

Using Scholarly Research in Course Redesign: Teaching to Engage Students with Authentic Disciplinary Practices

Rachel G. Ragland

Lake Forest College

Lake Forest, Illinois, USA

ragland@lakeforest.edu

Abstract

This action research study describes a course redesign using scholarly research in two ways. Traditional disciplinary research was used to inform the design of the curriculum, and SoTL was used to measure the success of the course design in achieving its objectives for student learning. The objective of the course redesign was to better engage students in applying the authentic disciplinary practices of the field. Research was then conducted on the pedagogical process to determine the success of the new course design in achieving its objectives. The research project documented: how the authentic disciplinary practices were taught to students; student attitudes toward the knowledge gained; and how the students subsequently put this knowledge into practice. The success of the course design in engaging student with authentic disciplinary practices was documented. Conclusions and implications for evidence-based research into the improvement of teaching effectiveness applied to other disciplines are discussed.

Key words: authentic disciplinary practices; evidence-based reflection; curriculum redesign; secondary history teacher education

Introduction

Engaging our students authentically with our chosen discipline is a goal shared by all of those who strive to make teaching the centerpiece of scholarly work in the Academy. By consciously re-conceptualizing the design of our courses using knowledge gained in our traditional scholarly research, articulating appropriate student learning outcomes, and using the tools of scholarly research to measure how successful we have been at achieving these outcomes, we can elevate our teaching and student learning to new levels. The teacher-scholar can be a scholar of both his or her discipline and the teaching of that discipline. Thus, scholarly research can be used in two ways; traditional research can inform the design of course curriculum and research on the scholarship of teaching and learning can be used to measure the success of the course design in achieving its objectives for student learning.

In the case study examined here, the course redesigned was a senior capstone course in secondary social studies instructional design or methods of teaching. The course redesign was intended to engage the students in a deliberate and conscious way with the authentic disciplinary practices in the field – in this instance the best practices for the teaching of high school history. The author's previous research with secondary history teachers included the development of twelve strategies that constitute best practices in history teaching. These McRAH strategies (named for the title of the professional development project "McRAH: Model Collaboration: Rethinking American History") formed the basis for the authentic

disciplinary practices around which the course was designed. (See Appendix A – McRAH Strategies)

At the same time as the new course design was implemented, a scholarly research design was put into place to determine how successful the course was in achieving its student learning outcomes. The outcomes involved the students implementing these authentic disciplinary practices into their own instructional design and subsequent teaching of high school history classes. The implementation was then measured using research techniques appropriate for the discipline of education. Every discipline has a body of authentic disciplinary practices –the knowledge, skills, and dispositions that make up the work of practitioners of that discipline. In order for our students to become practitioners of the discipline (or at least appreciate practitioners of the discipline), it is necessary to identify and communicate those authentic disciplinary practices.

This case study takes a unique perspective by examining both the use of authentic, evidence-based best practices in a discipline to determine course objectives and its deliberate incorporation of research on teaching into the course design. This research process blends seamlessly with the goals of the teacher education program of which this course is a part – developing reflective practitioners who see teaching as an intellectual activity. However, all disciplines value the importance of self-examination in their field as a means of making progress in the discipline, and this can be a positive addition to the process of teaching and sharing any discipline.

Background Research and Context

Familiarity with best practices in both the general area of conducting scholarship of teaching and learning research and the specific area of secondary history teacher education and best practices in secondary history teaching was critical to framing the course redesign. The intersection of the specific and general knowledge will also prove valuable in reflecting on the process of course redesign and assessment.

Scholarship of Teaching and Learning (SoTL) in Higher Education and the Teacher-Scholar

SoTL is characterized by a transformational agenda and a desire to create stronger curricula and more powerful pedagogies. SoTL might then be defined as scholarship undertaken in the name of change, with one measure of its success being its impact on thought and practice (Hutchings, 2000, p. 8) As Randy Bass (1999) has written, SoTL is a particular kind of activity, in which faculty engage, separate from the act of teaching, that can be considered scholarship itself. Lee Shulman believes that teaching is the clinical work of college and university faculty members (cited in Hutchings, 2000, p. 95). Teaching at its core, is an interactive, clinical practice, one that requires not just knowledge but craft and skill (Grossman & McDonald, 2008, p. 189) As such, SoTL studies should be theoretically sophisticated works of scholarship probing the relationship between teaching and learning (Huber & Morreale, 2002, p. 51). Pedagogy needs to move to center stage in higher education, particularly since simple transmission of knowledge is no longer the goal. Helping students construct knowledge in an authentic context takes pedagogical knowledge on the part of faculty not just content knowledge.

Different types of scholarly work merit formal consideration, including discovery (traditional), integration, application, and teaching. There are elements of discovery,

integration, and application involved in SoTL because this work typically involves classroom inquiry, synthesizing ideas from different fields, and the improvement of practice, all at the same time (Huber & Hutchings, 2005, p. 4). A white paper published by the Teagle Working Group on the Teacher-Scholar (2007) sees scholarship and teaching as mutually sustaining endeavors (p. 3). The teacher-scholar is at once deeply committed to inquiry in his or her disciplinary field and passionately devoted to successful student learning through teaching and effective institutional practices (p. 4).

Process of SoTL

While there is no single best method or approach for conducting the scholarship of teaching and learning, there is a need for approaches that are useful and doable in varied contexts (Hutchings, 2000, p. 1). SoTL often begins with a quite pragmatic question but also one that really matters to the researcher – often a matter of passion to the individual. Shaping a good question for SoTL is not only a practical and intellectual task but often a moral and ethical one as well. SoTL provides the context to turn this sticking point into an opportunity for purposeful experimentation and study (p. 3) demonstrating that problems of teaching are worth pursuing as an ongoing intellectual focus. One kind of question explored in SoTL is the “what works” question that seeks evidence about the effectiveness of different approaches (p. 4), and this is primarily the type of question explored in the case study reported here.

A key to commonalities across disciplines lies in the *process* of scholarship (Glassick, Huber, Taylor & Maeroff, 1997). All works of scholarship involve a common sequence of unfolding stages: clear goals; adequate preparation; appropriate methods; significant results; effective presentation; and reflective critique (p. 25). Teaching and learning are complex processes, and no single source or type of evidence can provide a sufficient window into the questions we most want to explore (Hutchings, 2000, p. 6). A mix of methods will tell you more than a single approach. Processes including collection and systematic analysis of student work, questionnaires, surveys, and interviews can be combined to give the fullest possible picture of the answer to the research question. All were used in the case study reported here.

According to Huber and Hutchings (2005), there are several defining features of SoTL projects. The first step is finding the framing questions about student learning that you want to explore as the catalyst to research. Thinking of teaching as a source of interesting, consequential, and intellectual problems is the key. The second step is devising way to gather and explore evidence that will shed light on the questions. While evidence should always be credible and significant, different disciplines have different rules and assumptions about what constitutes credible evidence and what kinds of methods yield scholarly results. In education, for example, a small case study can provide valid evidence. The important thing is that the method of research and the question match. The third step involves trying out and refining new insights. SoTL research occurs in the highly dynamic environment of the classroom where a problem is often messy rather than neatly linear, engaged rather than disinterested, and highly personal in its impact (p. 26). SoTL is an aspect of practice done “in the first person; undertaken by faculty looking at their own practice” (Hutchings, 2000, p. 8). Effective professionals think about what they are doing while they are carrying out their work. This reflective critique involves the scholar thinking about his or her work and learning from this process so that scholarship as well as teaching can be improved. Finally, SoTL produces knowledge that is available for others to use and build on through the process of going public with the results and conclusions of the research. This sharing distinguishes it from other approaches to classroom improvement. In improving classroom

practice the SoTL process enables faculty to justify, track, and evaluate each component of re-conceptualizing a course design.

Connection of SoTL with Discipline Specific Research

While teacher-scholars in all discipline can and do engage in SoTL work, SoTL is clearly embedded in one's discipline; its questions arise from the character of the field and what it means to know it deeply. It is important to note the power of the disciplinary context in shaping the way faculty think about and design their approaches to SoTL (Hutchings, 2000). While many pedagogical issues and topics cut across fields, SoTL may look different in different disciplines. Most faculty members think about teaching and learning inside the framework of their own (and closely related) fields, and while all may agree that they want to foster deep understanding in their college classrooms, what they mean by deep understanding is different (Donald, 2002). Research indicates that most SoTL researchers, as represented by work with the Carnegie Scholars, choose topics about teaching and learning that have resonance within the conceptual structure of their discipline, thus giving their problem for study intellectual authenticity and weight (Huber & Morreale, 2002, p. 33). We should expect that there will be reasonable differences among domains in the ways in which inquiry is conducted, arguments are presented, and evidence is offered. Method is used to characterize both the approaches and techniques employed in teaching and the strategies and tactics employed in the investigation. Method also refers to the techniques, strategies, and operations used by scholars to conduct inquiries. Both senses of method converge – your research method is how you organize your evidence into a powerful and persuasive argument, which can also shape your teaching method (Huber & Morreale, 2002, p. vii -viii).

Making judgments about the nature of understanding in our specific fields is nonetheless what we as teacher-scholars do best. Bernstein and Bass (2007) cite the importance of asking what teachers know about the processes that experienced or expert learners employ habitually in their work but that often are tacit or absent in instruction (p 3). This is a way of saying that we can identify the authentic disciplinary practices in our fields and can all apply these to teaching and course design. An example cited by Huber and Hutchings (2005) is questioning whether and how students apply academic content and skills to contexts that require judgment, action, and commitment. The case study reported here used this model to explore whether the methods of teaching secondary history that were taught in the course content were subsequently put into practice in the authentic context of the student teaching experience. Another concept of disciplinarity connected to this research is the relationship between an academic discipline and school subject matter. This will be addressed shortly as part of the discussion of secondary history teacher education research.

There is a synergy between teaching and scholarly interests that animates the teaching of the best professors. In the classroom, a professor's engagement with current research and thinking in his or her field keeps the presentation of material fresh, and direct reference to critical or scholarly debates shows students that the questions under discussion are consequential matters that have engaged the interest of serious minds. Faculty are most likely to do their best work when they can regularly connect their expertise to their teaching. Faculty are likely to have the greatest impact on students when their teaching is connected to their roles as expert scholars, and they will be more effective when their ideas about teaching and their knowledge of student learning outcomes can feed back into curriculum design and teaching strategies (Teagle, 2007).

Connection of SoTL with Teacher Education Research

Huber and Hutchings (2005) comment that scholars of teaching and learning in higher education owe a debt to the K-12 teacher-research movement and to other disciplines and fields that have developed the methods and paradigms for action research. To build useful, shared understandings about teaching, growing numbers of faculty are now bringing their knowledge, skills, and commitments as scholars to their classroom work. For me, this involves bringing my research on inservice (classroom teachers) teacher education into the design of my preservice (undergraduate teacher candidates) teacher education courses. Ball and Cohen (1999, cited in Grossman & McDonald, 2008) argue for a model of professional education that is grounded in the practices of teaching (p. 189). Changing teacher preparation to more fully engage core practices and pedagogies of enactment requires a significant shift in the practice of teacher education (p. 191). This was the theoretical foundation for the course redesign described and assessed in the case study reported here. Grossman and McDonald also stress the importance of this focus by stating “[T]he search for greater precision in our language for describing teaching will contribute to stronger connections across research communities ...In preservice teacher education, this might signal a move away from a curriculum focused on what teachers need to know to a curriculum focused on core practices (p. 189). This is why using the McRAH strategies’ labels helps the students to have a precise vocabulary about authentic disciplinary practices for history teaching, as will be discussed in the case study described below.

Secondary History Teacher Education Research

In order to determine what authentic disciplinary practices to include as objectives of the course being studied here, it is necessary to examine the research on best practices in teacher education and secondary history teaching. An examination of work with inservice teacher professional development serves as a good model to adapt to preservice education. What has been shown to be valuable in engaging teachers in the through professional development opportunities to improve their teaching of history in an appropriate way is a good place to start to determine goals and outcomes for preservice studying to become secondary classroom teachers of history. The inservice model of best teaching practices used by the author determined the authentic disciplinary practices to be shared with the preservice teacher candidates (Ragland, 2006, 2007).

A study by Medina et al (2000) reports that “subject matter professional development plays an important role in teacher preparation – one that isn’t replicated anywhere else” (p. 18). Teachers in the University of California-Davis History and Cultures Project clearly transferred their experiences from the institutes into their history classrooms, where subsequently their students demonstrated improved use of primary sources and the ability to identify multiple perspectives in these sources (p. 19). The teachers’ experience with professional development activities specific to history teaching proved to be an important element in improving their practice in the secondary history classroom. Bruce A. VanSledright (2004) indicates that “[k]nowing what expertise looks like gives history teachers some targets for what they might accomplish with their students (assuming they desire to move those students down the path towards greater expertise in historical thinking)” (p. 230). Garet et al (2001) also noted that content-focused activities had a substantial positive effect on enhanced knowledge and skills, as reported by the teachers in their sample.

To foster high school students’ conceptual understanding, teachers must have rich and flexible knowledge of the subjects they teach. They must understand the central facts and concepts of the discipline, how these ideas are connected, and the processes used to

establish new knowledge and determine the validity of claims (Borko, 2004). Wineburg (2005) reinforces that history courses made up of all facts and no interpretation are guaranteed to put kids to sleep. "The notion of history as a constructed account of the past is central to examining the discipline because this construction is the process that historian, teacher, and student have in common" (Seixas, 1999, p. 330).

This concept of examining the discipline through a process shared by historian, teacher and student brings us to a consideration of the relation of history as an academic discipline and as school subject matter. Stengel (1997) outlines five possible relationships between academic disciplines and school subjects. They are: 1) essentially continuous; 2) basically discontinuous; 3) different but related with the discipline preceding the subject; 4) different but related with the subject preceding the discipline; and 5) the relation between the two is dialectic. Deng (2007) builds on the work of Stengel while also referencing Dewey (1916) in taking the perspective that the academic discipline ('a study as a logical whole') and the school subject ('the same study as a psychological whole') are essentially different, yet dialectically related (p. 511). Stengel goes on to say that

"academic discipline' and 'school subject' can only be understood in curricular discussion in relating to their use together (as they mutually define or deny each other) and in light of political and moral interest...the meaning of each concept shifts depending on how the two concepts are used together" (p. 953-3) "the task of the teach is transformation, but the transformation is not a transformation of subject matter as previously learning through disciplinary study. It is a transformation of the student's environment so as to effect the experiences that will enable the student to come to the already know" (p. 596)

In other words, the school subject is a negotiation between the academic discipline and the experience of particular students. Noddings (as cited in Stengel, 1997, p. 588) also suggests that the disciplines themselves should play a peripheral or instrumental role in the education of most students taking into consideration attitudes of care and student empowerment as organizing principles.

The current scholarship in the field of history teacher education draws largely from the view that the academic discipline and the school subject of history are essentially continuous, with differences only in the level and degree of difficulty. This works with the philosophy that emerged from the inservice research and professional development work on which the course design of this case study was based. Deng (2007) points to the school subject as being formulated in a way that takes into account the experience of the immature learner and provides the avenue for getting to know the academic discipline, thereby implying that the school subject may precede the academic discipline (p. 511). Grossman also (as cited in Deng, 2007) alludes to the need to make a distinction between school subject and academic discipline in conceptualizing teacher subject matter knowledge (p. 506). This issue of disciplinarity is important to consider even though the focus of the course involved in the case study reported here is more on the methods of instruction rather than the concepts of the discipline or school subject. The students in the case study are familiar with both the discipline and the subject matter by virtue of being double majors in both history (where the concepts of the discipline are taught) and secondary education (where the scope and sequence of the high school history curriculum and the nature of the subject matter are taught).

Conveying the fascinating nature of history to others requires considerable ability, knowledge, and effort. For history to be taught in an engaging manner requires teachers and students to look at history in a new light. Preparation of history teachers to be able to understand and to perform this role, therefore, is critical (Bohan & Davis, 1998). There are two closely related aspects of 'doing the discipline' of history. The first is the critical reading of texts, both primary sources and secondary accounts of the past. The second is the construction of historical accounts (Seixas, 1999, p. 328). Therefore, the primary goal of both professional development and preservice preparation needs to be the engagement of participants so that they will convey their excitement to their students; participants should be given opportunities to learn how historians conduct research, and in particular, how they evaluate the reliability of sources.

Best Practices of History Teaching Research

Best practices in history teaching engage students with both the historical understandings and historical thinking skills in the history classroom. Knowledge is viewed as being actively constructed by the learner, which, in turn, calls for a shift away from a "transmission model of teaching toward one that is more complex and interactive (Prawat and Floden, 1994, p. 37) In these model classes, students learn how historical accounts have multiple perspectives and their contributions are welcomed as part of a shared learning process.

Historical pedagogy means leading students through the processes of "doing history." As Seixas (1998; 1999) explains, without such activities, there can be no critical historical knowledge at all. The teacher must arrange for students to work with historical sources and accounts while pursuing paths in constructing new knowledge. Thornton (cited in Brophy, 2001) emphasizes the importance of choosing methods of instruction specific to the methods of history. Michael Simpson (2002) emphasizes that "[t]he use of primary sources is one of the best methods of interesting students in history because it places them directly in the role of historians" (p. 389). Constructing a lesson plan to help students understand the distinction between history (the constructed account of the past) and the past (everything that has happened) is key to best practice in history teaching.

Pedagogical Content Knowledge Research

Hertzberg, Dewey, and Shulman remind us that content separated from pedagogy is an incomplete metaphor for knowledge, and such a dichotomy can be particularly problematic. Hazel Hertzberg's (1988) historical explanation for the dualism is that "historians were cast in the role of content experts" (p. 36). The separation of 'content' and 'method' and the distance between historians and teachers were thus closely connected problems. Dewey explains that "the subject matter, or content, thus becomes inert knowledge, while pedagogy becomes a matter of its 'deliver'". The idea that mind and the world of things and persons are two separate and independent realms...carries with it the conclusion that method and subject matter of instruction are separate affairs" (1916, p.164-165).

Lee Shulman (1987) has used the term pedagogical content knowledge to describe the intersection of content and pedagogy for the teaching practices in specific content areas. Instruction that focuses both on subject-matter content as well as how students learn is an especially important element in changing teaching practice. For example, social studies teachers' ability to teach students the uses of primary sources should lie squarely in the center of their pedagogical content knowledge (Seixas, 1999, p. 311).

Learning history through investigation is a most promising means of transcending the

ubiquitous content/pedagogy dichotomy; it is in the doing of the discipline that content becomes pedagogy and vice versa. Wineburg and Wilson (1991) found that historians and high school students considered the text differently. The historians corroborated information, employed a sourcing heuristic, and contextualized documents more frequently than the students. The students accepted documents as literal bearers of factual information more commonly than did the historians. It was critical that all of this background information on both SoTL research and discipline specific research inform the redesign of the course that is the subject of the study described below.

Description of the study

The case study described here has two elements: the re-conceptualization of the course to incorporate authentic disciplinary practices and associated student learning outcomes based on the author's and others' prior research in the field; and the collection and analysis of data to determine the extent to which this course design resulted in the desired practices on the part of the students in the course.

Course Redesign and Re-conceptualization

The first step in redesigning the course was to determine course goals and student learning objectives. The purpose of the course being studied, ED 420: Secondary Instructional Design for Social Studies, is to prepare the students (or teacher candidates as they are called) for their culminating experience in the teacher education program – student teaching in a high school history classroom. The goal of the class was to have students demonstrate the authentic disciplinary practices in both the senior capstone course and in their subsequent student teaching experience.

Two important characteristics to keep in mind about the students in the class are: first, all are double majors, completing a full major in secondary education and a full major in history, where they are skilled in the process of “doing history” and historical thinking skills; and second, reflection is a fundamental part of our developmental teacher education model. Students practice this formally and informally from the first course to the last in the program and come to value it as a means of demonstrating their metacognitive processes and developmental growth throughout the program. Therefore, they were comfortable with the reflection on practice required by the SoTL research embedded in the course.

In addition to determining course outcomes, the course redesign included structuring the course activities around modeling of the authentic instructional practices and engaging students directly in the work of the discipline. In prior professional development work with teachers we found three practices in particular were effective, so they were applied to the course design. First, I directly modeled best practice (McRAH) strategies and students engaged in these strategies during class sessions. Second, students engaged in creating artifacts of practice, just as professional teachers do, including a model unit plan and lesson plans which were later analyzed in the data collection process described below. Finally, the students worked directly in collaboration with an historian in the college's History Department on the framing and sourcing of their culminating project for the course – a three-week unit plan on a topic in U.S. history. Working directly with an historian had proved essential to improving practices with the inservice teachers as well.

Research Questions

This study was a course embedded research project. Three research questions were

developed:

- 1) How did students' attitudes change toward the use of research-based best practices in secondary history teaching (McRAH strategies)?
- 2) How were the McRAH strategies actually implemented by students?
- 3) Using evidence from measuring changes in students' attitude toward and implementation of the strategies, how did outcomes match the goals set in the course redesign?

Data Collection

Two methods were used to document student outcomes: content analysis of student artifacts of practice; and a variation of the Concerns-Based Adoption Model (CBAM) originated by Hall, Wallace and Dossett (1973) at the University Texas at Austin. The content analysis was performed on all the lessons included in the three-week unit plan created for the ED 420 course, as well as on all lessons taught by the students during their subsequent 14-week student teaching experience. The CBAM instrument consists of a series of surveys and interviews designed to measure changes in attitudes and practice as teachers adopt a new instructional system. (See Appendix B) The premise of the CBAM model is that innovation adoption is a developmental process rather than a single decision-point. It is also an individual process which each innovation user experiences differently.

With CBAM, teachers' attitudes are measured as they progress along a continuum of Stages of Concern (SoC) from concerns about self to concerns about the teaching task to concerns about impact on students. This progression occurs with Levels of Use (LoU) as well. With continued use, management becomes routine and the user is able to be directed more toward increasing the effectiveness of the teaching strategy for students. While SoC focuses on the affective dimensions, LoU deals with behaviors actually demonstrated in relation to the innovation (i.e., is it actually implemented in the classroom?).

Students' attitudes and practices were examined at three developmental stages – (1) at the beginning of the course (before ED 420), (2) at the end of the course (after ED 420), and (3) at the end of student teaching. While the results reported do not reach statistical significance with only three students in the case study so far, they are presented to demonstrate the collection of evidence in the SoTL process as embedded in the course design. The final step of the process was to reflect on the results and continue to make changes as necessary to improve the course. Approval from the College's Human Subjects Research Committee was obtained before data was collected, and each student signed an informed consent form in order to participate in the project.

Data Analysis

Quantitative analysis of the LoU and SoC survey responses consisted of tallying response frequencies by rating for each listed item and rank ordering the items based on the tallies, as well as calculating percentages for each data field. Relevant data are reported in the tables below. Qualitative analysis of classroom observation data during student teaching, content analysis of students' artifact of practice, teachers' reflective comments, and open-ended interview responses of participants consisted of organizing responses into categories that matched the data collection areas.

Results

For purposes of this report, only selected results of the course embedded research project will be reported without interpreting all of the data collected. (See Tables 1 – 3) Due to the small number of subjects involved, only the general trends in the results that inform reflection on the achievement of the SoTL research goals will be explored, rather than the results more relevant to traditional teacher education research, which will be reported in the future as more students are added to the case study. The case study examined here is presented for purposes of giving an example of the SoTL process embedded in the course design.

Question #1 – *How did students' attitudes change toward the use of research-based best practices in secondary history teaching (McRAH strategies)?*

An increasing confidence level toward the McRAH strategies was measured by the Stages of Concern (SoC) surveys at each of three developmental stages of the study. (See Table 1) Attitudes rated at considerably higher levels of confidence and were more clustered at this higher level at Stage 2 compared to Stage 1. This is particularly true for use of conceptual questions, graphic organizers, and images and media. At developmental stage 3, there was a reduced level of confidence for some of the strategies. In addition, individual patterns of confidence were present for each student in the case study. The findings are similar to those of the inservice research and explanations of these patterns will be discussed in the conclusions section.

Table 1. Development of Stages of Concern Before ED 420, After ED 420 & After student teaching.(N=3)

McRAH Strategy		Negative	Concerned	Indifferent	Tentative	Confident	Excited
A. Use of Primary Documents and Document Based Questions	DS 1					2	1
	DS 2						3
	DS 3					3	
B. Historical artifact analysis	DS 1				3		
	DS 2				1	2	
	DS 3		1		1		1
C. Use of "doing history" classroom activities	DS 1		1		2		
	DS 2					2	1
	DS 3		1			1	1
D. Use of "doing history" research	DS 1				2	1	
	DS 2					2	1
	DS 3		1			1	1
E. Thematic instruction including variety of textual resources	DS 1		1			2	
	DS 2						3
	DS 3				1	2	
F. Use of conceptual questions to organize lecture material	DS 1				1	2	
	DS 2						2
	DS 3					2	1
G. Use of graphic organizers, interactive note-taking and maps to develop main concepts	DS 1				2		1
	DS 2				1	1	1
	DS 3						3
H. Use of images/Media/Multimedia /Technology as sources for historical interpretation	DS 1					2	1
	DS 2				1		2
	DS 3					1	2
I. Use of counterfactual approach (What would have happened if)	DS 1				2	1	
	DS 2				2		1
	DS 3	1				1	1
J. Use of narrative approaches including guided imagery for response	DS 1		1			2	
	DS 2				1		2
	DS 3			1		2	
K. Perspective-taking exercises:	DS 1				1	1	1
	DS 2						3
	DS 3					1	2
L. Use of familiar, familial, and community connections to propose historical links	DS 1				1	2	
	DS 2					3	
	DS 3		1			1	1

DS 1 = Developmental Stage 1 (Before ED 420)

DS 2 = Developmental Stage 2 (After ED 420)

DS 3 = Developmental Stage 3 (After Student Teaching)

Question #2 - How were the McRAH strategies actually implemented by students?

Students also showed an increased level of use (LoU) of the authentic disciplinary practices by the end of student teaching (Stage 3). (See Table 2) All twelve strategies were in use by some students compared to only nine before student teaching (Stage 2). Only one strategy (use of the counterfactual approach) was now rated at the nonuse level by two students

compared to five strategies that received these low ratings before student teaching. There was more clustering and an even spread of responses at the higher levels of use (routine or higher). Increasing refinement level use was reported, with six strategies rated at this level at Stage 2 and eleven strategies rated at this level at Stage 3. A wider range of levels of use was reported at Stage 2 compared to Stage 3. The least used strategies both before and after student teaching were counterfactual and narrative approaches.

Table 2. Development of Levels of Use After ED 420 & After student teaching (N=3)

McRAH Strategy		Nonuse	Orien- tation	Prep- aration	Mechan- ical	Routine	Refine- ment	Inte- gration	Renewal
A. Use of Primary Documents and Document Based Questions	DS 2					1	1		1
	DS 3					1	2		
B. Historical artifact analysis	DS 2	1		1		1			
	DS 3				1		1		
C. Use of "doing history" classroom activities	DS 2		1				2		
	DS 3				2		1		
D. Use of "doing history" research	DS 2				2		1		
	DS 3				1	1	1		
E. Thematic instruction including variety of textual resources	DS 2				2				1
	DS 3					1	1	1	
F. Use of conceptual questions to organize lecture material	DS 2		1			1			1
	DS 3						2	1	
G. Use of graphic organizers, interactive note-taking and maps to develop main concepts	DS 2					2			1
	DS 3						1	1	1
H. Use of images/Media/Multi media/Technology as sources for historical interpretation	DS 2				1	1			1
	DS 3						2	1	
L. Use of familiar, familial, and community connections to propose historical links	DS 2				2		1		
	DS 3				1		2		

DS 2 = Developmental Stage 2 (After ED 420)

DS 3 = Developmental Stage 3 (After Student Teaching)

Content analysis of the artifacts of practice including student unit plans created in the capstone course and student teaching lesson plan binders documented specifically the increased use of the strategies. (See Table 3) The most often used strategies in the unit plans were: perspective taking exercises; graphic organizers; "doing history" classroom activities; and use of primary documents and Document Based Questions. The most often used strategies during student teaching were: use of media and technology; graphic organizers; "doing history" classroom activities; and use of primary documents and Document Based Questions.

Narrative comments collected from each student at Stages 2 & 3 confirmed these patterns. At Stage 2 students comments included sentiments that “[s]tudents need to experience history as dynamic, dimensional, and debatable. By incorporating a variety of teaching methods, resources that represent a range of perspectives, and accommodations for different learners, history can appeal to and become meaningful to the students... students need to develop their historical thinking skills. Practicing writing, analyzing, discussing, and interpreting, among other skills, allows students to think like and become historians. Additionally, a wide range of sources, both primary and secondary, are needed for students to have a well-rounded view of history and the topic of study. It is important that students recognize bias and perspective in resources. Also, it is critical for them to realize that not all of the issues in history are resolved just because they are in the past. By allowing students to study history in an exploratory manner, students will find history more engaging and will find more connections with it.” “Many students would excel if given the opportunity to analyze, interpret, and evaluate... [my unit] stress[es] the importance of interpreting documents with perspective in mind...” “One of the main skills that will be developed during this unit is document analysis. Students will be looking at primary documents ... Students will also be developing their historical thinking skills by discussing perspective and bias.”

Table 3. Actual Use of McRAH Strategies(N=3)

Strategy	Use in Senior Unit Plans (DS 2)	Use in Student Teaching (DS 3)
A. Use of Primary Documents and Document Based Questions	14	30
B. Historical artifact analysis	6	7
C. Use of “doing history” classroom activities	17	26
D. Use of “doing history” research	10	10
E. Thematic instruction including variety of textual resources	7	12
F. Use of conceptual questions to organize lecture material	12	11
G. Use of graphic organizers, interactive note-taking and maps to develop main concepts	18	34
H. Use of images/Media/Multimedia/Technology as sources for historical interpretation	11	48
I. Use of counterfactual approach (What would have happened if)	3	1
J. Use of narrative approaches including guided imagery for response	2	4
K. Perspective-taking exercises:	19	10
L. Use of familiar, familial, and community connections to propose historical links	2	6

Question #3 - Using evidence from measuring changes in students’ attitude toward and implementation of the strategies, how did outcomes match the goals set in the course redesign?

Based on the increasingly positive attitudes students reported and levels of use of all the strategies through the developmental stages, the goals of the course redesign were largely achieved. Students were able to create lessons and units of study incorporated the history teaching strategies taught in the course (the “McRAH strategies”) and demonstrate these authentic disciplinary practices in lessons taught. They were also able to explain the key concepts of pedagogical content knowledge for history teaching. The students’ patterns of adoption of the new strategies were similar to the patterns demonstrated by the inservice teachers’ behavior that formed the basis for the course redesign.

Conclusions

Course Embedded Research Project Conclusions

Students expressed an increasingly strong sense of confidence and excitement about all of the strategies by Stage 2. They felt particularly positive about the use of primary documents, thematic instruction, perspective-taking exercises, "doing history" classroom activities and research, using conceptual questions, graphic organizers, and images and media. These ratings were also based on a more realistic, substantive level of development in the adoption process after experience with developing unit plans and lesson plans, whereas the Stage 1 responses were based on incomplete knowledge of best practices of history instruction. After additional authentic practice with implementation of the strategies at Stage 3, the levels of confidence both increased and decreased. In some cases the students' level of confidence decreased after having more realistic experiences with a given strategy and the realization that continued practice and refining of the strategy is necessary. This was the case with the most foundational of the McRAH strategies – using of primary documents, historical artifact analysis, "doing history" classroom activities, and thematic instruction.

In terms of the adoption or use of the McRAH strategies, all but one of the strategies (use of counterfactual approach) was being used at Stage 3 by all students to some extent. The increasing level of use of strategies indicated that students were now more comfortable with a strategy in its basic form and were ready to make refinements. Only one strategy (use of graphic organizers) was at the highest level (renewal) at Stage 3, while seven strategies were listed at this level at Stage 2. High numbers for renewal at Stage 2 could indicate that the students focused on the language "seeking major modifications of strategies," (See Appendix B) meaning that they had not yet really adopted the strategy, but were still modifying it and experimenting with it. Lower numbers for renewal at Stage 3 may mean that the students had adopted the strategy more routinely, and now saw modifications they were making in it as refinement "varying the use of the strategy to increase the impact on students," rather than as "seeking major modifications of strategies." The changes in teaching practices were in line with the practices modeled during the course and supported by the work with the historian.

The students' own discussion of the unit plans constructed in Stage 2 reinforced the idea that they understood the key concepts of the course in terms of authentic disciplinary practices. Comments included: "Historians have come to their own conclusions through the examination of primary sources, secondary sources, and reflection. Accordingly, students [should] discover their opinions about the unit in the same manner. Additionally, students [should] use historical thinking skills, such as recognizing bias, perspective-taking, and analysis"; "Students will be motivated by the controversial nature of the unit. If my students approach the history I introduce as critical academic historians, then it will help guide them to my enduring understandings." The relation of academic discipline and school subject matter is clearly articulated here.

Interviews conducted following Stage 3 further indicated positive attitudes and understanding of the process. When asked "What does 'doing history' (the basis of authentic disciplinary practices in history education) mean to you?", responses included: Getting into history; becoming your own historian; investigating to come to your own conclusions, answering the mysteries of history, as history is not final; looking for your own interpretations; taking uninterpreted historical material and interpreting them and coming to larger conclusions; being actively involved with history content. Student comments

further revealed that they had implemented the strategies and that they saw the positive impact of approaching their subject matter as an extension of their discipline. Students commented: I use [McRAH strategies] without even thinking they are McRAH strategies; they are just how I teach now; [I] unconsciously used them often – when looking back, I realized they were used; I do more “doing history” assignment, primary document analysis, and less textbook work than my colleagues; I am more comfortable with them now that I have had more time and opportunities to use them; I am more comfortable in terms of my fluency with integrating them into plans; I have confidence with how successful they will be; and I feel they are best practice for history instruction.

The individual developmental nature of the students’ change in practices was reinforced by the fact that certain of the McRAH strategies were put into practice more than others. In addition, each of the three students in the case study showed an individual pattern of adoption. Initially, the wide range of levels of use from nonuse and orientation for five strategies to renewal for seven strategies reinforces the idea that adoption of educational innovations is an individual process. Differences among the three students in the case study that shaped these individual patterns of use include personality differences among the students, differences in educational background and school experiences, differences in field experiences during the teacher education program, and, most importantly, different settings for student teaching placements. The three different schools in which students completed their student teaching had variations in curriculum and instructional philosophies and requirements which impacted the students’ abilities to put into practice all of the strategies as they might have chosen to do if no restrictions were placed on them. Those strategies that were put into practice most overall were use of media and technology; graphic organizers; “doing history” classroom activities; and use of primary documents and Document Based Questions. These were also the strategies with which the schools and cooperating teachers used for these student teaching placements were most comfortable. Not all strategies were adopted by all students. However, the fact that the students were determined to implement the strategies during student teaching is significant given the restrictions placed on them by their cooperating teachers. Students continued to implement the strategies in Stage 3, despite these obstacles, while the implementation in Stage 2 would be expected because part of the assessment of the unit created for the course was based on the appropriate use of the strategies. This result is in line with the developmental nature of the adoption of changes in teaching, in that individual students could only be expected to make so many changes in practice over the short period of the study.

These attitude and adoption patterns mirror those of the inservice teachers (Ragland, 2007). Elements of the new course design that were taken from successes in the inservice project included: impact of direct modeling of best practices strategies; improved collaboration with an historian to create more authentic unit plans; opportunities for practical application of the strategies; and improved feedback and higher standards expected for implementation of strategies. Documented improvements in student learning outcomes included model unit plans that were more authentic with better use of best practices in discipline and students’ attitudes of understanding and support for authentic disciplinary practices which led to implementation during student teaching.

In conclusion, those authentic disciplinary strategies that had been adopted and maintained to the greatest extent were those that were: emphasized most by the instructor and historian during the course; were easiest for students to implement directly into their own individual classrooms given the context of their student teaching placement; and were the strategies with which the students felt most comfortable. Those strategies that were not

implemented to a large extent were also those that were not demonstrated, modeled, and focused on to as great an extent during the course. More specifically, the goals of the McRAH strategies as the focus of the course stressed engaging students in “doing history” as a historian and being able to see history as a dynamic body of knowledge created from historical interpretation of primary sources. These concepts emerged as those that were most embraced by the students.

SoTL Research: Course Re-conceptualization Conclusions

This study exemplified the “what works” type of SoTL research design in that evidence was gathered about the effectiveness of the approach of using authentic disciplinary practices to frame course curriculum. This research also used a mix of methods, both quantitative and qualitative, which is also characteristic of this type of research and provides more evidence than a single approach.

The study also followed the four steps of SoTL research outlined by Huber and Hutchings (2005). First, framing questions about student learning served as a catalyst to the research, as described above. Secondly, ways were devised to gather and explore evidence on these questions. These methods included surveys, interviews, and artifact analysis. Most people inquiring into teaching and learning try to use the normal procedures in their discipline, and the use of a recognized research tool such as the CBAM process served to provide sound evidence from which to begin to draw conclusions about student learning outcomes as framed in the research questions. The methods also stem from the discipline, as the use of small case studies and content analysis of artifacts of practice are accepted methods in teacher education research. The methods used matched the questions asked. Third, insights based on previous research were carried out and refined in the classroom by a faculty member looking at her own practice. This process clearly showed the effective use of reflective critique of the course redesign work, as well as the importance of modeling reflection as a part of best practice in teaching. Comparison of the preservice results to inservice results also helped the process so the scholarship itself could be improved. Finally, by presenting preliminary findings of this work at a national conference (SoTL Commons Conference, November 2007) as well as through this publication, the knowledge gained from this project is being shared publicly for others to adapt and use.

Implications & Applications

This study suggests that there are benefits of designing a course around traditional research findings and authentic disciplinary practices. It also suggests there is value to embedding SoTL research into the course design as an objective way to measure the success of the course’s outcomes. Using accepted processes of measurement helps support subsequent changes made to improve teaching and learning. The process reinforces the importance of documenting all teaching practices so that opportunities for systematic research and reflection are available. It provides sound evidence for the benefits of reflection on the teaching and learning process – a practice that needs to be routinely embedded into teaching at the college level.

In terms of application of this work to other disciplines, methods of inquiry will vary as much as the methods of teaching students to understand the substance and syntax of diverse fields. However, some broad general principles do remain that hold across problems, topics, issues and domains (Huber & Morreale, 2002) The process of thinking

about your discipline and what the authentic disciplinary practices are for that discipline can be undertaken in any field. Each discipline can embed these in course design and can appropriately measure whether the students are implementing these practices. As Huber and Morreale (2002) point out, it is in this borderland across the fields that scholars from different disciplinary cultures come to trade their wares – insights, ideas, and findings – even though the meanings and methods behind them may vary considerably among producer groups. (p. 2-3). While this case study is clearly situated within the discipline of teacher education, it also crosses the border into the discipline of history – as does the very work it investigates. Secondary history education is a cross disciplinary field that brings in the knowledge and skills of both history and education as they intersect in the area of historical pedagogical content knowledge. I believe this process will be helpful for those in all fields as they discover commonalities and what they can learn from the questions, methods, and styles of presentation discussed here to bring these ideas into their own disciplines and engage students more effectively with authentic disciplinary practices.

Future Directions and Areas for Exploration

While this report has provided a small case study sample of evidence-based conclusions and suggestions for course design, there are limitations that must be acknowledged. No study can investigate everything at once. The key place to start is for teachers to investigate the problems that matter most to them. This study was designed to investigate the effectiveness of using authentic disciplinary practices to frame the curriculum and student learning outcomes because this was felt to be fundamental to the goals of this course, as well as being a transferable process to other disciplines. While the case study was very small in size, the trends of the results are worth sharing, and it is important to continue this work even with these limitations, and encourage scholars in other fields to apply this model.

In terms of continued modifications to the course, I want to continue to improve the process of collaboration with the historian on the development of students' unit plans and continuing the historian's work with students during the phase of student teaching. I want to continue to refine my emphasis on modeling the McRAH strategies by including modeling of some of the lesser used strategies, such as the narrative and counterfactual approaches. I also plan to add more collaboration with inservice teachers who use best practices in their classrooms as additional models for the candidates as part of the clinical observation component of the course where students observe high school history teachers and reflect on their use of the strategies. Finally, in terms of future research, this study is continuing with two new cohorts of students. I also intend to continue to follow students through inservice practice to investigate the sustainability of practices. Evaluating the results of this study will certainly lead to improved teaching of this course in the future.

In general, this study suggests the importance of using a systematic, discipline-based approach to evidence-based reflection for the improvement of teaching and course design. While it is not possible in classroom-based research to attain the level of control, isolation of variables, and precise methods which are so powerful a tool in the social sciences, SoTL methods are beginning to produce good descriptive work, which more than precision, may be what is needed (Huber & Morreale, 2002). Specific data can better inform ongoing redesign than informal teacher reflection which could be inaccurate, and collecting both quantitative and qualitative data can be effective. SoTL can help one's teaching to become more effective and student learning to be more significant and enduring. This work emphasizes that teaching is a serious intellectual activity that can be both personal and

collegial - an attitude that is adopted for the purpose of improving student understanding. Ultimately, acceptance for this field of scholarship will come when it is seen as addressing problems other disciplines care about. We are already there in the field of teacher education, and by applying this model for improving learning outcomes by engaging students with authentic disciplinary practices this can be achieved in other fields as well.

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Appendix A

McRAH (Model Collaboration: Rethinking American History) Instructional Strategies
A. Use of Primary Documents and Document Based Questions
B. Historical artifact analysis
C. Use of "doing history" classroom activities (contextual analysis to question historical interpretations; present more than one possible cause for historical events and have students evaluate; use historical fact as evidence for arguments; student presentations of interpretations)
D. Use of "doing history" research assignments (where historical interpretations are questioned, students research for facts and counterfactuals to build an argument for why historical events took place as they did)
E. Thematic instruction including variety of textual resources
F. Use of conceptual questions to organize lecture material
G. Use of graphic organizers, interactive note-taking and maps to develop main concepts
H. Use of Images/Media/Multimedia/Technology as sources for historical interpretation
I. Use of counterfactual approach (What would have happened if)
J. Use of narrative approaches including guided imagery for response
K. Perspective-taking exercises: role-plays, scenarios, inclusive subjects and conditions, present-minded responses put in historical context, impact of individuals on history
L. Use of familiar, familial, and community connections to propose historical links

Appendix B

Stages of Concern (SoC) *	
1	Negative
2	Concerned
3	Indifferent
4	Tentative
5	Confident
6	Excited

Levels of Use (LoU)*		
0	Nonuse	Little or no knowledge, no involvement, or use of strategy
1	Orientation	Have explored or is exploring the value and demands of using the strategy
2	Preparation	Preparing for first use of the strategy
3	Mechanical Use	Focusing most effort on the short-term, day-to-day use of the strategy; somewhat disjointed and superficial use
4	Routine	Use of the strategy is stabilized; few if any changes are being made in ongoing use
5	Refinement	Varying the use of the strategy to increase the impact on students
6	Integration	Combining own efforts to use the strategy with related activities of colleagues
7	Renewal	Seeking major modifications of strategies to achieve increase impact on students and explore new goals for self

* Adapted from: Procedures for Adopting Educational Innovations/ CBAM Project, R & D Center for Teacher Education, The University of Texas at Austin, 1974.