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Teachers' Text Use in Middle School Content-Area Classrooms

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Abstract

Literacy standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) and best practices from Institute of Education Sciences practice guides (e.g., Baker et al., 2014; Kamil et al., 2008) encourage content-area teachers to use text reading to improve vocabulary and comprehension for middle grade students. Despite these strong research recommendations and various literacy initiatives, previous research studies have found a persistent pattern of limited text use (i.e., reading and learning from text) in content-area classrooms, thus limiting students' opportunities to develop advanced literacy skills. This study extends the research base on text use in middle school by presenting findings of a questionnaire administered to 124 middle school teachers and offering insights on how text is typically used in English language arts, science, and social studies classes. Teachers responded to questions about the duration and frequency of text use, as well as reading formats, reading materials (including textbooks), and challenges to utilizing text reading more often. Findings suggest that while most teachers indicated a desire to increase the amount of reading in their classes, they cited challenges such as students' difficulty with reading and a preference for using other types of teaching activities. Teachers also cited the need for higher-quality texts, and science and social studies teachers, in particular, reported dissatisfaction with and limited use of textbooks. Implications for practice include providing professional development focused on selecting appropriate texts for instruction, using text reading routines that enhance purposeful learning, and integrating reading practices into existing instructional delivery practices.

Keywords: middle school, reading, literacy, text, questionnaire

Teachers' Text Use in Middle School Content-Area Classrooms

The middle school setting is a critical juncture for students because many are either engaged in developing complex literacy and critical thinking skills needed in high school and beyond, or are at risk for academic challenges and potentially disengagement from school and drop out (Allensworth & Easton, 2005; Balfanz, 2011; Balfanz et al., 2012). Of the students who eventually drop out of school, 80% will exhibit one or more of the early warning signs in middle school, sometimes as early as sixth grade (Balfanz, 2011). The middle grades are a priority because high school may be too late to intervene as successful remediation is extremely difficult once students reach high school (Vaughn et al., 2015).

Risk factors associated with dropping out of school can be mitigated when proactively addressed when they first arise in the middle grades (Balfanz, et al., 2014). The single most impactful focus area to prevent school disconnection is academic preparation (e.g., Balfanz et al., 2007; Hernandez, 2012; Rumberger & Palardy, 2005). A persistent problem is that many secondary students lack basic reading proficiency (NCES, 2019). Only 34% of eighth graders scored at or above a proficient level in reading in 2019, and the percentage was far worse for students identified with disabilities (9%; NCES, 2019). Middle school is also a time when academic expectations rise and, for many students, the pressure to read and analyze complex texts is challenging (National Governors Association Center for Best Practices & Council of Chief State Schools Officers, 2010; Shanahan & Shanahan, 2008). Progressive state and national standards require students to master advanced literacy skills that result in deep comprehension, including synthesizing information in texts, integrating information across texts, engaging in text-based discussions, evaluating arguments, and assessing multiple perspectives and sources of

information (Murnane et al., 2012; National Governors Association Center for Best Practices & Council of Chief State Schools Officers, 2010).

In order to acquire proficiency with these advanced literacy skills, students need extensive, supported practice reading and “using texts for purposeful learning” (Greenleaf & Valencia, 2017, p. 235) across content areas. Unfortunately, once students move beyond the elementary grades, they are unlikely to receive a dedicated reading block in which teachers provide instruction in reading-related practices (Murnane et al., 2012). Because of this, it is important for content-area teachers (i.e., English language arts, science, and social studies) to provide practice opportunities for students to read and develop advanced literacy skills using content-area texts. Unfortunately, past research has demonstrated that learning from texts is often absent in secondary classrooms (Greenleaf and Valencia, 2017), which presents a significant challenge to researchers, policy makers, and others hoping to increase and improve advanced literacy practices across content areas through professional development efforts. For example, English language arts teachers may more commonly use texts while science and social studies teachers utilize more traditional instructional approaches (e.g., PowerPoint lecture presentations) that emphasize content delivery rather than learning content by reading text (Bolinger & Warren, 2007; Swanson et al., 2016). Additionally, many secondary teachers assume students will comprehend what they read, particularly if they can decode the text, and thus emphasize content instruction with little support for reading for understanding (Edmonds et al., 2009). Furthermore, science and social studies teachers often lack knowledge on how to teach reading and even more so how to support students in acquiring more advanced literacy skills required of complex content-area texts (Murnane et al., 2012).

To better support middle school teachers with implementing evidence-based reading comprehension practices that support students' advanced literacy skills, it is important to fully understand their text use during instruction. In this paper, we define "text use" as opportunities for students to read and learn from text during content-area instruction. This includes students reading a content-area text aloud, in pairs, in small groups, or independently. This also includes read-aloud opportunities, when the teacher or a student reads a content-area text aloud and students follow along with their own copy of the text. Specifically, we were interested in learning how often teachers have students read and learn from texts during instruction, how students read text (i.e. reading formats; e.g. pairs, independently), and barriers or challenges to reading text more often (e.g., students have difficulty reading the text). Within our questionnaire, we defined "reading" as reading silently or aloud at least one paragraph of print using any source (e.g., handout, primary source document, textbook, passages printed from a website, etc.). Addressing this need is important because teaching deep comprehension across the content areas is not just best practice, it is required in progressive standards used throughout the nation.

Prior Research on Text Use in Middle School Classrooms

Observation studies have identified a longstanding pattern of limited text use in secondary content-area classes (Greenleaf, 1995; Parker et al., 2013; Ratekin et al., 1985). A recent observation study examined text use in social studies and language arts classrooms in the middle and high school grades (Swanson et al., 2016). In social studies classes, students spent time reading text only 10.4% of the time, with most teachers (i.e., 6 of the 11 observed) engaging students in text reading less than 5% of the observed time. In English language arts classes, students spent 14.8% of the time reading text, with most teachers (i.e., 5 of the 9) engaging students in text reading less than 10% of the observed time. The authors recommended

training for teachers in using text during content-area instruction to support reading comprehension.

Other studies have reported additional challenges related to teachers' text use in the middle and secondary grades. First, many teachers utilize 'work-arounds,' such as delivering lectures, providing notes or short handouts, watching films, and listening to audiotapes, to avoid using text during content-area instruction (Greenleaf & Valencia, 2017; Vaughn et al., 2013). In fact, Parker and colleagues (2013) reported that even when teachers assigned text readings, they provided information orally to students so that students did not have to read the text. Second, when texts are used, they often play a secondary role rather than being the primary source for constructing students' content knowledge (Banilower et al., 2013; Litman et al., 2017). For example, in an observation study of 34 expert secondary English language arts, science, and social studies teachers, results showed teachers used text three times more than lecture-based activities; however, students engaged in meaning-making activities less than a third of that time (Litman et al., 2013). Learning from text may be limited to recalling isolated facts rather than synthesizing information within and across sources, with limited opportunities for extended text reading (Fisher, 2009; Greenleaf & Valencia, 2017; Litman et al., 2013).

Content-area teachers' efforts to circumvent text use is concerning (Parker et al., 2013), particularly because this limits the opportunities for students to develop the deep comprehension skills required to meet the existing standards and succeed in postsecondary education and the job market (Murnane et al., 2012). Greenleaf and Valencia (2017) refer to this as texts "missing in action" from students' learning and call for a shift from avoiding text use to heavily relying on texts such that students have extended opportunities to read, discuss, and make sense of subject-

matter text (p. 3). This suggests a critical need for targeted professional development aimed at improving the amount of text and nature of text use in middle grade, content-area classrooms.

Overall, these studies document a continued lack of text use despite ongoing efforts by researchers, technical assistance providers, and policy makers' emphasis on using research-based reading comprehension practices within secondary content area classrooms (e.g., Pearson et al., 2020). We recognized that in order to strategically prioritize professional development to enhance text practices in content areas, we needed to better understand how teachers use texts during instruction beyond simply their frequency of use and duration. Specifically, we investigated the types of materials and reading formats teachers used, as well as barriers to engaging students in text reading in class. These data provide necessary context for understanding how to better support teachers of various content areas as they integrate text reading into their classes. We asked the following research questions: (1) What is the frequency and duration of text reading in each content area? (2) When texts are used in class, what types of materials (e.g., textbooks, passages, primary sources) are used and in what format (e.g., teacher read aloud, independent reading, paired reading)? (3) Do teachers express a desire to utilize more text reading? If so, what barriers do they identify to doing so? Finally, we were interested in how text use practices compared across content areas.

Method

Participants

Participants included 124 teachers from six middle schools in two near-urban, southwest districts. The total number of English language arts/reading (ELAR), science, and social studies teachers working in these six middle schools was 127, thus, the participants in this sample represented 97.6% of available teachers. The school districts served approximately 20,000 and

25,500 students, respectively. Graduation rates were 90.3% to 97.4%. Both districts served approximately 51% economically disadvantaged students with 11% of students enrolled in special education. Students with limited English proficiency represented 16.6% and 22.3% of the population in each district. The ethnicity make-up of one district was 2.8% African-American, 64.25% Hispanic, 29.1% White, 1% Asian, and 2.6% other ethnicities. The second district's ethnicity make-up was 15.3% African-American, 48.7% Hispanic, 23.1% White, 8% Asian, and 4.9% other ethnicities.

Of the 124 teachers, 48 taught ELAR, 37 taught science, and 39 taught social studies in grades 6 through 8. In total, there were 84 female and 36 male teachers ranging in years of experience from 0 to more than 30 years. The sample included one teacher with a doctoral degree, 33 teachers with a master's degree, 15 teachers who completed some masters level work, and 75 teachers with a bachelor's degree. Table 1 provides complete demographic data for this sample.

<<Insert Table 1 here>>

Questionnaire

We developed an online questionnaire to gather self-report data from middle school teachers about their text use (i.e., opportunities for students to read and learn from text) during content-area instruction. The questionnaire contained 12 items on reading and text use during content-area instruction. Specifically, items asked about the amount of time students read in class, reading materials (including district-assigned textbooks), reading formats (e.g., independently, pairs), and challenges to using text reading more often. "Reading" was defined as "reading one paragraph or more of print using any source (e.g., handout, primary source document, textbook, passages printed from a website, etc.)." All questions were forced-response.

When teachers selected an answer choice of “other,” they were provided an opportunity to write a detailed description.

Procedures

The authors emailed the questionnaire to 127 teachers during the last week of March 2020. The email contained a cover letter describing the purpose of the questionnaire and a unique link so that researchers could track completion. Teachers received a reminder email once per day for five days if the questionnaire had not yet been submitted. Teachers received a small stipend for completing the questionnaire. In total, 124 teachers (97.6%) completed the questionnaire.

Data Analysis and Results

A trained graduate research assistant downloaded questionnaire data from the online survey system used in this study. A second researcher generated reports that included the results for each item. Data checks were performed to ensure raw data was captured and summarized correctly in the reports. Researchers examined the data for trends and patterns across content areas. Tables 2 through 10 present the descriptive results for each item or groups of related items. For each item, we report the number and percentage of *all* teachers (across all content areas), as well as the number and percentage of teachers within *each* content area, who selected a particular response.

Frequency of Reading

The first item asked teachers to report how often students read in their class during content-area instruction (Table 2). Results indicated that 101 teachers (81.5%) reported that they have students read “routinely” (approximately three days a week or more). Of those teachers, the majority were ELAR teachers ($n = 48$), which accounts for 100% of teachers in that content area. About 80% of social studies teachers and approximately 60% of science teachers reported they

also have students read at least three days a week. One science teacher reported having students read “rarely.”

<<Insert Table 2 here>>

Duration of Reading

Teachers reported how many minutes per week *students spend reading* and how much time *teachers read to students* (Table 3). Overall, a little more than half of teachers (52.4%) reported that students read more than 30 minutes per week. The majority of these were ELAR teachers (79.2%), including almost a third of ELAR teachers reporting that they have students read more than 60 minutes per week. By contrast, 47.6% of teachers indicated that students read 30 minutes or less per week in their class. Results indicated that students in science and social studies classes received the least amount of time to read, as 70.3% of science ($n = 26$) and 59% of social studies teachers ($n = 23$) responded that they have students read 30 minutes or less per week, which equates to an average of less than 6 minutes per school day. In terms of teachers reading to students, the majority of all teachers ($n = 96$, 77.4%) responded that they read aloud to students less than 30 minutes per week.

<<Insert Table 3 here>>

Types of Reading Materials Primarily Used

Teachers identified the reading materials students primarily used in class (Table 4). Overall, the majority of teachers reported that students primarily read brief passages ($n = 63$; 50.8%), followed by the textbook (20.9%) and “other” text types (19.4%). Findings differed across subject areas. ELAR teachers reported primarily using the textbook (37.5%), followed by brief passages (25%), novels or chapter books (18.8%), and other text types (18.8%) such as a mixture of various materials. In contrast, approximately 84% of science teachers reported using

brief passages while only 5.4% reported using the textbook. Social studies teachers reported most commonly using brief passages (51.3%), followed by other types of text (33.3%) such as primary source documents. Approximately 15% of social studies teachers reported using the textbook as their primary reading material.

<<Insert Table 4 here>>

Textbook Usage

We aimed to gain a better understanding of how middle school teachers used textbooks to support content learning in their classes. First, teachers were asked if they have access to a textbook. The majority of teachers responded that “yes,” they did have access to a content-area textbook ($n = 117$; 94.4%). Seven teachers (5.6%) responded “no,” indicating they did not have access to a content-area textbook. Of these, five were science teachers, one was a social studies teacher, and one was an ELAR teacher.

Next, the 117 participants that responded “yes” indicated (a) how often they use their textbook during instruction (Table 5). ELAR, science, and social studies teachers reported different frequencies of textbook usage. The majority of ELAR teachers (57.4%) reported using their textbook frequently (i.e., using it exclusively or as the main part of their curriculum). By contrast, the majority of social studies teachers (50%) reported using it “sometimes” (i.e., reading a lesson or part of a chapter about once per unit), and most science teachers (71.9%) reported using the textbook “rarely or never.”

<<Insert Table 5 here>>

Reasons for Not Using Textbook More Often

Next, participants were asked to describe reasons that the textbook was not used more often (Table 6). Researchers examined the responses of the 83 participants who indicated they

“sometimes” or “rarely or never” used the textbook. Participants chose all reasons that applied, including “other,” with an open-ended response box to provide additional information. Across content areas, teachers reported the textbook more frequently as “not engaging” ($n = 57$; 68.7%). For example, social studies teachers commented that they would rather use primary source materials and “student-led activities.” The next most commonly chosen reason was “it is outdated or does not align with state standards,” which was selected by 38.7% of science teachers and 31.3% of social studies teachers. No ELAR teachers selected this reason. 32.3% of science teachers also reported that they “prefer teaching content in ways that don’t involve reading.” A relatively small percentage of participants (18.1%)—mostly ELAR teachers-- indicated that a reason they don’t use the textbook more often is because it is “too difficult for students to read.” Finally, 14.5% of teachers chose other reasons for not using the textbook more often, including that they preferred to supplement it with other materials or instructional strategies, and it was inconvenient to use (e.g., “cumbersome to pull out daily,” “students can’t take them home”).

<<Insert Table 6 here>>

Source of Reading Materials Used in Class

Teachers identified where they located reading materials used in class (i.e., websites, program purchased by the district, written or provided by other teachers, or “other” locations; Table 7). The most commonly reported source of reading materials was websites (81.5% of all teachers). In addition, approximately 53% received materials from teachers (i.e., materials written themselves or provided/shared by other colleagues), and roughly 38% used reading materials from a district-provided program. Science teachers represented the largest percentage of teachers that reported using reading materials from a district program (54.1%), while social

studies teachers reported the highest incidence of using reading materials from other teachers (74.4%). 11.3% of teachers selected “other sources,” including library books, research materials, leveled readers, novel sets, digital texts, and released passages from the state-mandated tests.

<<Insert Table 7 here>>

Reading Format

Participants were asked to identify commonly-used reading formats, or *how* students read in class (Table 8), and teachers were asked to choose “all that apply.” The most commonly-reported reading formats included having students read in pairs or small groups (71.8%), reading the text aloud (by the teacher) while students follow along (61.3%), and having students read text independently (53.2%). Overall, teachers reported infrequently having the whole class read aloud together (17.7%), although just over a quarter of science teachers did report doing this. Over a third of teachers reported using sustained silent reading (SSR), including over half of ELAR teachers.

<<Insert Table 8 here>>

Desire for Additional Reading Time

The questionnaire asked teachers if they wanted students to read more in their class, and if so, what support or resources they needed to do so (Table 9). Across all content areas, a high percentage of teachers (81.5%) responded “yes,” they would like additional reading time in their classes. These 101 teachers then described what supports or resources they would need to accomplish this. 47.5% of those teachers (mostly science and social studies teachers) indicated they would like “more or higher-quality texts” that are engaging, align well with the curriculum standards relevant to the content being taught, and appropriate for struggling readers (e.g.,

leveled texts). 23.8% of teachers identified “additional time” (planning and instructional time) as something they need to provide additional reading time in class.

Teachers who responded “no” (18.5%) described why they did not want students to read more in class. Of the 18.5% of teachers who said they would not like students to read more (split relatively evenly across content areas), the majority (69.6%) said students already read enough in their classes, while 21.7% said that additional text reading would not be applicable to the class content or preferences of students.

<<Insert Table 9 here>>

Barriers to Additional Reading Time

Teachers identified specific barriers that prevented students from reading more in class. Out of the seven options presented, participants selected all that applied (Table 10). The most common barrier identified across all teachers was “students have difficulty reading” ($n = 67$, 54%), followed by teachers’ “preference to use other types of teaching activities” ($n = 39$, 31.5%). Barriers differed somewhat by content area. Science teachers reported that their greatest barrier was their preference to use other teaching activities (73%), while ELAR (70.8%) and social studies (43.6%) teachers reported that their greatest barrier was students’ difficulty reading. Interestingly, only 11.3% of teachers reported that they “cannot locate appropriate reading materials” even though 47.5% of teachers described a lack of reading materials in the open response portion of the previous questionnaire item. Only 3.2% of the teachers identified ‘I don’t feel prepared to help students read’ as a barrier to additional reading time, indicating most teachers feel adequately prepared to help students access text in class.

<<Insert Table 10 here>>

Discussion

This study extends the research base on text use in middle school by offering insights on how middle school content-area teachers typically use texts in their classes, especially for purposeful content learning, and how the use of texts compared across the three content areas of ELAR, science, and social studies. Knowing how teachers currently use texts and the challenges they encounter while using text with students can inform future professional development and support efforts. Furthermore, identifying whether ELAR, science, and social studies teachers differ in the types of resources or support they need can inform differentiation of professional development opportunities and highlight specific research to practice gaps.

We asked the following research questions: (1) What is the frequency and duration of text reading in each content area? (2) When texts are used in class, what types of materials are used and in what format? (3) Do teachers express a desire to utilize more text reading? If so, what barriers do they identify to doing so? We discuss the results for each question below, connecting these findings with those from studies observing teacher practice. We also connect these findings to important implications for professional development that may support and extend teachers' text use in the middle grades.

Frequency and Duration of Text Use

In general, ELAR teachers typically ask students to read most frequently and for the most amount of time while science teachers ask students to read the least frequently and for the least amount of time. Social studies teachers reported a wide range of how frequently students read in class, but the majority reported having students read at least 3 days per week. In addition, 70.3% of science and 59% of social studies teachers reported students read 30 minutes or less per week, which equates to as little as 6 minutes per day on average. These findings are not necessarily surprising given that the primary purpose of middle grade ELAR teachers is to enhance

knowledge and comprehension of various text genres (e.g., poetry, biography, literature) while science and social studies teachers' primary focus is covering content, which may be accomplished more efficiently by means other than reading. However, while it appears that ELAR teachers incorporate text reading more often than science or social studies teachers, the total amount of text reading across the three subjects is still minimal despite the efforts of researchers, technical assistance experts, and policy makers' emphasis on secondary reading comprehension over the years (e.g., Pearson et al., 2020). The limited opportunities to read and use text as data sources in middle school content areas provides a challenge for improving text access and learning from text. It is difficult to determine how students who have minimal access to using texts in content area classes will develop the literacy skills necessary for success on high stakes assessments, postsecondary education, and employment (Murnane et al., 2012). If students do not encounter texts in ways that allow for extended opportunities to read, discuss, and interpret content, this substantially limits the extent to which teachers can support students with developing those advanced literacy skills. Furthermore, professional development efforts to increase content-area reading practices may be increasingly difficult to implement if teachers simply do not use texts to teach content. We think an important take-away message is that teachers need to incorporate more text-based learning throughout the school day, thereby increasing the total amount of text reading as well as the extent and quality of text-based interactions. Findings suggest that professional development aimed at assisting teachers in rethinking their instructional practices to integrate texts as well as supporting teachers in locating appropriately engaging texts may yield beneficial outcomes. At a minimum, improving students' access to and use of content-area texts will serve to better prepare them for high school and post-secondary reading and learning.

Reading Materials and Formats

The second question of the study addressed *what* and *how* students read; specifically, which reading materials (e.g., textbooks) and reading formats used most often by middle school teachers. Results indicated that teachers reported using brief passages in their instruction most frequently. Despite the fact that nearly all teachers report having access to a textbook, only 29% of teachers (mainly ELAR) reported using it “frequently.” Science and social studies teachers reported using the textbook the least, mainly because it is not engaging to students or doesn’t align with standards. Although textbooks are generally available to all students and teachers, it seems that science and social studies teachers, in particular, may not find the textbook a valuable teaching resource and instead rely on locating reading materials from websites (81.5%) or from other teachers (53.2%), which likely consumes their already limited planning time. This dissatisfaction with textbooks may contribute to teachers’ self-reported lack of content-area reading materials and the relatively low amount of time spent reading in science and social studies classes.

Findings also revealed that, across all content areas, teachers ask students to typically read in several ways: (a) reading in pairs or small groups (71.8%), (b) following along in text while the teacher reads it aloud (61.3%), or (c) reading text independently without support (53.2%). Interestingly, over half of ELAR teachers, who may have more training in reading instruction than other content-area teachers, implement sustained silent reading (SSR). This is somewhat concerning since research has not produced sufficient evidence that independent, silent reading improves students’ reading, especially for students who are not fluent readers (NICHD, 2000). This finding underscores the need for continued dissemination of research-based reading practices to all teachers.

Barriers to Additional Text Use during Content-Area Instruction

The third research question addressed content-area teachers' desire to use more text reading during content-area instruction and potential barriers to doing so. Interestingly, nearly all teachers (81.5%) expressed a desire for students to read more during class. Nearly half of those teachers (i.e., mostly science and social studies teachers) indicated they needed additional resources to increase text reading, including better quality texts that are engaging, aligned to the standards, and appropriate for struggling readers (e.g., leveled text). In addition, teachers indicated the most common barrier to increased reading time as students' difficulty reading text.

It is encouraging that teachers want to utilize more text reading during content-area instruction. First, we think providing teachers with structures and supports for how they might better integrate even small amounts of reading into their content instruction will facilitate this goal. Since teachers identified the text as being the source of the problem (i.e., it is too difficult), we believe professional development aimed at procuring appropriate text resources that align with content units might be a valuable activity. Though teachers did not identify their own knowledge and skills on how to support students with reading text during class as a high need, we suspect that if teachers knew more practices for integrating text in content instruction they would be more likely to do so. The fact that many teachers identified text difficulty as a barrier to additional text use suggests a possible disconnect between teachers' perception of their content-area reading knowledge and skills and their actual knowledge and skills for implementing those practices. Additionally, identifying text difficulty as a primary barrier to using text reading more often in classrooms suggests teachers are unfamiliar with reading routines and reading comprehension practices that support struggling readers with accessing grade level text, building background knowledge, building vocabulary understanding, monitoring

for meaning, and making connections across ideas in the text. Even when provided with “better” texts, teachers need the knowledge and skills to support deep reading comprehension of content-area texts for a range of readers.

Teachers also identified a preference for teaching content without text reading; 31.5% of teachers – most of whom were science teachers – indicated they utilized other activities for teaching students to understand content. This finding aligns with previous observation research, demonstrating that teachers often circumvent text use in favor of other activities such as lectures, PowerPoint presentations, using handouts, watching films, or listening to audiotapes (Greenleaf & Valencia, 2017; Parker et al., 2013; Vaughn et al., 2013). This may also connect with content-area teachers’ view that their primary job is to teach content, not reading. Teachers may feel it is beyond their responsibility to “figure out” how to support struggling readers by locating more engaging or leveled text or even dedicating class time to text reading activities.

Implications for Professional Development in the Middle Grades

The findings from this study provide important insight on the type of professional development needed to increase and support middle grade teachers’ text use during content-area instruction. Considering the emphasis in this study on the use of texts in content area classes, it is important to wonder how much we know about improving access to text reading and student outcomes in the middle grades. The real issue may be to consider how the increase in text reading contributes to students’ knowledge acquisition. In part, this may depend on how these texts are used to promote knowledge use. For example, Vaughn et al. (2013) demonstrated that when teachers provided instruction of essential vocabulary words, supported students as they read texts aligned with their course curriculum and standards, lead students in text-based discussions, and implemented team-based learning approaches to guide the application of

knowledge learned from text, on average, students made gains in history knowledge, content reading comprehension, and standardized reading comprehension when compared with students taught by the same teachers in different classes. This type of text-based instruction was also effective for students with reading difficulties (Swanson et al., 2017). This example underscores the importance of using text for *purposeful learning* as opposed to achieving more reading time through other methods such as free-choice, independent, silent reading or assigning reading for homework. This is especially true for students with reading difficulties who benefit from teacher-provided support and feedback (Rupley et al., 2009). We recognize that integrating reading within content-area instruction is not easily accomplished for many teachers, but we believe there are areas researchers, technical assistance providers, and policymakers can address to gradually help educators scale-up such instruction across content areas. Thus, we present three implications for professional development.

First, middle grade teachers might benefit from professional development on selecting appropriate texts for instruction. When teachers use lower level texts, what students gain in readability may be at the expense of reducing the quality of the vocabulary and rich content knowledge. This study suggests that teachers would benefit from professional development that facilitates identifying appropriate text that provide students with the vocabulary terms and content necessary for grade level standards.

Second, teachers may benefit from professional development on text reading routines that support a range of learners with accessing these grade-level texts before, during, and after reading. For example, reading routines in which students are explicitly taught important vocabulary words prior to reading, monitor comprehension during reading, and write summaries after reading have been effective in improving students' content knowledge acquisition in middle

school social studies classes (Wanzek et al., 2018). A second example, Collaborative Strategic Reading (Klingner et al., 2002), is a system of practices to improve students' reading comprehension of informational text. Students work in collaborative groups to preview text and activate background knowledge before reading, monitor comprehension during reading by identifying "clunks" (words or concepts that are confusing), write main idea statements about important information, and finally "wrap up" by generating questions to check their understanding of the text.

These examples certainly do not represent the full range of research- and evidence-based practices available to secondary teachers. Baker et al., (2014) and Kamil et al. (2008), for example, have identified and described a comprehensive set of practices and recommendations for improving literacy for adolescents. These include providing explicit vocabulary instruction and repeated exposures to new words, teaching and practicing comprehension monitoring strategies, providing a variety of oral and written activities that support the interpretation and analysis of text, and offering opportunities for text-based discussions. However, the sheer number of these recommended and research-proven practices, when examined separately, may be overwhelming to educators who are left wondering when and how to use each practice. For this reason, we believe professional development on text reading routines that "package" several practices together and provide a structure for teachers to use as they integrate reading with content instruction, will facilitate implementation of reading practices across ELAR, science, and social studies classes in a rather effective and efficient manner.

It is important for teachers to develop proficiency with these practices such that they feel more comfortable using text as a primary vehicle for building students' content knowledge rather than a secondary task. We recognize the challenges in this recommendation, as it involves a shift

for many content-area teachers from ‘I’m not a reading teacher’ to a perspective in which content knowledge and content application activities can be taught with and alongside text reading. It may be useful to utilize whole-school professional development models in which ELAR, science, and social studies teachers learn the same reading comprehension practices, and thus, students are exposed to and practice those comprehension practices throughout their school day.

Last, we recommend professional development that emphasizes how teachers can embed reading and reading comprehension practices within their existing instruction so the amount of text-based learning and reading is gradually increased throughout the day. Without these efforts, improving teachers’ existing, limited reading practices will be difficult to support. This shift toward using more reading during science and social studies instruction does not have to be ‘all or nothing,’ requiring teachers to abandon other content delivery activities, such as lectures, activities, lab work, or videos. Rather, teachers can utilize reading and reading comprehension practices alongside other instructional delivery approaches. It is our opinion that if middle grade teachers learn how to support readers with grade-level texts and incorporate research-based reading routines and practices that can be used before, during, and after reading, it will improve students’ content knowledge and work toward building advanced literacy skills necessary for students to be successful beyond middle school and when they enter the workforce.

Limitations and Future Research

Several limitations of this study should be considered. First, our goal was to identify the text-use practices of educators, however, the sample is from two mid-size districts. Thus, the findings of this study may have limited generalizability given the unique contextual factors in these two districts (e.g., urban districts, high number of certified educators with advanced degrees or coursework). Second, these data represent teacher self-report, and it is possible that

some degree of social-desirability bias exists in the responses to this questionnaire, resulting in an overestimate of the amount of reading that actually occurs in these classrooms. Finally, this questionnaire did not address the particular reading practices, routines or activities (e.g., learning vocabulary, identifying main ideas, writing summaries) that teachers may use when students read content-area texts, nor did it address the extent to which teachers support students with applying reading comprehension practices while reading. It is unclear if and how teachers already utilize reading routines (e.g., repeated reading or partner reading) to support students' with accessing grade level texts. It is also unclear whether teachers use reading comprehension practices before reading, during reading, and after reading. Previous research found text reading often plays a secondary role in content learning, meaning that text reading is not the primary vehicle for constructing students' content knowledge (Banilower et al., 2013; Litman et al., 2017). When assigned, text reading may be used as a homework activity or to recall facts rather than supporting more advanced literacy skills and content knowledge building (Fisher, 2009; Greenleaf & Valencia, 2017; Litman et al., 2013). Future research might examine teachers' self-report data on the type of reading routine and reading comprehension practices used when the teacher reads aloud, when students read independently, and when students read in partner or small groups.

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Tables

Table 1

Teacher Demographics

Variable	ELAR (<i>n</i> = 48)	Science (<i>n</i> = 37)	Social studies (<i>n</i> = 39)
Average years taught	9	11	9
Gender			
Female	39	25	20
Male	7	10	19
Not Reported	1	2	0
Ethnicity			
African American	3	2	2
Anglo	32	25	28
Asian	1	0	0
Hispanic	9	7	7
Other/Not Reported	3	3	2
Highest degree earned			
Bachelor's	25	24	26
Some master's	9	3	3
Master's	13	10	10
Doctorate	1	0	0

Note. ELAR = English language arts and reading.

Table 2*Frequency of Reading*

How often students read to learn new content	Respondent	<i>n</i>	%
Routinely (about 3 days a week or more)	All teachers	101	81.5
	ELAR	48	100
	Science	22	59.5
	Social studies	31	79.5
Occasionally (about once per week)	All teachers	22	17.7
	ELAR	0	0
	Science	14	37.8
	Social studies	8	20.5
Rarely (a few times each month)	All teachers	1	0.8
	ELAR	0	0
	Science	1	2.7
	Social studies	0	0

Table 3*Time Students Read Per Week and Time Teachers Read to Students*

Time	Student reading			Teacher reading		
	Respondent	<i>n</i>	%	Respondent	<i>n</i>	%
30 minutes or less	All teachers	59	47.6	All teachers	96	77.4
	ELAR	10	20.8	ELAR	31	64.6
	Science	26	70.3	Science	35	94.6
	Social studies	23	59.0	Social studies	30	76.9
31–60 minutes	All teachers	48	38.7	All teachers	26	21.0
	ELAR	24	50.0	ELAR	15	31.3
	Science	11	29.7	Science	2	5.4
	Social studies	13	33.3	Social studies	9	23.1
More than 60 minutes	All teachers	17	13.7	All teachers	2	1.6
	ELAR	14	29.2	ELAR	2	4.2
	Science	0	0.0	Science	0	0.0
	Social studies	3	7.7	Social studies	0	0.0

Table 4
Types of Reading Materials Primarily Used in Class

Reading materials	Respondent	<i>n</i>	%
Textbook	All teachers	26	20.9
	ELAR	18	37.5
	Science	2	5.4
	Social studies	6	15.4
Brief passages	All teachers	63	50.8
	ELAR	12	25.0
	Science	31	83.8
	Social studies	20	51.3
Novels or chapter books	All teachers	11	8.9
	ELAR	9	18.8
	Science	2	5.4
	Social studies	0	0.0
Other	All teachers	24	19.4
	ELAR	9	18.8
	Science	2	5.4
	Social studies	13	33.3

Table 5*Textbook Usage*

Frequency of textbook use	Respondent	<i>n</i>	%
Frequently (I use it exclusively or it is the main part of my curriculum)	All teachers	34	29.0
	ELAR	27	57.4
	Science	1	3.1
	Social studies	6	15.8
Sometimes (I have students read a lesson or part of a chapter approximately once per unit)	All teachers	40	34.2
	ELAR	13	27.7
	Science	8	25.0
	Social studies	19	50.0
Rarely or Never (I have students use it only a few times per year or I don't use it at all).	All teachers	43	36.8
	ELAR	7	14.9
	Science	23	71.9
	Social studies	13	34.2

Note. Total *n* for this item is 117.

Table 6*Reasons for Not Using Textbook More Often*

Reason	Respondent	<i>n</i>	%
It is outdated/does not align with state standards.	All teachers	22	26.5
	ELAR	0	0.0
	Science	12	38.7
	Social studies	10	31.3
It is too difficult for students to read.	All teachers	15	18.1
	ELAR	6	30.0
	Science	6	19.4
	Social studies	3	9.4
It is not engaging for my students.	All teachers	57	68.7
	ELAR	14	70.0
	Science	21	67.7
	Social studies	22	68.8
I prefer teaching content in ways that don't involve reading.	All teachers	19	22.9
	ELAR	0	0.0
	Science	10	32.3
	Social studies	5	15.6
Other (please describe)	All teachers	12	14.5
	ELAR	3	15.0
	Science	1	3.2
	Social studies	8	25.0

Note. Total *n* for this item is 83, including 20 ELAR teachers, 31 science teachers, and 32 social studies teachers.

Table 7*Source of Reading Materials Used in Class*

Source	Respondent	<i>n</i>	%
Websites	All teachers	101	81.5
	ELAR	42	87.5
	Science	28	75.7
	Social studies	31	79.5
District program	All teachers	48	38.7
	ELAR	16	33.3
	Science	20	54.1
	Social studies	12	30.8
Teachers (written or provided)	All teachers	66	53.2
	ELAR	22	45.8
	Science	15	40.5
	Social studies	29	74.4
Other	All teachers	14	11.3
	ELAR	5	10.4
	Science	3	8.1
	Social studies	6	7.7

Table 8*Reading Format*

How students primarily read in class	Respondent	<i>n</i>	%
I read the text aloud while my students follow along.	All teachers	76	61.3
	ELAR	33	68.8
	Science	25	67.6
	Social studies	18	46.2
Students read the text independently without support.	All teachers	66	53.2
	ELAR	30	62.5
	Science	23	62.2
	Social studies	13	33.3
The whole class reads aloud together.	All teachers	22	17.7
	ELAR	7	14.3
	Science	10	27.0
	Social studies	5	12.8
One student reads the text aloud to the class.	All teachers	37	29.8
	ELAR	13	27.1
	Science	16	43.2
	Social studies	8	20.5
Students work in pairs or small groups to read the text.	All teachers	89	71.8
	ELAR	35	72.9
	Science	26	70.3
	Social studies	28	71.8
Students read during sustained silent reading time.	All teachers	45	36.3
	ELAR	26	54.2
	Science	10	27.0
	Social studies	9	23.1

Table 9*Desire for Additional Reading Time*

Response	Respondent	<i>n</i>	%
Yes	All teachers	101	81.5
	ELAR	42	87.5
	Science	28	75.7
	Social studies	31	79.5

Table 10*Barriers to Additional Reading Time*

Barrier	Respondent	<i>n</i>	%
I cannot locate appropriate reading materials.	All teachers	14	11.3
	ELAR	3	6.3
	Science	4	10.8
	Social studies	7	17.9
Reading takes too much instructional time.	All teachers	15	12.1
	ELAR	5	10.4
	Science	2	5.4
	Social studies	8	20.5
Students have difficulty reading.	All teachers	67	54.0
	ELAR	34	70.8
	Science	16	43.2
	Social studies	17	43.6
I prefer to use other teaching activities.	All teachers	39	31.5
	ELAR	5	10.4
	Science	27	73.0
	Social studies	7	17.9
I am required to use lesson plans that do not include reading.	All teachers	10	8.1
	ELAR	3	6.3
	Science	2	5.4
	Social studies	5	12.9
My focus is teaching content, not reading.	All teachers	21	16.9
	ELAR	2	4.2
	Science	7	18.9
	Social studies	12	30.8
I don't feel prepared to help students read.	All teachers	4	3.2
	ELAR	0	0.0
	Science	2	5.4
	Social studies	2	5.1