Developing a Professional Knowledge Culture for Problem-based Historical Inquiry: Scaffolded Lesson Study

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Abstract: *This report investigates the effects of scaffolded lesson study on development of a shared theory-based framework for inquiry teaching among the history faculty of one school. Results suggest that collaboration within a scaffolded community of practice may encourage teachers to de-privatize their knowledge and begin to link theory to practice.*

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Using Lesson Study to Build a Professional Knowledge Community for Problem-based History Study

Surveys and national tests consistently report that citizens lack the knowledge, skills, and dispositions necessary for self-government. Observers of social studies classrooms do not find this surprising. Many reformers have argued that developing civic competency requires deep knowledge and rigorous inquiry into the enduring issues that have confronted societies throughout history (Engle & Ochoa, 1988; Oliver & Shaver, 1966; Saye & Brush, 2004a). However, social inquiry of any sort is rare in our nation's schools (Goodlad, 1984; Kagan, 1993; Shaver, Davis, & Helburn, 1979).

Some researchers have argued that professional development has been ineffective in changing teacher practice because it does not honor the practical teaching knowledge that teachers hold or provide them with long-term experiences that would allow them to test an alternative vision of teaching (Hiebert, Gallimore, & Stigler, 2002; Saye, 1999). In the current study we hypothesized that professional development that integrates teachers' practical knowledge with research-based knowledge might produce a professional teaching knowledge base for social inquiry that practitioners would recognize as legitimate. Our previous research has built the foundation for such a professional knowledge base (Brush & Saye, 2000; Saye & Brush, 1999, 2002, 2004a, 2004b, 2006, 2007). The research reported here extends our inquiry to examine how a scaffolded adaptation of Japanese-style lesson study within a collaborative community of historians, teacher educators, and teachers might encourage the development of a professional knowledge culture for problem-based historical inquiry. This report focuses on the knowledge and practice of an entire history faculty in a single school setting. Specifically, we ask:

1. Does scaffolded lesson study affect teachers' conceptualization, implementation, and discussion of history instruction?
2. Do interactions encouraged by Lesson Study facilitate the development of a shared professional knowledge culture?

Overview of the Problem

Teachers' failure to embrace issues-centered inquiry has been attributed to teacher dispositions; teacher beliefs about knowledge, teaching, and learning; and to pragmatic concerns

such as extensive preparation time, accountability from high-stakes testing, and the cognitive demands required by inquiry practice (Grant, Gradwell, Lauricella, Derme-Insinna, Pullano, & Tzetzo, 2002; Onosko, 1991; Rossi & Pace, 1998; Saye, 1998; Windschitl, 2002). Given its rarity in existing classrooms, teachers lack models for envisioning successful inquiry practice. Although researchers have offered a number of social studies inquiry models, teachers often have little regard for theory-based knowledge. Instead, they put their trust in craft knowledge generated by practitioners. The two teaching knowledge bases proceed from substantially different assumptions. Researcher knowledge is public, propositional, and replicable. Craft knowledge, on the other hand, is private, concrete, situated in specific classrooms, and linked to problems of practice. (Hiebert et al., 2002). Without opportunities to observe and test theoretical claims in authentic classroom settings, most teachers are unlikely to entertain practices that originate with researchers and deviate from well-established classroom patterns (Cuban, 1984; Kagan, 1993; Lortie, 1975).

To bridge the gap between craft and researcher knowledge, educational researchers have proposed building professional communities of practice through peer mentoring, modeling, and teacher-researcher collaborations that link theory directly to curricula and practice (Clark et al., 1996; Garet et al., 2001; Martin, 2002). Some researchers have promoted Japanese-style lesson study as a vehicle for developing such communities (Lewis, Perry, & Murata, 2006; Chokshi & Fernandez, 2004)

Our project applies these ideas to the development of a professional community of practice dedicated to implementing problem-based historical inquiry (PBHI) in social studies classrooms. Figure 1 illustrates how craft and researcher knowledge might be merged to form professional teaching knowledge. We use a scaffolded form of lesson study as a lever for encouraging the sort of classroom-based tests of pragmatic theory required for developing such knowledge.

For nine years we have collaborated with teachers to design and test a set of propositions for planning and implementing PBHI in secondary classrooms. PBHI centers instruction on decision-making about enduring societal problems as they are instantiated in particular historical periods (Saye & Brush, 2004a; Oliver & Shaver, 1996). For instance, in the present research, one Lesson Study team examined 19th century British imperialism in India and asked: “Did British presence in India benefit Indians?” This question represents a larger persistent issue: “When are

nations justified in intervening in the affairs of other states?" Students use understandings developed from sustained historical study to make reasoned ethical judgments. Reasoning about this issue as it is instantiated in imperial India can help students to reason about later historical instances of the issue such as World War II and contemporary instances such as Iraq.

Our work with teaching partners has reinforced our assumptions about the challenges of mastering PBHI practice (Brush & Saye; 2000; Saye & Brush, 1999, 2002, 2004b, 2006, 2007). We have integrated our findings with the research literature to develop a set of wise PBHI practices for planning and teaching. Representative of a professional knowledge culture, these criteria differ in substantial ways from those often employed by teachers who are guided by craft knowledge (Table 1). Underlying these competing conceptions of planning and teaching are fundamental differences in assumptions regarding epistemology (e.g., Newmann, 1991), students (e.g., Jackson, 1968), the mission of history teaching (e.g., Barton & Levstik, 2004), and the desirability and necessity of risk-taking by teachers and students (e.g., Saye, 1998) (Table 2).

Study Design

Our project took place in one junior high school (grades 8-9) where Mike, a long-time collaborator, served as the department head (pseudonyms are used for all teachers). Mike's school was in a transitional period in which he led a young faculty who were in the formative stages of developing their teaching practice. With his encouragement, the history faculty became interested in exploring PBHI teaching. Given the complexities of PBHI practice, its challenge to craft knowledge assumptions, and evidence that teachers resist innovation as it has been presented in typical professional development, we wished to experiment with a more collaborative effort to discover if it might encourage teachers to incorporate shared professional knowledge (Hiebert et al., 2002) into a re-envisioned practice. Acknowledging obstacles that complicate efforts to encourage classroom change, we viewed teacher change as an evolutionary process. Although Mike demonstrated major cultural assumptions of the PBHI framework from the outset of the study, for the other teachers on his faculty the adoption of that framework would represent substantial change.

We believed that certain prerequisites must be in place before teachers could implement inquiry practices with enough fidelity to provide them with a genuine opportunity to test the worth PBHI as an alternative framework for teaching: Teachers must have a vision of effective inquiry practice in action, deep content knowledge of the inquiry topic, and rich pedagogical

knowledge of how to engage students in meaningful inquiry with that content. We expected that if those prerequisites could be met that PBHI lesson implementations might produce successful classroom outcomes and that positive results might open teachers to the sort of changes necessary for the establishment of a professional knowledge culture among this community. We believed that a carefully scaffolded Lesson Study process provided an iterative cycle of planning, action, and reflection that offered promise for establishing those baseline prerequisites.

We established two Research Lesson Study teams: one for each grade. The department head and two other veteran teachers were members of the 9th grade team while four teachers with three or less years of experience formed the 8th grade teaching cohort. Teachers on each team were joined by a teacher educator and a historian with expertise in the topic chosen by teachers for the lesson study. Each team met for a week-long summer planning workshop to develop a unit plan, a focus Research Lesson, and a plan for observing lesson outcomes. We used PBHI planning scaffolds to guide teams in conceptualizing instruction in ways consistent with the PBHI framework (Appendix). One teacher taught each lesson in fall semester while the rest of the team observed. Implementations were debriefed and the lessons were revised. All teachers taught the revised lesson in spring semester and the debriefing and revision process was repeated.

We collected data from three phases of the study: Planning, Implementation I, and Implementation II. From the planning phase we collected baseline surveys, completed planning scaffolds, videotape of all planning sessions, discussion forum postings, and final lesson plans. For both Implementations I and II we videotaped and transcribed lesson implementation, debriefing and revision sessions, and collected field notes, student work products, and post-lesson interviews and surveys.

We based our analysis of teacher planning, implementation, and discussion on the criteria for PBHI professional teaching knowledge developed from past studies (Tables 1 & 2). We expected that individuals who had fully integrated the major cultural assumptions of the PBHI framework would demonstrate a constructivist epistemology, a commitment to civic competence as the central mission of history teaching, an acceptance of ambiguity and risk-taking, and empowering beliefs about student motivation and curiosity. We further expected that adherents of a professional knowledge culture would ground their practice in theory-based principles, use

theoretical understandings to diagnose and revise practice, and see value in collaborative dialogue as a means to expand a generalizable teaching knowledge base.

In examining teacher dialogue and lesson implementations we looked for patterns in the data that suggested their conceptualization of teaching practice at each project stage and any changes that might indicate movement toward the assumptions of professional PBHI teaching knowledge. Using analytic induction and content analysis, researchers analyzed and coded data independently and met to compare findings, develop and refine categories, and produce data-based speculations about the findings' implications for professional development.

Findings and Discussion

Teachers' actions and responses suggested participation in the Lesson Study process did encourage them to revisit fundamental assumptions about content, learning, and teaching. Lesson study seemed to provide the support necessary for teachers to envision an alternative teaching practice and develop the content and pedagogical knowledge needed to successfully engage their students in meaningful inquiry. Most importantly, positive classroom outcomes from the enacted lessons convinced them of the practicality and worth of the PBHI framework for teaching and encouraged reconsideration of how knowledge is created and the complexity of making sense of social reality. Teachers became more open to a vision of teaching knowledge as public, principled, and expanded by collaborative dialogue. However, most did not seem to have fully integrated all of the assumptions of PBHI professional knowledge into a holistic framework for making practice decisions. We begin our discussion with evidence regarding the establishment of prerequisite support structures for designing and implementing genuine PBHI lessons.

Supporting High Fidelity PBHI Lesson Implementations

We had assumed that the Lesson Study process would facilitate the establishment of baseline elements necessary for teachers to have realistic experiences with problem-based inquiry instruction. Study results supported that assumption. Lesson study scaffolds and models seemed to focus teams' attention on essential elements of PBHI instructional design and teaching. Collaborative planning that utilized the diverse expertise of teachers, teacher educators, and historians seemed to develop deeper and more nuanced understandings of the historical topic to be investigated. Deep planning and collegial reflection upon the results after instruction

encouraged teachers to revisit the cognitive challenges posed by entertaining ill-structured problems and to reconsider how they might best help learners meet those challenges.

Models And Scaffolds Facilitated Re-Conceptualization Of Teaching Practice

Observations and participant reflections suggested that the use of PBHI planning tools focused teacher attention and dialogue on larger theory-based organizing principles. For example an 8th grade teacher explained how the scaffolds help her to conceptualize PBHI instruction:

> I couldn't do it by myself, but at least now I feel . . . I can use the resources [planning scaffolds] to design my own. I wouldn't be able to scaffold myself when I'm thinking about doing a unit on Russia or something. I realize I'm capable of doing it now [Tanya].

The most pronounced effect in encouraging deeper conceptual understanding of PBHI principles and their relation to specific learning strategies appeared to come from access to classroom-based models. A 9th grade teacher with over 20 years in the classroom explained how both videotaped and real-time peer modeling aided her understanding:

> I modeled after Mike, because I am new to this kind of lesson . . . I felt I couldn't have done what I did without watching him. I went in there everyday and watched his lesson [the second iteration of the research lesson implementation] . . . I would recommend that someone, before they did this lesson, watch the video [of the first research lesson implementation] many times . . . I would see things the second time that I didn't see in the beginning. I had our outline in front of me that we discussed, and when I saw Mike do it [on the video], I'd go like "Oh, that's what this means." . . . You have it on paper, but until you see someone actually do it and see the students respond to it, then you understand. . . Just seeing someone doing it while you have the lesson in front of you makes the light bulb [come on] . . . because if you just read it, you don't understand [Linda].

An 8th grade teacher with three years of teaching experience expressed similar sentiments:

> After watching Joyce do her lesson before I did it with my 4th block, it went more smoothly . . . For example, the grabber, trying to get them to think about the influences the groups [student cliques] were having . . . after seeing Joyce do it, I hammered that more . . . I realized that was important to stress [Jack].

More Complex Understanding Of Historical Phenomena

Analysis of artifacts, observations, and respondents' reflections also suggested that intensive dialogue and planning produced more complex and nuanced teacher understanding of the historical phenomena under study. Richer teacher understandings contributed to more substantive classroom consideration of the actors and issues associated with the selected historical period of study.

An 8th grade teacher in his second year of teaching observed that when he taught the research lesson, "More people who normally don't talk were jumping in and sharing . . . the discussions themselves were more in-depth. They were asking and talking about deeper questions than normal. We were ready for them to come up with these ideas because we knew the material so much better [Bill].

The dialogue that arose when the 8th grade team historian challenged teachers' interpretation of the Greek city-states provides an example of teachers' deeper immersion in the content:

> Historian: I always think of Sparta more defensively and Athens more offensively.
>
> Tanya: Yeah, but that's what I was saying - that's what we've been telling them. The students know that Sparta is isolated, and they don't want to try to spread themselves out; they want to stay doing their own thing. But how do we convey to them that they are not perfect . . .?
>
> Jack**:** Well, I know what I did was with the Plutarch excerpt that we had – we talked about bias – when I talk about bias with them I say 'you know, look at that everything you see in that document is something good about Sparta – you get this feeling that the Spartans are the best.' Then I say, 'well, think about what we talked about earlier. You know, doesn't Sparta have some flaws?' Then kids say 'well, yeah - the way they treat the helots'….

A debriefing discussion by the 9th grade team suggested the potential of Lesson Study for encouraging teachers to engage the nuances of their content. As they reviewed lesson outcomes, the team wrestled at length with the dilemma of student representations of the Hindu faith. In their deliberations over whether British presence benefited India, students had made repeated references to suttee, the practice of a Hindu widow cremating herself on her husband's funeral pyre. Student discussion often fixated on this more sensational aspect of Hinduism without

considering other dimensions of the faith and how British actions ignored or insulted Hindu beliefs. Linda wondered if perhaps the team should omit introduction of suttee practice because it seemed to encourage a negative stereotype of Hinduism: "that Indians were barbarians and deserved to be ruled [by the more civilized British]." Mike argued, " I think we're doing an injustice if we don't mention it . . . that is a legitimate argument; even if it is repulsive, it is legitimate." A spirited dialogue followed in which the team balanced the dangers of stereotyping against the need to represent one of the cases that was made for the 'civilizing' influence of British rule. Linda finally proposed that rather than omit suttee, the lesson needed to devote more time to developing an understanding of other aspects of Hinduism and its role in Indian culture.

Sense-Making About Social Reality Is A Complex Process

Teacher responses suggested that engagement in the Lesson Study process produced fuller realizations of the complexities involved in making sense of social reality. Teachers began to reconsider what was required to facilitate complex learning among their students and to refine their repertoire of learning strategies.

An 8th grade teacher reflected on the power of source documents for immersing students in sense-making about other times and cultures: "It gives me more ideas on other lessons . . . I thought, 'I need to find things like this [primary accounts] with the Roman Empire, Mayans. I need things they can read and connect to' . . . I could really tell a difference in the kids when they read things directly straight from the past instead of a PowerPoint [lecture]. They connect with those sources [Bill]."

Another 8th grade teacher concurred: "Doing these documents was helpful. A lot of my students started to get into that and began asking why Pericles would say these things at a funeral. That got them to look at bias, Lycurgus' ideas of why everything was good for Sparta. The students began to ask questions of his speech, 'was it really all that good'? I'd like to find good documents like these to incorporate in more lessons [Jack]."

A veteran 9th grade teacher was struck by the differences in depth and quality of student thinking when the task design required students to take a position on a historical issue: "I liked the whole fact of the persuasion element [in the research lesson]. Because without them knowing, it raises their level of thinking because they have to defend their position and put themselves in that place to defend it adequately. And it encourages them to be prepared when they get up . . . the primary documents were difficult, and I don't know if we need to introduce

more primary documents throughout our teaching. If we do more lessons like this I'm sure that by using them it will help them to understand and read them better . . .[Rita]

After watching a peer teach the research lesson, an 8th grade teacher in her second year discussed with her team the difficulty of generating quality reasoning. Her reflections suggested an enhanced sense of the degree of support required to encourage reasoning:

> Something I'm going to do with my kids, because I know they are going to struggle… [with] the arguments for peace, the arguments for war. I think it would a good idea when you are having the debate at the beginning of class that they just do a T-chart, and maybe just say: 'As we talk about this, jot down these arguments' – because I know my kids, they are going to get in their groups and just be like, 'War, peace … let's do war!" They like to kill people; they are not going to think of substantial arguments, the majority of them. So maybe if we kind of held their hand through that debate . . . just to kind of give them a push when they start talking about their reasons. And even if they did end up using the exact same reasons, and just elaborating on it, that might be better. They would have something critical to think about, whereas if they are coming up with it on their own, unfortunately, sometimes they are not going to come up with a critical argument. Whereas, if we as a class come up with the arguments together . . .they can say – 'O.K. this is what we all said, which one do we think is better?' And then maybe they could take those ideas and run with it [Tanya].

Reconsidering Assumptions about Content, Teaching, and Learning

The enacted lessons of both teams demonstrated substantial fidelity to the essential elements of the PBHI teaching framework. Teachers were uniformly enthusiastic about student responses to the lessons. Positive student outcomes appeared to stimulate teachers to reconsider beliefs about what students can and will do and about the practicability of PBHI practices.

A veteran 9th grade teacher admitted:

> I picked this class because it was my most challenging class and was very large, so I picked it to see what it would do with a large group like this . . . It really surprised me, because I thought it was going to be too hard for them. I was skeptical. I was REAL skeptical; I said . . . "My class is not going to be able to do this . . . I went home and told my husband that, gosh, we are doing something that my kids will never be able to do—

> this group I had this year. You know, I just didn't think they could! And I went back and told him I was proven wrong, because my kids did beautifully today . . .
>
> I've definitely found that my students can do primary documents that I didn't think they could do; that I thought were too hard for them . . . if you scaffold enough and . . . if you guide them through it, they can do it. To be honest, I probably would have never done this with them had we not done this unit and gotten together and discussed it, and if I had not seen it with my own eyes. So, I think all of this has opened my eyes to what they can actually do and the way they can do it, and ideas on how to do it with them [Linda].

An 8th grade teacher in her second year of teaching reflected: "I realize you get more student involvement in teaching lessons like this. . . And teaching this way is so much better because when I leave for the day, I think 'I did a good job today' and that makes me want to come back tomorrow. That will make me want to teach for 20 years instead of 20 days [Joyce]."

Her colleague expressed similar sentiments: "I know my second and fourth blocks, . . . something has really been sparked, and you know, kids are grabbing . . . the Pericles document, . . . and they're thinking . . . 'this is a funeral, why is he saying all this stuff?' And I mean, they're really getting into it. I really like what is coming about, and I'm looking forward to working more trying to revise it. I know I am already thinking more about my part and what I can do to make it better so this lesson can be a true model of what [PBHI] really is . . . [Jack]

An Expanded View Of Teaching Knowledge

Experience and success with the entire lesson study process seemed to open teachers to a key cultural change: a conceptualization of teaching knowledge as public, shared, and expanded through collaboration within a professional community. Respondents particularly valued the increased collaboration and dialogue within their practitioner community.

A 9th grade teacher found that one of the biggest benefits of Lesson Study was "having others in my field to bounce ideas off and to share the lesson. I liked the fact you can say, 'this didn't work well and what can we do to improve it.' Or, 'I think I'll try this, what do you think?' I guess the biggest thing is you are not an island and you are not out there by yourself [Rita]."

An 8th grade teacher found a similar value in collegial dialogue: "I miss things, and if I have other people with me, they'll say 'we need to talk about this' and I'd go, 'Oh, I didn't even think about that, of course we need to talk about that.' And that happened a lot when we were

planning. If someone said you have to plan a unit on imperialism and ancient Greece, I never would have thought of all the pieces we did as a group [Joyce]."

One of her team members concurred:

> Obviously the biggest thing is the collaboration, it's sad, but we teach in [interdisciplinary] teams here, so unless it's a vertical team meeting organized by the central office, we seldom confide in fellow social studies teachers. So that was the number one difference and a huge advantage because obviously five minds are better than one and we all teach differently, and it was so awesome to have my eyes opened to different ways and techniques. If it's just me, I would never be brave enough to go so in-depth. . . the product was a million times better than what [I] could have done. [Tanya]

As further evidence of cultural change, she reported an increase in informal dialogue about instruction outside of the Lesson Study project.

> I've tried since then [the first Lesson Study] to get emails going about different units, 'What do you think about this, check out this PowerPoint and give me help.' I've learned to seek counsel from other teachers. Part of that was just breaking the ice so this experience was healthy for us young teachers . . . After it's over you feel part of something so big, we feel accomplished, it was a big deal, we're part of something important. It's worth the sweat for both our students and us [Tanya].

Reflecting entrenched views about lines of authority and cultural membership, teachers were more reticent about entering into equal dialogue with university educators and often waited for those educators to take the lead. However, episodes like the one below in which 8th grade teachers challenged a historian team member's interpretation of content offered promise that the distinction between practitioner and researcher knowledge was beginning to fade.

> Historian: That is why I worry about Spartan imperialism - it seems so contradictory to me. I guess in terms of what –just sort of acquiring allies? Is that what makes it imperialism?
>
> Joyce: It is not complete isolationism. And if we are looking at a continuum of a 0 being complete isolationism and a 10 being completely imperialistic, obviously they are not going to be a 10, but they are not going to be a 0 either, so ...
>
> Historian: Nobody can be.

Joyce: Right, so I think that's kind of where we're talking about. Not them being terribly imperialistic, but not being completely isolated either.

Teacher Educator: So we would look for them ranking them at about a 2 or something.

Historian: O.K., I'd give them a 2.

Teacher Educator: And we want the Athenians to be ranking about 8, 9 . . .

Joyce: And my kids have done that.

Tanya: Yeah, mine have too.

Joyce: My kids say, 'Well - Sparta is not that imperialistic, you know, they're allying with people that have similar interests, and they are just scared of Athens – so that's not really them taking over.' My kids saw that quick.

That such young inexperienced teachers did not defer to the expertise of the historian suggests a growing sense of ownership and authority for their content. A further indication of teachers assuming more ownership for all of the components of professional knowledge surfaced as we planned for a second year of lesson study. Several teachers suggested a substantial reconfiguration in the role that the historians would play in lesson development. They asked for less emphasis on content lectures in favor of more collegial dialogue about the content.

Although he perceived progress toward a more public knowledge culture among the teachers, the department head voiced caution as he acknowledged the pull of durable craft culture assumptions: "There is a lot of pressure involved with this. You are going to be on film; knowing you are going to be watched. We are not through breaking that American solo artist "stay out of my room" solo mentality. I've grown fairly immune to it because there are constantly people in my room, but I still resent it sometimes, and I still feel the pressure [Mike]."

Integrating the Assumptions of a Professional Knowledge Culture

In our view, teachers who have internalized PBHI professional knowledge perceive a central mission for history teaching as the nurturing of civic competence. They begin to diagnose problems from within the assumptions of the professional knowledge culture and identify subtle practice dilemmas that are not readily apparent to cultural initiates who are still focused on mastery of the practice implications of the broader principles. Despite substantial evidence of cultural change and movement toward a new vision of practice, most Lesson Study teachers had not fully conceptualized the PBHI framework as a unified set of theories for giving a cohesive purpose to practice by the study's end

The Civic Competence Mission

Only Mike appeared to operate consistently from a grounded understanding of theory-based PBHI practice that emphasized the central mission of developing civic competence. In debriefing and lesson refinement sessions he regularly brought this vision to the discussion. For instance, as his team assessed the success of their second round of lesson implementations, he tried to put their progress in perspective:

> I want them [students] to think like I think, not my political opinions, but to think with the complexity that I try to do, and they can't do that. But what they are doing is incredibly valuable, or otherwise, I think we tend to dismiss the importance of what is happening. For me these things are conceptual, I think we have to realize what we are really doing . . . and that is preparing kids for full citizenship in a democracy. That's the hokey version, but we are teaching kids how to think, how to analyze, read, detect bias. It just doesn't get more important than that in their personal lives, who they marry, how they raise their kids, in every venue of their personal lives. And that sort of thing is constantly reaffirmed for me when I see kids do this.

Diagnosing Practice Problems

Consistent with our other observations, the department head was the only teacher to regularly diagnose practice problems within the lens of a professional knowledge base. Although his peers were quite pleased, and often surprised, at the students' accomplishments in the research lesson, Mike pushed the discussions toward examining how student thinking and performances could be made more substantive. For instance as the team discussed their observations of a class of particularly able learners working with the document analysis lesson, he commented on the students' use of the definitional, contextual, and metacognitive hyperlinks that we had embedded in the digital versions of the source documents:

> Mike: This group used the fewest links out of all the others.
>
> Linda: Oh, yeah, definitely. But they didn't need them, so . . .
>
> Mike: Well, I don't know if they didn't need them, or they didn't *think* they needed them.
>
> Linda: It looked like from their answers that they were getting it . . .
>
> Mike: But what I would be interested in seeing is, in a group like this that is clearly more academically inclined than others, I'd like to--Like your class, I think they used the links

> just to survive the documents. My class used the links because they were supposed to use the links. And I want to see if a higher level academic group would get more substance by using the links than either of our groups did . . .

As the debriefing continued, he returned to larger issues of developing habits of mind for disciplined historical thinking and the need for establishing an authentic purpose for academic tasks.

> Mike: The biggest thing that came across to me was that a lot of the groups didn't understand--or I don't know if it was understanding, or whether they valued the whole idea of sourcing. I saw some give cursory attention to it, and then I watched one group, after they had read the whole document, they got to the first question, and it said 'What did Hobson think?' and they read the name, and one of the girls said, 'hang on, let's go back and figure out who he is.' So, it was very much a reverse process. So, to me that indicates that we've got to …
>
> Rita: And even after I mentioned it, 'Source, source it, go look!' And their big thing was . . . they kept saying 'Where do I write this?' . . . And I said, 'You don't have to write it down …'
>
> Mike: It kind of highlights to me, it's kind of like why we do hooks in these units. It's to establish relevance. This matters; therefore they value it, therefore they do it. And I think that we have to do the same thing throughout the course . . . I don't know, even the ones who understood how to source it, I don't know how many knew why it's so critical to source it.

Movement Towards A Professional Teaching Knowledge Base

Although none of the department head's peers demonstrated the same level of integrated professional knowledge, all teachers showed evidence that they had begun to make some linkages between theory and practice as they began to re-think what knowledge is most worthy and to question how they might facilitate complex learning. The centrality of powerful ideas and in-depth instruction for encouraging transfer to broader understandings of social reality became much more salient in teacher discussions of the goals of history instruction. The comments of two eighth grade teachers suggested promise for the long-term effects of Lesson Study on teachers' cultural assumptions.

> [A]fter we planned this lesson over the summer, I went back and looked at every single unit and pretty much changed them all. I really did, based on different types of activities . . . I started teaching more in-depth because the students seem to identify so much better and think a little deeper than when I just teach the basic facts. It pretty much changed the entire year [Joyce].
>
> Last year I felt the need to cover so much material, but this shows you if you go more in-depth, the kids learn a lot more. You might not be able to get to that extra unit or lesson, but they get more out of this and can take it to next year . . . The thing I'm going to change the most is taking out some stuff and making the big units more in-depth so they get more out of it [Bill].

Conclusions

The educational landscape is littered with failed efforts to change the traditional classroom culture. Although this study's findings cannot be generalized, they are noteworthy because they suggest that scaffolded Lesson Study might produce a different result. We view cultural change as a developmental process. Certain prerequisites must be met before teachers will genuinely entertain change. A change must be practical, and it must generate positive student outcomes. Such results are unlikely unless teachers grasp the nuances of the innovation with enough fidelity to test these alternative ideas in an authentic way with their own students. Our findings suggest that a scaffolded Lesson Study process facilitates the establishment of these baseline conditions.

Demonstrable student results may incite reconsideration of teacher beliefs and deepen their understandings of the requirements of complex learning and instruction. Experience and success with a collaborative community of practice can open teachers to a more public, principled conceptualization of the genesis and refinement of teaching knowledge. Perhaps one of the most remarkable demonstrations of the potential of Lesson Study for inciting cultural change is that all of the teachers in our study have chosen to continue their involvement in the collaboratiion as the project moves into a second year.

For a shift from a traditional to a professional teaching knowledge culture to be fully realized, teachers must consolidate these new ideas around a holistic, theory-based framework that guides practice. Our study suggests that collaborative communities of practice may encourage participants to use each other as resources for making connections to common

principles that build a professional knowledge base of reliable wise practice. Although our findings indicate that teachers were beginning this integrative process, they also suggest that teachers must be supported in grounding these alternative ideas in their own experience over an extended period of time before they become fully integrated into their worldview. Establishing a professional knowledge culture must be considered a long-term project.

References

Barton, K. C., & Levstik, L. S. (2004). Teaching History for the Common Good. Mahwah, New Jersey: Lawrence Erlbaum.

Brush, T. & Saye, J. (2000). Implementation and evaluation of a student-centered learning unit: A case study. *Educational Technology Research and Development, 48*(3), 79-100.

Chokshi, S. & C. Fernandez (2004). Challenges to importing Japanese lesson study: Concerns, misconceptions, and nuances. *Phi Delta Kappan, 85*(7), 520-525.

Clark, C., Moss, P. A., Goering, S., Herter, R. J., Lamar, B., Leonard, D., et al. (1996). Collaboration as dialogue: Teachers and researchers engaged in conversation and professional development. *American Educational Research Journal, 33*(1), 193-231.

Cuban, L. (1984). *How teachers taught*. New York: Longmans.

Engle, S., & Ochoa, A. (1988). Educating citizens for democracy: Decision-making in social studies. New York: Teachers College Press.

Garet, M. S., Proter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*, 915-945.

Grant, S. G., Gradwell, J., Lauricella, A. M., Derme-Insinna, A., Pullano, L., & Tzetzo, K. (2002). When increasing stakes need not mean increasing standards: The case of the New York state global history and geography exam. *Theory and Research in Social Education, 30*(4), 488-515.

Goodlad, J. (1984). A place called school: Prospects for the future. New York: McGraw-Hill.

Hiebert, J., Gallimore, R., & Stigler, J. W. (2002). A knowledge base for the teaching profession: What would it look like and how can we get one? *Educational Researcher, 31*(5), 3-15.

Jackson, P. (1968). Life in classrooms. New York: Holt, Reinhold, & Winston.

Kagan, D. M. (1993). *Laura and Jim and what they taught me about the gap between educational theory and practice*. Albany, NY: SUNY Press.

Lewis, C., Perry, R., & Murata, A. (2006). How should research contribute to instructional improvement? The case of lesson study. Educational Researcher, 35(3), 3-14.

Lortie, D. (1975). *School-teacher: A sociological study*. Chicago: University of Chicago Press.

Martin, Arlene (2002). "Mentoring and Teacher Induction: Hearing the Voices of Change." Chapter 13 in Francis Kochan (ed.) *"The Organizational and Human Dimensions of*

Successful Mentoring Programs and Relationships." Information Age Publishing: Greenwich, CT. pp. 185-201.

Newmann, F. M. (1991). Higher order thinking in the teaching of social studies: Connections between theory and practice. In J. Segal (Ed.), Informal reasoning and education (pp. 381-400). Hillsdale, NJ: Lawrence Erlbaum.

Oliver, D. W., & Shaver, J. P. (1966). Teaching public issues in the high school. Boston: Houghton Mifflin.

Onosko, J. (1991). Barriers to the promotion of higher order thinking in social studies. *Theory and Research in Social Education, 19*(4), 341-366.

Rossi, J. A. (1995). In-depth study in an issues-centered social studies classroom. *Theory and Research in Social Education, 23*(2), 87-120.

Rossi, J. A. & Pace, C.M. (1998). Issues-centered instruction with low achieving high school students: The dileMikeas of two teachers. *Theory and Research in Social Education, 26*(3), 380-409.

Saye, J. W. (1998). Technology in the classroom: The role of dispostions in teacher gatekeeping. Journal of Curriculum & Supervision, 13(3), 210-234.

Saye, J. W. (1999). School-based collaborations: Building an authentic model for problem-based instruction. The Journal of Social Studies Research, 23(2), 11-18.

Saye, J. & Brush, T. (1999). Student engagement with social issues in a multimedia-supported learning environment. *Theory and Research in Social Education*, *27*(4), 472-504.

Saye, J. & Brush, T. (2002). Scaffolding Critical Reasoning about History and Social Issues in Multimedia-Supported Learning Environments *Educational Technology Research and Development*.

Saye, J. & Brush, T. (2004a). Promoting Civic Competence through Problem-based History Learning Environments. In *Civic Learning in Teacher Education* (Volume 3) (G. E. Hamot, and J. J. Patrick, eds). Bloomington, Indiana: ERIC Clearinghouse for Social Studies/Social Science Education.

Saye, J. & Brush, T. (2004b). Scaffolding problem-centered teaching in traditional social studies classrooms. *Theory and Research in Social Education*, *32*(3), 349-378.

Saye, J. & Brush, T. (2006). Comparing Teachers' Strategies for Supporting Student Inquiry in a Problem-Based Multimedia-Enhanced Learning Environment. Theory and Research in Social

Education, 34(2), 183-212.

Saye, J. & Brush, T. (2007). Using technology-enhanced learning environments to support problem-based historical inquiry in secondary school classrooms. Theory and Research in Social Education, 35(2), 196-230.

Shaver, J. P., Davis, O. L., & Helburn, S. W. (1979). The status of social studies education: Impressions from three NSF studies. Social Education, 4(3), 150-153.

Windschitl, M. (2002). Framing constructivism in practice as negotiation of dilemmas: An analysis of the conceptual, pedagogical, cultural, and political challenges facing teachers. *Review of Educational Research, 72*(2), 131-175.

Table 1. Craft Knowledge vs PBHI Professional Knowledge Planning and Teaching

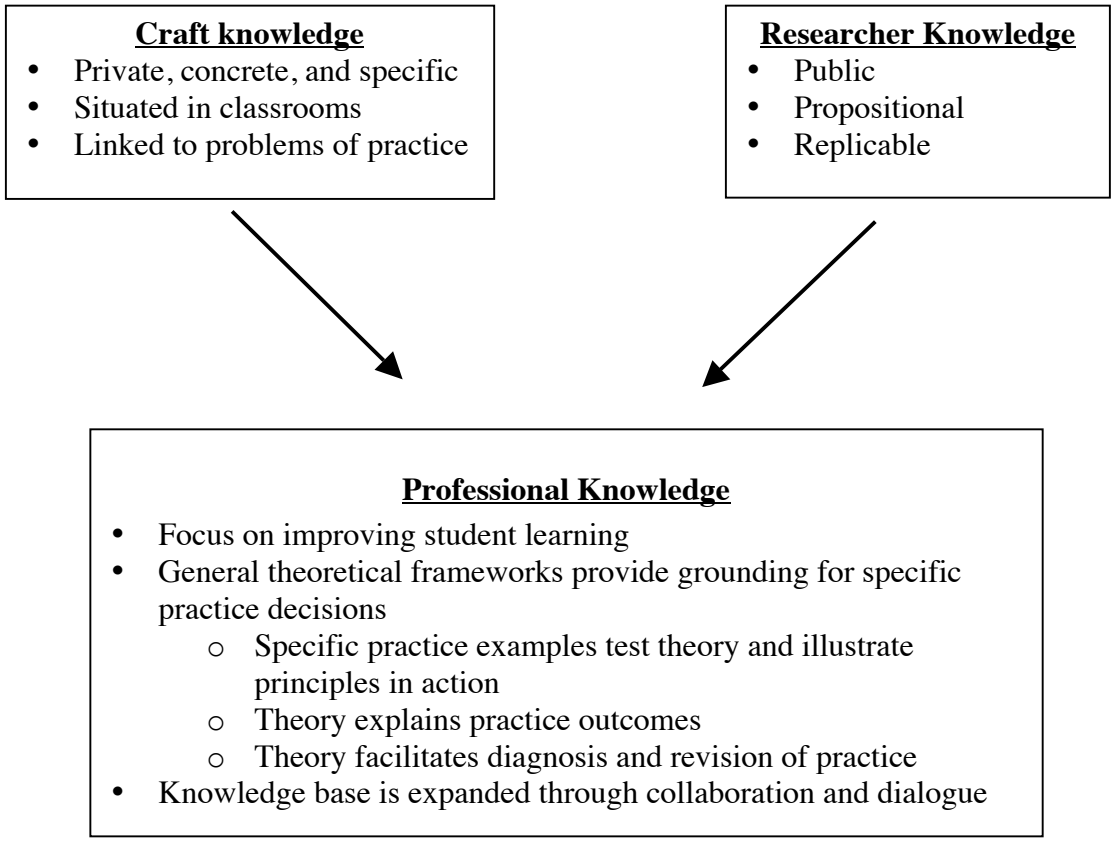
Craft Knowledge Characteristics	PBHI Professional Knowledge Characteristics
• Planning and implementing instruction is idiosyncratic, particular to an individual teacher, and specific to a particular topic or lesson • Varied criteria guide instructional design decisions o Coverage of topics in curriculum guide o Teacher interest o Interesting materials/activities o Easily managed/controlled o Easily assessed	• Planning and implementing instruction is based upon a shared, field-tested theoretical framework • An integrated set of criteria guide instructional design decisions o Meaningful, ill-structured problems serve as conceptual anchors for learning o Collaboration facilitates complex understanding o Design for multiple intelligences allow all learners access to understanding o Scaffolding and modeling facilitate complex thinking

Table 2. Competing Assumptions in Craft and PBHI Cultures

Traditional Craft Culture Assumptions	PBHI Culture Assumptions
Absolutist epistemology • Knowledge is created primarily by outside authorities • Historical truth is fixed and knowable • Facts speak the same to all. There is a unilinear historical narrative. • Thinking is a fairly uncomplicated affair	**Constructivist epistemology** • Individuals and/or communities create knowledge • Social reality is ill-structured and ambiguous. Sense-making is a complex process. • Perspective shapes interpretation of facts and leads to multiple historical narratives.
Transmission functions of history • Identification with nation and culture • Teach moral lessons • Personal enrichment	**Civic competence function of history** • Develop informed, ethical decision-making • Develop analytical thinking • Develop foundational knowledge within an authentic problem context
Beliefs about students Most students resist challenging tasks and can't or won't engage in higher-order thinking	**Beliefs about students** Students will undertake meaningful challenging tasks and can engage in higher-order thinking
Risk taking creates the potential for unnecessary classroom disruptions. Knowledge can be best communicated in a orderly, teacher-centered environment and assessed in a straightforward, unambiguous manner	**Risk taking** by teachers and students is necessary and good to stimulate thinking, explore multiple perspectives, and prepare citizens to make responsible decisions in an ambiguous world.

Figure Caption

Figure 1. Creation of professional knowledge


Craft knowledge
Private, concrete, and specific
Situated in classrooms
Linked to problems of practice
Researcher Knowledge
Public
Propositional
Replicable
Professional Knowledge
Focus on improving student learning
General theoretical frameworks provide grounding for specific practice decisions
Specific practice examples test theory and illustrate principles in action
Theory explains practice outcomes
Theory facilitates diagnosis and revision of practice
Knowledge base is expanded through collaboration and dialogue

Appendix: Sample from PBHI Lesson Study Planning Log: Framing the Unit

My Content Topic	**The Persistent Issue**	**The Topic-Specific Central Question**	**The Culminating Activity**

What is a topic that is rich and significant enough to deserve in-depth treatment?	**What is the broad, recurring issue that might serve as a focus for organizing content related to my topic?**
	
	• Does my question apply to a number of topics across time?
	• Is this question evaluative and ill-structured?
	  o Would people disagree about the answer?
	  o Could evidence be offered for at least two different, defensible answers?
	• What values are in conflict that make this a persistent, troublesome issue?
		What is a more specific question that requires students to make a specific, evaluative judgment for which they will have to use knowledge gained from activities in this unit?
		
		• Does the question relate directly to the broad, persistent issue?
		• Is the question sharply focused so that students it calls for a clear student decision that they must defend with evidence?
			What will my students do at the end of the unit to answer the unit central question?
			
			• Is the activity authentic? Is it something people might do in the real world?
			• Does the task clearly address the central question?
			• Have I planned for both individual and group accountability?
			• Is there a public performance that requires defense of position before peers?
			• Have I accounted for multiple intelligences so that all can contribute and demonstrate knowledge?

Imperialism	*When is a nation justified in intervening in the affairs of another nation or group?*	*Did British presence in India benefit Indian citizens?*	*Persuasive Campaign. Design Billboards to convince the Indian people to support or oppose British presence in India. Defend position in a public meeting. Write individual letters to the editor of a British newspaper stating personal position.*