Rethinking Curation in School Libraries and School Library Education: Critical, Conceptual, Collaborative

Jenna Spiering
University of South Carolina, USA

Kate Lechtenberg
University of Iowa, USA

School library educators often assign a curation assignment to preservice school librarians in the university classroom. However, these projects emphasize a product created by librarians for teachers and learners, rather than the collaborative and critical process that the National School Library Standards suggest. In this paper, we draw on data from a qualitative inquiry of several courses for preservice school librarians, looking at both curation assignment descriptions and the final products. Through a systematic content analysis of these projects, we have found that these assignments often fall short in asking our learners to critically consider conceptual connections and diverse perspectives. To this end, we identify revisions to these assignments that reframe curation as a collaborative, conceptual, critical endeavor.

Introduction

Curation has always been a mainstay of school library practice. Very few days go by in a school library when the librarian is not asked to pull books on a topic, locate digital resources to support research, or select a set of resources to display and promote. However, as the information landscape has become more expansive, the curation process has become more complex. In fact, American Association of School Librarians (2018) includes "Curate" as one of its six Shared Foundations in the *National School Library Standards*, defining curation as the process of "mak[ing] meaning for oneself and others by collecting, organizing, and sharing resources of personal relevance" (p. 96). Today's school librarians must both demonstrate their unique contributions as curators *and* invite learners and classroom teachers into the curation process; the traditional cart of books and a simple search on a database no longer meet the needs of today's participatory information culture. Throughout this paper we use the phrase "student" to refer to candidates in our school library courses and the phrase "learner" to refer to K-12 students. As we consider the current vision of curation set out in the AASL standards, we asked ourselves whether our own assignments in school library education courses are sufficiently preparing future school librarians for this complex work.

As preservice library students, we were assigned to create pathfinders in reference courses, thematic text sets in children's and young adult materials courses, select texts to address multiple literacies in our literacy courses, and purchase lists of highly reviewed books in our collection development courses. And today, as school library educators, we find ourselves offering similar assignments to our own preservice library students. We emphasize curating a diverse set of texts

that meet the school's selection criteria, address multiple literacies, can be accessed by a diverse set of readers at varying levels, and represent a diversity of formats and identity groups. However, these assignments continue to emphasize a product created *by* librarians *for* teachers and learners, rather than the collaborative and critical process that the AASL standards suggest.

In order to begin to improve our curation assignments, we engaged in a qualitative inquiry of several courses for preservice school librarians, looking specifically at curation assignment descriptions and the final products that students created. Through a systematic content analysis (Krippendorff, 2012; White & Marsh, 2006) of these projects, we found that these assignments sometimes fall short in asking our learners to critically consider why and how they curate resources. In this paper, we present findings from this study and explore how we can align our curation assignments with the AASL's complete vision of curation as a critical and collaborative process, and design curation assignments that consider the role of resource selection in inquiry-driven instruction (Kuhlthau, Maniotes, & Caspari, 2012). We conclude by offering suggestions for meaningful revisions to curation assignments in school library education courses. The following research questions guided our inquiry:

1. What factors do school library students consider when curating resources for classroom teachers?
2. To what extent does student work from curation assignments in school librarian courses reflect an alignment with professional standards and literature on curation?

Review of Literature

Existing research on curation in school libraries is often included in collection development literature. Newsum (2016) described the long-standing focus on multimedia curation as well as the increasingly digital and participatory nature of collection development in 21st century school libraries. Despite this attention to the social aspects of collection development, in a survey of school librarians, Loertscher and Koechlin (2016) found that practicing school librarians continued to focus on librarian-selected materials, without embracing the full extent of digital resources available today.

While little empirical research exists on how school librarians curate, many scholars and practitioners have addressed the importance of curation and have suggested specific resource lists, digital platforms for curation, and resources for inclusive curation. Valenza (2012) advocated for school librarians as expert curators, positioning the librarian as the "human filter" who helps teachers and learners manage online information overload. Valenza, Boyer, & Curtis (2014) profiled several librarians' definitions of curation and as well as the specific platforms they recommend. Other scholars and practitioners offered similar combinations of rationales and resource lists, offering both broad arguments and suggested tools for curation (Robertson, 2012), as well as specific types of resources like makerspaces (Robertson, 2019), breakout boxes (Lewallen, 2019), OER (Emrich, Senior, Ford, Hicks, & Riesett, 2019; Valenza, 2016), databases (Ivory & Viens, 2019), and tools for gathering feedback on a curated collection (Moorefield-Lang, 2019). Additionally, many rationales and resources focused on diversifying collections broadly (e.g. Ishizuka, 2018; Wright, 2015), pursuing racial equity (Schadt, 2016a, 2016b), and attending to the accessibility needs of all learners (Agee, 2019; Robinson, 2019).

Since the introduction of the AASL's National School Library Standards (2018), scholars have also started centering the Shared Foundation "Curate" in their research. Ahlfeld (2019) analyzed the curation best practices suggested by AASL, offering her own specific ideas for instruction and assessment related to curation. In one of the few empirical studies to include an examination of curation, Garrison, FitzGerald, and Sheerman (2019) used the six Shared Foundations (Inquire, Include, Collaborate, Curate, Explore, Engage) as a lens for examining which information literacy

skills students found to be easy and difficult. In focus group discussions, students referenced skills in the "curate" skillset as 'difficult' 52 times and 'easy' only 27 times, the largest difference of any Shared Foundation. Overall, Garrison et al. found a tension between students' desire to complete complex inquiry tasks independently and their desire to have additional guidance for particularly difficult skills like curation. More empirical research about how students actually engage with curation activities and skills is needed.

Likewise, little research exists about how school library educators teach curation in university coursework. Much of the current research about curation instruction in LIS programs has focused on digital curation and data management without attention to the nuances of school librarianship and educational settings (Kim, 2015; Yakel, Conway, Hedstrom, & Wallace, 2011). While school librarians might mimic these universities' approaches to developing curation curriculum and instruction, the universities' performance standards (e.g., "Prepare data for ingest (e.g., file normalization, checksums)") often do not align with the work of school librarians. Therefore, our study begins to address the gap in research as we examine what competent curation looks like in school library education and in school libraries.

In the absence of research on how pre-service school librarians learn to curate, we also considered educational research on how teacher educators teach pre-service teachers to select text sets for instructional purposes. Although the term 'curation' and the role of school librarians are rarely mentioned as part of the text selection process, since the 2010 release of the Common Core State Standards, scholars and classroom practitioners have shared their models for creating text sets across the curriculum (e.g, Lupo, Strong, Lewis, Walpole, & McKenna, 2018) and in a variety of disciplines including social studies (e.g, Bersh, 2013; Guthrie & Klauda, 2014), English language arts (e.g., Pytash, Batchelor, Kist, & Srsen, 2014; Wessling, 2011), and science (e.g., Folk & Palmer, 2016). Moreover, others have offered models for text sets focused on increasing diverse representation in texts and among authors (e.g., Möller, 2016; Muhammad, 2018). These text set models provided exemplars that can help school librarians begin to build collaborative curation relationships with teachers across the curriculum and various disciplines.

Building on the AASL standards' approach to curation, Lechtenberg (2018) examined the curation that pre-service English language arts teachers performed when they selected supplemental texts to accompany the reading of canonical literature--differentiating between "flat" and "layered" curation. When teachers flattened texts they curated, they "tended toward superficial, monolithic, and didactic ways of conceptualizing, including, connecting, and framing texts" (p. 9); for example, they engaged in tokenizing selections or made prescriptive assumptions about narrow messages that all learners would receive from a text. With "layered" curation, pre-service teacher rationales focused instead on "developing thick conceptual frameworks, including counter stories and subjecting them to critical questioning, making multifaceted connections between texts, and taking an exploratory stance toward texts" (p. 9-10). We build on this analysis by examining the work of pre-service school librarians in the context of the broader school library research on curation. Using school library rationales, resources, and emerging empirical literature on curation as a springboard, this study begins to address the gap in empirical research related to curation in school library education.

Conceptual Framework

In order for pre-service school librarians to develop the ability to curate "the right resource in both content and format" (Mardis, 2014, p. ii), we argue that library educators need to work from robust theories of literacies, conceptual learning, and inquiry as they teach curation.

Our understanding of curation is rooted in definitions of literacy and literacies in the contemporary information landscape. We draw on *multiliteracies*, a term proposed to acknowledge the multicultural, multilingual, and multimodal dimensions of the new literacies required by increasingly diverse forms of texts (e.g, digital, visual, aural, animated, interactive) (Cope & Kalantzis, 2009; The New London Group, 1996). These literacies are "new" because diverse forms of text are fundamentally different from traditional conceptions of print-based reading and writing (Lankshear & Knobel, 2011). Along with this new paradigm, scholars have argued that learners must be active designers of their own learning within complex social environments (The New London Group, 1996), and that educators must no longer "push" pre-selected resources to learners and instead embrace a "pull" model in which learners select resources relevant to their own inquiry (Brown & Adler, 2008; Lankshear & Knobel, 2011). This model supports current conceptions of curation in the participatory, multimodal information landscape that the AASL standards forefront.

Disciplinary literacy adds another layer to our understanding of the literacies necessary for curation. Moje (2015) argued that learners must be taught to view each discipline as its own culture in which members produce, consume, and discuss texts and knowledge in unique, purposeful ways. Such disciplinary learning also requires that educators and learners "look beyond easily found information resources" (AASL, 2018, p. 97), seeking instead to develop a "deep understanding of core disciplinary knowledge framed conceptually to facilitate access, retrieval, and use" (Moje, 2015, p. 272). Moje's emphasis on deep conceptual understanding is related to Erickson's (2006) distinction between topics (factual content areas like the Civil War or weather systems) and concepts, which are complex, abstract ideas that transfer across disciplines (e.g., power, forces, or systems). Framing learning around (transferable) concepts rather than topics supports learners' ability to connect information across disciplines and link to prior knowledge (Ausubel, 1977), in line with AASL's call for learners' ability to develop a "conceptual knowledge network" (AASL, 2018, p. 94).

Multiple literacies are foundational to any inquiry learning experience as learners interact with multimodal texts. Kuhlthau (2010) suggested that a three-member team of educators should support inquiry learning, with the school librarian, classroom teachers, and/or other disciplinary specialists collaborating to "take full advantage of the expertise in the school and community" (p. 6). Implicit in Kuhlthau's call for diverse inquiry teams is an acknowledgement of the unique disciplinary knowledge that different educators possess. Our conceptual framework acknowledges the new, multiple, and disciplinary literacies that school library educators must consider when they prepare school librarians for collaborative, conceptual, inquiry-based curation across the curriculum.

Methods

The data from this study came from a two-year qualitative inquiry in three school library education courses. We (authors) spent two summers observing and collecting data in three sections of two different courses Collection Development and Resources for Young. We employed content analysis (Krippendorff, 2012) to examine students' submitted written assignments. In both courses, students were asked to complete a significant curation project.

Data Sources

Data for this study consisted of 23 final projects from consenting participants in the three courses. In the collection development course, students were asked to choose a unit of study for a grade level and subject area of their choice and curate ten quality digital resources that would support inquiry into a concept or topic. In the young adult materials course, students were asked to curate ten resources related to a specific young adult text and secondary English Language Arts (ELA) standard. Each project took different forms; some submitted a basic annotated bibliography in a

Word document, while others created online resource guides using a variety of platforms, including Thinglink, Google Sites, Padlet, S'more, and school-based website platforms. In each of the projects students provided an annotation describing why they selected the resources in their projects, and in the collection development course they also provided annotations for five resources that they decided *not* to include for the project. We coded both sets of annotations.

Data Analysis

We used content analysis in this study, a systematic approach to data analysis that looks at written texts/artifacts and attempts to interpret their meaning within a given context by identifying themes and patterns and inferring the meaning of those themes based on researchers' perspective and expertise (White & Marsh, 2006). Because we are interested in the students' justifications for texts they included in their collections, our unit of analyses are the annotations that accompanied each resource.

We began our content analysis by reading through each annotation separately and pulling out a collection of codes that we transferred to columns in a spreadsheet. Together, we identified five codes during this open coding (Saldaña, 2012) phase including: text features, reading level, content, accuracy, and teaching ideas. Each of these codes represent a quality of the texts that students focused on in their annotations. We then came together and engaged in a second round of focused analytic coding where we added codes to more specifically clarify what was happening in each annotation. For example, when we noticed that there were many comments about reading level, but that some of the comments were related to the appropriateness of content for certain kinds of youth and certain age groups, we separated our original code (now called 'text complexity') into two subcodes 'reading level' and 'appropriateness for youth.' We ended up with five codes and eight subcodes, as described in Table 1).

Table 1. Data Analysis Codes and Subcodes

Code	Subcode	Description	Examples
Text Attributes	Text Type	Video, website, encyclopedia, poems etc.	*"book, collection of essays/memoirs, 'first-hand accounts'"*
	Text Features	Headings, organization, use of images, links and navigation	*"animations, maps, diagrams"*
	Access	Accessibility	*"multiple people can access at the same time"*
			"Login required"
Content	Topic	Specific topics or ideas that the resource addresses.	*"Climate change"*
			"Famous poets"
	Accuracy	Credibility and authority of the source	*"while the site appears legitimate, it is still a .com instead of a .edu or .org"*
	Concepts	Big ideas, connections to other concepts. Cannot be easily researched by typing into a search bar.	*"connection between mental and physical health"*
			"Climate change and its relation to human action and behaviors"
Text Complexity	Appropriateness for Youth	Reliance on normative narratives about youth	*"video should be saved for older high school ages (language)"*

		"includes appealing visuals that will hold readers attention."
Reading Level	Lexile, age range, general comments about ability	*"specific to eighth graders, able to choose reading levels"*
Teaching Ideas	Examples of connections to curriculum or ideas for classroom implementation	*"This is a good article to use for students that might want to compare past and present migrant workers."*
Diversity and Multiple Perspectives	Inclusion of diverse voices, ideas, and perspectives	*"It includes Native American students discussing climate change."*

After completing the coding process, we counted the number of times each code and subcode was used in each class individually and across all three classes. After putting this data into pie charts, we could visualize several trends in the kind of content that was presented in the annotations across all three classes. Then, in line with the goals of content analysis, we compared our findings with the assignment descriptions in an effort to make sense of the phenomenon with the particular context of these courses and student expectations (White & Marsh, 2006). Our project is meant to be generative rather than reductive, so it was important that we focused less on students' shortcomings and instead considered how we might better frame our school library curation assignments in a way that encourages conceptual and collaborative curation.

Findings and Discussion

After coding each annotation, we counted the frequency of codes across all of the data. While our aim is not to engage in a quantitative analysis of this data, content analysis often starts with an analysis of frequency in order to make connections between the data and context, identifying themes and notable absences. The frequency of codes are subcodes are listed in Table 2.

Table 2. Frequency of Codes and Subcodes

Code	Subcode	Frequency
Text Attributes	Text Type	202
	Text Features	115
	Access	37
Text Attributes Total		354
Content	Topic	175
	Accuracy	33
	Concepts	29
Content Total		237
Text Complexity	Appropriateness for Youth	48
	Reading Level	27
Text Complexity Total		75
Teaching Ideas		46
Diversity and Multiple Perspectives		22

Figure 1 and Figure 2 graphically depict the frequencies listed in Table 2 and provides their percentages.

- Text Attributes 48.2%
- Content 32.3%
- Text Complexity 10.2 %
- Teaching Ideas 6.3%
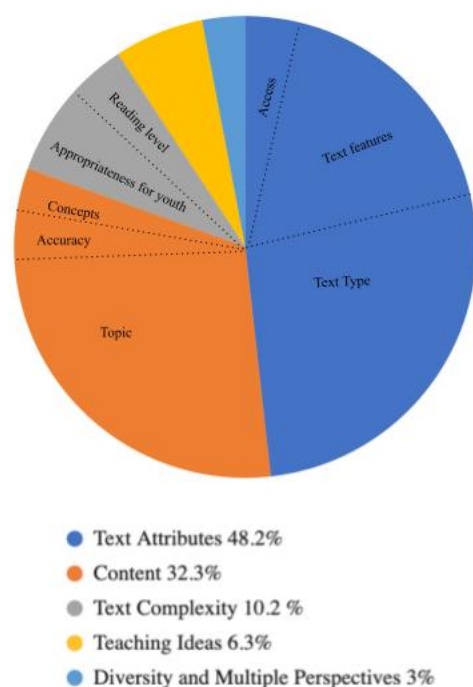- Diversity and Multiple Perspectives 3%

Figure 1. Distribution of Codes and Subcodes

We found that text attributes, content, and text complexity accounted for the majority of codes in the students' projects, as shown in Figure 1.

Themes: Factors Considered in Curation of Resources for Classroom Teachers

Our first research question asked about the factors that school library students considered when curating resources for classroom teachers.

Text attributes. A key factor in nearly every student's selection was the text type and the text features. Together, these codes accounted for just under half of all codes in the annotations. Text type refers to the format of the resource (e.g. website, video, eBook etc.), while text features refers to the specific elements of the resource that contributed to its navigation or design (e.g. links, zooming capabilities, interactive aspects). For example, one student described a resource as a "site" that "contains audio files of famous poets reading their work." In this context, they have provided the text type (website) and some features of that site (i.e., included audio files). There were a few instances of the text features being considered for accessibility or differentiation: "This site gives the student the ability to have the text read to them." However, these instances were rare. Rather, the text type or feature was included without the context of accessibility or any discussion about why the particular text feature would be beneficial for learners.

Providing a variety of text types factored into most decisions to include resources in the collections and this was likely related to the assignment descriptions that asked students to do so. In general, students provided a wide variety of resource types. This focus on finding multiple formats was potentially related to directives in all of the assignments to provide resources in

multiple formats (e.g. "print and nonprint formats") as well as specific language about the requirements for different formats (e.g. include one multimedia resources and one database). While students generally attempted to provide resources in multiple formats, less attention was devoted to *why* formats were chosen or how they might contribute to the development of literacy skills; we examine this potential in the implications section.

Content. Content was also an important component in selection decisions (32.3%), but conceptual connections accounted for less than 13% of the subcodes total in that category, with topics making up 73.8% of all content-related subcodes, as seen in Figure 2.
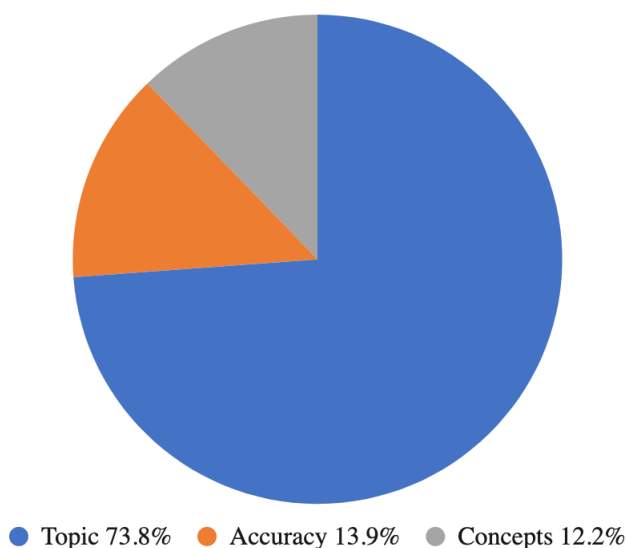

● Topic 73.8%   ● Accuracy 13.9%   ● Concepts 12.2%

Figure 2. Content Subcode Distribution

For example, Figure 2 reflected an example in which one student was creating a collection of resources about the American Revolution and each annotation contained some reference to the American Revolution being covered within the specific resources. "A list of books that can be used to help teach about the American Revolution" or "This site has many short videos about the events that led up to, during and after the battles of the American Revolution." Selecting resources relevant to the topic is essential, of course, but without going beyond the broad focus on the American Revolution, the school librarian is missing an opportunity to contribute conceptual complexity and depth to the teacher's thinking about the topic and connections to content area standards.

Topics were also often described when students included large general websites like the *National Geographic* website or a collection or database such as Learn 360. For example, Figure 3 shows three selected resources with one student's annotations related to the topic of evolution for 5th graders in science.

Learn 360 Evolution Resources	Learn 360 has collections of videos, interactive, information sheets (printable), and links to Encyclopedia entries. A great place to explore ideas and help clarify your understanding of topics. The link takes you to the evolution resources.
PBS Evolution Resources	Here is a collection of resources PBS has collected explaining evolution with tutorials to help you understand things you may be confused about. There are also links to extension topics for you to learn more
National Geographic	National Geographic has a collection of articles and photos depicting current research in natural sciences. This link takes you to a search for articles related to evolution

Figure 3. Sample of curated sources

In Figure 3, each link leads to a collection of articles, videos, and webpages without any clear direction about how the resources fit into a conceptual network. Although the assignment asked students to select more specific information sources, it is notable that these types of sources were again accompanied by topic language rather than conceptual annotations or instructional notes. The student included a link to a *National Geographic* keyword search for "evolution." This kind of general list was not the goal of either curation assignment, but it does bear a resemblance to resource lists and curated collections on platforms like Pinterest or Symbaloo which rarely include annotations that make transparent the conceptual complexity that may have gone into the curation project. Many of these resources would not help learners develop a conceptual understanding of scientific evolution, but instead simply included the keyword as it related to a different topic (e.g., the evolution of Picasso's work).

Such broad, general lists would require classroom teachers to sift through irrelevant materials they could have found in their own cursory searches. These tangential, and oftentimes superficial, resources suggest that the student had not developed their own conceptual understanding of the related sub-concepts needed in order to understand evolution (e.g., migration, mutation, survival, or adaptation). In the implications section, we will discuss collaboration with classroom teachers as a pathway toward conceptually rich curation.

Text complexity. Because each project was focused on a specific grade and the content and standards being addressed at that level, we observed many references to the level of the text and the way it could (or count not) be approached by learners at that grade level. In total, 10.5% of the codes were related to the ability level of the material and the appropriateness for youth. Again, although these were coded separately they are discussed together here because the boundary between the two codes was often blurry. Sometimes students mentioned the material being better suited for a different age group often approaching their curated lists with a monolithic idea about what learners of a certain age or grade level could comprehend, rarely taking into account the varying abilities or readiness levels within grade levels.

While several annotations made explicit and specific mention of the reading level of texts (indicated either by grade or Lexile level), students also often made determinations about the appropriateness of the content for their chosen youth audience. For example, one student claimed that a resource "could contain questionable content that should not be viewed in schools," and another student cautioned that the "video should be saved for older high school ages (language)." In each scenario the student (acting as school librarian) imagined part of their role to act as a

confident gatekeeper of "mature" content. This pattern stands in direct contrast to the intellectual freedom and anti-censorship principles that instructors of both courses included in their instruction, as well as the focus on collaboration with classroom teachers.

Additionally, some annotations also signaled misconceptions and stereotypes about adolescence/ts. One student wrote, "although interesting in small segments, this resource would be too dry and challenging for high school students," and another said that a resource "includes appealing visuals that will hold readers attention," seemingly implying that high school learners would only be interested in materials that made an attempt to entertain. Furthermore, the fact that many codes related to text complexity speaks to the oversimplified belief that when learners read nonfiction, they read every word from top to bottom in a linear fashion, rather than what happens in reality: learners read and re-read around a text gleaning information from particular sections, words, images, and other visuals (Hoffman, 2017).

Lack of Alignment with Professional Standards and Literature

While many of the themes from the curation assignments examined in the previous section did in some ways reflect an alignment with the AASL standards (2018) and literature on curation, there were also notable absences including a lack of conceptual connections and attention to diversity and multiple perspectives in the resources selected.

Conceptual Connections. Making conceptual connections across texts requires a more complex process than simply searching a given topic on a reputable website or a robust database. As discussed before, concept-based learning asks learners to engage in curriculum that is abstract, transferable, and linked to prior knowledge (Erickson, 2006). In other words, conceptual connections focus on the overarching "big ideas" that connect (sometimes seemingly unrelated) material rather than specific topics and subjects. For example, one of the student projects we analyzed was a collection of resources about climate change, and in several of these annotations she focused on the impact of human action on climate change—a more conceptual approach that led her to explore the related concepts of cause and effect, consequences, priorities, and conflicting interests. However, findings from our data suggest that students were rarely making these kinds of conceptual connections across texts and resources they selected, and instead were looking for surface-level, topical connections.

The school library profession's focus on inquiry, both in the scholarship (e.g., Garrison, FitzGerald, & Sheerman, 2018; Gordon, 2010; Montiel-Overall & Grimes, 2013) and the *National School Library Standards* (AASL, 2018) necessitates a more nuanced focus on concepts rather than content. In describing the role of the school librarian in an inquiry process the standards state that the "school librarian captures learner interest with intellectually rich, appropriate, and rigorous ideas, and nurtures questioning behaviors." Furthermore, the librarian has a role in "helping learners master an iterative process that results in deeper, more-complex questions" (AASL, 2018, p. 71). This kind of process can be demonstrated through a more complex approach to curation as process that engages learners and classroom teachers.

Diversity and multiple perspectives. There are larger conversations happening in the school library community about the inclusion of diverse and multiple perspectives in school library collection development (e.g., Ishizuka, 2018; Wright, 2015), especially as it relates to the selection of fiction materials. However, these same conversations have not necessarily been applied to the practice of curation, and likewise, our data shows that discussion of diverse texts and the inclusion of multiple perspectives only accounted for 3% of the total codes in our projects. Several mentions

of diverse perspectives in the student annotations were in relation to fiction titles required in young adult resources course curation projects. Far fewer were present if we considered places where students mentioned diverse perspectives in informational texts and resources in the collection development course. When diversity and multiple perspectives were included, students often used coded and potentially problematic language—or they failed to explicitly acknowledge it at all. For example, a student included a fiction title by Christopher Paul Curtis, *The Mighty Miss Malone,* featuring a young Black girl growing up during the Great Depression. In the annotation, the student wrote that the book provides a "unique perspective on life in the Midwest," signaling the diverse perspective in the book without explicitly stating that the character is Black.

Including multiple perspectives within curated collections is not simply a shallow attempt at attaining diversity within a set of resources, but rather a process of asking learners to read critically. Searching for information resources with a critical eye asks learners to consider dominant ideologies and perspectives that may be privileged in information sources provided in schools. Critically curated resources question authority, provide counterstories, and a path for learners to read more broadly in an effort to challenge dominant perspectives. The AASL Standards (2018) also discuss the importance or learners recognizing different perspectives so "they can begin to seek understanding of different viewpoints and to consider how that understanding can affect their own views" (p. 78). Furthermore, the standards describe the school librarians' role in "facilitating learners' opportunities to adopt discerning stances" (p. 79). A more critical approach to curation attends to multiple perspectives, and assignment descriptions should include language that supports the value of diversity in resource selection. Seeking marginalized perspectives and counternarratives is a way school librarians can demonstrate their unique value through curation, and in the implications section we examine pathways for seeking diversity in nonfiction as well as fiction resources.

Implications

Implications

When describing their curation choices, the students in our study focused on the more concrete qualities of an information resource like text types and features, topic information, and reading level. In some instances, our students even acted as independent gatekeepers who filter inappropriate content or make decisions about learners' ability. The students we observed have embraced directives that ask them to provide materials in multiple formats and from a variety of digital resources (the focus of the bulk of recent curation scholarship (e.g., Moorefield-Lang, 2019; Valenza, 2012, 2016). These concrete qualities are not in and of themselves problematic, but rather they existed without the more complex conceptual connections and attention to inclusion and multiple perspectives that are necessary to support the conceptual understandings and participatory vision of curation outlined in the AASL standards.

Curation continues to be a core professional function of the school librarian, and the time is right for a reevaluation of the way we teach curation in school library education. Not only do the National School Library Standards call for a unique approach to curation in school libraries that emphasizes collaboration in the process and critical inclusion with attention to diverse and multiple perspectives, but curation continues to be a way we can demonstrate our value for classroom teachers. The findings from our project suggest a need to shift the focus of curation projects to include specific language in assignment descriptions that asks students to consider multiple perspectives in information sources, as well as conceptual connections rather than superficial, topical connections between resources.

Furthermore, our intention is not to critique students for this lack of focus in their curation choices. Rather, in looking at the assignment descriptions, it is clear that these projects are intended as products that a school librarian can provide for a classroom teacher or learners, rather than the collaborative endeavor the AASL standards suggests. Many of the assignment descriptions emphasized requirements that justified a narrow curation practice by focusing on the format of a resource rather than the content, and including simple requirements (i.e. number of resources, or specific formats to include) that did not encourage the student to look for conceptual connections among resources, essentially creating lists that teachers could easily create themselves. To this end, we offer four potential suggestions for the instruction of curation in school library education and revisions of curation assignment.

1. Frame the assignment as a collaborative curation project. In order to avoid a generic list of topic-focused resources that a teacher can locate themselves, school library educators need to prepare students to collaborate with classroom teachers and with learners. In their discussion about collaborative collection development, Loertscher & Koechlin (2016) say, "if you build it they will ignore it for the most part. If they build it, they will use it" (p. 53). However, the assignments we examined continue to focus on librarian-focused products that center a librarian's knowledge of resources without asking them to enact their knowledge as educators focused on conceptual understandings and instructional implications.

To meet this challenge, school library educators can provide opportunities to curate with a teacher partner, colleague, or outside disciplinary expert. Before we send our preservice school librarians off to curate resources, we should ask them to curate with partners. Many school library students are practicing teachers or school librarians, and school library educators can invite them to seek a partner in their current school context to collaborate on curation assignment *before* the hunt for resources begins. In addition, school library students could also be invited to collaborate with colleagues in their cohort to take on the classroom teacher collaborator role in each other's curation projects. Most school library education programs have some type of collaborative planning assignment, and pathfinders and text sets could also be built into existing collaborative experiences. To prepare school library students to collaborate with their future learners, school library educators can include a requirement that students include a plan for learner curation in their curation projects. School library students may create a space on their curation platform to include suggestions from learners, they might build a learner curation component into the instructional design, and they might consider creating opportunities for learners to reflect on the usefulness of librarian-curated resources. The key is that school library students should plan for how learners will be involved in curation and provide an instructional rationale for why that involvement is appropriate in their context.

2. Model and scaffold conceptual thinking. School library students need explicit instruction and practice differentiating between concepts and topics. For example, many of our students selected topics that were covered in the content areas (like the American Revolution) but did not consider the conceptual understandings that teachers are asked to foster in their content area standards (e.g. nationhood, federalism, or monarchy). Building conceptual knowledge networks requires the school librarian to engage in their own inquiry into the topic first—building background knowledge, consulting applicable standards in order to be an effective instructional partner, and collaboration. The Next Generation Science Standards, for example, address "cross-cutting concepts" that support conceptual understandings.

However, instruction that would help school library students go beyond a superficial understanding of their selected topics is needed. For example, school library educators could provide a brief excerpt from Erickson's (2006) book to explain the difference between concepts and topics. Then in-class activities could be incorporated to generate search terms and conceptual layers that support the development of conceptual knowledge networks, rather than the repetitive variation-on-a-theme approach that we often saw.

3. Attend to multiliteracies and disciplinary literacies. School librarians should bring expertise in literacy to their collaborations across the curriculum, but the assignments we examined did not integrate a robust understanding of multiple literacies and disciplinary literacy. Simply asking school library students to select a variety of text types or to consider text features, as the assignments we examined did, is not enough. Instead, school library educators can require their students to provide rationales for *why* particular resource types are appropriate for the instructional focus of their curation project.

In order to write such a rationale, the school library student will need to consult with their collaborative partners and disciplinary standards to decide which literacy skills are essential for this inquiry project. This will also involve asking school library students to consult literacy standards across disciplines (e.g., the Common Core State Standards for Literacy in History/Social Studies, Science & Technical Subjects). For example, if the goal of an assignment is for learners to share their research on social media, there is a mandate for curating texts on a variety of social media platforms to serve as examples and non-examples for learners' work. Moreover, these examples should be drawn from discipline-specific experts who can model disciplinary literacies in context. Asking school library students to be intentional about the types of texts they curate has the potential to move toward fulfilling the goal of supporting multiple literacies, new literacies, and disciplines in today's participatory information landscape.

4. Develop multifaceted understandings of diversity and multiple perspectives. As former literacy educators (both instructors and both authors have a background in literacy education), we have a strong history and research base to support inclusive materials in literature units, but we have yet to acknowledge the complexity of curating diverse perspectives across content areas. Curating for diversity and multiple perspectives must be considered beyond the inclusion of many identity groups (race, ethnicity, class, religion, gender etc.) to include multiple ideologies and political viewpoints, disparate disciplinary experts, and diverse authorship.

For example, curating diverse resources about the environmental health effects in common consumer products might require that a school library student curate resources from a variety of stakeholder groups (e.g., manufacturers, doctors, environmental scientists, consumers, etc.). On the other hand, a school library student curating texts about the American Revolution might be encouraged to consider texts by non-American authors or publications, as well as historians who hold opposing viewpoints about the intent of the authors of the Bill of Rights. In this way, encouraging multifaceted understandings of what diverse perspectives means also becomes part of developing conceptual complexity, supporting disciplinary literacies, and collaborating with classroom teachers.

Conclusion

Ultimately our findings suggest that school library curation projects must be redesigned with more intentionality in regard to complex, conceptual, and critical connections. These revisions are in line with the National School Library Standards' vision of curation, and they offer explicit connections

to other Shared Foundations of Inquire, Include, Collaborate, Explore, and Engage. When we offer a collection of resources on a topic, albeit in multiple formats on an appealing platform, we are simply designing a fact-finding mission for learners. However, when we curate based on conceptual connections and collaborative instructional planning with classroom teachers and learners, we are modelling the complex inquiry that disciplinary experts pursue in scholarship, work, and citizenship every day. This collaborative, critical, conceptual curation is the essential update that school librarians need in order to grow and sustain our long-standing roles as curators in today's schools.

Notes

[1] Throughout this paper we use the phrase "student" to refer to candidates in our school library courses and the phrase "learner" to refer to K-12 students.

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Author Notes

Jenna Spiering (spiering@sc.edu) is an Assistant Professor in the School of Library and Information Science at the University of South Carolina. She was a junior high school librarian before receiving her doctorate from the University of Iowa. Her research interests include children's and young adult literature, graphic novels, issues of censorship and selection of LGBTQ materials, and curation.

Kate Lechtenberg (kate-lechtenberg@uiowa.edu) is a recent graduate of the University of Iowa. Before her doctoral studies, she taught high school English and worked as a secondary school librarian. Her research focuses broadly on how critical educators work within systems to curate texts and frame inquiry into complex sociocultural issues.