Integrating Literacy into the Secondary School Content Areas: An Enduring Problem in Enduring Institutions

Elizabeth Birr Moje
University of Michigan
610 E. University, 4107 SEB
Ann Arbor, MI 48109-1259
moje@umich.edu
www.umich.edu/~moje

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For almost 50 years, educators interested in secondary school literacy have experimented with strategies designed to help students learn to read and write with proficiency in the content areas. We have examined how strategies work in classrooms, why teachers do or do enact the strategies designed by content literacy researchers, and whether students transfer their use of strategies in one content area to another. We have studied teachers' and students' literacy practices, attempting to understand what motivates teachers' decisions to highlight literate practice in various content areas, or to analyze why and how young people read and write various kinds of texts.

What we have not done, however, is to examine and challenge what it means to learn in the content areas, and we have not done a thorough job of conceptualizing literacy practice as an integral aspect of content-area learning, rather than as a set of strategies for engaging with texts. If those interested in secondary school education were to reconceptualize learning in the content areas as a matter of learning the ways of knowing, doing, believing, and communicating that are privileged in the content areas, then a more compelling argument for integrating literacy teaching into content-area teaching could be made.

This turn toward literacy as an essential aspect of disciplinary learning, however, requires the acceptance of a key premise that "the disciplines are constituted by discourses" (Luke, p. xii, 2001; cf. O'Brien, Moje, & Stewart, 2001). In brief, this claim assumes that producing knowledge in a discipline requires fluency in making and interrogating knowledge claims, which in turn require fluency in a wide range of ways of constructing and communicating knowledge. Literacy, in that view, becomes an essential aspect of disciplinary practice, rather than a set of strategies or tools brought in to improve reading and writing of content-area texts. In what follows, I present some background on the problems of content literacy integration and then return to the idea of reconceptualizing learning and literacy in the content areas.

Some Background on the Problem

Why do we need to pay attention to literacy in the content areas? The most recent National Assessment of Educational Progress Reading Report Card (Donahue *et al.*, 2003) shows, for example, that while general test scores have improved over the last several years, very few young people in the United States read at proficient or advanced levels. While most can decode and answer basic comprehension questions, few can synthesize ideas, interpret information, or critique ideas offered in texts, particularly when working with expository texts. What's more, being literate in a content area has implications that extend beyond the ability to make meaning from or about a content-area text. Advanced or specialized forms of literacy serve as tools for and signifiers of both school and social success, and thus can be considered important tools for gaining or denying access to opportunities for economic, political, and social success beyond school. Each of these points underscores the need for a focus on literacy learning beyond the primary grades and beyond the discipline of English language arts. Content area texts make unique demands on readers, and the best people to teach how to read and write content area texts are those who are expert in the disciplines themselves.

The exhortation to integrate literacy instruction into the various content areas of the secondary schools is not new. Since the early 1900s, educational practitioners, researchers, and policy makers have grappled with questions about the role of instruction in reading and writing in the secondary school. Although more recently researchers have turned to questions about the role that literacy plays in the in- and out-of-school lives of adolescents, questions about integrating literacy instruction into the secondary content areas have not been forgotten. Indeed, recent state and federal policy initiatives suggest renewed attention to the school-based literacy skills of youth, making questions about the integration of literacy into the content areas of the secondary school more salient now than ever before.

Questions about the struggle to integrate the teaching and learning of literacy into the content areas of the secondary school beg the question what it means to talk about literacy. Does literacy simply refer to the cognitive processes of decoding, comprehending, encoding, and composing informational print texts? Or is literacy something more complex? In particular, what does it mean to engage in literate practice in content areas or disciplines? A reconceptualized view of content-area literacy suggests that a person who has learned deeply in a content area can use a variety of representational forms—most notably reading and writing of written texts, but also oral language, visual images, music, and art—to communicate their learning, to synthesize ideas across texts and across groups of people, to express new ideas, and to question and challenge ideas held dear in the content areas and in broader spheres.

With these arguments for the value of integrating literacy into the secondary content areas, it seems odd that secondary schools and teacher education programs have not been more successful in developing integrated secondary literacy programs. A small, but stable, research base in content literacy exists; teachers and administrators are aware of the need to do something different in secondary school classrooms; and teacher educators are generally committed to teacher education around content literacy. Why, then, the failure to integrate literacy teaching into the content areas in any widespread or sustained fashion?

Constraints on the Integration of Literacy in the Content Areas

Historically, the reasons offered for the failure to integrate the teaching of literacy into the secondary school range from explanations rooted in lack of teacher knowledge, conflicting beliefs or cultural values among teachers, students, and administrators, the dominance of content areas norms, and the structures of secondary schools (see Alvermann & Moore, 1991; Moore, 1996; O'Brien, et al., 1995). Although my basic premise is that the reason for a lack of integration is more nuanced than any one of these arguments, I review each of these points briefly because they each have important connections to what I argue is the key challenge, that of reconceptualizing how we think of disciplinary learning.

Teacher Knowledge, Beliefs, and Practices: Resistance to Content Literacy

A significant body of research over the last twenty years has demonstrated that preservice teachers are skeptical about the efficacy of teaching and learning strategies offered by content literacy research, and inservice teachers rarely enact such strategies in their secondary content-area classrooms (Alvermann & Moore, 1991; Holt-Reynolds, 1992; O'Brien & Stewart, 1990; Ratekin, Simpson, Alvermann, & Dishner, 1985). According to these and other studies, pre- and inservice teachers often argue that the strategies are time consuming, especially given the mandate they feel to cover content information and concepts. In addition, pre- and inservice teachers argue that even if they had more time, the strategies offered by content literacy researchers are not particularly efficient for the kinds of classes they teach and for the demands they face as purveyors of content. Many argue for a "pedagogy of telling" (Sizer, 1984; see also O'Brien, et al., 1995), which allows them to cover vast amounts of information in short periods of time.

In addition, a number of teachers feel that the strategies place an unfair burden of teaching reading or teaching on them when they should be "teaching content" (Readence, Bean, & Baldwin, 1989). In other words, teachers hold cultural beliefs about what the appropriate practices are of their respective disciplines. Many science, social studies, and mathematics teachers in my teacher education courses initially reject the idea that they are the best people to teach the conventions of literacy in their discipline, arguing that language education is a discipline unto itself. It is not uncommon, for example, to hear teachers in such content areas argue that they should not be expected to assess a student's ability to construct a well-argued essay for their class: "What matters is the content," they say, "I'm not the English teacher." By contrast, English language arts teachers—particularly at the high school level—argue that their discipline revolves around understanding themes in literature or rhetorical devices in composition, not around acts of reading and writing in other disciplines.

School Structures: Time, Space, and Departments as Obstacles to Content Literacy

Teacher knowledge and beliefs about content and about literacy are not the only explanations for the failure to integrate literacy into the content areas, however. In particular, O'Brien and colleagues (1995) argued that the secondary school as an institution cannot be ignored. More to the point, teachers do not operate in a vacuum: The structures of the secondary school, an amazingly stable and enduring institution that has changed little in the past one hundred odd years of its existence (Cuban, 1986), constrain and support the ways that teachers and students carry out their day-to-day classroom practices.

In particular, the division of secondary school learning into content-areas drawn from the disciplines reifies a belief (and constructs sets of practices) that knowledge is inherently different in different disciplines. Content-areas become sub-cultures of the secondary school, with their own ways of knowing, doing, and believing. What's more, the structures of time and space shape how content areas are used and how knowledge gets constructed within them; science classrooms filled with lab tables, mathematics classrooms covered with chalkboards, and English classrooms with tables for writing groups all suggest that particular textual practices are valued or allowed in such spaces. Moreover, tightly timed class periods suggest that young people should simply march through the day open to information that will be offered in the most efficient and painless manner possible, supporting the pedagogy of telling.

Students' Knowledge, Beliefs, and Practices: Learning Literacy Against the Grain

O'Brien et al. (1995) also argue that students' beliefs, values, and knowledges support and constrain teachers' practices and the dominant structures of the secondary school. Few students, for example, question the fact that little reading is assigned in their mathematics classrooms. Few students expect to construct charts and graphs about novels they read in English class. Students bring ideas about what counts as literacy to their content classrooms, and teachers make decisions about classroom practices in interaction with students and in the context of the secondary school as an institution. Students also engage in literacy practices and learning outside of school, learning they consider powerful and important. Typical approaches to secondary school content learning often overlook the learning and literacy practices that youth engage in apart from their school-based, content learning (Moje, 2002).

These constraints, even taken together, however, fail to pinpoint a central problem in content-area literacy: Without careful attention to what it means to learn in the content areas and to the relationship between learning and literacy, content-literacy and secondary school educators will continue to struggle with integrating literacy into the content areas.

An Alternative Conception of Literacy and Learning in the Content Areas: The Study of Discourses

For many years, content-literacy theory and research has focused on the development of strategies to help young people better extract information from text or compose more effective texts. If, by contrast, we were to reconceptualize learning in the content areas as a matter of learning new ways of knowing, doing, believing, and communicating, then "content literacy" would have a place in secondary schools.

To accept this reconceptualization requires a radical rethinking of what constitutes a content area. A number of theorists have argued that the content areas, or disciplines, can be viewed as spaces in which knowledge is produced or constructed, rather than as repositories of content knowledge or information (Foucault, 1972; Halliday & Martin, 1996; Hicks, 1995/1996; Lemke, 1990; Luke, 2001). Even more important, knowledge production in the content areas needs to be understood to be the result of human interaction. As such, knowledge production of the disciplines operates according to particular norms for everyday practice, conventions for communicating and representing knowledge and ideas, and ways of interacting, defending ideas, and challenging the deeply held ideas of others in the discipline.

For example, in science, a norm of practice is that researchable problems be carefully defined and systematically and repeatedly studied before claims can be made about phenomena. Particular forms of evidence—typically empirical or observable forms that derive from experimental study—are required to provide warrant for claims. In history, by contrast, the norms of practice differ in important ways. Historians, like natural scientists, set aside researchable problems to be studied systematically, but the means of obtaining evidence and the forms that provide warrant for claims differ. For example, the context in which a claim is situated matters tremendously to an historian; thus, context is something a reader of historical texts must know, uncover, or examine as she or he reads (Bain, 2000). Moreover, how claims are made public differs across content areas. The types of texts produced are different and the role that various texts play in providing warrant for claims also differs, and to read a history text requires particular metacognitive and cognitive processes to come into play, processes that are demanded by the social and cultural practices, or the discourses, of the discipline itself (Wineburg, 2005; Winebury & Martin, 2004). Part of learning in the content area, then, is coming to understand the norms of practice for producing and communicating knowledge in the disciplines (Bain, 2000, in press; Hicks, 1995/1996; Lemke, 1990; Moje *et al.*, 2004; Wilson & Wineburg, 1988; Wineburg, 2005; Wineburg & Martin, 2004). Part of that learning also involves examining how content-area norms for practice are similar to and different from everyday norms for practice. Such learning requires understanding deeply held assumptions or themes of the discipline (Lemke, 1990), as well as the ways of knowing, doing, and communicating outside of the disciplines, in their everyday lives (Moje et al., 2004a).

The task of literacy education, relative to these goals of learning the discourses of the discipline, then, becomes one of teaching students what the privileged discourses are, when and why such discourses are useful, and how these discourses and practices came to be valued. For example, in a high school chemistry classroom I studied (Moje, 1995), the teacher, Ms. Landy, routinely reminded students that scientists required accuracy and precision in experimentation. She also stressed organization, prediction, classification, and explanation as hallmarks of scientific experimentation and communication. Although one might question the norms she chose to emphasize (see Moje, 1997), Landy did make explicit certain conventions and assumptions of scientific experimentation. She also used literacy strategies that emphasized those norms. For example, she taught students how to take notes from text and from lectures as a way of organizing the different concepts they read and heard. She also taught them strategies for organizing their laboratory investigations in written form. Each of Landy's strategies made organization and precision central to the reading and writing processes in her science classes (Moje, 1996).

Similarly, in middle-school science classrooms that several colleagues and I have studied, teachers emphasize the scientific practices of data representation, analysis, and interpretation, as they teach students how to write scientific explanations of phenomena (Moje et al., 2004a\b). Even as they engage in inquiry around the phenomena, these teachers help students learn the literate practices required to make scientific investigation meaningful. Together with students, for example, they have constructed criteria for producing scientific explanations, criteria that include (a) making a claim; (b) providing multiple pieces of evidence, drawn from experimentation or the past research of others; (c) reasoning through the evidence back to the claim; and (d) writing the explanation in precise and accurate language that "Anyone interested in science should be able to understand" (Moje et al., 2004a).

What is equally important to content learning, however, is providing opportunities for young people to examine how the norms of knowing, doing, and communicating are constructed. Each of these norms is not only an important aspect of "doing" the discipline, but each norm is also socially constructed. That is, the norms are constructed, practiced, and enforced by people; they are not a set of immutable rules that can be questioned or changed. Indeed, members of the different disciplines and profession often reconstruct rules, especially in their day-to-day practices. To learn deeply in a content area, young people need to have access to the way that conventions of disciplinary knowledge production and communication can be routinely or more explicitly challenged and reshaped; such knowledge gives young people the power to read critically across various texts and various disciplines. They become critical readers and thinkers.

Perhaps most important is the realization that learning in a discipline requires people to enact particular identities, even if they do not fully take that identity on as an aspect of self. Thus, young people in secondary school are expected to participate in the discourses of the disciplines; to incorporate those discourses with other discourses and identities they experience throughout the secondary school day; and to forge, or at least try out, new identities as they take up those discourses (Gee, 2001; Luke, 2001). What this suggests is that teachers of content areas need to provide young people with opportunities to examine the discourses they are learning in the discipline in relation to the discourses (and identity enactments) of everyday life. In a task recently designed for a unit on communicable disease (Moje et al., 2004b), we asked students to analyze data from a hypothetical experiment designed to test a mother's advice that two young women wash their hands for at least 15 seconds in order to reduce bacteria growth. In their conclusions, we asked students to both write a scientific claim based on the data and to write what they would tell their mothers about their experiment. As a literacy activity, students had to read data from charts, and then had to make two kinds of claims. An exemplar from one student illustrates one kind of claim (spelling, punctuation, and grammar intact): "They should tell there mom that she was right and they were wrong and they should of believed her in the first place cause mama knows best!" With the opportunity to write two explicitly different claims, the assignment makes explicit different kinds of warrant necessary to make convincing claims in different discourse communities.

Preparing Metadiscursive Youth

In sum, we need to reconceptualize content-area learning as a matter of learning new ways of knowing and practicing, not merely as spaces in which students are exposed to new ideas or bits of information. Content literacy then becomes a matter of teaching students how the disciplines are different from one another, how acts of inquiry produce knowledge and representational forms (such as texts written in particular ways), as well as how those disciplinary differences are socially constructed. Bain (2000) calls this the generation of an epistemically grounded curriculum and pedagogy, or one in which students come to understand that knowing how knowledge is produced is as important as having access to the knowledge itself. The focus moves away from accessing or generating texts only to obtain or produce information, toward an understanding of how texts represent ways of knowing, doing, and believing in different discourse communities. Content literacy teachers should also teach students to be *metadiscursive*, which means that they should not only to be able to engage in many different discourse communities, but should also know how and why they are engaging, and what those engagements mean for them and others in terms of social positioning and larger power relations (New London Group, 1996).

Even with such a reconceptualization, the everyday realities that have historically limited the integration of content literacy should not be ignored. Content literacy teacher educators still need to focus on teachers' and students' knowledge and beliefs. What opportunities do teacher education and inservice professional development provide teachers to learn about the discursive basis of the content areas? How do teacher educators support teachers in supporting young people as they construct identities across different disciplines? How are teachers to work with a notion of content-area literacy as metadiscursive practice as they encounter probable resistance from students who have become quite comfortable with the idea that learning in the content areas is a matter of memorizing and reproducing information?

At a broader level, what school structures need to change to support teachers in supporting students as they navigate, critique, and weave together the discourses of the disciplines? The issues of the content area sub-cultures, limited opportunities for teachers to work across disciplines, the implacable structure and timing of the typical secondary school day all work to challenge a metadiscursive approach to content literacy, just as they challenge strategy-based approaches. Indeed, a metadiscursive pedagogy calls for teachers to be able to work across disciplines, to develop courses of study that examine ideas from many different disciplinary perspectives as a way of questioning the norms of their primary discipline. Without a change in typical school structures of 50-minute classes, relative isolation of

teachers in single classrooms, and confinement of classes within the physical school space, a broad, metadiscursive pedagogy and curriculum will be difficult to develop.

Finally, we should not ignore the powerful ways that young people already negotiate multiple discourse communities and literacies in their lives. A number of study illustrate that out of school youth demonstrate remarkably metadiscursive practices (e.g., Alvermann, 2001; Finders, 1996; Lewis & Fabos, 2005; Moje, 2000). We have much to learn from young people about how we could develop a metadiscursive approach to content literacy.

The work and commitment required to develop an integrated approach to literacy teaching and learning in the secondary content areas is enormous, requiring conceptual changes in our definitions, cultural changes in our practices, and structural changes in the enduring institutions of the secondary school and secondary teacher education. Because these constraints do not exist in some sort of hierarchical form (i.e., changes in structures lead to changes in culture or vice versa), each set of constraints needs to be addressed simultaneously, and these constraints need to be addressed by several different players of the content-area literacy puzzle, including teacher educators; school administrators; teachers; researchers; and local and national policy makers. No one group can wait for one of the other groups to take action toward change. The integration of literacy into the content areas is a complex change process that will require collaboration, communication, and a commitment to major conceptual, structural, and cultural changes.

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