

**How Do Pre-service Social Studies Teachers Implement Problem-based Historical
Inquiry Strategies – A Scenario-based Survey Study**

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RUNNING HEAD: Scenario-Based Survey

Abstract

A scenario-based survey was administered to 23 pre-service social studies teachers to examine their knowledge regarding problem-based historical inquiry (PBHI) teaching strategies. The instrument was administered once at the beginning of their teacher education program, and again at the end of their program. Results of data analysis suggest that pre-service teachers were able to recognize and incorporate core components of the PBHI curricular framework into the scenario-based activity more effectively on the post-survey than on the initial survey. In addition, participants were able to better articulate their reasoning for their instructional choices on the post-survey, and their reasoning tended to align with the core components of PBHI. Implications for the use of scenario-based instruments to measure knowledge of curricular innovations are also discussed.

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Introduction

In most high school history classrooms, problem-based curriculum reform has not been widely accepted and adopted by teachers (Onosko, 1991; Shaver, 1996; Shaver, Davis, & Helburn, 1979; Zukas, 2000), despite the fact that social educators have advocated that history instruction move away from the goal of mere retention of historical information. In order to increase the integration of problem-based inquiry into classroom practice, a model specifically designed for social studies and history classrooms has been developed. This model, entitled problem-based historical inquiry (PBHI), focuses instructional activities on the examination of persistent societal problems in a particular historical context. As Brush and Saye (2006, p. 1-2) state:

In the PBHI curricular framework, each unit of study begins with the explicit posting of a persistent societal problem that provides the motivating context for disciplined inquiry. Unit activities engage students in PBHI to explore the featured problems as it is instantiated in the particular historical period of study. In the process, students develop foundational knowledge, clarify key concepts, and confront pertinent ethical issues. As a culminating unit activity, students propose problem solutions and defend them with historical evidence.

Integrating PBHI in Pre-Service Teacher Education

The PBHI curricular design we present to our pre-service teachers incorporates specific research-based practices and components that are necessary for successful

implementation of PBHI units and activities. These include authenticity of experience, incorporation of multiple intelligences, and effective collaboration (Saye & Brush, 2004). Researchers suggest that the authenticity of the learning experience can have a major positive influence on student engagement (Land, 2000; Newmann, Wehlage, & Lamborn, 1992; VanSickle, 1991). Throughout their teacher education program, pre-service teachers need opportunities to explore, develop, implement, and evaluate curricular activities that incorporate features designed to promote authenticity (see Table 1).

Research also suggests that students may fail to become engaged when placed in circumstances that do not provide them with reasonable opportunities to be successful (Doyle, 1983). Often school tasks reward only those students who can demonstrate their knowledge either linguistically or logically. Gardner's (1999) theory of multiple intelligences proposes that learners should be provided with opportunities to demonstrate their knowledge in alternative ways (other than linguistically or logically). Thus, pre-service teachers need opportunities to explore a variety of authentic assessment strategies, and incorporate assessment tasks into curricular activities they develop and implement that require collaborative effort and call for a wide array of student abilities in order to produce a successful final product.

Finally, researchers believe that implementing collaborative tasks in classrooms encourage broader engagement, healthier classroom environments, and may help students succeed in developing richer and more complex models of reality than they might do individually (Cohen & Benton, 1988). Thus, pre-service teachers need to be provided with opportunities to explore the combination of collaborative tasks with other PBHI

strategies that promote authenticity (e.g., various historical roles, engaging with primary source documents, constructing arguments and defending positions).

Table 1. PBHI Curriculum Design (from Saye & Brush, 2004).

<p>Authenticity</p> <ul style="list-style-type: none"> • Central focus on meaningful motivating problem • Culminating task and standards for evaluation are known in advance • Students assume roles of historical decision makers • Rich primary documents feature multiple perspectives • Students author and publicly defend problem solutions
<p>Multiple Intelligences/Collaboration</p> <ul style="list-style-type: none"> • Complex collaborative task structure facilitates multiple intelligences and collective rationality

Assessing Knowledge of PBHI

However, assisting pre-service teachers with conceptualizing PBHI strategies and implementing those strategies in classrooms poses numerous challenges to teacher educators. Designing PBHI activities requires teachers to think differently about introductory unit activities, culminating student assessments, and classroom activities that engage learners and provide them with the foundational knowledge necessary to successfully complete the assessment activities (Saye & Brush, 2004). For pre-service teachers, there are potentially multiple aspects of the PBHI curricular design that are difficult for them to grasp. To this point, though, we have had little data to assist us with determining the knowledge level of pre-service teachers regarding problem-based inquiry, and no measurement devices for acquiring those data. In addition, we currently lack the tools to determine the effectiveness of curricular practices within our pre-service teacher education programs designed to provide future teachers with skills and

experiences that will assist them in conceptualizing PBHI teaching practices, and potentially implement those practices in their future classrooms.

By developing an instrument that attempts to measure knowledge of PBHI curricular practices, we may be better able to customize the activities we implement in our teaching methods courses, while at the same time providing an assessment tool that other researchers may be able to use to determine the effectiveness of PBHI curricular interventions in a variety of history and social studies contexts. But developing an instrument to measure an individual's knowledge of problem-based inquiry is more difficult than developing more standard instruments such as attitudinal surveys or observation forms. For measuring this type of knowledge, researchers have recommended assessments that provide content-specific scenarios and ask participants to complete a task based on the scenario. This form of assessment has been successfully implemented in fields such as science (Cooper, Shepardson, & Harber, 2002), business (Callanan & Perri, 2006), ethics (Snow & Bloom, 1996), and even computer security procedures (Barrett, Garrety, & Seberry, 2006). However, the use of scenario-based instruments to measure learners' knowledge of problem-based inquiry strategies (particularly in social studies) appears to be limited.

Purpose of Paper

The purpose of this paper is to present an assessment instrument designed to measure pre-service social studies teachers' knowledge of PBHI strategies, and to present findings from the initial longitudinal implementation of the instrument with 23 pre-service social studies teachers at one southeastern university. Pre-service teachers

completed the survey instrument at the beginning of their teacher education program, and again at the end of their student teaching experience.

Specifically, this paper will present an overview of the scenario-based instrument, findings from implementation of the instrument with an initial cohort of pre-service teachers, and a discussion of participant responses from their initial completion of the survey to their final completion of the survey prior to the end of their program. Finally, implications of the results for preparing pre-service teachers to integrate problem-based inquiry strategies in their teaching will be discussed.

Method

Participants and Setting

Participants included 23 students enrolled in a secondary social studies program at a large southeastern university. Ten of the participants were male, and 13 were female. All participants were less than 25 years of age. In terms of ethnicity, all but two of the participants classified themselves as “white (other than latino).” All participants stated that they used a computer every day.

Participants were enrolled in a two-year teacher education program, which (in addition to 45 hours of pre-requisite social studies content courses) included 11 hours of teaching methods/practicum courses, and 12 hours of student teaching. The philosophy and conceptual framework of the program is built upon a vision of the social studies consistent with that stated by the National Council for the Social Studies:

“Social studies is the integrated study of social sciences and humanities to promote civic competence. . . The primary purpose of social studies is to help

young people develop the ability to make informed and reasoned decision for the public good as citizens of a culturally diverse, democratic society in an interdependent world” (National Council for the Social Studies, 2008, p.1).

The program itself uses persistent societal issues as an organizing principle for integrating the strengths of each programmatic tradition into a teaching practice that promotes disciplined inquiry and civic competence. In addition, all courses in the program proceed from a PBHI perspective and curricular framework with the hope that pre-service teachers will adopt these models in their own classrooms. Pre-service teachers in this program learn to use the modes of inquiry and concepts of social sciences to search for and interpret factual evidence to be used in decision making. Finally, pre-service teachers master the skills and habits of mind for identifying and evaluating conflicting values and alternative courses of action and their likely consequences in order to make reasoned, informed decisions from within an examined, qualified value framework.

Design and Data Sources

The design of this study can generally be considered a cohort survey research design, in which the same participants complete a survey instrument on multiple occasions in order to determine differences in responses to various items over the course of an intervention (Fowler, 2002). Participants were asked to complete the survey instrument at the beginning of their teacher education program (their initial activity in the program), and to complete the same survey as they completed their culminating student

teaching experience. The data source for this study included participants' responses to the survey items on those two occasions.

Survey instrument. The instrument itself had three sections. The first section (containing 11 items) asked participants to provide background information include age, gender, ethnicity, academic progress, and computer experience. The second section (containing 15 items) asked participants to provide more detailed information regarding their technology expertise. Questions asked participants to discuss their experience with word processing, spreadsheets, presentation tools, e-mail and other online communication resources, web searching and browsing, and website design.

The final section of the survey included questions based on the scenario of teaching a 10th grade US History class focusing on the Reconstruction following the U.S. Civil War. The participants were asked to select instructional activities including identifying learning objectives, arranging introduction activity to the content, providing resources for students' active knowledge construction, and assessing student learning outcomes. The various instructional activities were included based on both traditional classroom practices and classroom practices consistent with the PBHI curricular framework. Open-ended questions were asked for participants to provide rationales for their selected instructional activities in the scenario. Refer to Appendix A for a copy of the survey instrument.

Procedure

Approximately one week prior to the first class meeting of their initial course in the teacher education program (either the Spring of 2006 or the Summer of 2006), participants were sent an e-mail by the instructor of their class requesting that they

complete the survey. The email contained a link to the survey instrument. Participants were asked to complete the survey prior to their first face-to-face call meeting.

Approximately one week prior to the end of their student teaching experience (the Fall of 2007), participants were sent an e-mail requesting that they complete the survey again. Once again, the e-mail contained a link to the online survey instrument.

Participants were asked to complete the survey prior to their completion of student teaching.

Data Analysis and Results

Numerical data from the survey were analyzed using descriptive statistical procedures. Participants' initial responses to the survey were compared to their responses as they were completing their student teaching experiences. In addition, participants' responses to open-ended questions were analyzed qualitatively for further explanation of their beliefs and choice of instructional activities in the scenario. Since this paper focuses on participants' views on the implementation of problem-based activities in their future classrooms, only results of the final section of the survey are presented.

Comparison of Components of Scenario

As stated above, the scenario-based component of the survey asked participants to rank various aspects of a unit focusing on the Reconstruction period following the U.S. Civil War. Participants were asked to provide views on four specific components of the lesson: the objectives for the lesson, the introductory activity for the lesson, methods for ensuring active student involvement in the lesson, and culminating assessment activities for the lesson. The results for each of these components are described below.

Objectives. Participants were asked to rank six learning objectives in order of importance. These learning objectives included:

1. Students will explain the influence the Reconstruction period had on today's political structure
2. Students will use primary documents to identify major controversies surrounding Reconstruction policies
3. Students will describe the relationship between the Reconstruction period and the Civil War
4. Students will construct an argument that reflects the perspective of a figure from the Reconstruction period
5. Students will explain the reasons for the Federal initiatives implemented during Reconstruction
6. Students will use historical evidence to defend a position on the desirability and effectiveness of Reconstruction policies

Responses were aggregated to determine the percentage of participants who selected each objective as either their first or second choice. A summary of responses is provided in Table 2.

Table 2. Percentage of participants who ranked each learning objective as first or second.

<u>Learning Objective</u>	<u>Pre-Survey %</u>	<u>Post-Survey %</u>
LO 1	52.2	34.8
LO 2	34.8	34.8
LO 3	52.1	26.1
LO 4	8.7	26.1
LO 5	34.8	13.0
LO 6	17.4	65.2

These data suggest that participants modified their rankings of the possible learning objectives from the time they first completed the survey at the beginning of their program to when they completed the survey at the end of the program. When they initially completed the survey, over half of the participants selected Learning Objective 1, “Students will explain the influence the Reconstruction period had on today’s political structure” and/or Learning Objective 3, “Students will describe the relationship between the Reconstruction period and the Civil War” as the objectives they considered to be most important to include in the Reconstruction Unit. Only 17% of participants ranked Learning Objective 6, “Students will use historical evidence to defend a position on the desirability and effectiveness of Reconstruction policies” as their first or second choice.

In contrast, over 65% of participants selected Learning Objective 6 as their first or second choice on the post-survey, with just under 35% selecting Learning Objective 1 and/or Learning Objective 2 (“Students will use primary documents to identify major controversies surrounding Reconstruction policies”). In addition, no participants ranked Learning Objective 6 as the most important objective to include when they initially completed the survey – as opposed to over 50% of participants choosing Learning Objective 6 as the most important objective to include when they completed the post-survey.

Examination of participants’ open-ended rationales for the selection of their highest-ranked learning objectives also revealed some differences between the initial survey and the post-survey. On the initial survey, two general themes emerged from the rationale statements. First, participants felt that it was very important for students to understand how past events influenced present-day issues and political structures. Over

40% of participants specifically stated that this should be one of the most important goals of the unit. For example, one participant stated “I chose [learning objective] #1 as most important because I think it is very important to understand and learn how history can affect our lives many years after the fact.” Another participant stated, “...it is important for students to be able to tie in the knowledge and events of the past to what is happening in today’s society because everything in the past has had some effect on the outcome of the world today and what it will be in the future.”

The second theme related to acquiring broad knowledge about the Reconstruction Period. Participants felt it was very important for students to understand “what the Reconstruction period was about and why it took place following the Civil War.” Over 50% of participants made reference to the need for students to gain this knowledge. Examples of participant statements included: “...10th graders need to first get a solid foundation of information about the Reconstruction period before they can handle [objectives] 4,5, and 6”, “I believe that it is important for the students to know why certain events happened in history and why they came about”, and “I think that is the most basic aspect of the Reconstruction period to cover: what Reconstruction was, and how it came about after the war.”

On the post-survey, however, different themes emerged from participant responses. The most prevalent theme dealt with the importance of students being able to construct an argument and defend that argument with evidence. Over 60% of participants stated that this should be one of the most important goals of the unit. One participant stated, “I think this is important because it allows students to form their opinions about historical events based on evidence and helps them to develop reasoning skills.” Another

participant responded, “The first objective [objective 6] would be the central focus of the whole unit. I would want the kids to examine the pros and cons of these policies, assess their value, and defend/criticize from different perspectives.”

A second theme focused on the importance of having students use primary sources in order to acquire multiple perspectives on an historical issue. Over 56% of participants stated that this was important. As one participant stated: “...I feel that students only understand the controversy of the Reconstruction era by examining the actual documents using historical empathy...”. Another participant said, “Using primary documents to identify major controversies helps students to grasp the climate of the time period under study.” Another student stated a similar belief: “I think it is important to analyze primary documents in order to teach students the importance of first hand accounts and to explain to students that the further the documents are removed from the time/event the less credible they will be.”

Introductory strategy. Participants were asked to rank seven possible introductory strategies in order of how likely they would use them in their Reconstruction unit. These introductory strategies included:

1. Ask students what they know about the Reconstruction period
2. Connect the historical topic to students’ own interests and experiences
3. Present a general overview of important events that will be covered in the Reconstruction unit
4. Connect Reconstruction to events studied in the previous unit
5. Have students complete a pre-test to determine their general knowledge of the Reconstruction period
6. Connect Reconstruction to broader historical themes or issues

7. Explain to students how their understanding will be assessed at the end of the unit

Responses were aggregated to determine the percentage of participants who selected each introductory strategy as either their first or second choice. A summary of responses is provided in Table 3.

Table 3. Percentage of participants who ranked each introductory strategy as first or second.

<u>Introductory Strategy</u>	<u>Pre-Survey %</u>	<u>Post-Survey %</u>
IN 1	39.1	47.8
IN 2	39.1	73.9
IN 3	43.5	13.0
IN 4	34.7	20.4
IN 5	30.4	8.7
IN 6	13.0	21.7
IN 7	26.1	4.3

As with the learning objectives, participants' responses indicate that the introductory strategies they most preferred changed from the time they first completed the survey at the beginning of their program to when they completed the survey at the end of the program. In the initial survey, participants' preferences regarding the introductory activity seemed to be spread out across all of the possible choices, with 43% of participants selecting Introductory Strategy 3 ("Present a general overview of important events that will be covered in the Reconstruction unit"), 39% preferring Introductory Strategy 1 ("Ask students what they know about the Reconstruction period") and/or

Introductory Strategy 2 (“Connect the historical topic to students’ own interests and experiences”), and 35% choosing Introductory Strategy 4 (“Connect Reconstruction to events studied in the previous unit”). In fact, only Introductory Strategy 6 (“Connect Reconstruction to broader historical themes or issues”) was a top choice for fewer than 25% of participants.

Participants’ responses on the post-survey were more focused in terms of preferences. Nearly 74% of participants selected Introductory Strategy 2 as their first or second choice (in fact, nearly 60% selected it as their first choice), and nearly 48% identified Introductory Strategy 1 as one of their top preferences. Interestingly, only 13% of participants selected Introductory Strategy 3 as one of their top choices – the strategy that was preferred by the highest percentage of participants on the initial survey.

Examination of participants’ rationales for the selection of their preferred introductory strategies once again revealed some differences between the initial survey and the post-survey. As with the overall rankings, the discussions of the reasoning for selecting the introductory strategy tended to be widespread and varied. However, one general theme was present. Over 52% of participants stated that they thought it was important to assess the current knowledge level of their students prior to teaching new content – either informally (by asking students to discuss what they already knew about Reconstruction) or formally (via a pre-test). They believed this would assist them in planning and refining their lessons. As one participant stated, “Of the choices give, I would probably give the students a pre-test in order to see how much each student knows and to see where I will need to focus my lectures.” Similarly, a participant stated, “I think that students should be presented with a pre-test in order to determine what they know

about the reconstruction and what needs to be taught in further depth.” Another participant responded, “Asking students about their current knowledge of the Reconstruction would give me a good idea about where to start my introduction about this period.”

One very strong theme emerged from responses on the post-survey – the importance of making the information relevant by connecting it to students’ experiences. Nearly 70% of participants stressed the importance of finding methods of relating the topic of the unit to students’ own experiences while introducing the unit. Their main reasoning for this strategy was that it would potentially increase student interest and engagement in the topic itself, and make the topic more meaningful to students. For example, one participant stated “...it’s a good idea to connect historical topics to students’ own interests and experiences because it increases the likelihood that they’ll get involved and become interested in the topic.” Another participant responded, “I think that it is important to connect historical events to students interests in order to get students fully engaged in the lesson.” Finally, one participant posited: “I feel that the only way to grab students attention is to relate the past to what they’re going through today. I think that too many teachers fail to make the subject interesting and therefore lose a lot of the students due to their teaching style.” Interestingly, only one participant discussed the use of a pre-test to gauge students’ pre-existing knowledge as one of their preferred introductory activities.

Actively involved in developing knowledge. Participants were asked to rank five different types of historical resources in order of how likely they would use them to

promote students’ active involvement in developing knowledge about Reconstruction policies. These resources included:

1. Accounts of Reconstruction from three different high school history textbooks
2. An account of Reconstruction from an on-line encyclopedia such as MSN Encarta
3. An account by an historian that explains Reconstruction policies and their results
4. Several official government documents from the Reconstruction period such as the Freedman’s Bureau Act of 1865
5. Two to three primary source documents such as newspaper editorials or letters that differ in the judgments they make about the effectiveness or desirability of Reconstruction policies

Responses were aggregated to determine the percentage of participants who selected each resource as either their first or second choice. A summary of responses is provided in Table 4.

Table 4. Percentage of participants who ranked each resource as first or second.

Resource	Pre-Survey %	Post-Survey %
RE 1	13.0	8.6
RE 2	8.6	8.6
RE 3	34.8	13.0
RE 4	56.5	78.3
RE 5	86.9	91.3

Unlike the first two sections of the survey, participants’ preferences for the various resources provided to them were fairly consistent from the responses on the initial survey to the responses on the post-survey. In both instances, participants overwhelmingly preferred to use Resource 5 (“Two to three primary source documents

such as newspaper editorials or letters that differ in the judgments they make about the effectiveness or desirability of Reconstruction policies “) to promote active involvement among their students, with Resource 4 (“Several official government documents from the Reconstruction period such as the Freedman’s Bureau Act of 1865”) as the next-highest percentage. There was little enthusiasm for utilizing Resource 1 (“Accounts of Reconstruction from three different high school history textbooks “) or Resource 2 (“An account of Reconstruction from an on-line encyclopedia such as MSN Encarta“) among participants during either the initial survey or the post-survey.

Examination of participants’ justifications for choosing the various resources available revealed similar reasoning in both the initial survey results and the post-survey results. Participants were strongly in favor of using primary sources and historian accounts on both surveys. On the initial survey, 78% of participants specifically mentioned the importance of the use of primary sources and actual historic artifacts in their lessons. Several reasons for using these types of resources were provided, including “...the use of primary documents allows the students to read something that came from that exact period and exactly what the people were thinking and feeling at the time”, “primary sources...are more substantial evidence and more reliable than sources written by present-day historians”, “ I thought [primary sources] would be the best at grabbing the student’s attention and interest”, and “[primary sources] let students see varying opinions, which will aid them in formulating their own opinions concerning Reconstruction policies.”

On the post-survey, all but two of the participants (91%) specifically stated that their preference would be to use primary source documents in their units in order to

actively involve students. Participants' written justifications for their choices were similar to those on the initial survey, but their reasoning was much more specific. For example, as opposed to discussing how primary sources to help students understand how people in the past were "feeling" at the time (as mentioned in the initial survey), participants specifically discussed how primary sources could foster historical empathy among students. For example, one participant stated "[Primary sources] will allow the students to gain historical empathy by examining the writings of people in the time period." Another participant wrote: "Primary sources are a great tool. They help students develop historical empathy and improve their reading skills...". Participants also discussed the importance of authenticity, and how authentic documents can help engage students in unit activities. For example, participant comments included: "...primary accounts are always a great way to teach and show students the past. It also helps them feel more connected to the past which helps to engage them", and "I like the idea of using primary documents because I think they lend a sense of authenticity to the lesson because they came from real live people."

Assessment. In the final section of the survey, participants were asked to select the assessment strategy (or strategies) they would use in their unit. As opposed to ranking the various assessment strategies in order of preference, participants were allowed to select up to three of the assessment strategies provided to them that they felt they would use in their unit. The five possible assessment strategies provided included:

1. An objective test of student knowledge of Reconstruction events and issues
2. An essay test in which students evaluate the desirability and effectiveness of Reconstruction policies

3. An essay test in which students demonstrate understanding of Reconstruction polices and their effects
4. A group project to construct museum displays that reveal the pivotal events of the Reconstruction period
5. A group project to prepare and conduct a mock Congressional hearing that debates Reconstruction policies and evaluates their effectiveness

Responses were aggregated to determine the percentage of participants who selected each of the assessment strategies. A summary of responses is provided in Table 5.

Table 5. Percentage of participants who selected each assessment strategy.

<u>Assessment Strategy</u>	<u>Pre-Survey %</u>	<u>Post-Survey %</u>
AS 1	69.6	43.5
AS 2	26.1	30.4
AS 3	65.2	39.1
AS 4	21.7	34.8
AS 5	69.6	82.6

While participants' preferences for the various assessment strategies provided to them were somewhat consistent from the responses on the initial survey to the responses on the post-survey in terms of preferences, the percentages of participants selecting each of the assessment strategies varied significantly. For example, results of the initial survey indicated that nearly 70% of participants would utilize Assessment Strategy 1 ("An objective test of student knowledge of Reconstruction events and issues") and/or Assessment Strategy 5 ("A group project to prepare and conduct a mock Congressional hearing that debates Reconstruction policies and evaluates their effectiveness") in their

unit, and that over 65% would include assessment strategy 3 (“An essay test in which students demonstrate understanding of Reconstruction policies and their effects”). In contrast, results of the post-survey indicated that over 82% of participants would include Assessment Strategy 5 in their unit, and that approximately 40% of participants would select Assessment Strategy 1 and/or Assessment Strategy 3. In addition, nearly 35% of participants selected Assessment Strategy 4 (“A group project to construct museum displays that reveal the pivotal events of the Reconstruction period”) on the post-survey, and 30% selected Assessment Strategy 2 (“An essay test in which students evaluate the desirability and effectiveness of Reconstruction policies”). Thus, other than Assessment Strategy 5 which was the clear preference, participants selected the various assessment strategies fairly equally on the post-survey.

In terms of the participants’ written rationales for choosing the assessment strategies for their units, there were marked differences between responses made on the initial survey and responses made on the follow-up survey. On the initial survey, 61% of participants stated that they would first use either an objective test or an essay test in which students demonstrate understanding of Reconstruction policies as their initial assessment (in fact, 30% of participants stated that this would be their only form of assessment). The specific reasoning for choosing these types of assessment tended to focus on ensuring mastery and retention of knowledge presented in the unit. Participant comments included: “I would first use an objective assessment for the Reconstruction era so that I can see if the students have learned the solid facts from the Reconstruction era”, “I think it is important for students to be able to take an objective test because so many things are covered in a unit that this is a good way to measure what they have retained”,

“To me giving an essay assessment is a good way to determine if the student has mastered the assigned objectives”, and “The objective test would be the best idea I believe because it leaves little room for error in establishing an appropriate knowledge of the material.”

Participants’ rationales for the assessment strategies they selected on the post-survey tended to focus on providing students with multiple opportunities to demonstrate their understanding. While they did not altogether reject the use of some form of objective assessment (35% specifically stated that they would include some form of objective test as one of their assessment strategies), their overall preference was for more open-ended group assessments such as a mock hearing or museum display. Participants repeatedly stated that providing opportunities to assess students with various learning styles and multiple intelligences was important in their overall assessment strategy. For example, one participant stated “I think it is important to cover as many different learning styles as possible when assessing student work.” Another student stated, “The group project would be a great assessment method because it’d draw on students’ various multiple intelligences [as they] take different roles within their group and present their arguments to class.” A fellow participant concurred, stating “I like the idea of students working together on group projects because it pulls in multiple intelligences and strengths and allows different forms of assessment instead of constantly using written exams – objective or subjective.”

Discussion

The purpose of this paper was to provide an overview of a scenario-based survey instrument designed to assess pre-service teachers' knowledge regarding PBHI practices, and to report the results of the first cohort of pre-service teachers completing two iterations of the instrument. Results suggest that pre-service teachers did internalize major components of the PBHI curricular framework from their initial entry into their teacher education program to their completion of the program. In particular, there is some evidence that pre-service teachers came to understand and value the three major aspects of the PBHI model integrated into their program: authenticity, multiple intelligences, and collaboration.

In terms of authenticity, there is some evidence in the differences in responses from the initial survey to the post-survey that participants placed great value on incorporating authenticity into the Reconstruction unit they were developing via the survey. For example, when selecting learning objectives for their unit, a vast majority of participants selected learning objectives focusing on analysis and synthesis of evidence, constructing knowledge, and defending arguments in the post-survey. This compares to their responses in the initial survey, where a majority of participants selected learning objectives that focused more on description and explanation of knowledge related to the Reconstruction era. More interestingly, participants' rationales for their selection of learning objectives tended to focus on higher-order thinking (e.g., "...constructing their own arguments using historical evidence", "...allows students to think critical about the topic", "...assess their value and defend/criticize from different perspectives") in the post-survey than the rationales reported in the initial survey (e.g., "...understanding what

the Reconstruction period was about”, “...explain the details that were involved [in Reconstruction]”, “...explain and summarize what happened during Reconstruction”).

Participants’ choices in terms of introductory activities also provided some evidence that they were concerned about making the unit as authentic and relevant as possible. On the post-survey, over 70% of participants stated that they would develop an introductory activity that helped connect the topic to students’ own interests – compared to under 40% in the initial survey (fewer than the percentage of participants who chose to just give a general overview of the unit). Once again, the reasoning behind the choices provide insight into the selection of choices, with participants focusing on how to engage students and make the content meaningful in the post-survey (e.g., “Connecting to students interests makes the information more meaningful”, “Relevance is the most important thing...”, “...you are grabbing their attention and making the topic relevant to their lives”), as opposed to focusing more on attempting to assess student knowledge in order to better plan for the unit – the predominant rationales presented in the initial survey (e.g., “...give the students a pre-test in order to see how much each student knows”, “Asking students about their current knowledge...would give me a good idea about where to start”, “...ask students what they knew already...so that I could decide how much detail I needed to go into”).

The assessment activities participants selected provided further evidence that they valued authenticity (e.g., “These assessments seem most authentic”), and that they recognized how multiple intelligences could be incorporated into assessment. On the post-survey, over 80% of participants stated that they would utilize some form of group-based assessment activity (either a mock congressional hearing or a museum display, and

numerous participants stated that they would use multiple forms of assessment in order to provide learners who may have different strengths and learning styles with opportunities to successfully demonstrate their knowledge of the information presented in the unit. Their justification for selecting their assessment strategies included “...cover as many learning styles as possible”, “...it’d draw on students various multiple intelligences”, “...[a] group project will allow students that might not do well on a written test to adequately show what they have learned”, and “...it incorporates all of the multiple intelligences.” In contrast, on the initial survey none of the participants stated the desire to provide students with multiple opportunities to demonstrate their knowledge in different ways as a rationale for their choices of assessment strategies. In fact, although a large percentage of participants chose to include group projects such as the mock congressional hearing in their overall assessment strategies on the initial survey, many made this choice simply because they enjoyed group projects when they were in school (e.g., “I chose the two group projects because I like group projects.”), because they thought students would find the projects to be fun (“I chose to do the mock congressional hearing because I felt that it would be a fun experience”), or because they thought it would assist students with retaining information covered in the unit (“...I went to the group project to try and keep the information interesting and maybe they won’t forget it as easily”).

Finally, participants’ assessment choices on the survey provided some evidence that they not only believed that incorporating collaboration strategies into unit activities was important, but that they understood how collaboration could facilitate overall student learning. As stated above, over 80% of participants selected a group projects as their

preferred assessment strategy on the post-survey, and many of them indicated that incorporating collaboration would be beneficial to students in multiple ways (e.g., “[they could] take different roles within their group and present their arguments”, “the group project would allow all students to participate and they learn best by participating”, and “...all students would be engaged and active”). While many of the participants also included a group project as an assessment strategy on the initial survey, none of them specifically described the pedagogical benefits having students work collaboratively might include, other than in a very general way (e.g., “...[it] would allow the students to show their knowledge”, “It helps people become more social”, or “...it is important for students to debate and work as a team”).

Conclusion and Implications

Results of this study with our initial cohort of pre-service teachers provides some evidence to suggest that, when provided with multiple opportunities to explore, critique, implement, and evaluate PBHI teaching strategies within their teacher education program, pre-service teachers are able to articulate the core curricular framework of PBHI, and are able to incorporate that framework into the design of instructional activities. Pre-service teachers’ selection of various components of a unit on Reconstruction seemed to more closely align with the core principles of PBHI on the post-survey than on the initial survey. More importantly, pre-service teachers seemed to be better able to articulate the reasons making various curricular choices on the post-survey, and their reasoning may have been based on the PBHI principles they were exposed to in their teacher education program.

This research also provides some promise for using scenario-based surveys as one method for determining how well pre-service teachers understand various curriculum frameworks. While this assessment strategy is by no means fully authentic, we believe that it does provide a *more* authentic assessment of pre-service teachers' knowledge of PBHI and ability to apply PBHI in teaching situations than other alternatives such as general "belief" surveys or more objective assessments focusing on the specific components of the PBHI framework. Ideally, this assessment can be used to determine (in a more general sense) the effectiveness of a teacher education program's ability facilitate pre-service teachers in understanding various curricular models. Coupled with more authentic assessments, such as evaluation of actual development and implementation of PBHI activities with students, this survey tool could provide valuable information to teacher educators and allow them to better model and guide pre-service teachers' mastery of PBHI teaching strategies.

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APPENDIX A – SURVEY INSTRUMENT

Section I – Background Information

In the space below, please enter the **LAST SIX** digits of your social security number. This will be used for **anonymous identification** only!

Directions: For questions 1-8, please place a check (✓) in the box to the left of the appropriate response.

1. Which University are you currently attending?
 Auburn University
 Indiana University
2. What is your current academic year?
 Freshman
 Sophomore
 Junior
 Senior
 Other
3. What is your gender?
 Male
 Female
4. What is your age?
 20 or less
 Between 21 and 25
 Between 26 and 30
 Between 31 and 35
 Greater than 35
5. How often do you use your computer at home (dorm, apartment, house, etc.)?
 Less than once a month
 About once a month
 About once a week
 Several times a week
 I don't have a computer at home
6. What is your ethnicity?
 African American
 Asian American
 Latino/Hispanic American
 Native American
 White (other than Latino)
 Other/No Response
7. Approximately how many **education foundations** (e.g., Auburn – EDUC 3000; Indiana – M300) classes have you taken?
 1 – 2
 3 – 4
 5 – 6
 Greater than 6

8. Approximately how many **history or social studies content** classes have you taken?

- 1 – 4
- 5 – 10
- 11 – 15
- Greater than 15

9. Think about a junior high or high school social studies **teacher** you liked or felt you learned a lot from. In the spaces below, list **three** things that made this person an effective, memorable teacher:

10. Check (√) the **three** most important reasons why you want to become a secondary social studies teacher:

- I've always liked history and other social studies subjects.
- I enjoy debate and think it's important for students to engage in issues.
- I think history and social studies help students develop a sense of social responsibility.
- I like politics.
- I think teaching social studies opens up other professional opportunities, such as coaching.
- I think history and social studies help students make better decisions about public policy.

Section II – Technology Skills

Directions for items 11-25: Below is a list of technology skills and competencies. For each item, please determine your skill level and place a check (√) in the appropriate column. Use the key below to determine your response:

KEY:

- A = I can't do this
- B = I can do this with some assistance
- C = I can do this independently
- D = I can teach others how to do this

Productivity Software		A	B	C	D
11	Word Processors: Use the functions of a word processor to format text (font colors and styles), check spelling / grammar				
12	Word Processors: Use advanced features of a word processor such as headers / footers, tables, insert pictures				
13	Spreadsheets: Use the basic functions of a spreadsheet to create column headings and enter data.				
14	Spreadsheets: Use advanced features of a spreadsheet (e.g. using formulas, sorting data, and creating charts / graphs)				
15	Presentation: Create a presentation using predefined templates				
16	Presentation: Create a presentation with graphics, transitions, animation, and hyperlinks				
17	Email: Send, receive, open, and read email.				
18	Email: Use advanced features of email (e.g. attachments, folders, address books, distribution lists)				

World Wide Web		A	B	C	D
19	Navigate the WWW using a web browser (e.g. Netscape Navigator, Internet Explorer, Firefox)				
20	Use more advanced features of a web browser (e.g. creating, organizing, and using bookmarks; opening multiple windows; using reload / refresh and stop buttons)				
21	Use advanced features of a web browser (e.g. install plug-ins, download files and programs, download images)				
22	Use a search engine (e.g. Yahoo, Lycos, Google) to search for information on the Web				
23	Use a web authoring tool (e.g. Netscape Composer or FrontPage) to create basic web pages with text and images				
24	Format web pages using tables, backgrounds, internal and external links				
25	Upload web page files to a server				

Section III – Teaching Scenarios

Directions for items 26 - 29: The following questions are based on a brief “scenario” that describes planning for teaching a history unit and asks how you would respond in each phase of planning. We know there are many ways to teach social studies, and you may not organize your lessons in the manner that is presented. Please answer as if the unit were one you would teach.

SCENARIO: TEACHING RECONSTRUCTION

Imagine you are teaching a 10th grade US History class. You are about to begin a week-long unit focusing on the Reconstruction period immediately following the Civil War. Your students have had experience with the events leading up to the Civil War, and have just completed a unit focusing on the Civil War.

26a. If you were to teach a unit on the Reconstruction period to **the target class**, rank order the following learning objectives in terms of the importance of each for accomplishing your goals for this unit by placing a number corresponding to the item’s importance in the right column. **Please use each number (1-6) only once.**

Item Number	Learning Objective	Item Rank (1 – 6)
1	Students will explain the influence the Reconstruction period had on today’s political structure	
2	Students will use primary documents to identify major controversies surrounding Reconstruction policies	
3	Students will describe the relationship between the Reconstruction period and the Civil War	
4	Students will construct an argument that reflects the perspective of a figure from the Reconstruction period	
5	Students will explain the reasons for the Federal initiatives implemented during Reconstruction	
6	Students will use historical evidence to defend a position on the desirability and effectiveness of Reconstruction policies	

26b. Consider only your **top three** ranked choices for item 26a. In the space provided, briefly explain why you ordered them in this way and why these three choices are preferable to the other possible choices.

27a. Please rank order the following activities in terms of how likely you would be to choose each as part of an **introduction** to the Reconstruction unit by placing a number corresponding to the likelihood you would choose the item in the right column. **Please use each number (1-7) only once.**

Item Number	Activity Description	Item Rank (1 – 7)
1	Ask students what they know about the Reconstruction period	
2	Connect the historical topic to students' own interests and experiences	
3	Present a general overview of important events that will be covered in the Reconstruction unit	
4	Connect Reconstruction to events studied in the previous unit	
5	Have students complete a pre-test to determine their general knowledge of the Reconstruction period	
6	Connect Reconstruction to broader historical themes or issues	
7	Explain to students how their understanding will be assessed at the end of the unit	

27b. Consider only your **top three** ranked choices for item 27a. In the space provided, briefly explain why you ordered them in this way and why these three choices are preferable to the other possible choices.

28a. In the course of your unit, suppose that you want students to be **actively involved in developing knowledge** of Reconstruction policies and their effects. Rank the following materials based on how likely you would be to use them in your unit by placing a number corresponding to the likelihood you would choose the item in the right column. **Please use each number (1-5) only once.**

Item Number	Materials Description	Item Rank (1 – 5)
1	Accounts of Reconstruction from three different high school history textbooks	
2	An account of Reconstruction from an on-line encyclopedia such as MSN Encarta	
3	An account by an historian that explains Reconstruction policies and their results	
4	Several official government documents from the Reconstruction period such as the Freedman's Bureau Act of 1865	
5	Two to three primary source documents such as newspaper editorials or letters that differ in the judgments they make about the effectiveness or desirability of Reconstruction policies	

28b. Consider only your **top three** ranked choices for item 28a. In the space provided, briefly explain why you ordered them in this way and why these three choices are preferable to the other possible choices.

29a. Teachers may use one or several measures to assess student learning outcomes. Consider how you would assess learning for the Reconstruction unit. Select the activity or activities that you would include in your assessment by placing a check (✓) in the column to the right of the item(s) you would choose to use. **You may choose from one to three items from the list to form your unit assessment.**

Item Number	Assessment Activity Description	Include Item? (✓)
1	An objective test of student knowledge of Reconstruction events and issues	
2	An essay test in which students evaluate the desirability and effectiveness of Reconstruction policies	
3	An essay test in which students demonstrate understanding of Reconstruction policies and their effects.	
4	A group project to construct museum displays that reveal the pivotal events of the Reconstruction period	
5	A group project to prepare and conduct a mock Congressional hearing that debates Reconstruction policies and evaluates their effectiveness	

29b. In the space provided, please explain your reasons for making the choice(s) you did for your unit assessment.

THANK YOU FOR PARTICIPATING IN THIS SURVEY!