Examining teachers’ development and implementation of compelling questions

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Abstract
Purpose – The College, Career, and Civic Life Framework and recently revised social studies standards in a number of states have placed renewed emphasis on inquiry-based instruction rooted in rigorous and relevant questions, which necessitates a better understanding of how teachers develop questions capable of meeting the expectations set forth in these documents. The purpose of this paper is to examine teachers’ question-development processes and the impact of question development and implementation on their understanding of compelling questions.

Design/methodology/approach – This qualitative study examined how six high school civics teachers from a single Kentucky school district defined and developed compelling questions. Following recommendations for in-depth phenomenological interviews, this study implemented a three-interview sequence, each of which included a verbal report component. Additional data were generated through teacher-completed Question Development Tasks and Question Evaluation Tasks.

Findings – The findings suggest that participants’ attempts to craft questions that balanced relevance and complexity led them to engage in a deliberate, reflective question-development process. Teachers’ understandings of compelling questions were shaped by their question-development experience; however, teachers who implemented their compelling questions emerged with a more nuanced understanding of their construction and a deeper commitment to their use.

Originality/value – Although focused on a small group of teachers, this study provides valuable insight into teachers’ conceptions of inquiry, which may strengthen the supports teacher educators and administrators provide to those attempting to implement inquiry in their classrooms.

Keywords Inquiry, C3 Framework, Compelling questions, Secondary social studies

Paper type Research paper

Since the release of the College, Career, and Civic Life (C3) Framework (National Council for the Social Studies, 2013), I have had a number of conversations with district and state-level leaders about how to support teachers as they strive to meet the aspirations of the Inquiry Arc. These conversations frequently focus on resources to help teachers develop compelling questions, which highlights one of the greatest challenges with the C3 Framework. Teachers are excited by the prospect of social studies instruction rooted in the investigation of rigorous, relevant questions, but they are not always sure how to begin. Researchers from Dewey onward have argued the primacy of questions to the inquiry process, so what impact do teachers’ struggles with question development have on the overall viability of the C3 Framework? Various resources exist that include example compelling questions (e.g. C3 Teachers), but the process of actually developing a compelling question is a bit of a mystery, and the impetus for my own research.

I designed this study to take advantage of the development of Kentucky’s Social Studies Standards for the Next Generation, drafts of which incorporated the terms Inquiry Cycle and Compelling Questions. Assuming inquiry-based instruction framed by compelling questions would become the expectation for social studies in the state, I was curious as to how social studies teachers made sense of these concepts. In particular, this study focused on teachers’ question-development processes and the impact of question development and implementation on teachers’ understandings of compelling questions. Findings suggest that
participants’ attempts to craft questions that balanced relevance and complexity led them to engage in a deliberate, reflective question-development process. Teachers’ understandings of compelling questions were shaped by their question-development experience; however, teachers who implemented their compelling questions emerged with a more nuanced understanding of their construction and a deeper commitment to their use. Although Kentucky has since delayed the release of the proposed standards (Hughes, 2016), other states have taken steps to explicitly integrate inquiry and questions into their social studies standards (e.g. Connecticut State Department of Education, 2015; Illinois State Board of Education, 2016; New York State Education Department, 2015), further supporting the need to better understand how social studies teachers develop compelling questions.

**Literature review**

Of the various stages of inquiry, researchers have given questioning limited attention. Scholars argue that provocative questions that resonate with students are more likely to spur inquiry (Barton and Levstik, 2004; Grant, 2013), but there is little discussion of how such questions are developed. As Dennie Wolf (1987) explained:

> Ask a teacher how he or she teaches, and chances are, the answer is, “By asking questions.” However, if you go on and ask just how he or she uses questions or what sets apart keen, invigorating questioning from perfunctory versions, that same teacher might have a hard time replying (para. 1).

Across the social studies literature, the traits most frequently associated with inquiry questions are rigor and relevance (e.g. Barr et al., 1977; Beyer, 1971; Caron, 2005; Levstik and Barton, 2015). Reflecting this sentiment, compelling questions are described in the C3 Framework as ones that “focus on enduring issues and concerns” (p. 23), are “intriguing to students and intellectually honest” (p. 17), and are “vigorously explored through the disciplines” (p. 17). Examinations of teachers’ descriptions of inquiry questions reveal a similar understanding (e.g. Rossi and Pace, 1998). Emma Thacker et al. (2017) found that when asked to select a question most capable of supporting inquiry, teachers tended to select a question they deemed “open-ended” and “interesting” (p. 8).

Despite apparent consensus on the traits of an inquiry question, teachers may struggle to develop questions for inquiry. Rossi and Pace (1998) found that “choosing a persisting question that would guide a unit” (p. 405) was one of the greatest difficulties faced by teachers attempting to implement issue-based instruction because of the rigor/relevance criteria:

> The challenge is to develop questions that not only grab student attention, but also open doors that explore meaningful and significant themes that would broaden a student’s worldview. The danger lies either in choosing a question that will not grab student interest or proceeding with one just because it will (p. 405).

The teachers at the heart of Grant and Gradwell’s (2010) investigation of teaching with big ideas also struggled to develop questions that would serve multiple purposes (e.g. facilitate higher levels of thinking, prompt interest, allow for coverage of substantial content). In each case, teachers encountered the difficulty of formulating, what David Page termed, a medium question:

> It is easy to ask trivial questions or to lead the child to ask trivial questions. It is also easy to ask impossibly difficult questions. The trick is to find the medium questions that can be answered and that take you somewhere (as quoted in Bruner, 1977, p. 40).

There seems to be a significant difference between teachers’ confidence in their conception of an inquiry question and teachers’ confidence in their ability to create one.
J.T. Dillon (1988) argued that effective teacher questioning involves a process of “questioning to purpose” (p. 54). Although Dillon applied this process to questions developed for recitation or discussion, the steps of identifying one’s pedagogical purpose, classroom circumstances, and questioning behaviors are also pertinent to the development of inquiry questions (p. 54). Within the context of history, Abby Reisman’s (2015) comparison of interpretive and evaluative questions and Edward Caron’s (2005) criteria for designing central questions may provide insight into the type of questions appropriate for inquiry. McTighe and Wiggins’ (2013) suggestions for developing essential questions are also relevant. Their recommendations included working backwards from the content answers, unpacking content standards, and connecting to common student misunderstandings (pp. 28-34). McTighe and Wiggins provided sentence starters related to their six facets of understanding, such as What caused ______? (explanation), What does ______ reveal about ______? (interpretation), and What are different points of view about ______? (perspective) (pp. 35-36). These scholars provide scaffolds teachers may use to guide question development but do not explore teachers’ experiences with these scaffolds.

Dillon, McTighe and Wiggins, and others (e.g. Grant, 2013) acknowledged that question development is hard work, characterizing it as a learned skill that must be practiced and refined. Grant and Gradwell (2010) claimed that research into inquiry-based instruction rarely describe how teachers develop the questions that frame their instruction. Although their book did much to explain how teachers warmed to the idea of teaching with questions and the factors that influenced their understanding of what it means to teach with questions, there is still little focus on how teachers craft questions. This study attempted to contribute to this gap in the literature by more closely examining the approaches of a small group of secondary social studies teachers.

Method
I designed a qualitative study to provide insight into particular experiences of individual teachers when developing and using inquiry-based questions and address the more general phenomenon of question development and use (van Manen, 1990). The main research question of the study was:

**RQ1.** How do high school social studies teachers understand the role questions play in inquiry?

Supporting research questions most pertinent to this paper include:

**RQ2.** What traits do teachers attribute to questions used for inquiry?

**RQ3.** How do teachers approach developing questions used for inquiry?

Participants
The six participants were drawn from a population of ninth-grade civics teachers in a single Kentucky school district. Selecting a single district and a single content area facilitated my ability to look across the teacher-developed questions. An initial questionnaire addressing general views of and experiences with inquiry and questions was distributed to the 25 teachers in the district assigned to the ninth-grade civics course during the 2015-2016 school year. I reviewed the 12 completed questionnaires and employed an intensity sampling method in order to select “rich examples of the phenomenon of interest” (Patton, 1990, p. 171). This six participant sample represented approximately 40 percent of the district’s ninth-grade civics teachers as well as four of the five public high schools in the district. Table I shows the six participants and their years of teaching experience.
Following recommendations for in-depth phenomenological interviews, I implemented a three-interview sequence, each of which included a verbal report component (Seidman, 2006). The first interview focused on the participants’ professional backgrounds and expanded upon the participants’ general views of and experiences with inquiry and questions. Teachers also participated in a text-based talk-aloud in response to three quotes about questions. The second interview focused on the participants’ interpretation of standards related to questions, including a text-based talk-aloud in response to selected standards from Kentucky’s proposed Social Studies Standards for the Next Generation. Prior to the final interview, teachers completed a Question Development Task, for which they crafted a question they deemed suitable for an inquiry related to the Constitution. This topic was selected because it was listed on each teacher’s questionnaire as a topic they teach in the ninth-grade civics course. Because the phenomenon of interest to this study does not typically occur within a controlled environment, teachers were asked to approach the Question Development Task in ways that most accurately reflected their natural process, but they were instructed to summarize their process on a form I provided. The third interview focused primarily on the participants’ experiences with the Question Development Task, which began with teachers using the summary form as an impetus to talk through their process. Finally, teachers completed a Question Evaluation Task, for which teachers assessed the questions created by the other participants.

I followed a five-phase cycle of analysis: compiling, disassembling, reassembling, interpreting, and concluding (Yin, 2011). Interviews were transcribed and examined in tandem with field notes taken during the verbal reports and materials generated by the participants (e.g. Question Development Task). I utilized holistic and selective approaches to identify thematic aspects (van Manen, 1990, p. 73). Data were examined within and across interviews, participants, and themes (Rubin and Rubin, 1995). I examined the data generated by a single participant and identified themes. I then crafted thematic memos that allowed me to better articulate the properties of each theme and why I included data within that theme (Seidman, 2006). I repeated this process with each participant’s data, revising thematic memos and creating new thematic memos along the way. I continuously reviewed themes to distinguish incidental themes from essential themes (van Manen, 1990). Throughout the process I wrote researcher memos that captured my reflections, questions, and research decisions (Glesne, 2011).

Drawn from a comprehensive analysis of data, this paper focuses on findings related most directly to teachers’ experiences with question development and use: participants identified relevance and complexity as key traits of compelling questions, participants’ development

<table>
<thead>
<tr>
<th>Name</th>
<th>Years of teaching experience</th>
<th>Years Teaching the ninth-grade civics course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agatha</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Calvin</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Molly</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Quentin</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Ryn</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

**Table 1.** Participants

**Note:** All teachers are identified by self-selected pseudonyms.

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**Procedure**

**Analysis**

**Findings**
processes were informed by those desired traits, and experiments with question implementation reaffirmed the importance of desired traits and the need to approach question development in a deliberate way.

**Traits of compelling questions**

Although this paper is primarily focused on teachers’ question-development process, that process is partially a product of teachers’ definition of compelling questions; therefore, a brief summary is valuable. As seen in the broader literature, participants’ descriptions of compelling questions centered on two traits: relevance and complexity (which is used instead of rigor because it better reflects participants’ language). Teachers’ understood relevance to include not just the pertinence of the topic to students but also the phrasing of the question. Teachers believed that the relevance of a topic might be lost if not presented with student-friendly language. Teachers’ understanding of complexity was also multipronged. To produce the prolonged, substantive inquiry teachers expected, teachers believed compelling questions must address complex issues; require the use of varied disciplinary practices; and result in an extended, evidence-based response. Teachers believed these two traits worked in tandem and were equally important elements of the compelling question equation; though when pressed to evaluate what made their own and other participants’ questions compelling, their reasoning tended to emphasize complexity.

**Process of question development**

The defining traits of relevance and complexity were central to teachers’ question-development process. Each teacher began with either relevance or complexity in mind and then worked to craft a question they believed satisfied both elements. Teachers also commented that the traits and purpose of compelling questions led them to approach their development in a more deliberate way when compared to other types of classroom questions. Compelling questions developed for the Question Development Task are shown in Table II.

**Beginning with relevance.** Two teachers began the question-development process by considering relevance and then moved toward complexity. The initial step was finding out what interested students. As a first-year teacher, Elizabeth had limited experience, so she reflected on lessons she had taught thus far and tried to identify what students seemed to really care about. She honed in on equality and fairness, “It’s something we come back to almost once or twice a week with them. They love talking about that.” Elizabeth identified “what my students care about” as the greatest influence on her choices as she went through the development process, which is apparent in the topic she selected and her attention to clarity, “I struggled with the wording of it and making sure that the wording is kid-friendly, that it’s straight-forward and not too complex for them to understand.”

<table>
<thead>
<tr>
<th>Participant</th>
<th>Compelling question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agatha</td>
<td>How did the exclusion of minority voices at the Constitutional Convention shape, alter, or change the Constitution itself as well as events in history?</td>
</tr>
<tr>
<td>Calvin</td>
<td>As early citizens, our American ancestors entered into a social contract with our Founding Fathers while creating the Constitution. What is a more important charge to the government, to protect individual rights or maintain order?</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Who did the founders mean by “we the people”? Did they really mean all people or just some?</td>
</tr>
<tr>
<td>Molly</td>
<td>Are great men or women chosen to be president?</td>
</tr>
<tr>
<td>Quentin</td>
<td>Describe how the USA would look without a Bill of Rights. How would you as a citizen be affected?</td>
</tr>
<tr>
<td>Ryn</td>
<td>Does the Constitution protect people from the government?</td>
</tr>
</tbody>
</table>

Table II. Question Development Task
Molly began by trying to identify what was interesting about the Constitution. She thought about what intrigued her and talked with colleagues, one of whom shared an article about greatness:

> So when he mentioned that to me, I was like “Oh, that’s a really interesting idea to talk about,” and that’s what got my gears in my brain rolling about how I could do it in my class. It was difficult to get started but, as soon as my curiosity got piqued, I knew that I could make it so that it was tangible for my students to understand and be interested in.

As with Elizabeth, the greatest influence on Molly’s process was “the caring factor. Would my students and I care?” Molly also considered elements of complexity, such as did the question have multiple viable answers and did it produce an evidence-based argument instead of a prediction.

**Beginning with complexity.** The other four teachers started with complexity and worked toward relevance, what they likened to backwards planning. They began by determining appropriate content. Ryn listed the topics she typically covers in her Constitution unit, and Quentin referred to the applicable unit objectives generated by his professional learning community (PLC). Calvin looked at the current state social studies standards and data from last year’s exams and identified topics on which students under-performed. Agatha reflected on the holes in her typical instruction and saw this as an opportunity “for [students] to get familiar with the Constitution.” These teachers also considered if the question was debatable, related to key themes from the course, and lent itself to historical and modern evidence.

Like Elizabeth and Molly, three of these teachers mentioned that students had the biggest influence on their choices, but they cast their concern with relevance in the light of curricular demands. After identifying applicable unit objectives, Quentin thought, “This is what I want them to accomplish, this is what I want them to learn about […] What question do I have to meet this objective […] How can I get kids engaged in the content?” Ryn looked for ways to “teach the things they don’t really necessarily like but need to know.”

**A deliberate process.** Despite the different starting points, upon reflection, all teachers mentioned that their approach to developing the compelling question was more deliberate than their normal process. Some of that was certainly due to the nature of assigned task, but teachers also believed compelling questions required a different approach. Teachers dedicated more time and resources to the development process than they typically do. Calvin noted, “I literally sat at a table and had all this stuff laid out in front of me and just kept pulling and putting stuff together and making notes and scribbles […] It took me two hours to make one question. That’s crazy.” Teachers constantly asked themselves questions as they refined their compelling questions, which often reflected the two key attributes: What is my end for the kids? Do I want to answer this question? How does this reflect an enduring issue in the field? How is this going to go over in my classroom? Some teachers stated that they also thought about possible answers to their questions, but when pressed their anticipated responses were poorly articulated and often reflected a narrow desired answer instead of a range of plausible answers. This suggests that even though teachers approached these questions in a more deliberate way, they struggled to think simultaneously about instructional tools and instructional outcomes. As discussed below, teachers who implemented their compelling questions discovered that not doing so can limit the effectiveness of the compelling question.

Developing a compelling question was a challenging task for teachers. They struggled to identify core issues on which to base the question, draft a question that students would understand, and effectively tie the question to desired content and skills. Calvin and Molly both commented that the process helped them learn more about themselves as questioners.
in a general sense, but all teachers mentioned that the experience of developing a compelling question revealed lessons they will apply, and will encourage their colleagues to apply, in the future. The most common lessons involved collaboration and relevance. Four teachers mentioned they wanted to develop future compelling questions with colleagues. Ryn thought, “it would have been a lot of fun to come up with this [question] as a PLC. Our PLC has lots of interesting people from different backgrounds in it. I think it would have been a lot stronger.” Molly agreed, “The best resource is somebody who you can talk with and create those compelling questions […] if you don’t have back and forth discussion [about] what makes something really compelling, I don’t think you can understand it.”

Four teachers also emphasized that this process taught them the importance of developing questions with students in mind. Elizabeth stated, “Definitely think about your students as you do it. Think about the things they care about and the things they would want to answer, would be my biggest piece of advice […] I think students are the center of it.” Molly identified relevance as a significant aspect and challenge of question development:

I feel like really knowing your kids is the essential component of the compelling question. I feel like anybody can make a good content question, but it is a question about whether or not your kids are really going to care about it. I think that’s the biggest hurdle […] especially when you’re driven so much by content, or you’re driven so much by testing.

Going through the process of developing a compelling question seemed to reinforce teachers’ initial conceptions that compelling questions are different from more common classroom questions. Because compelling questions must be developed in a deliberate way, participants also suggested that teachers will need deliberate support, including sample questions, videos of implementation, and time for collaboration and experimentation.

The impact of implementation
Over the course of the study, three teachers chose to utilize a compelling question in class, but the experiences of Agatha and Molly are particularly insightful because they led both teachers to reflect upon their approach to question development.

Agatha: “It does require some thought and some strategy.” Agatha implemented the question she crafted through the Question Development Task: How did the exclusion of minority voices at the Constitutional Convention shape, alter, or change the Constitution itself as well as events in history? Agatha said she approached this content very differently than she had in the past. In fact, she spent several days on the compelling question, making alterations to her instruction when students did not perform as expected. Agatha began by tasking groups of students to select a historical perspective (e.g. women, free blacks, American Indians) from which to answer the question. As students conducted research, Agatha saw that students could identify relevant elements of the Constitution, but she did not sense that students were “us[ing] any evidence to support their claims” or thinking beyond the Constitution itself. She decided to change strategy and provided groups with reference cards about different events since the Constitution (e.g. Civil War, Great Depression, Vietnam), but she still believed students were off the mark. Agatha ultimately directed students to “Ask yourself three questions that you need to know to answer the bigger question.” Agatha contended this last approach moved students in a better direction, but “we just didn’t have the time to give them […] At some point, we just had to go on to the political process.”

Agatha had mixed feelings about the inquiry. She identified students’ enthusiasm during the inquiry as the greatest strength and students’ inability to utilize specific evidence, particularly from the Constitution, as its greatest weakness. Agatha had a path in mind that she hoped students would follow, and when her vision did not come to fruition, she
identified “they are just not sophisticated enough at research” as a concern, but she also acknowledged that her question may have been part of the problem:

I think that they really were looking at “How would a woman want the Constitution to look?” when I was asking “How would the outcome of what we got be different because a woman was there?” And I didn’t do a good job of asking that.

Despite the shortcomings, Agatha found tremendous value in the experience, “I don’t think I’ve ever changed a question that I’ve asked my kids before. I think I’ve just been ‘it worked or didn’t, we’ll go on.’ This time, I really […] wanted to see if we could get there.” Agatha subsequently chose to revise her next unit to incorporate more question-based instruction.

This experience emphasized to Agatha that the question is not the sole factor in an inquiry’s success. Students’ prior knowledge, students’ skill level, preceding instruction, and scaffolding all influenced the outcome; therefore, Agatha concluded they should also influence question development:

I realized after giving them the first question that I should have done a better job with “What do they need to know first?” [I need to consider] what I need them to know first and [what] resources I can give them. And then I would say, “What are they going to have to do to get that question answered?” That would be the biggest change.

Agatha saw these considerations as part of a more intentional approach to question development, “It drove home that you can’t just ‘harum-scarum’ come up with a question and think that your kids are going to get there. It does require some thought and strategy […] like backward planning […] [which] I had never thought about before.” Although Agatha revised her question numerous times while completing the Question Development Task (see Appendix), implementing her question further emphasized the importance of a thorough and deliberate approach to question development.

Molly: “Unless you try it, I don’t think you can understand why it is so different.” Molly did not implement her compelling question but used an inquiry from Teaching the C3 Framework (Swan et al., 2014, pp. 149-156) with the compelling question “Why vote?” The lesson began with a whole-class discussion about a photograph. Students then completed station work, which included analyzing graphs of voting data and comparing platforms of 2016 presidential candidates. Class concluded with a whole-class discussion and an individual writing assignment about the compelling question.

Molly believed the compelling question was key to the lesson’s success, primarily because of “the natural engagement it creates […] When you truly have a compelling question, it’s what kids want to answer.” She believed students engaged with this particular compelling question because it was “not too academic” and because the question was introduced to students via a photograph. Molly also noticed that “as the lesson was going on, it was always going back to that bigger question […] [and] I was still teaching the concepts and the facts but within the umbrella of the question.” Molly believed the lesson resonated with students throughout the unit, leading students to make connections between that investigation and content covered later in the unit.

Molly emphasized throughout our discussions how this experience “blew her mind.” She was enthusiastic in her belief that compelling questions can be powerful teaching tools:

I can’t describe it. Literally there was this moment where I turned my head to look at the screen [where the question was projected] and like “oh” – It was literally a game changer […] I was apprehensive about it too, and I took a plunge, and all of a sudden it made sense.

For Molly, what “made sense” was the ability of a compelling question, crafted with students in mind, to naturally foster critical thinking around complex issues, “That question, ‘economic, social, whatever’ doesn’t work. With ‘why vote’ it’s addressing those [topics] and works like a charm […] Being in the classroom and seeing the evolution
happen – I can’t go back and not teach that way.” Molly implemented this compelling question early in the study, and it was easy to see the influence of this experience on her Question Development Task and Question Evaluation Task, particularly her focus on relevance and her criticism of questions that trended away from the succinct, provocative nature of “Why vote?” Molly also suggested that experimenting with compelling questions is integral to better understanding them, “I don’t know if I can even put into words what ‘different’ means […] unless you try it, I don’t think you can understand why it is so different.” Even if this implementation experience did not improve Molly’s ability to explain compelling questions, it certainly made her more willing to endorse them.

Discussion
This study was motivated by a desire to explore the relationship among teachers’ definition, development, and implementation of compelling questions. What appears is a reinforcing relationship. Definition seemed to drive development, and implementation led teachers to revise their process of development to better capture desired traits.

Definition influences development
Although each teacher identified relevance and complexity as key traits of a compelling question and considered both traits during question development, teachers’ starting point (i.e. with relevance or complexity in mind) did seem to influence the final product. Most notably, the teachers who began with complexity tended to utilize more complicated syntax and crafted questions that often included more than one task for students. This distinction persisted even though several of these teachers also stated that students were a driving factor in their question-development process. Elizabeth and Agatha provide a nice comparison. Elizabeth, who prioritized relevance, developed the question “Who did the founders mean by ‘we the people’? Did they really mean all people or just some?” Agatha, who prioritized complexity, developed the question “How did the exclusion of minority voices at the Constitutional Convention shape, alter, or change the Constitution itself as well as events in history?” These questions could prompt similar inquiries, but Agatha’s question sounds much more like a typical teacher question. In discussing how they will approach future development of compelling questions, both Agatha and Elizabeth suggested this experience reaffirmed their focus on a particular trait. Agatha took away a need to further clarify the question to better lead students to desired content and skill objectives, whereas Elizabeth took away the need to keep students’ interests at the center. Molly’s experience reinforced her concern with relevance (e.g. the question worked because it was “not too academic”), whereas Ryn’s experience reinforced her concern with complexity (e.g. the question must be robust enough to sustain an inquiry). Other factors likely influenced teachers’ questions (e.g. prior experience with the content, students’ personalities), but evidence suggests that granting primacy of one trait over the other can influence the resulting question and, subsequently, the inquiry. Rossi and Pace (1998) noted this relationship in their examination of issue-centered curriculum. The teachers in their study were primarily concerned with engaging students, which led teachers to develop a question that directly reflected students’ interests despite acknowledgments that it might produce flawed or narrow understanding. The degree to which the form of these compelling questions may influence student engagement and/or the quality of the inquiry is unknown but worthy of further investigation.

Attention to follow-through
While crafting their compelling questions, teachers were attentive to the emotional and intellectual responses it would provoke in students, but they did not think deeply about

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additional instructional decisions that may influence the effectiveness of a compelling question. Teachers who implemented their compelling questions noticed that a seemingly compelling question can fizzle or derail if factors including curricular objectives, students’ content knowledge, and instructional strategies were not considered during the development process. This was especially apparent to Agatha, who believed her compelling question did not produce desired results in large part because she did not consider and account for students’ content and skill levels during development. Witnessing her students’ struggle with the question led Agatha to contemplate a potential mismatch between the question and students’ readiness. Her mid-lesson adjustments were attempts to rectify this mismatch, but she reflected that more careful consideration of student factors during question development would have produced both a stronger question and better instruction. Agatha concluded that teachers should not ask a question, no matter how interesting, if they cannot provide the necessary resources to effectively investigate that question. Her advice for colleagues reflected this lesson, “Think about what prior information, background knowledge their kids bring to answering that question. And then what is it that they’re going to actually have to be able to do? And do they have the resources to get them there?”

The need to develop compelling questions in accordance with other instructional factors is logical, but the fact that teachers did not vocalize this concern until after implementing compelling questions is interesting. As discussed above, teachers did not think deeply about how students might answer their questions or how they would implement their questions in class. Although teachers emphasized that compelling questions should prompt critical thinking and varied, well-reasoned responses, they seemed unable to articulate how these general goals may be realized with their specific questions. There are several potential reasons for their struggles, from gaps in their own subject-matter knowledge to fuzzy understandings of inquiry to limitations of the Question Development Task itself. Agatha’s experiences suggests that even if a compelling question embodies the traits of relevance and complexity, the degree to which that question is compelling cannot be determined outside the context of implementation. Reisman (2015) came to a related conclusion while investigating text-based discussion in history classes, finding that students workings with the same materials engaged in discussions of drastically different quality due, in large part, to facilitation differences among teachers. Ultimately, we must remember that compelling questions are just one piece of a larger inquiry; therefore, a compelling question’s power will wane if not supported by effective instruction.

Prepare for revision
Teachers admitted dedicating significant time to the development of their compelling question, more than they typically do and, in some cases, more than they anticipated. Teachers spent time brainstorming ideas, reviewing sources, and refining their wording. The structure of the Question Development Task insinuated revision (e.g. I started by … I ended up with …), but in many ways, the traits teachers associated with compelling questions make time-consuming revision unavoidable. The need for complexity prompted revision, as teachers sought questions that reflected enduring issues, fostered divergent thinking, and applied disciplinary skills. The need for relevance prompted revision, as teachers sought questions that resonated with students, capitalized on contemporary issues, and made sense. This degree of preparation was new for teachers, and although this group seemed energized by the challenge, one might assume that other teachers, particularly those less intrigued by inquiry-based instruction, would be turned off. Despite the time teachers must spend on the front end, Agatha’s experience revealed that revision is ongoing. Because compelling questions must be relevant to students, a teacher can only anticipate so much. Deep knowledge of students cannot guarantee engagement. Hours spent wordsmithing
cannot guarantee clarity. McTighe and Wiggins (2013) addressed this challenge regarding essential questions:

The best test of an essential question comes in its use. Does it in fact engage the learners in productive inquiry? Does it stimulate thinking, discussion, and even debate? Does it spark rethinking and further questions? Does it lead to deeper insights about important matters? If not, revisions are needed (p. 39).

Agatha seemed to be motivated by this need to revise and reframe her compelling question, but teachers less capable of reflection-in-action (Schön, 1983) may be either oblivious to the ineffectiveness of the question or unwilling to change course. Both of these challenges present implications for professional development. We must be forthcoming about the difference between compelling questions and more traditional classroom questions, including the time and practice necessary to become more adept at their development and use; provide supports (e.g. sentence starters) but clarify that compelling is contextual, so real-time adjustments may be necessary; and provide substantial, safe space for teachers to experiment, reflect, and refine.

Conclusion
As the C3 Framework gains traction, particularly through its influence on social studies standards in several states and the recently revised NCSS National Standards for Social Studies Teachers (National Council for the Social Studies, 2017), interest in better preparing social studies educators to utilize compelling questions will increase. This study provides some insight into teachers’ development of compelling questions, but further exploration is required. Considering the emphasis participants placed on collaboration, future studies may investigate the dynamics of an individual’s question-development process as compared to a collaborative question-development process. Are multiple minds better than one? This study capitalized on participants’ unprompted decisions to implement compelling questions, so a more systematic examination of the potential impact of teachers’ use of compelling questions in classroom settings on their question-development process is also necessary, paying particular attention to proactive and reactive revision. More specifically, it will be beneficial to examine the degree to which a teachers’ instructional purpose for the compelling question (e.g. to anchor a classroom discussion, to spark an extended student-directed investigation) impacts the resulting question, which may also provide further insight into teachers’ conceptions of inquiry. Evidence from such studies will allow teacher educators to more confidently support teachers and school leaders excited by and apprehensive about the growing place of compelling questions in social studies classrooms.

References


Further reading


(The Appendix follows overleaf.)
**Final Q - How did the exclusion of minority voices at the Constitutional Convention shape, alter or change the Constitution itself as well as events in history?**

**Question-Development Task**

Before the next interview, please

1) Keeping in mind what the term means to you, develop a compelling question that would be appropriate for an inquiry related to the Constitution.

2) Determine how you would use that compelling question in your classroom.

Please approach this task in whatever way is most comfortable and natural for you. Below is a guide for summarizing your question-development process. Should you choose, you are welcome to compile additional notes.

I started by...

- Discussing "who were involved in the drafting of the Constitution?" (what citizens were there taking part)

<table>
<thead>
<tr>
<th>Drafts of the question...</th>
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<tbody>
<tr>
<td>1. Would the constitution be different if a broader range of Americans were involved in its creation?</td>
</tr>
<tr>
<td>2. What would the US have avoided modern setbacks (Civil War, civil rights movement, war, suffrage, labor movement)</td>
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I ended up with...

- How did the exclusion of minority groups from the constitutional Convention affect the final Constitution? (What would the Constitution be if more voices were included? How could it have been included? What kind of country would we have?)

I would use this question...

1) For a debate
2) As an ORP or Essay Q
3) For a "pro/con" activity

<table>
<thead>
<tr>
<th>Challenges encountered...</th>
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<tr>
<td>Students thinking &quot;big picture&quot; or long range enough to make the leap from what we have/need to what might have been added or rejected.</td>
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<th>Factors that influenced me...</th>
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<tr>
<td>- Belief my students need to understand what it means to leave out the minority voices.</td>
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<tr>
<td>- Belief my students need to be pushed to consider alternative views of history</td>
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<th>Resources consulted...</th>
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<tr>
<td>InterAct - who were the legislators, who were &quot;left out,&quot; civil rights movement &quot;big picture,&quot; and issues that need to be considered</td>
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<td>&quot;Evil Rights for Some&quot; by Karen Evert, Ph.D.</td>
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<td>&quot;What citizens were there taking part?&quot;</td>
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About the author

Rebecca G.W. Mueller is Assistant Professor of Social Studies Education at the University of South Carolina Upstate. Her research focuses on teachers’ use of inquiry and questioning in the social studies classroom. She teaches secondary methods and social studies methods courses. This work is partially supported by a RISE grant from the Office of the Vice President for Research at the University of South Carolina. Rebecca G.W. Mueller can be contacted at: rmuelle2@uscupstate.edu

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