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The what, when, and how of preservice teachers and literacy across the disciplines: A systematic literature review of nearly 50 years of research

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HIGHLIGHTS

- Synthesized research encompassed three categories: *perceptions, resistance,* and *experience.*
- Preservice teachers' beliefs are strongly impacted by instructional context.
- Preservice teachers' perceptions of literacy use within content area disciplines increased.
- Positive gains in knowledge of literacy practices across the disciplines were demonstrated.

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ABSTRACT

To organize nearly five decades of research regarding teacher preparation in literacy across the disciplines, this study systematically examined and qualitatively synthesized the *what, when*, and *how* of the research, resulting in three overarching categories: (a) perceptions, (b) resistance, and (c) experience. Key findings include that when preservice teachers receive instruction through coursework and practicums, their perceptions toward providing literacy instruction in future teaching contexts became more positive. However, researchers often measured such instruction's effect upon content-area literacy courses in the short term, rarely exploring future classroom implementation. Additionally, recommendations for practice and implications for future research are given.

For decades, integrating literacy instruction within content-areas (formerly known as content-area reading and now content-area literacy) has been advocated by educational researchers (Durkin, 1978/1979; Dobbs, Ippolito, & Charner-Laird, 2016; Gray, 1925); despite such advocacy, literacy practices typically remain segregated from the other disciplines. Discrepancies may result from the disparate research base, particularly in the translation of research to the classroom. In spite of content-area literacies' long trajectory in education (Banton Smith, 1934), the density and systematic nature of the research has not reached the same rigorous levels bestowed upon other literacy topics such as fluency or phonemic awareness. Therefore, the foci of this review was to better understand the preparation of preservice teachers to implement literacy within discipline-specific courses—what has happened, developed, and changed in the field.

1. Conceptualizing the review

1.1. Rationale and importance of this research

As the primary pathway to knowledge acquisition, reading is an essential component of all disciplines of learning and instruction (Horning, 2007). Strong literacy skills enable students' success in all

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realms of life, including school and work (Alliance for Excellent Education, 2011). Additionally, Common Core State Standards (CCSS; National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers, [CCSSO], 2010) address the need for students to read and engage with complex literary and informational texts. Specifically, "students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines" (CCSS, 2010, p. iii).

Current standards are rooted in a rich history of studies in content-area literacy research, that include Bader & Pearce, 1983; Dupuis & Askov, 1978; Dupuis, Askov, & Lee, 1979; Stieglitz, 1983 and Usova, 1978. Usova (1978) worked to analyze content-area teachers', reading specialists', and administrators' attitudes toward reading instruction and its effectiveness across all grade levels. He reported that if "content-area teachers are to be effective in the teaching of reading skills, they must possess sound and positive attitudes toward reading instruction" and that "no content area is devoid of reading skills" (Usova, 1978, p. 24), which is still true today. At this same time, Dupuis and Askov (1978) and Dupuis et al. (1979) investigated inservice teachers attitudes about content-area reading and identified that graduate-level courses in content-area reading provide teachers with a deeper understanding and benefits of reading in content-area classes; although these studies focused on inservice teachers, direct implications can be made for teacher preparation.

Influential in the 1980s, Bader and Pearce (1983) investigated the effectiveness of methods courses, specifically content-area reading courses, in which they reported "that preservice teachers may need increased field experiences prior to content area reading instruction … to sensitize undergraduates to the importance of content reading" (Bader & Pearce, 1983, p. 118). While Stieglitz (1983) researched the effect of required content-area reading courses on preservice teacher attitudes and practices, results indicated that preservice teachers' positive attitudes toward content-area reading may not transfer to their instructional practices.

Yet, researchers and teachers still argue about the optimum process of integrating reading and writing into content-area instruction and revisit the question Artley (1944) posed nearly 70 years ago: "who teaches reading?" After decades of focus on traditional content-area literacy, (e.g., study skills), Fisher and Ivey (2005) concluded that "reading and writing strategy instruction has not focused on what really matters to content-area teachers" (p. 3). Moreover, the 2010 *Advancing Adolescent Literacy: The Cornerstone of School Reform* report established an initiative focused on adolescent literacy. With this report, and other research shifting attention from literacy experts to content experts, disciplinary literacy instruction is aimed at introducing students to problem solving, specialized thinking, and communication within each distinct discipline (International Reading Association [IRA, now International Literacy Association, ILA], 2012).

Content-area literacy therefore remains a curious case, in that despite noble intentions, large-scale inclusion in teacher preparation programs and decades of research, the concerted results of such efforts have been underwhelming. Simply put, doing more of the same will not yield the desired results, but what are the next logical directions? To transform instruction and research in this area, we believe that "historical perspective allows for reasoned reflection and a certain wisdom that can be easily lost when one is immersed in ongoing study and practice" (Alexander & Fox, 2004, p. 33). As such, to fully codify the current state of content-area literacy we need to position the knowledge base within a historical context.

In particular, content-area reading instruction, as evidenced through the analysis of research themes, has not always progressed in a particularly systematic fashion but instead has responded to both internal and external forces. These forces can be uncovered through analyzing the trends in the literature base. An understanding of how such historical forces shifted the focus of research allows us to more critically examine which forces are influencing the work of today. Perhaps then, we can resist temptations to follow "what is hot" and instead build upon the most promising findings of previous researchers.

Similarly, through analysis of methodological quality and rigor over time, we are examining our epistemology of content-area reading. Methodology and epistemology are intrinsically linked because our methodological limitations directly limit what and how we know. A systematic review allows current researchers to build upon the strength of previous methodologies and better address the limitations that have beleaguered past research. Only by fully understanding the work of the past will we be able to think about the challenge anew.

1.2. Constructs of literacy

As researchers, we acknowledge several camps surround the research in content-area and disciplinary literacy; thus, a brief historical perspective provides insight for their development. Over the decades, *content-area reading* expanded to include the skills of writing, speaking, and listening to learn specific content and is now referred to as *content-area literacy* (Vacca & Vacca, 2005). More broadly, content-area literacy describes the student-centered approach of incorporating reading and writing instruction in content-area classes to promote students' learning of content area information as well as literacy skills (Fisher & Ivey, 2005). Notably, starting in the 1990s, textbooks and professional organizations, previously using *reading* in the titles, changed to *literacy*.

Furthermore, *disciplinary literacy* refers to the integration of authentic, content-specific literacy practices into the processes and discourses of disciplinary study (Fang & Schleppegrell, 2010; Moje, 2008; Rainey, 2015, 2017; Reisman, 2012; Shanahan & Shanahan, 2008, 2012) and "to the shared ways of reading, writing, thinking, and reasoning within academic fields" (Rainey & Moje, 2012, p. 73). More recently, disciplinary literacy has dominated the discussion regarding adolescent learners. According to Shanahan and Shanahan (2008), disciplinary literacy describes the advanced, specialized, and critical literacy resulting from embedded instruction in content-area classes. Still, it must be understood that disciplinary literacy, as viewed through multiple perspectives, recognizes that "each perspective shares a focus on text, language, and other symbol systems" (Moje, 2007, p. 12).

Not surprisingly, Dunkerly-Bean and Bean (2016) documented that domains are "at odds with each other" (p. 448) and that literacy scholars have spent energy distinguishing between content-area literacy and disciplinary literacy. For example, the *Journal of Adolescent and Adult Literacy* (2010) published debates between Heller and Moje in response to the "Call for Change" in secondary literacy (Heller, 2010, p. 267). Heller critiques Moje's call for change, contending that literacy is essential, but questions whether "to assume that disciplinary practice is what goes on—or should go on—in secondary schools" (p. 268). In response, Moje (2010) noted Heller's use of *amateur* in reference to secondary students and teachers but clarifies her work, stating "literacy theorists, researchers, and teacher educators would do well to consider approaching secondary literacy instruction from the standpoint of the people who teach in the school subject areas" (p. 276).

Nonetheless, researchers (e.g., Darling-Hammond & Youngs, 2002) asserted that preservice teachers need appropriate preparation to teach literacy in general and in content-specific classes.