Evaluating Professional Development of American History Teachers

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Abstract
The first Teaching American History (TAH) grants were made available to K-12 schools from the Department of Education in 2002. They provide money to school systems for three-year projects to form partnerships with area organizations with the goal of increasing the American history knowledge of teachers and students. This study focuses on the evaluation plan, project implementation, and results from one such TAH grant. The teacher participants were from targeted elementary and secondary schools. Where possible, teams of teachers (history and English for Speakers of Other Languages (ESOL) or Special Education (SPED) participated. A formative and summative evaluation was designed to ensure the efficacy of the project design and to guarantee its outcomes. This is a report on year one of the evaluation, focusing on the design, its impact on the conduct of the grant, and the prospects for success in meeting the goals of the grant.

Background

In 2001, Senator Robert C. Byrd of West Virginia inserted a section into the reauthorization of the Elementary and Secondary Education Act (ESEA) that included $50 million to fund Teaching American History (TAH) grants. The program was designed with the express purpose of improving the teaching and learning of traditional American history in America’s public schools. In providing money (increased to $100 million in subsequent years) to K-12 schools, Senator Byrd was responding to national studies that indicated the large gap in students’ knowledge of their nation’s history (NAEP, 1994, 2001), as well as studies of teacher knowledge in history (What Matters Most: Teaching and
America’s Future, 1996) indicating that many teachers of American history (as many as 40%) did not have a major or even a minor in history. Researchers such as Theodore Rabb (2004) and Linda Levstik and Keith Barton (2001), among others, have called for increased emphasis on history in K-12 classrooms. Moving from the assumption that more time on history as well as strong teacher knowledge in history are key to increased student learning, the TAH grant money was identified as a way to address concerns about the schooling of future citizens. The offer of federal money to assist school systems in changing teacher and student knowledge created an opportunity for schools choosing to apply for the grants to review their current practices and goals for teaching history. While history had been on the national stage over several decades because of disputes over the content of the curriculum (Nash, 1997, Zimmerman, 2001), these grants also centered attention on the method of instruction as a factor in student learning.

To strengthen teaching and learning, then, the focus of the TAH grants would most effectively be on the enhancement of the link between teacher knowledge and student learning identified by educational researchers (Schulman, 1986, 1987; Haycock, 1998; Ravitch, 2000; National Commission on Teaching and America’s Future, 2003). The work of Lee Schulman (1987) is of particular importance to the development of an approach that focuses on teaching and learning. His arguments for increased teacher pedagogical content knowledge informed much of the structure of the objectives, presentation, and evaluation of the professional development identified in this study. He defined this approach as essential to effective content instruction and student learning: a “blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction” (p. 8).

In addressing pedagogical content knowledge as it applies to history, one must note the unique aspects of the process. Because there are particular ways of thinking in reading, writing, and comprehending history, the pedagogy may require specific approaches (Bradley Commission, 1988; Holt, 1990; Wineburg, 2001). The National History Standards (1996) include “Historical Thinking Standards” as primary and integrated parts of the standards document, emphasizing the connections historians make between thinking and acquisition of knowledge.

Evidence of student knowledge in American history, based on an analysis of the data from the 2001 National Assessment of Educational Progress (NAEP) assessment in history, showed that student scores were as “disappointing in 2001 as in 1994 when the assessment was last given” (Patrick, 2002). In his report, Patrick also highlighted several conclusions about classroom practice. Increased class time spent on history and on reading and learning from texts affected scores positively.
Use of primary sources, computers for conducting research and report writing, and stories about history also had a positive impact on scores (Patrick, 2002). The NAEP data and conclusions reinforce the integrative nature of history content and pedagogy.

The TAH grant whose evaluation is the subject of this study included professional development for history teachers specifically designed to recognize the importance of the integration of history content and pedagogy. The grant goals included: increased history knowledge and instructional competence; development of classroom resources; increased student knowledge and appreciation; and application and dissemination of practices combining content knowledge with teachers’ ability to transfer that knowledge to students. The work of Schulman (1987) and later Wineburg (2001) informed the development of both the professional development activities and the evaluation strategies that measured outcomes. While professional development in social studies content is not new (for example, National Geographic has long provided seminars and workshops in content), a focused assessment of the value of these activities has not been common. The research process outlined here can provide an opportunity for further research, as well as increased knowledge of effective practices in history education and professional development.

In this paper we: 1) briefly describe the planned three-year Teaching American History (TAH) project that provides the context for this study; 2) outline the evaluation plan for the project; 3) highlight the findings of the first year; and 4) discuss how this project is addressing the goals of the grant.

A Model of Professional Development

The project Defining US: The American Experience (2002) was designed to provide professional development in American history for 120 teachers in Fairfax County, Virginia, Public Schools (FCPS) over three years, including those who teach history to special education students and students learning English. While project leaders hypothesized that all teachers would benefit from additional history content knowledge, they also understood that the diverse backgrounds of teachers could produce varied results. Teachers of special education and second language students often have little or no background in American history, although they are expected to teach the content; thus, increasing their content knowledge would allow them to better address their students’ needs. Teachers of American history with stronger content knowledge could benefit from increased information about and practice with effective strategies for the diverse student populations in their schools. Project leaders also expected that the teachers who participated in the project would implement their learning in their own classrooms, as well as share their learning with colleagues.
Participant teachers came from elementary (grades 4 and 6), middle (grades 7 and 8), and high (grade 11) schools. Some were volunteers, while others were “encouraged” to participate by their principals. Where possible, teachers from the same school participated in teams. Schools with the most diverse student populations and the highest numbers of students on free and reduced lunch were targeted for the first year of the grant. In addition, all students in this school system are required to achieve on state and federally mandated high stakes tests.

Teachers’ needs formed the core of the professional development model. According to Guskey (2000), change in teacher knowledge and practice is the most significant outcome of any professional development effort. If professional development efforts fail to alter teacher characteristics, little change in student outcomes can be expected (Guskey, 2000). Therefore, a primary concern in the design of this professional development project was that teachers transfer new knowledge and skills to their teaching. Research indicates that transfer can be promoted by mastery of subject matter, learning with understanding, time to learn, time to practice, and motivation to learn (Bransford, Brown, & Cocking, 1999). All teachers of American History in the system had been polled the year prior to the grant about the areas within American history that they would particularly like to consider. The selection of topics for the content of the year one seminars was guided by teacher responses.

It is argued in the literature that professional development must be job-embedded and focused on content-specific learning rather than generic approaches (Sparks & Hirsh, 1997). History teachers do not need the same professional development as English or art teachers, nor do first grade teachers need the same professional development as sixth grade teachers.

In the model under study, professional development is 1) ongoing - seminars are held throughout the school year and in summer; 2) long-term - teachers participate for three years; 3) formative - adjustments are made in response to teachers’ needs; and 4) linked to local and state standards - seminar topics are representative of what teachers are expected to teach and students are required to know.

The project is designed to improve teaching and, consequently, student learning of American history. Acknowledging that a number of teachers in the school system who were teaching history had limited formal education in this content, the project leaders focused on recruiting teachers with varying levels of formal education in history. Table 1 identifies the history preparation of 34 of the 43 teachers participating in the first year professional development (9 teachers failed to respond to the online survey).

The profiles of teachers in our project parallel findings of national surveys on preparation of teachers of history/social studies (National Commission on Teaching and America’s Future, 1996) that indicate many teachers of American history lack formal education in the content.
In their first year, each of the three cohort groups of teachers participated in an intensive program of monthly seminars. Seminars focused on topics identified by teachers and targeted history’s vital themes, including: Civil Rights, Vietnam War, Post 1945 Foreign and Domestic Policies, Expansion and Mapping of America, Washington’s Vision of the American Character, and Jefferson’s View of the World. On-site visits to the National Archives, Museum of the American Indian, and Library of Congress provided opportunities for further research. The seminars were led by expert historians, professors, and museum curators who presented and modeled strategies for differentiating instruction, adapting technology, accessing and using primary sources, and cultivating critical literacy. Teachers were required to develop lesson plans utilizing seminar content, pedagogy, and resources to share with other school district teachers of American history.

It is proposed that in the second and third project years, participants will continue to learn new history content, develop pedagogy and access history resources, teach lessons developed with new material, mentor colleagues, and disseminate knowledge. Historians, professors, and project leaders will observe all participating teachers as they teach TAH-enhanced lessons to assess depth of integration of new pedagogical content, level of student engagement, and the extent to which students are encouraged to think like historians. Teachers will meet periodically to share resources and analyze classroom practices to assess impact on student learning. Also, these teachers will provide school-based staff development and mentor the new cohort groups by sharing curriculum knowledge, teaching strategies, and results of personal experiences. A summary of the project design is presented in Table 2.

**Evaluation Design**

Evaluation is a key component for successful planning and implementation of any professional development program. The evaluation of this project for American history teachers is designed to be a systematic assessment of the operation and outcomes of the professional development in order to improve the program when necessary. In addition to subjecting the project to a formative and summative external evaluation process, evaluation was an ongoing internal process. This internal process fed back information to project leaders regarding project impact so that, if necessary, immediate modifications could be made to enhance the experience of the teachers. Thus, the two purposes of the evaluation were to 1) provide regular feedback for planning and decision making to ensure the project was based on measurable outcomes and was on target to meet goals, and 2) document the project activities, outcomes, and impact for reporting to the U.S. Department of Education and partner organizations in fulfillment of TAH grant requirements.
To ensure that each activity and accomplishment was assessed, project evaluation was aligned with the four project goals: 1) to increase teachers’ content knowledge and instructional competencies in teaching American history; 2) to develop classroom resources and materials designed to enhance American history instruction; 3) to increase students’ knowledge and appreciation of American history; and 4) to implement a model for sustained professional development and dissemination of content and instructional pedagogy for American history.

The evaluation plan for year one focused primarily on the first two goals. Assessment of changes in students’ knowledge and appreciation of American history (goal 3) would be premature, since it will take twelve months for teachers to experience the full range of the professional development program. However, some preliminary assessment of teacher perceptions and expectations relative to goals 3 and 4 was completed.

According to Weiss (1998), certain underlying assumptions influence the design of any program. An evaluator can use these assumptions to organize the evaluation. Inherent in this TAH design of professional development are assumptions about the utility and power of professional development experiences in leading teachers to change their teaching practices, the ways professional development should be structured so that positive changes result, and the benefits that will accrue to students. In essence, the assumptions made in the design phase of a program and the assumptions that unfold during implementation combine to reveal what Weiss terms the program’s “theory of change.” Questions critical to the evaluation emerge from the program’s theory. Figure 1 illustrates the theory of change of the Fairfax County Public School TAH professional development program. Emergent questions are: (1) Do teachers perceive their knowledge is increasing as a result of attending the seminars? (2) Do they integrate new knowledge in their planning and instruction? (3) Is there an increase in teachers’ application of pedagogy, such as collaborative learning activities or the use of primary sources or technology to teach content during instruction? (4) Do changes in teaching practices resulting from the professional development increase student appreciation and achievement in American history? The evaluation should track each step to determine if the program is unfolding as anticipated. If so, the evaluation can reveal how the program is achieving its goals. If not, the evaluation can illustrate where the program is missing the mark.

Weiss (1998) notes, “A big advantage of understanding the program’s theory of change is that it can provide the basis for the evaluation...The evaluation can collect data on the interim markers that are expected to appear” (p. 58). For example, evaluators of this TAH project used the FCPS program’s theory of change to guide data collection. How did evaluators identify or construct the program’s
theory of change? We began with the four goals outlined by the grants’ creators and examined the project design that outlined how each goal would be met.

**Figure 1. Fairfax TAH Theories of Change**

<table>
<thead>
<tr>
<th>Implementation theory (program activities)</th>
<th>Program theory (mechanisms of change)</th>
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</thead>
<tbody>
<tr>
<td>TAH professional development is advertised</td>
<td>American history teachers volunteer to participate or are volunteered by their principals</td>
</tr>
<tr>
<td>Teachers are enrolled</td>
<td>Teachers attend a project orientation</td>
</tr>
<tr>
<td>Project provides a series of seminars and other programs that teach content and relevant pedagogy</td>
<td>Teachers attend seminars</td>
</tr>
<tr>
<td>Resources are developed and provided to enhance teachers’ instruction</td>
<td>Teachers learn about and utilize resources in planning and delivery</td>
</tr>
<tr>
<td>Presenters model how to apply new pedagogical content knowledge and resources</td>
<td>Do teachers perceive seminars contribute to increased knowledge?</td>
</tr>
<tr>
<td>Teachers create lesson plans integrating new knowledge and pedagogy</td>
<td>Do teachers integrate new knowledge in their planning and instruction?</td>
</tr>
<tr>
<td>Teachers receive feedback from historians and professors</td>
<td>Teachers perceive benefits of lesson professional development and transfer new knowledge and competencies to classrooms</td>
</tr>
<tr>
<td>Students’ knowledge and appreciation of American history increases</td>
<td>Do changes in teaching practices resulting from the professional development increase student appreciation and achievement?</td>
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A program’s theory of change can be kept simple, as in this case, or made more elaborate by including contingencies – for example, different things happening under different conditions – or by distinguishing between subgroups of people such as elementary and secondary teachers. The diagram in Figure 1 aided evaluators in deciding what data to collect, and thus a variety of quantitative and qualitative measures were used.

During the orientation to the professional development, teachers completed a brief questionnaire used to compile demographic information as well as assess pre-program perceptions about professional development. One item on the questionnaire asked if teachers voluntarily applied to participate in TAH or if they were volunteered by their school administrator. Approximately 1/3 of the group indicated they were volunteered. Throughout the first year, evaluators monitored whether differences existed in the ways the two groups of teachers responded to the professional development. Indeed, it was found that teachers who were volunteered were less enthusiastic about the benefits of the programming, complained with greater frequency about being out of their classrooms, and had lower attendance at seminars.

Project leaders felt strongly that “tests” of teacher knowledge would adversely affect participation in the grant. Thus, evaluators captured teachers’ perceptions of their knowledge before and after each seminar, as well as their views on the overall value and usability of the material presented. In some cases, teachers’ responses to seminars were overwhelmingly positive, in others they were mixed. Mixed responses alerted project leaders that changes needed to be considered. For example, evaluations indicated that elementary teachers valued the content presented in a seminar on the Vietnam War but rated usability very low because this topic is not part of the fourth or sixth grade curriculum. In response, project leaders and advisory committee members developed alternative seminars on the American Revolution and slavery, which are more often taught by elementary teachers.

In order to learn whether teachers were using resources provided by the grant, evaluators conducted individual and group interviews. Across all grade levels, teachers reported that the resources (including books, web-based information, and “take-aways”) were beneficial and that they had either used them in the first year or had plans to use them in the second year. Interviews, questionnaires, and teachers’ lesson plans were analyzed to learn if and in what ways teachers were transferring new pedagogical content knowledge to their teaching. Analysis revealed that when professional development topics aligned with curriculum sequence and when they had not already taught the content, teachers tended to infuse that new knowledge into their lessons. The transfer of pedagogy was not bound to the curriculum sequence in the same way, thus teachers tended to incorporate new strategies.
more readily. In order to more accurately test transfer of knowledge and pedagogy, evaluation in years two and three will include classroom observations and assessment of student knowledge.

Methods

Instruments

Evaluation should be data driven. Findings are strengthened when multiple sources of data are used to measure outcomes (Fraenkel and Wallen, 2000). We triangulated data findings through use of questionnaires, focus group and teacher interviews, and teacher reflections. Questionnaires were used to make a broad sweep of teachers’ pedagogical content knowledge. An analysis of the questionnaire data highlighted particular issues to be explored during focus group and individual interviews. Themes and findings arising from the questionnaire and focus group data were explored further through analysis of teacher reflections.

Specifically, questionnaires were developed to measure the change in teachers’ perceptions of their knowledge gains for each of the eight seminars. Also, focus group interviews with teachers were held at the mid-point and end of year one. The mid-point focus groups were followed by individual teacher interviews. At the end of the year, teachers submitted personal reflections in which they noted their thoughts and feelings about the professional development, identified resultant changes in their teaching, and addressed benefits to students.

The questionnaires developed for each session were based on the written objectives of the seminar as provided by the presenters. Each questionnaire contained four parts: demographics, content knowledge, pedagogical competency, and use of resources. Demographics consisted of a participant ID used to ensure anonymity, teaching assignment (classroom, ESOL, or SPED), and grade level taught (4, 6, 7, 8, or 11) in order to provide evaluators with the tools needed to compare data across sessions. Teachers assessed their knowledge of content, pedagogy, and resources using a 7-point Likert scale that ranged from “no knowledge” to “superior knowledge.”

Focus group interview questions centered on teachers’ perceptions of knowledge gains; integration of knowledge, pedagogy, and resources into their teaching; and teachers’ perceptions of the impact of their professional development on their students. Teacher interview questions investigated individual teacher responses to the professional development and determined whether and how teachers working in the same building were partnering in their instruction.

The personal reflection was guided by 3 questions: 1) How do you rate your level of commitment to the Teaching American History professional development? 2) Have you modified or do you plan to
modify your teaching practices as a result of your participation? 3) Has your involvement in the Teaching American History Project improved your students’ learning of American history? For each question, teachers were asked to explain their responses in detail.

**Validity and Reliability**

Feedback from external evaluators, project leaders, and seminar instructors determined content validity of the assessment instruments. Triangulation of questionnaire and interview data was used to enhance validity of the data. Internal reliability of the questionnaires was analyzed using Cronbach’s Alpha measure of internal consistency. The reliability analysis is shown in Table 3 in the Appendix.

**Procedures**

In order to maximize participation, group-administered questionnaires were completed by teachers at the beginning and end of each seminar. Teachers were provided verbal instructions for completing and returning the questionnaires. Teachers were assured of anonymity, since they selected identifiers known only to themselves and the external evaluator. Further, teachers were informed that the questionnaires were being used solely to assess the project. The number of participants determined the number of questionnaires completed for each seminar.

Teachers voluntarily participated in one of four focus groups. To accommodate differences in grade levels taught, teachers were assigned to either an elementary or secondary group. Two groups met mid-year, and two met at the end of the year. The number of teachers participating in the focus groups at the mid-point was 8 of 22 elementary teachers and 5 of 21 secondary teachers. At the end of the year, elementary teacher participation in the focus group fell to 4 of 17 teachers, and secondary teacher participation increased to 8 of 21 teachers. Classroom teachers, ESOL teachers, and special educators were represented in all of the groups. Each focus group interview lasted two hours. The interviews were audio-taped, and notes were taken by an assigned note-taker who was part of the outside evaluation team. To maintain anonymity, teacher participants were each assigned a number and were asked to provide that number whenever they responded to a question. Teachers were provided a small stipend based on an hourly rate for their time and to cover travel expenses. One evaluator conducted all the focus group interviews, and the same questions were asked of all groups.

Participants in teacher interviews represented a sample of the population and every grade level and teacher assignment. Three high school, four middle school and four elementary level teacher participants volunteered to be interviewed at their school sites. One
evaluator conducted all the teacher interviews. When possible, teachers who were partnering in schools were interviewed together. The interviews were audio-taped, and teachers identified themselves by number to ensure anonymity. The same set of questions was used in all interviews.

Teachers were required to develop lesson plans that infused TAH content and pedagogy. They had the option of working independently or collaboratively. Drafts of their plans were submitted to university professors for review. Attending to the feedback they received, teachers finalized their plans and presented them to colleagues. Final lesson plans were made available on the project website. Evaluators analyzed lesson plans for inclusion of TAH content and pedagogy.

Additionally, a format was designed to capture teachers’ personal reflections and was sent to each year one participant via email. Teachers were asked to complete the reflection by a certain date, then to e-mail the completed reflection to the evaluator. Only 17 of 34 teachers returned the personal reflection. Participant numbers decreased throughout the year (from 43 to 34) for a variety of reasons such as changing schedules, new assignments, or personal factors.

**Data Analysis**

As cited in Figure 1, the four emerging questions were: (1) Do teachers perceive their knowledge is increasing as a result of attending the seminars? (2) Do they integrate new knowledge in their planning and instruction? (3) Is there an increase in teachers’ application of pedagogy, such as collaborative learning activities or the use of primary sources or technology, to teach content during instruction? (4) Do changes in teaching practices resulting from the professional development increase student appreciation and achievement?

Questionnaires were used to gather data about teachers’ perceptions of knowledge gains. The data compared before and after responses to questions related to the content of a particular seminar and across three grade levels (elementary, middle and high) and major history teaching responsibilities (general classroom, ESOL, special education). A three-way mixed analysis of variance (mixed ANOVA) was performed to determine changes between the pre-assessment and the post-assessment, differences by grade level groups, and differences by teaching assignment.

Interviews and personal reflections about teachers’ perceptions of their knowledge gains provided additional data. This data focused on whether and to what extent teachers were integrating new content and pedagogy into their planning and instruction, as well as their perceptions regarding the impact of their professional development on student appreciation and achievement. Data from focus groups and teacher interviews were transcribed from audiotapes. Qualitative
data analysis (Creswell, 1994) was employed to organize and make judgments about the meaning of the interview data and the personal reflections. Three themes were identified by the researchers prior to conducting interviews: pedagogical content knowledge, classroom application, and impact on students. A fourth theme emerged from the data and was labeled ‘meaningfulness’; this referred to the match between seminar content and the curriculum teachers were required to teach. Since all teachers reported they were learning through the professional development, our analysis led to coding data according to what was learned (content, pedagogy, or both), the professional development venue in which it was learned (specific seminars or field trips), how what was learned was applied in the classroom (planning, instruction, assessment), and teacher perceptions of impact on student learning (engagement, achievement). Finally, themes guiding analysis of the personal reflections were teacher motivation, teacher application of new knowledge, and teacher perceptions of impact on student learning. Data was coded as teacher commitment, application, and impact.

Findings

Teacher Perceptions of Knowledge Gains

Questionnaire responses indicated that 100% of attending teachers perceived knowledge gains following each seminar (Table 4). The ANOVA was significant at the .05 level for each of the eight seminars. Overall, the greatest gains were made in Post-1945 Foreign and Domestic Policies, and the fewest were made in the Expansion and Mapping of America (content that teachers perceived they knew a lot about prior to the seminar). Across the seminars, middle school teachers perceived the greatest gains in four seminars (50%), and elementary teachers reported the greatest gains in three (38%) seminars. In the seminar on Expansion and Mapping, middle and elementary level teachers made the same gains. High school teachers made the fewest knowledge gains in all seminars, but this was expected given that all had earned either a major or minor in history at the Bachelor’s or Master’s level. Special educators made the greatest gains in five seminars (63%), followed by ESOL teachers, who made the greatest gains in three seminars (37%). General classroom teachers of history made the fewest gains in all seminars.

Mid-year and end-of-year focus group and teacher interviews confirmed that teachers perceived their knowledge had grown as a result of the seminars. During the interviews, teachers were asked to provide details on the changes in their history knowledge. The following comments taken from interview transcripts reveal the ways in which teachers assessed changes in their knowledge.
I’ve been teaching U.S. History for a number of years now and have extensive knowledge of my content, but the seminars gave me a lot of anecdotal information, things that I can use to passionately enliven my classes and interest my students. I treasured the seminars in which the speakers were able to personalize the individuals. I came away very enriched and very appreciative of the speakers (secondary, 11th grade teacher).

I thought I knew a lot of American history before I started this and after attending the seminars, I realized that although I knew a lot of the background information, there is so much more I don’t know and need to know to enrich my lessons (secondary, 7th grade teacher).

Dr. Elliot West’s perspective in his lessons blew my mind [Westward Expansion]. I had always taught history from the ‘eastern perspective.’ The seminar taught me to teach differently. I took ten pages of notes and used them in my classroom, which allows me to add information that is not in the book, which gives me a bit of a power trip (secondary, 8th grade teacher).

Overall, elementary teachers have challenges of knowing enough content or being experts in one content area. The seminars give me the ability to respond to students’ questions (elementary, 4th grade teacher).

Roger Wilkin’s lesson about the way we view our forefathers [Keynote Address] and their decisions and perceptions really changed the way I looked at them in my own classroom. I’m teaching from different points of view instead of just incorporating my own opinions into my lessons (elementary, 4th grade teacher).

Mid-year focus group interviews revealed that secondary teachers felt overwhelmingly that their content needs were being met through the professional development. However, elementary teachers reported that some of the content was not relevant to their teaching (e.g., Vietnam War and post-1945 foreign policy): The Vietnam War seminar was personally interesting but not helpful to me as an elementary teacher. I don’t teach this content (elementary, 4th grade teacher).

I haven’t been able to use much of the TAH content in my teaching. Presentations on early American history to Reconstruction would be more useful for elementary teachers (elementary, 6th grade teacher).
Teachers in Fairfax County are responsible for ensuring that students meet the state of Virginia’s grade level Standards of Learning (SOL), which delineate specific content in American history that all students are expected to know for the standardized test. In some cases, the content in the seminar focused on in-depth material not addressed in the SOLs. For example, SOLs require only that students identify “Rosie the Riveter” to demonstrate what they know about women’s roles in WWII, while a TAH seminar on Eleanor Roosevelt and the WWII home front examined the topic in great detail. Some teacher comments included the following:

I have to use The Standards of Learning (SOLs) in determining what and to what extent I teach certain content (secondary, 11th grade teacher).

The SOLs dictate what students have to know and what we have to teach. If the seminar content fits with what the SOLs say I have to teach, then I can use it. If not, I don’t have the time in my curriculum to introduce something new (secondary, 8th grade teacher).

In the interviews, teachers described their difficulty in attending all of the seminars scheduled during the teaching day. In one instance, a three-day seminar was scheduled during the last three teaching days prior to the administration of the SOL exam. Teachers had to choose between attending the professional development and reviewing students for the exam. Another concern teachers raised was the added burden of developing lesson plans for the substitute teachers who stood in for them as they attended the TAH seminars. Teachers suggested that in years two and three of the grant, more seminars be scheduled to meet after school and during the summer.

**Teachers’ Integration of Knowledge in Planning and Instruction**

Teachers were required to develop lesson plans that incorporated pedagogical content knowledge gained in the professional development. The mid-year focus group and teacher interviews found that across grade levels, teachers had reservations about having to create lesson plans utilizing project content and pedagogy. Seventy-five percent of teachers interviewed reported that they began with a lesson they had taught in the past and modified the lesson to fit the assignment. Between the mid-year and year-end interviews, teachers revised their lesson plans after receiving feedback from university professors. In the year-end focus groups, 11 of 12 participating teachers stated their intent to implement the lesson plans in the coming school year when the content fit the curriculum, but noted they would modify the plans due to time limitations. The one exception was an ESOL teacher who,
because of a change in assignment, would not be working with history students in year two. Some comments included the following:

I’m actually going to use a modified version of the multi-day lesson plan tomorrow. I found that aspects of the multi-day lesson plan can be manipulated into a 90-minute lesson (secondary, 8th grade teacher).

I would never spend as much time planning a lesson to execute in daily teaching as I did the assigned lesson plan. Also, I can’t teach all of the lesson I planned. It would take more time than I have to cover the content (secondary, 11th grade teacher).

Additional reported changes in planning ensuing from the professional development were teachers’ use of history-rich websites (National Archives, Library of Congress, and History Matters) to conduct research and find resources, use of a variety of primary sources (letters, photographs, diary entries, trial testimonies, art, and documents), increased focus on student collaboration (cooperative learning, think-pair-share strategies, inquiry, and problem-solving), and use of technology to organize presentations and interactive lessons.

In the mid-year focus group interviews, both elementary and secondary teachers pointed out that the seminars were so tightly scheduled they had little or no time for discourse with their colleagues. They expressed a need for the opportunity to talk and think about what they learned and consider how they could take materials and ideas back to their classrooms. They suggested time be built into each seminar to allow grade-level and across-grade-level groups to meet. Teacher comments were as follows:

It would be beneficial for elementary teachers to meet as a group at the beginning of the year of seminars as well as during seminars. It would give us more of a connection. However, I did find meeting with the high school teachers a very intellectual experience (elementary, 6th grade teacher).

It would be great to have a ‘pow-wow’ meeting during each of the seminars so that we could discuss what we learned and how we can use it. Maybe we can have lunch meetings (secondary, 11th grade teacher).

Interviews exposed timing as a factor in teachers’ ability to integrate new pedagogical content knowledge. When the seminar content introduced material that teachers would be teaching in an upcoming unit, they had greater opportunity to apply what they learned.
teachers had already taught curriculum matching the seminar content, they had to delay its application until the next school year.

Fifty percent of teachers reported in their reflections that they changed their instruction based on what they learned in the professional development. The other fifty percent indicated they planned to implement changes in the following year as the TAH content matched their curriculum. Teachers were asked to rate their commitment to the project as high, moderately high, moderate, moderately low, or low. On average, middle school teachers rated their commitment to the project higher than did elementary or high school teachers (high, moderately high, and moderately high respectively). Two elementary teachers rated their commitment level moderately low, while eight rated their commitment high or moderately high. Teacher statements reveal their reasons for selecting a particular rating:

Every seminar that I have attended has taught me something new or reminded me of something important that I had forgotten (secondary, 8th grade teacher, high commitment).

I love having been in the program for the past year. I have learned more in one year than I believe most people learn in years of study (secondary, 7th grade ESOL teacher, high commitment).

I attended all the scheduled seminars and was happy that I did. In the lessons that I submitted, I really tried to use the pedagogy and content that was presented in the seminars. I also tried to capture the spirit of the program when creating my lessons by going beyond the norm and challenging both myself and my students to use the new materials and resources that I had recently been exposed to. I would also share my experiences with my students when I returned from a seminar, and I found myself a bit energized when talking about all I had learned (secondary, 11th grade special education teacher, high commitment).

The information presented in some of the seminars was not aimed at helping students at the 6th grade level and was not SOL appropriate (elementary, 6th grade teacher, moderately low commitment).

The program required too much time in places and was too inconvenient (elementary, 4th grade teacher, moderately low commitment).

**Teachers’ Application of TAH Pedagogies**

Analysis of teachers’ lesson plans identified use of primary sources and collaboration as the two most frequently used pedagogies for teaching TAH content. In personal reflections, 85% of participating
teachers indicated they were using more primary sources in their lessons. In addition, teachers identified changes in 1) the way they planned and organized lessons, citing more comfort with collaboration and less need to rely on text-based content; 2) the way in which they presented new information, such as storytelling, readers’ theater, biographies, and life stories; and 3) greater variability in teaching strategies and resources that included web-based research, analysis of photos and art, and activities to stimulate critical thinking. Even teachers who rated their commitment as moderately low reported application of new content and/or pedagogy in their teaching. Below are excerpts from teacher reflections that highlight ways they integrated what they learned into their planning and instruction:

I sorted and organized everything I was given. I then put it into groups based on my units. I put all of my materials from last year’s teaching and created much richer units. I worked on this all summer (secondary, 8th grade special education teacher).

I’m using the Ellis Island Simulation. I plan to use this website next year for the kids to get more in touch with this incredible event (elementary, 6th grade teacher).

This year I relied less on the textbook and more on primary sources and pictures to teach concepts (secondary, 7th grade ESOL teacher).

I am using the computer more for websites and sources, especially to locate primary and secondary sources. Not only am I using the computer more to enhance my own lessons, I am including lessons for my students that incorporate the use of computers (elementary, 4th & 6th grade special education teacher).

During mid-point interviews, ESOL and special education teachers expressed a desire for more instruction on how to use primary sources with language learners and learning disabled students. ESOL and special educators noted that they followed the lesson plans developed by the classroom teachers with whom they worked, so they had limited opportunities to influence the lesson planning. One teacher commented:

My students can’t read the text. I’d like to learn how to use primary sources with my English Speakers of Other Languages students that don’t rely on reading skills (secondary, 7th & 8th grade ESOL teacher).
**Teachers’ Perceptions of Impact on Students**

Even though cause-and-effect relationships cannot be established due to lack of control over multiple intervening variables, research shows that teacher knowledge and competency are highly influential with regard to what students learn (Joyce & Showers, 1998; Killion, 2002; McLaughlin & Zarrow, 2001; Darling-Hammond, Hightower, Husbands, LaFors, Young & Christopher, 2003; Corcoran, McVay & Riordan, 2003). Guskey (2002) argues for the need to link professional development to student data and achievement. The design of this TAH project called for job-embedded, content-focused professional development that would lead to changes in teaching practices and, in turn, would positively influence students’ appreciation and knowledge of American history. Formal evaluation of the impact on students will be conducted in years two and three through the SOL exams and TAH-constructed assessments.

In year one, evaluators gathered data on teacher perceptions of student impact through interviews and personal reflections. Teachers across grade levels and assignments expressed greater confidence in their teaching of the content. Some linked greater confidence to student learning as reported in interviews and reflections:

I feel more confident with material now than I did in the past. This helps me to create more interesting lessons, which in turn helps students. The more information I have, the more information they have (secondary, 11th grade teacher).

I feel more confident and more knowledgeable. So, students get a ‘vibe’ from me and feel my enjoyment. They trust me, enabling me to improve their learning (elementary, special education teacher).

I have learned about different ways to teach and also have gained more insight/knowledge into many time periods and topics. I believe my students have benefited from this increase in knowledge in a variety of ways. First, they are exposed to more types of learning tools, especially primary sources. Second, I am able to make history more interesting because of my experience and new knowledge. Overall, my students benefit from having a teacher who knows the material, knows how to teach it, and feels confident in his abilities to help them succeed in the course (secondary, 8th grade teacher).

I have already included more primary source documents in my history classes. Before, I think I was a little bit afraid to use primary source documents with my classes due to both my own
worry about interpreting them correctly and my worry that my students would struggle with them. Thanks to the activities we have done this year, I am much more comfortable with using primary sources, and I have a myriad of new resources and ideas about how to use them with my class (elementary, 4th grade teacher).

When asked about evidence to support improvements in students’ learning, teachers pointed to deeper discussions of content following analysis of primary sources, greater student engagement when using primary sources and web-based resources, and positive student feedback. Elementary and middle school teachers were more enthusiastic in their descriptions of changes they perceived in their students’ interest and learning than high school teachers, though all teachers made references to ways their professional development sparked students’ interest and learning.

My students are writing things in their notebooks like ‘history is great.’ They pay attention and ask questions. I don’t have behavior problems because they come expecting me to be prepared. They know I have a lot to cover. I use lots of strategies that keep them on track. They don’t know that I’m doing so well because of my learning. They just have high expectations because of what I’m teaching (secondary, 8th grade special education teacher).

I’ve been using primary sources. Students are much more excited and interested. They’re into it more. They feel my excitement and are eager to learn, which leads to more learning (elementary, 6th grade teacher).

For a long time, I’ve thought of history as ‘dusty.’ Primary sources shed a new light on history. My ESOL students didn’t like history because they can’t read it, but primary sources, especially visuals like art and photos, allow me to make it more enjoyable for them. They’ve responded well (secondary, 7th grade ESOL teacher).

Due to the knowledge I have obtained through the TAH project, my enthusiasm and my ability to add to the stories and knowledge of the historical matter has increased. This enthusiasm has become contagious, and my students are even more eager to participate in discussions. My students are also inspired to learn more about the topics we discuss [in class] on their own. To me, that’s one of the most important outcomes; my kids want to learn more about the topics than I have time in the class to teach, and they are going out on their own to learn (secondary, 8th grade teacher).
My students are now going out and looking for additional information to share with the other students in class, making classroom discussions ‘electric’ (elementary, 6th grade teacher).

**Summary of Findings**

Teachers perceived that they had increased their knowledge of American history through attending seminars and visiting related field sites. In interviews and personal reflections, they identified multiple ways they had integrated what they learned in their planning and instruction and what they believed the impact had been on their students. Middle school teachers perceived slightly greater knowledge gains than elementary teachers, and special education and ESOL teachers reported greater gains than classroom teachers. Matters of daytime scheduling, planning for substitute teachers, poorly timed seminar presentations, and lack of opportunity for teacher interaction and discussion were cited as barriers to either attending seminars or to integration of TAH content and pedagogy in planning and instruction. Teachers perceived that their participation in the project benefited their students. Teachers’ comments in year-end focus groups reflected the following beliefs:

- The more they know, the more confident they are in their teaching.
- The more they know, the more they can teach their students.
- The more excited and enthusiastic they are about American history, the more enthusiastic and excited their students will be.
- Their instruction is more productive when it is more focused and organized.
- The more interesting they make the content through use of multiple strategies and resources, the more their students engage.

**Discussion**

*Evaluating TAH Professional Development*

How did the evaluation inform this project? The end goal of the grant is to improve the teaching of American history and resultant student learning. Ultimately, the questions to be answered about this professional development are: Does it lead teachers to transfer new pedagogical content knowledge to their classroom practice? Does that transfer, if made, increase student learning and engagement with the subject? Were underlying assumptions (Figure 1) about the role of this professional development in building teachers’ knowledge of content and pedagogy
realized? How well and to what extent did this professional development structure inspire teachers to incorporate new knowledge and practice into their classrooms? Did teachers perceive benefits to students? Year one evaluation data showed that all participating teachers perceived gains in knowledge and pedagogy following every seminar. Analysis of lesson plans, however, indicated that not all teachers were applying this new knowledge. Thus, the assumptions in the program’s theory of change were correct up to a point; the way the seminars were structured worked to increase teachers’ knowledge. Yet, there was a disconnect that prohibited teachers from making the transfer to their taught lessons. As the data revealed this disconnect or incorrect assumption (increased knowledge would lead to transfer), it led project leaders to modify the professional development to increase the likelihood that the project could accomplish its goals. Project leaders met monthly with the grant advisory committee to resolve teacher concerns about the professional development, which resulted in a number of changes.

Immediate changes affecting year one teachers. The format of the seminars was changed following early feedback. Initially, seminars centered on content presentations delivered through lecture, with little time for teacher comment or conversation. Later seminars added more time for teachers to interact with the content expert or historian and with one another. Teachers were provided with opportunities to work together either during or after seminar presentations. Group activities capitalized on teachers’ collaborative brainstorming about how the content could be integrated into their curriculum and how it could be organized to address differences in students’ literacy and grade levels. Attention was given to discussions about how teachers could immediately apply some or all of what they had learned. Project leaders included presentations on strategies not introduced during seminars (e.g., graphic organizers and other visual displays) because they could increase effective teaching of the content. Also, an effort was made to structure seminars so that teachers worked not only in grade level groups but across grade levels in order to facilitate dialogue about the vertical articulation of the American history curriculum.

Long-term changes affecting second and third year experiences. In the second year of the project, additional seminars were made available. Even though seminars were initially developed based on Fairfax County Public Schools’ teacher survey responses, some groups of teachers had difficulty linking seminar content to the curriculum they taught. Project leaders added seminars that were more closely aligned with content and grade level requirements and the sequence of the curriculum. Rather than increase the number of days that teachers would attend seminars, concurrent seminars were offered to reflect the different content needs of elementary and secondary teachers. Teachers were then given the option to select the seminar they would attend.
Another concern that arose regarding seminar topics was how to expand the content to include new learning while at the same time addressing the state-mandated assessment. Evaluation data indicated that some teachers, particularly those teaching high school, struggled with how to reconcile what the SOLs would assess with the in-depth content presentations and resources they were exposed to in the seminars. They reported that while they found a half-day seminar on “A Changing America” in WWII and beyond engaging and personally interesting, they pointed out that their students were not expected to know very much about this topic. So, although they believed it would be worthwhile, they would not be expected to spend instructional time on the influence women had on the culture and economy of WWII America. In contrast to this group of teachers, others reported that the professional development was breathing new life into history teaching, which they claimed had become stale because of the intense focus on achieving and improving SOL scores. The challenge for project leaders was to empower teachers to believe that they could both meet the SOL requirements and provide students with in-depth instruction on critical topics in American history. To do this, master teachers were identified to facilitate group conversations during or following year two seminars that would include discussion of standards and other topics. The aim will be to assist teachers in thinking about how they can meld the need to meet standards and the desire to enrich history content and lessons.

Another change made to the structure of the seminars was scheduling. In year one, teachers were required to plan for substitutes and were away from their students an average of one day per month. A number of teachers expressed concern about leaving their classrooms. In response, project leaders scheduled seminars to meet after school during year two and coordinated seminar offerings with the school calendar.

To further improve the opportunities for transfer, lesson plan requirements were modified. While laudable, the original intent to partner classroom teachers with special educators and ESOL teachers did not work. Teachers from the same school rarely shared common planning periods and often taught different grade levels. In the second year, teachers will have the option to collaborate or work independently in creating lesson plans.

In year one, teachers were given a lesson plan template that identified the components they should include in their plans. Evaluation found wide variability in the extent to which teachers’ plans incorporated TAH pedagogical content and in the quality of the writing. Mid-year feedback indicated needed changes, but the process and expectations for revising the lesson plans were not clear. The intent of project leaders was to post teacher lesson plans to the project website, but there was concern about posting mediocre or inadequate plans. An
additional problem was the requirement that teachers develop both short and multi-day plans. As it turned out, a number of teachers reported that, due to time limitations, they would never use the multi-day plan. In response to the evaluation findings, project leaders provided samples of exemplary lesson plans that would serve as models for year two teachers, who will be required to develop two period-long lesson plans. The shorter lessons will again be critiqued by professors, and teachers will be expected to revise their plans prior to presenting them to their colleagues in a half-day sharing session. Lessons deemed to be of high quality will be published on the project website.

Another barrier arose as project leaders planned for transition to the second year. Some teachers were unable to commit to the full term of the grant because of decisions made by their administrators (e.g., a change in grade level or teaching assignment). In preparation for the second year’s cohort, project leaders made an effort to communicate to principals that teachers will be making a multi-year commitment to the project and will need to be teaching American history classes for the duration.

Situating the Project in Professional Development

A common set of characteristics defining effective teacher development initiatives continuously emerges in the literature on professional development. Hawley and Valli (1999) synthesize these characteristics into what they term “design principles for effective professional development” that will create “substantive and lasting changes in the knowledge, skills, and behaviors of educators that strengthen student learning” (Hawley & Valli, 1999, p. 137):

- Professional development should be driven by the analyses of student performance and the goals and standards established for students.
- Teachers must be involved in making decisions about the design and content of professional development.
- Teacher learning should be school-based or job-embedded.
- Professional development should include collaborative problem solving as a critical way to induce change.
- Professional development must be continuous and supported by internal and external sources.
- An abundance of information, such as teacher knowledge, research studies, and outside consultants should be available.
- Theoretical understanding engages teachers in reconsidering their beliefs based on experiences and new learning so that transformations can occur in their day-to-day practice of teaching.
- Professional development should be part of a comprehensive change plan that provides for continuous, slow-paced experimentation and improvement that is supported by district initiatives.
The state of Connecticut has developed an evaluation and professional development plan based on the eight principles above. The efforts of policymakers and educators in Connecticut have been cited as exemplary in the Fourth Edition of the Handbook of Research on Teaching (2001) and the Report of the National Commission on Teaching and America’s Future (1996). The Fairfax TAH project relies heavily on the eight design principles to guide professional development of their American history teachers.

A number of models of professional development have been suggested. Sparks and Loucks-Horsley (1989) identified individual guided development, observation and assessment, involvement in a development or improvement process, training, and inquiry as models that can be combined rather than used in isolation to ensure that teacher learning goals are met. Gall and Vojtek (1994) developed six research-based models of professional development that utilize similar approaches to the models suggested by Sparks and Loucks-Horsley. They include Expert-Presenter Model, Clinical-Supervision Model, Skill-Training Model, Action-Research Model, Organization-Development Model, and Change-Process Model. These models offer diverse strategies to achieve complex professional development goals. Huberman (1995) uses the term ‘cycle’ rather than model to describe a process in which teachers collectively solve problems by going through successive stages of inputs, sharing, observations, strategizing, and experimentation; he calls this the Open Cycle Collective. The framers of these models suggest that a combination of models be utilized to meet the professional development needs of teachers in various stages of their careers.

In the Fairfax TAH, combining models afforded project leaders the opportunity to design professional development experiences they deemed as most appropriate for teachers of American history within their school system. Particularly in year one, the Expert-Presenter Model was utilized to help teachers acquire new knowledge and skills on a particular topic by viewing and listening to a presentation given by a person or group with specific knowledge or skills. A recent project in the Bronx district of New York City Public Schools, called Teacher Leaders for Mathematics Success, found this model was not only effective in increasing teachers’ knowledge of math, but also that students gained in test scores on an assessment after receiving instruction from the teachers in the professional development program (Fancsali, 2004).

In years two and three, TAH project leaders have planned for year one teachers to serve as mentors to other teachers of American history who have not participated in the professional development. Mentoring is a feature of several models, including Training, Individually Guided Development, and Observation and Assessment. Mentors will share what they have learned through a variety of means: one-on-one collaboration, department discussions, school and system-based professional
development, publication of lesson plans on the Fairfax TAH website, and presentations at local, state, and national conferences.

Teacher collaboration and sharing have been shown to be powerful learning experiences for teachers participating in the National Writing Project (Lieberman & Wood, 2001). In Fairfax, the TAH project is attempting to build a community of learners focused on American history instruction. Professional learning communities are generally described as groups of adults in a school or system who share mission, vision, and values; collectively inquire and collaborate in teams; have a willingness to act and experiment in an effort to continuously improve; and base decisions on results rather than intentions (DuFour & Eaker, 1998). Through shared experiences in seminars and other activities, collegial discussions and problem-solving, collaborative lesson planning, mentoring, and dissemination of resources and knowledge, project leaders expect that teachers will improve their practices and, consequently, student learning.

Considerations

Can we declare victory? Teachers report knowledge gains in history. They report implementation of stronger content into classrooms and new strategies using primary documents, videos, and other materials across teaching assignment and grade levels. Clearly there are other questions to answer, and the ultimate success of the grant relies on the accomplishment of the larger goal set forth in the theory of change, namely, positive changes in students’ appreciation and knowledge of American history. Unless we want to experience the short-lived benefits typical of “drive by” professional development programs, the next years of this grant are crucial.

Evaluation in years two and three needs to examine whether modifying the professional development diminishes – or preferably eliminates – the barriers to transfer experienced by year one teachers. A critical component of the evaluation will be classroom observations. Year one teachers will be observed by peers and school and university faculty (TAH project leaders). Observations are intended 1) to verify teachers’ perceptions that they have gained knowledge and expertise in learning strategies, 2) to learn more about the ways teaching practices are changing as a result of the professional development, and 3) to assess students’ level of engagement during the lessons. Essential questions are: Can new learning be seen in the classroom practices of the teachers? If new learning is observed, does it lead to high levels of student engagement in the history content?

Based on an instrument that specifies TAH outcomes, two observations for each member of cohort one will provide some information about teacher transfer of learning. Additionally, in the third year, a
volunteer group of year one teachers will be asked to engage in action research in their classrooms to address the third goal of increased student learning. Teachers will be supported in designing, implementing, and evaluating an investigation of how increased history content and pedagogical knowledge impact students in their classrooms. Changes in student knowledge will be measured using grade-level assessments featuring the use of primary sources in analyzing historical events. In several ways, then, changes in students’ history knowledge will be assessed as a means of linking changes in student learning directly to the professional development outcomes. This is vital in evaluating whether and to what extent the goals of the professional development program are accomplished.

The outcome of the evaluation of this TAH project should be increased knowledge about the effectiveness of the model of professional development being implemented by Fairfax County Public Schools to enhance the teaching and learning of American history. While professional development is a key to advancing teacher learning, the transfer of that knowledge to enhance student learning should be the primary goal of any teacher professional development program. Is long-term, content-rich professional development led by historians, museum curators, and professors successful in improving the teaching and learning of American history? In regard to this project, questions still to be evaluated are: How can teacher transfer of professional development learning be more systematically measured? What are the roles of the teachers, the project leaders, and the students in this process? The charge of TAH grants is clear: to enhance teachers’ knowledge and, ultimately, students’ learning of American history. Understanding how best to meet this charge has importance for educators and policy-makers alike.
### Appendix

#### Table 1. *Highest Level of History Preparation of 34 Teacher Participants*

<table>
<thead>
<tr>
<th>Level of Preparation in History</th>
<th>Teachers Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers with no formal education in history</td>
<td>18</td>
<td>52.9</td>
</tr>
<tr>
<td>Teachers with a teaching concentration in history</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Teachers with a history minor at the undergraduate level</td>
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<td>14.7</td>
</tr>
<tr>
<td>Teachers with a master’s degree in history</td>
<td>6</td>
<td>17.6</td>
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</table>

#### Table 2. *Summary of the Project Design*

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<th>Participants</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4 Extension</th>
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</thead>
<tbody>
<tr>
<td>Cohort 1 n 43</td>
<td>Intensive training: monthly seminars</td>
<td>Mentoring, modeling, school-based collaboration, lesson creation, reflection</td>
<td>Mentoring, modeling, refining units and dissemination, reflection</td>
<td></td>
</tr>
<tr>
<td>Cohort 2 n 60</td>
<td>Intensive training: monthly seminars</td>
<td>Mentoring, modeling, school-based collaboration, action research, lesson creation, reflection</td>
<td>Mentoring, modeling, refining units and dissemination, reflection</td>
<td></td>
</tr>
<tr>
<td>Cohort 3 n 60</td>
<td>Intensive training: monthly seminars, action research, lesson creation, reflection</td>
<td>Mentoring, modeling, school-based collaboration, research, lesson creation, reflection</td>
<td>Mentoring, modeling, school-based collaboration, research, lesson creation, reflection</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td>Content</td>
<td>Before</td>
<td>After</td>
<td>Teaching Strategies</td>
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<tr>
<td>----------------------------------------</td>
<td>---------</td>
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</tr>
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<td>Post 1945 Policies</td>
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<td>.959</td>
<td>.890</td>
</tr>
<tr>
<td>Civil Rights</td>
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<td>.952</td>
<td>.969</td>
<td>.945</td>
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<td>Vietnam</td>
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<td>.941</td>
<td>.951</td>
<td>.980</td>
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<td>America in a Changing World</td>
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<td>.969</td>
<td>.974</td>
<td>.721</td>
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<td>Society &amp; Culture, Expansion &amp; Mapping</td>
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<td>.862</td>
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<tr>
<td>Legacy of George Washington</td>
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Note: Reliability at .70 or higher is acceptable.
Table 4. **Perceived Knowledge Gains Following Each Seminar Session**

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<tr>
<th>Seminar</th>
<th>Before Seminar (i)</th>
<th>After Seminar (j)</th>
<th>Difference (j-i)</th>
<th>Before Seminar (x)</th>
<th>After Seminar (y)</th>
<th>Difference (y-x)</th>
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<td>1. Where Are We As Americans?</td>
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<tr>
<td>Elementary</td>
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<td>Overall</td>
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<td>Spec. Ed</td>
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<td>2. America in a Changing World</td>
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<td>3. Civil Rights</td>
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### Table 4 cont.

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<th>After Seminar (y)</th>
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<td>5.00</td>
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Note: Significant difference found between pre and post test scores.
References


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