The Time Tunnel History Mashup Project
Proposal Seeking
Digital Humanities Start-up Grant
National Endowment for the Humanities

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Abstract

The following is a proposal for a Digital Humanities Start-Up Grant from the National Endowment of the Humanities (2010). The request is for Level I funding, which is an award for the initial planning of a new, technologically innovative project which seeks to strengthen an area of the humanities within K-12 education. The Time Tunnel History Mashup Project will further the use of technology while at the same time helping students to become better engaged with the importance of history to our current society. The use of mashups brings together many aspects of the emerging Web 2.0 Internet—a more semantic web, where information is connected by ideas, categories and topics into a cohesive unit—a meaningful display of multiple data sources in one location on the web. This project focuses on the meaning derived by the creators of the mashup—the teachers and students who search for, compile and manipulate these disparate resources in order to create something new and different.

Project Description

It is widely believed that the current state of social studies instruction must undergo a transformation in order to connect with today's students. The difficulty in presenting historical materials in a way that promotes not only understanding but also the ability to use the ideas independently is well known. Increasingly, educators are turning to a project-based learning approach to place students in the center of the instruction. Project-based learning uses project-centered activities, often in a group format, to bring about deep learning applicable to students' lives and that is transferable to a variety of situations (Kurubacak, 2007).

Technology has been shown to be an effective means for implementing project-based learning in the classroom. Specifically, the interactive, multi-faceted nature of Web 2.0 gives teachers the capability of textured, non-linear instruction that is the essence of project-based learning (Bull, Hammond & Ferster, 2008). Web 2.0 is a term that refers to an array of online interactive applications, such as wikis, blogs and social networking sites (Boulos & Wheeler, 2007).

One aspect of Web 2.0 that is receiving growing attention is the mashup—a web-page that pulls together information from a variety of external sources, integrating this data in a way that creates something new. An example of a well-known mashup is Google Maps, which integrates mapping capabilities, satellite information, photographic images and pinpointed information as to weather, businesses and services available in a given geographic area.

Educators and researchers are just beginning to conceive of the instructional possibilities of using mashups in the classroom. Mashups were named one of the best educational

technology innovation in 2008 by the non-profit New Media Consortium (The Horizon Report, 2008). Recent literature highlights their potential (Boss & Krauss, 2007) . Mashups offer teachers a new way of presenting historical information, one in which the learner must interact with and manipulate the data, constructing new meaning in a virtual environment that is rich in its representational symbolism. "With such authentic data manipulation, educators can situate classroom learning in real-world contexts creating difficult, true-to-life problems for students to solve as they hone their higher order thinking skills while becoming facile in navigating high levels of data complexity, volume, and change" (Liu, Olmason & Wang, 2008, p. 246).

The nature of this project will be the implementation of Web 2.0 mashup capabilities into the preservice preparation of middle school social studies teacher candidates. Through the Time Tunnel History Mashup Project, preservice teachers will be exposed to mashups and create their own. These mashups can change and grow with the teachers as they enter the teaching field and will ultimately serve as key components in their classroom social studies instruction.

Enhancing the Humanities Through Innovation

The Time Tunnel History Mashup Project meets the criteria for the Digital Humanities Start-Up Grant in several ways. Using mashups to create and disseminate historical information is a new technological approach. Time Tunnel uses the Internet to make digital historical resources widely accessible. The project will prove effective in both formal and informal educational settings and at virtually any academic level. Time Tunnel will not only preserve and aid in the analysis of historical information gathered from a variety of media sources, it will also assemble this information in a way that creates new ideas and perspectives regarding historical tools, primary source data and other historical artifacts.

Open-source Software

It is the preference of the NEH to fund technological and educational projects that make use of generally accessible software that is available to all individuals for the broad distribution of ideas, innovation and scholarship. Time Tunnel will use the open source software developed through the SIMILE program at the Massachusetts Institute of Technology. Piggy Bank is a Firefox extension that can use a computer's browser as a mashup platform making it possible for the user to extract data from different web sites in order to create something new. Piggy Bank will be used in conjunction with the Exhibit program, which uses the extracted data to create maps, timelines and other interactive web pages. Both programs are "end-user friendly."

The Current Environment

Currently, use of mashups in K-12 education is sporadic. Some publishers have begun to offer rudimentary mashup capabilities as a resource available online for districts that have purchased certain textbooks. Some teachers with a bent toward technologically have

pieced together mashups on their own. Google Earth offers a way for teachers and students to share and publish their own mashup mapping projects. Veteran teacher Jerome Burg made mashups a key part of his literary instruction. Burg's "Google Lit Trips," created with the help of mapping technology available at Google Earth, were so successful that he now teaches others at Granada High School in Livermore, California, how to use mashups in their own classrooms (Boss & Krauss, 2007).

The object of the Time Tunnel History Mashup Project is to foster the widespread use of mashups. We hope to make mashups easier understand and assemble. Our goal is to expand the use of mashups so that they are used in a variety of educational environments with a diverse group of teachers and students, including those who may not be technologically inclined.

Work Plan

The Time Tunnel History Mashup Project will be implemented through the teacher preparation program at Texas A&M University, College of Education, Teaching and Culture, during the Spring 2011 semester. The program will be part of the methods class instruction received by preservice middle school social studies teachers in the course entitled MEFB 451, Social Studies Methods and Technology in the Middle Grades. Much of the mashup instruction will take place in the state-of-the-art Aggie-STEM Center, located at 428 Harrington Tower, 4226 TAMU, College Station, Texas . The focus of the Aggie-STEM Center is the dissemination of project-based learning resources and technology skills in Texas. As such, its laboratory is the ideal environment in which to learn about and create mashups. All direct mashup instruction will be provided by an Aggie-STEM Center instructor who is experienced in the use of Piggy Bank and Exhibit software.

The program will be broken down into separate components over the course of the 13-week Spring 2011 semester:

Module 1: Introduction to the concept of project-based learning, and its importance to social studies instruction.

Module 2: Introduction to mashups through examples on the web, such as the following links:

- U.S. Presidents: http://www.simile-widgets.org/exhibit/examples/presidents/presidents.html
- Live Earthquake Mashup: http://www.oe-files.de/gmaps/eqmashup.html
- The Itinerary of King John and the Rottuli Litterarum Patentium: http://neolography.com/timelines/JohnItinerary.html

Module 3: Instructor demonstrate the use of Piggy Bank and Exhibit in order to retrieve Internet information and create timelines, geographical maps, etc.

Module 4: Students are broken into groups of five and assigned the task of creating a mashup that maps out distinctive aspects of one of the amendments to the U.S. Constitution. Each group member is assigned a different task in order to find information and build the mashup. This can include Internet research and retrieval of information regarding geographical locations, a timeline of events that led to ratification, and links to related photographs and images of primary source data. Each group will research and create a mashup for one of the following Constitutional Amendments:

- Amendment 13 – Abolishment of slavery
- Amendment 15 – Prohibition of denial of suffrage based on race, color
- Amendment 16 – Allows federal income tax
- Amendment 17 – Direct election of Senators
- Amendment 18 -- Prohibition of alcohol/Amendment 21 – Its subsequent repeal
- Amendment 19 – Federal recognition of women's suffrage
- Amendment 22 – Limits the President to two terms in office
- Amendment 24 – Prohibition of restriction of voting rights due to non-payment of poll tax
- Amendment 26 – Voting age of 18

Module 5: Presentation of group mashups; discussion

Module 6: Debriefing orally and through short-answer survey regarding the perceptions of preservice teachers regarding Time Tunnel History Mashup Project.

Final Product and Dissemination

Our goal is the wide dissemination of the results of our project. This will be accomplished through publication of both quantitative and qualitative data in scholarly journals such as such as Technological Horizons in Education, Journal of Research on Computing in Education and Journal of Social Studies Research. Another way to spark a national conversation among educators is to provide results and links through the website of the National Council for the Social Studies, at http://www.socialstudies.org. NCSS is an authoritatiave body in the area of social studies instruction and is a leader in offering access to resources and information at the cutting edge of social studies education.

Conclusion

Through the Time Tunnel History Mashup Project, teachers, as well as their students of the future, will gain a fuller sense of the importance of each amendment as well as the historical journey that took place in order for these amendments to reach ratification. Mashups can help students become more engaged and informed citizens. They offer ways of sparking student interest, participation and knowledge application that are vital to a project-based learning environment. The fresh insights offered through the use of

mashups as an educational tool make their development an important part of the social studies classroom of today and tomorrow.

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