use this knowledge with ease. The intent of this research endeavor was to explore techniques and/or

tools that might be effective in guiding pre-service teachers as they strive to develop autonomy and ownership regarding their decision-making instructional practices. Through a qualitative analysis of preservice teachers' personal written reflections, we uncovered how the use of a semantic feature analysis chart supported their development of pedagogical content knowledge for content language literacy, aided in viewing these strategies as tools to strengthen students' content language fluency, and influenced their decision-making abilities to select impactful literacy strategies. We also wanted to rise to the challenge set out by the International Literacy Association to find ways to answers the question of "When can we begin to think about disciplinary literacies as something that should be topics of conversation in all classrooms and not just secondary curriculum? When will literacy become a tool and not a subject?" (ILA, 2018, p. 6). We believe that this research contributed to positively addressing both our questions as well as the challenge.

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Table 1- Pre-Assessment Themes and Confidence Rate

Question 1: What comes to mind when you hear teaching “content as a language” or “developing content language fluency”? What might this term mean to you?	Question 2: What are your thoughts on selecting literacy strategies to enhance content lessons?
The goal is to understand/comprehension (6) Ways of teaching or techniques (4) Connecting to reading (4) Communicating the content (3) * Using the five literacies (3) * Content as its own language (2) * Just didn’t know (2)	Strategies support comprehension (9) Strategies teach new vocabulary (7) Students exhibit comprehension through communication of subject matter (5) * Multiple literacies need to be incorporated (5) * Learning new content is like learning a new language (3) *
Question 3: Confidence rate for designing content lessons with literacy strategies that develop content language fluency: 2.8 out of 5 or 58% *Themes connected to literature on content language fluency	

Table 2- Post-Assessment Themes and Confidence Rate

Question 1: What comes to mind when you hear teaching “content as a language” or “developing content language fluency”? What might this term mean to you?	Question 2: What are your thoughts on selecting literacy strategies to enhance content lessons?
Variety of five literacy strategies develops content language (7)* Content has its own language (6)* Becoming conversational about language (6)* To understand and engage with content (5)* Strategies help become fluent in content learning (4)*	Enhancing student comprehension (17) Incorporation of 5 literacies (14)* Having students actively involved in their learning (9)* This is something I will use in my future classroom (8) Student background knowledge needs to be activated (4)* Content must be connected to the TEKS (3)
Question 3: Confidence rate for designing content lessons with literacy strategies that develop content language fluency: 4.3 out of 5 or 86% confidence rate *Themes connected to literature	

Content Language Checklist							
5 Literacies	Reading						
	Writing						
	Speaking						
	Thinking						
	Listening						
Learning Skill	Vocabulary						
	Content Comprehension						
	Content Organization						
	Content Ownership						
Type of Strategy	Front Loading						
	Back Loading						
	Whole Lesson						
Appropriate Level	Lower Elementary (PK-1)						
	Upper Elementary (2-6)						

Appendix B: Completed Student Chart

Content Language Lesson Design Checklist	5 Literacies					Learning skill					Type of Strategy	Appropriate level
	Reading	Writing	Speaking	Thinking	Listening	Vocabulary	Content Comprehension	Content organization	Content Ownership	Front Loading	Back Loading	Whole lesson
Quick Write	✓			✓					✓	✓	✓	✓
Think Pair Share		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Word Web		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carousel Re/Review		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Four Corners			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
I think/I know			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Semantic charts			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Puzzle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Discovery Circles		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Unlock The Door			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anticipation Guide			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Power Pictures	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stop/Drop/Draw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stickynote Discussions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CHAPTER 1: Developing a Framework for Thinking about Content as Language

Form the objective/rational

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* - modify for visual thinking
* pictures