Viewing Content Curriculum Through the Lens of Language Acquisition: A Content Analysis

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Abstract

The purpose of this study was to investigate whether literacy journals are supporting teaching content curriculum as language acquisition. Articles from three literacy journals (N= 1648) during the years 2005-2015 were coded via mixed method content analysis. Articles with a focus on any aspect of content curriculum were initially selected. Further coding revealed articles that did not discuss forms of literacies (i.e. thinking, reading, writing, listening, and reading), articles that discussed one or more forms of literacies in relation to the content area(s), and articles that connected teaching content curriculum to language acquisition either explicitly or implicitly. The researchers support a belief that students should become fluent in the language of content as content is a language to be acquired; however findings from this study indicated that less than 1% of articles in the selected literacy journals related teaching content curriculum to language acquisition. Further research to include additional literacy journals as well as content specific journals is needed to explore the topic deeper.

Keywords: content area, content language acquisition, literacy, content analysis

Do we teach for the purpose of guiding learners to absorb facts to grow a knowledge base in and of itself, or do we teach for the purpose of guiding learners to communicate knowledge in society in and out of the classroom? Historically, content as curriculum knowledge in America emerged from the acquisition of languages. During the early 1900s when the word curriculum first entered the lexicon of American education, acquisition of knowledge paralleled the acquisition of language. From the 1892 report on Secondary School Studies, Charles Eliot outlined four main "curriculums" of study. There were Classical, Latin-Scientific, Modern Language, and Language Instruction. Each of these worked from the understanding that learning a language, be it foreign, modern, or ancient, was the vehicle learners used to apply the learning of curriculum (Pinar et. al., 2004, 70-78). Through the languages, "Teachers had to ensure continuity through each of the main subjects namely, language, science, history, and mathematics" (p. 76). Using the lens of these early theories of 'curriculum', learners were speakers of and for the curriculum using language to communicate philosophical understandings regarding the curriculum.

But alas, there is always another side

to the coin. As the word 'curriculum' was surfacing in the field of American education during the early 1900s, so too were theories about delivery of curriculum. Methods of curriculum emerged in a procedural context as education became generalized to a rapidly growing society. Hamilton (1990) claimed that, "This practical emphasis on procedure signals a shift in intellectual focus on the part of pedagogic reformers, from the ideal end-product of a classical education (the perfect orator) to classroom aids (textbooks, manuals and teaching drills)" (p. 23). Pinar et al.(2004) also reported the historical shift of curriculum away from the communicative abilities of the individual and towards becoming a vehicle to control the methods by which curriculum is taught as evidence of the increased emphasis on textbook-recitation as the main approach (p. 77).

Thus far, content curriculum has been discussed through historical perspectives as once relating to *an acquisition* of one or more languages, specifically of European, Latin, or ancient origin, as the vehicle for communicating learned knowledge. What is between those metaphorical lines is the relationship language develops between the learner and the content knowledge. In the 21st century, educators call that relationship *literacy*, or the ability to read, write, think, speak, listen, and view content for the purpose of communicating the philosophical relationship between learner and content. Haas, Durham and Williams (2015) refer to this as 'becoming fluent in the language of content' where content curriculum *is the language* acquired. By connecting content curriculum to the idea of content as language acquisition, interpretation is grounded in the individual and in how fluent that individual is in the content language. When students are allowed to manipulate knowledge using the language of content, they become owners of this knowledge, discovering the personal connection as well as the interconnections of becoming speakers of the content, a notion somewhat returning back to the theories of classical education. By constructing meaning through the language, learners of a content discipline are expected to interact with and interpret text in its printed, visual, auditorial, and spoken form to communicate in the discourse community. This is a belief Varbelow (2013) supports as "curriculum is meaningless without the notion of communicative interpretation and interconnectedness" (p. 74).

This article will present perspectives currently supporting viewing content as language acquisitions, and sets out to answer the question of where content curriculum is in the 21st century. In what ways are we teaching content curriculum (curriculum other than the language arts) to support learners towards becoming critical consumers, users, and communicators of knowledge by learning the *language* of content? This article will try to shed light on this question by exploring how content curriculum is being advocated to educators through a content analysis of three peer-edited national literacy journals.

Content as language acquisition.

Literacy involves reading, writing, speaking, listening, and thinking. Gee (1989) calls these activities *social discourses* that are enacted to create situated understanding (e.g. understandings that are situational such as in science, math, social studies, etc.). Literacy

situated in the content areas then requires specialized ideas, concepts, vocabulary, and other ways of "thinking, believing, feeling, valuing, acting/doing and interacting in relation to people and things" (Knobel & Lankshear, 2007, p. 3) related to the content and specific to the situated community to which they belong (e.g. math, science, social studies, etc.). The acquisition, manipulation, and control of these discourses develops fluency in the language of content (Haas, Durham, & Williams, 2015).

In the content area of science, for example, Vygotsky (1962) related students' development of scientific concepts and scientific language to acquiring a foreign language as they require the same cognitive demands. Ideally, students of science become immersed in new science ideas while using new science language at the same time (Rincke, 2011) and identify *with* and *as* a scientist; thinking, speaking, reading, writing, and listening as a scientist would. The same could be said of any of the content areas. Wakefield (1999) looked closely at mathematics as a language noting the strong similarities between the two. Similarities such as written symbols (abstractions) representing ideas or images used to communicate, memorization of symbols and rules are required for success, meaning can change according to symbol order, encoding and decoding skills are required for meaning, translations and interpretations can offer alternative meanings, among others.

Gee (2004) has called for schools to adjust their perspective of literacy to extend past the established concentration of isolated instruction of reading and writing and towards its application to assist learners in acquiring a fluent academic language (referring to the content subject areas) through using the interconnected nature of various forms of literacy. His call for content language acquisition rests on the notion that academic language is to be considered a second language for learners- one that has its own structure and code to learn. Gee refers to the academic language as *social language* and defines this as a language that has established expectations and nuances, "[a] social language is a way of using language to enact a particular socially situated identity and carry out a particular socially situated activity. For example, there are ways of speaking and acting like a (specific type of) doctor … biologist, and so forth" (p. 14). As infants, learners begin to internalize the social language of their first language and continue to expand this knowledge during the primary grades. They will learn how to break the *social language code* as they pass through their years as well as through the interactions with language arts curriculum. By putting together the individual sounds and letters, learners will continue to bring meaning to the speaking, listening, reading, writing, and thinking aspects of that social language to become fluent producers and consumers of that language. Gee argues that academic language has this similar social language code to unlock, except rather than the sounds and letters it is the "grammatical patterns and styles of language (and their associated identities)" (p. 14).

Just as a first social language had both informal and formal guidance, learners need to be in a safe and accepting environment for them to try out, misuse, simulate, imitate, and effectively communicate with the oral and

written forms of the academic language. An academic language may carry similar characteristics of a social first language, but Gee (2004) claims that resistance to acquiring academic language fluency will occur unless the language can be situated in a meaningful context using the phrases and idiosyncrasies of that academic social language. Learners need to have meaningful authentic experiences to use the academic language. They also 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. Only through these situated meanings can a learner become fluent producers and consumers of the academic language,

> When anyone is trying to speak or write, or listen or read, within a given social language [academic or content language] within a given Discourse, the crucial question becomes, What sorts of experiences (if any) --in terms of embodied practices and activities, including textual, conversational, and rhetorical ones -- has this person had that can anchor the situated meanings of the words and phrases of this social language? Otherwise, one is stuck with merely a general and verbal understanding (the sort that, unfortunately, often is rewarded in school anyway) (Gee, 2004, p. 22).

Gee argues that classrooms need to simulate environments where learners can feel safe to speak and act like a mathematician (math), social scientist/historian (social studies), scientist (science), artist (art), kinesiology (physical education), musician (music), nurse/doctor (health), or any other content related subject area. Historically, American education once would have supported such an approach when education had a more classical stance and learners took command of the academic language. So, we once again return to our inquiry focus for this article... where are we now? In what ways are we teaching content curriculum (curriculum other than the language arts) to support learners towards becoming critical consumers, users, and communicators of knowledge by learning the *language* of content? Through a content analysis of three peer-edited national literacy journals, we try to shed light on this question by exploring how content curriculum is being advocated to educators.

Method

Content analysis, as defined by Berelson (1952), is a systematic and replicable method for creating condensed content categories from larger pieces of communication (e.g. verbal, visual, or written text) based on clearly stated rules of coding. The content analysis of written text, in this case journal articles, included both qualitative and quantitative approaches resulting in a mixed method design. Leech and Onwuegbuzie (2009) describe the following three typologies of

mixed method research: level of mixing (partially mixed or fully mixed), time orientation (concurrent or sequential), and emphasis of qualitative and quantitative approaches (equal status or dominant status). This study is classified as a partially mixed sequential dominant status design, noted as QUAL → quan (Leech & Onwuegbuzie, 2009).

Procedures and sample selection.

The sample comprised three journals published between 2005-2015 that were selected for inclusion based on their relationship to literacy research and/or their focus on content area reading/literacy. The researchers developed the following qualitative criteria, enacted in a three-step process, for an article's inclusion. First, the abstracts of all of the articles from the selected journals (N=1648) were filtered by the two researchers for those that focused on teaching in the content areas. Next, the researchers separately identified whether each article supported teaching through one or more forms of literacies (i.e. reading, writing, speaking, listening, thinking). Finally, the articles were sifted by each of the researchers as to whether or not they connected learning in the content area(s) to language acquisition. The number of articles in each category were then quantitatively counted.

Data analysis.

Following disaggregation of the articles, the researchers compared their categorization and the respective codes as a means of inter-rater reliability. Specifically, codes for articles included those that discussed one or more content areas, but did not discuss literacy; articles that discussed literacies in relation to the content area(s); and articles that linked learning in the content areas to language acquisition including the subcategories of manifest (i.e. directly stating the relationship of content area literacy to language acquisition) and latent (i.e. the relationship between content area literacy and language acquisition was implied and inferred from the text) content (Berg, 2008). The following excerpt from *A Framework for Supporting Scientific Language in Primary Grades* (Honig, 2010) exemplifies the manifest content analysis:

> My learning in this case was mediated by words: the language of biology determined how I organized my thinking about biology… Fluency with this language - the ability to flexibly read and write it - was necessary for me to excel in academic science settings. Science is constructed by particular routines of language, and students' access scientific ideas through language… Thus, students' success in the domain of science is necessarily linked to their fluency with this specialized discourse (p. 23).

Discussion of "the language of biology" and "fluency with this language" as well as success in science being "linked to [students'] fluency with [biology's] specialized discourse" clearly connect learning in the content area of science to acquiring a language.

An exemplar of the latent content analysis can be found in *Positioning Students in a New Lens: Art Historians, Readers, and*

Writers (Katz, 2013-14):

> In this unit, students were taking on a new identity - simultaneously positioned as art historians, readers, and writers as opposed to assuming the usual discourse of a struggling literacy student… As students engage in "talk" about the concepts and subject matter introduced, they were positioned as art historians (p.10).

Here, the author transmitted the implication that students assumed a new identity as well as a new discourse associated with that identity in the content area of art. The researchers inferred from the author's implication, that assuming the identity and discourse of an art historian would include thinking, speaking, reading, writing, and listening like an art historian, or *learning the content language* of an art historian.

Discrepancies between the researchers' categorizations were identified and resolved through deeper investigation and discussion of the abstract and, in some cases, the full article text. Descriptive analyses were used to report findings.

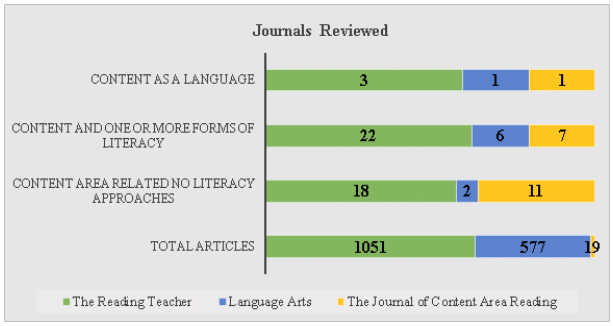
Results

The purpose of this inquiry was to uncover, through a content analysis, how three literacy journals published between 2005 and 2015 advocated teaching content curriculum (curriculum other than the language arts). Specifically, are the journals disseminating research supporting the teaching of content to support learners towards become critical consumers, users, and communicators of knowledge by learning the *language* of content?

Overall Journal Findings

Of the 1,648 total journal titles and abstracts reviewed, 71 articles were deemed to meet the established criteria. Of these 71 articles, five were categorized as supporting teaching content as a language to be learned. After an in depth review of these five articles, one meet the criteria of the 'manifest' category of explicitly connecting to the teaching of content as a process of language acquisition, and four were categorized as "latent" or implied and inferred that teaching content had a connection with learning a language. Additionally, 35 titles and abstracts discussed one or more forms of literacy in relation to the content area(s), and 31 titles and abstracts fit the criteria of discussing teaching one or more content areas, but did not discuss literacy approaches (see Table 1).

Table 1. *Journals reviewed.*



Individual Journal Findings

From the journal *The Reading Teacher*, 1,051 total titles and abstracts were reviewed with a total of 43 articles deemed to meet the criteria. Of these articles, three were categorized as supporting teaching con-

tent as a language to be learned. After in depth reviewing, one met the criteria of the 'manifest' category of explicitly connecting to the teaching of content as a process of language acquisition, and two were categorized as "latent" or implied and inferred that teaching content had a connection with learning a language. Additionally, 22 titles and abstracts discussed one or more forms of literacy in relation to the content area(s), and 18 titles and abstracts fit the criteria of discussing teaching one or more content areas, but did not discuss literacy. Of the three qualifying articles advocating content as language, Honig (2010) directly states that teaching content is teaching language acquisition. Her study focused on "the measurement and support of students' expressive fluency with scientific discourse, their ability to *use* the specialized vocabulary and language structure of science, specifically in writing"(p. 24). Honig advocated that a language rich classroom included opportunities for students to extend dialogue using the science language. For this to occur, students needed to have experiences to become fluent in the five literacies of speaking, thinking, reading, writing, and listening to science as a scientist, but they also needed to engage with the content as a scientist would. Honig's observations of classroom discourse included students discussing ideas and owning the linguistic and lexical aspects of the topic.

The two additional articles from *The Reading Teacher* supporting content as a language made a latent connection. While Honig (2010) made an explicit connection to science content as a learned language, Spencer and Guillaume (2006) had previously made connections to learning science through the acquisition of its' vocabulary. For students to become engaged learners, they must possess the necessary vocabulary to communicate but also have opportunities to practice using the terms in meaningful situations to become part of their receptive and expressive vocabularies, "[s]ocial interaction, embedded at various points in the learning cycle, encourages exploring idea and using terms in meaningful conversations" (p. 210). Using this lens, it can be inferred and interpreted that vocabulary acquisition equates to meaningful content language.

In like manner, Soares and Wood (2010) stated that to become a young social scientist, students must be in environments which allow them to develop capacities to think, question, collaborate, and share content knowledge. It was implied that these environments should foster using the language of a social scientist to truly connect social content of the past to what is unfolding in the present, and use this connection to make social change for the future. For this to be successful, it can be interpreted that Soares and Wood advocate content as a language,"[t]he goal is for young learners to become more knowledgeable on important issues in their world and then to specifically connect their voice to critical issues… it is crucial that students be given opportunities to discuss, debate, and rewrite cultural narratives using their unique voices while becoming critically literate [in the content]" (p. 490).

When analyzing the *Language Arts* journal, 577 total titles and abstracts were reviewed with a total of nine articles deemed to meet the criteria. Of the nine articles, only

one was categorized as supporting teaching content as a language to be learned. After in depth reviewing, this article was categorized as "latent" or implied and inferred that teaching content had a connection with learning a language. Additionally, six titles and abstracts discussed one or more forms of literacy in relation to the content area(s), and two titles and abstracts fit the criteria of discussing teaching one or more content areas, but did not discuss literacy. In the article identified as having a latent connection to language acquisition, Mills, O'Keefe, Hass, and Johnson (2014) investigated collaborative inquiry enacted during citizen science projects. Rather than having students *learn about* math, science, social studies, reading, and writing, the authors proposed that students should *do* what mathematicians, scientists, social scientists, readers, and writers do. "In short, our kids learn how to read, write, and think mathematically, and they learn how to use reading, writing, and mathematics as tools for learning as young researchers in the sciences and social sciences" (p. 37), constructing rather than just consuming knowledge. Mills, et al. (2014) imply and we infer that as students assume the roles of researchers, they would be implementing the listening, speaking, thinking, reading, and writing literacies associated with science and social science, thus acquiring new languages related to these content areas.

The final journal reviewed was the *Journal of Content Area Reading*. Nineteen total titles and abstracts were reviewed with a total of 19 articles deemed to meet the criteria. Of the 19 articles, only one was categorized as supporting teaching content as a language to be learned. After in depth reviewing, this article was categorized as "latent" or implied and inferred that teaching content had a connection with learning a language. Additionally, seven titles and abstracts discussed one or more forms of literacy in relation to the content area(s), and 11 titles and abstracts fit the criteria of discussing teaching one or more content areas, but did not discuss literacy. From these articles, Katz (2013-2014) made a latent connection to teaching content as a language. She used the content of art history to design a platform for two struggling readers to improve on their reading and writing skills by taking on the role of art historians. Through the art content, these young art historians acquired a new language for 'art' as well as a new discourse community for the "talk" to be used, "both students became amateur art historians, learning a great deal about artists, art history, and "talking about art." They became participants in a new and valuable discourse" (p. 17). By combining multiple literacies, Katz designed an authentic inquiry-oriented classroom that extended out into museums and increased motivation for reading and writing through the 'talk' of art.

We set out, through a content analysis, to uncover how three literacy journals published between 2005 and 2015 advocate teaching content curriculum (curriculum other than the language arts). Out of 71 qualifying journal titles and abstracts, 49% of the articles supported teaching content with one or more forms of literacy to enhance the experience and develop content knowledge. We found that less than 1%, or one journal article explicitly and four implicitly, advocated the teaching of content to support learners

towards become critical consumers, users, and communicators of knowledge by learning the *language* of content (see Table 2).

Table 2. *Articles meeting the criteria of connecting content to the acquisition of language.*

Manifested or explicitly related to content as a language	Latent or implied and inferred connection to content as a language
Honig, S.L. (2010). A framework for supporting scientific language in primary grades. *The Reading Teacher, 64*, 23-32.	Mills, H., O'Keefe, C.H., & Johnson, S. (2014). Changing hearts, minds, and actions through collaborative inquiry. *Language Arts, 92*, 36-51.
	Katz, A. (2013-14). Positioning students in a new lens: Art historians, readers, and writers. *Journal of Content Area Reading, 10*, 7-28.
	Soares, L.B., & Wood, K. (2010). A critical literacy perspective for teaching and learning social studies. *The Reading Teacher, 63*(6), 486-494.
	Spencer, B.H., & Guillaume, A.M.(2006). Integrating curriculum through the learning cycle: Content-based reading and vocabulary instruction. *The Reading Teacher, 60* (3), 206-219.

Discussion

The original focus of this inquiry was to uncover ways content curriculum (curriculum other than the language arts) is being viewed in three journals. Are they supporting practices that help learners move towards becoming critical consumers, users, and communicators of knowledge by learning the *language* of content? Our attempts to shed light on these questions included exploring how teaching content curriculum is being advocated to educators through a content analysis of three peer-edited national literacy journals. With less than 1% of the journal articles explicitly or implicitly reporting on practices which teach content as language acquisition-- the straightforward answer is, no. These three journals are not supporting educators to use practices and theories that move the learner towards becoming critical consumers, users, and communicators of knowledge by learning the *language* of content.

With that said, of the less than 1%, we did find that this approach to teaching content as a language is being practiced in all five articles. Earlier in this article, we discussed Gee's (2004) theory that content language acquisition rests on the notion that academic language is to be considered a second language for learners- one that has its own structure and code to learn. To highlight this, both Honig (2010) and Spencer and Guillaume (2006) used their research to support such a claim as they both studied student's ability to *use* vocabulary acquisition and the structure of the academic language. Additionally, Gee (2004) claimed that resistance to acquiring academic language fluency will occur unless the language can be situated in a meaningful content using the phrases and idiosyncrasies of that academic social language. Again, while all five articles support these claims, we will use Katz (2013-2014) to highlight this as her study of inquiry-oriented classrooms allowed students to have a discourse

community for the "talk" of art. As mentioned earlier, Haas, Durham, & Williams, 2015) stated that acquisition, manipulation, and control of these discourses develops fluency in the language of content which is also supported in these articles. Finally, Gee argues that classrooms need to simulate environments where learners can feel safe to speak and act like a mathematician (math), social scientist/historian (social studies), scientist (science), artist (art), kinesiology (physical education), musician (music), nurse/doctor (health), or any other content related subject area. These articles supported this claim by engaging their students to become scientists, social scientists, and art historians.

We earlier defined content language acquisition as the ability to read, write, think, speak, listen, and view content for the purpose of communicating fluently the philosophical relationship between learner and content. While only five articles were found that made such a clear connection to this interpretation, the additional findings of the content analysis supports that this may be in practice, but not stating it as content language acquisition. There were 71 articles (49%) that met the criteria of using one or more forms of literacy with content learning. We can say, based on these numbers, that nearly half of the articles relating to teaching content curriculum for these three journals are disseminating research that supports combining content learning with multiple forms of literacies. Whether or not this approach is for the purpose of fluently communicating the philosophical relationship between learner and content could not be clarified in this analysis. What is very important to address is that while these articles are advocating for the connection of multiple literacies and content knowledge, the criteria we used to categorize these articles initially indicated that this type of research is still disconnected from the language acquisition process of content learning, or the notion that there is a unique and separate social language structure that needs to be implicitly addressed for learners to truly become fluent in the language of content.

Conclusion and future implications.

This article set out to present various perspectives currently supporting viewing content as language acquisitions. We feel confident that our attempt to advance awareness for content language acquisition and how content curriculum is being advocated to educators has been fulfilled. Educators and researchers are indeed moving toward recognizing literacy learning in the content areas as content language acquisition, albeit somewhat slower than anticipated and not as explicitly; at least in the journals that were chosen for this investigation. With that said, this study only looked at three of the many literacy and language arts journals available and did not investigate content specific journals for math, science, social studies, etc. We propose further content analyses of additional language arts and literacy journals in order to broaden the scope to get a richer perspective of how journals are advocating teaching content curriculum. Content specific journals should be explored as they might contain a plethora of studies and articles that make a direct connection between learning in the content areas as language acquisition, per-

haps broadening the search to include 'multiliteracies'. These content specific journals could be the housing agent for research being conducted on content language acquisition. Further analysis looking into the audience for these articles on content language acquisition or content literacy would be beneficial. Do they favor secondary or elementary educators? We realize that a high school science teacher is less likely to subscribe to *The Reading Teacher*, a journal whose readership is typically preK-6 teachers, reading teachers, and/or English teachers, than they would be to read *Science Education*. In either of these research scenarios, it is evident that more collaboration between practitioners and researchers needs to occur to help extend theories such as those proposed by Gee (2004) and Haas, Durham, & Williams (2015) to develop academic or content language fluency in the classroom.

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