Every Student a Historian
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Why:

Traditional history instruction has generally struggled to communicate the concepts and processes that historians routinely employ as part of their professional practice. Its primary focus has been on fact retention, and even this limited task has proven largely unsuccessful, as measured by every test, survey, or study conducted during the past three decades. The key problem is not just one of students not remembering the date of a battle, or the name of a historical figure; rather, the problem is that students are unable to use historical knowledge as a way of both understanding and making decisions about their lives in the present. A recent example was provided by the events of the Arab Spring: while raw data about the events was abundant, the construction of knowledge from this data required the application of nontrivial historical methods. Sadly, in the absence of an understanding of these methods, public discussion of these events remained largely uninformed, a situation which was not helped by the similarly uninformed presentation of these events in the media.

How:

Multiple approaches to teaching history as practice by historians have been developed and tried out since the sixties. While many of these methods have shown excellent results, they have largely gone unadopted due to the difficulty of obtaining a corpus of original documents for students to analyze, and due to the time-consuming nature of the construction of maps, timelines, and diagrams that could assist in the historical analysis process. These problems have been solved in recent years by the explosion of available materials over the Internet, and by the development of easy-to-use software for the construction of tools for historical understanding. The workflow below is informed by the recent work of Bruce Lesh, who emphasizes the role of key organizing historical concepts in creating classroom experiences where students learn to think and work as historians. Some of these (text, subtext, and context; chronological thinking and causality; multiple perspectives; continuity and change over time) are highlighted in the workflow.

What:

The workflow uses the politics that have surrounded the creation, ownership, and management of the Panama Canal for over a century as the basis for this particular example. The choice of topic was guided by the ready availability of source materials, its presence in almost any traditional American History curriculum, and its connections with events currently influencing student lives. Additionally, it provides a wealth of opportunities for students to explore a plurality of interpretations of events, and for them to conduct their own research and reach their own conclusions about the relative validity of some of those interpretations. Needless to say, any similar episode in American or World history could be substituted at the heart of the workflow.
Flow Steps:
Step 1: The Historical Context

Students browse through the historical timeline, putting the creation of the Panama Canal in the context of other contemporary historical events.

App Used: Timeline Eons

App Notes: better data import/export mechanisms would be useful here - while it is possible for a teacher to "prepopulate" a timeline for student exploration of events not included with the original app, the process is more cumbersome than need be.

SAMR Level: S
Step 2: The Sources

With the historical context in place, students analyze, highlight, and annotate historical overview materials, as well as source documents.

App Used: iBooks

App Notes: it would be desirable to be able to export the notes with the text that they highlight - right now, email export only mails the note text. Additionally, export options other than email or print would be useful.

SAMR Level: S
Step 3: Structuring the Analysis

The initial analysis from Step 2 requires some structuring to be truly useable by students - and lists of notes are not enough, particularly as answers to initial queries lead to deeper questions. Students need to organize the information, deriving categories for analysis, pulling out key summary points, and cross-referencing backing data. Physical index cards have always been a central tool for historians in this context - digital index cards can do even more.

App used: Index Card

App Notes: the back/front aspect of the cards is crucial for students to use - front of the cards with summary points, back of the cards with detailed references and analysis. Similarly, the stacks option is essential for overall info structuring and organization.

SAMR Level: A
Step 4: Cause(s) and Effect(s)

Students can now use their analysis from Step 3 to look at logical networks of influence and causality, as focused by either teacher prompts, or student interests. One such prompt: how were different influencing factors affected by the selection of a location for the construction of the canal?

App Used: **iThoughtsHD**

**App Notes:** iThoughtsHD is unique among the concept mapping tools on the App Store in offering a combination of mindmap-like tree network depiction, together with callouts and unlimited directed and undirected links. The combination of all these features makes it suitable for use in this type of study - chains of causality in historical systems rarely, if ever, follow the strict tree hierarchy imposed by mindmaps, but at the same time require richer symbolic tools than can be afforded when all links are indicated as simple undirected connections.

**SAMR Level:** A

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Step 5: Geography as Context and Narrative

Students can now place those influencing factors in the context of a map, and then use that map to analyze the relative potential influence of different factors (e.g. value per volume of various goods, shipping costs by different means, port of departure, port of arrival). Even more interestingly, they can then turn around and analyze the same issues in the context of the current Panama Canal Expansion (scheduled for completion in 2014), and see what the corresponding economic impact would be in today's world.

App Used: My Maps Editor

App Notes: the map here should act as a tool for visualization and analysis, as well as a gateway to other information and as a tool for integrating it within a narrative. For instance, the icon shown on the map is linked to the USDA report from which the information on current trade routes and travel times was sourced.

SAMR Level: M
Step 6: Time as Context and Narrative

With this knowledge in hand, students return to the timeline, and add events and interpretive commentary in the broader historical context. In turn, this should suggest additional insights into connections, particularly as they have impacted other players outside the USA on the world stage.

Apps Used: Timeline Eons

App Notes: as in the case of Step 5, the timeline here acts as a tool for visualization and analysis, as well as a gateway to other information and as a tool for integrating it within a narrative. Student-created categories are an important aspect of the use of the timeline - they allow for turning layers of information on or off as part of the analysis. As already remarked in Step 1, better export/import mechanisms would allow students to share their narratives.

SAMR Level: M
Step 7: Constructing and Visualizing Meaning

Having developed a sense of context, and an understanding of the evolving role of various interests in the Canal's history, students can now investigate how these factors were reflected in communication in the popular media about the canal. In particular, they can see how these interests, and their attempts to sway public opinion in varying directions were reflected through political cartoons. Once students have developed this analysis using the scaffolding they've built to date for President Roosevelt's time, they can turn to a creative historical exercise: how did these elements and players remain (or failed to do so) on the public stage at the time of President Carter? Note that students will have to expand upon their use of the tools for this latter part of the exercise - in effect, they will have to undertake portions of Steps 1-6 in developing an understanding of the issues in Carter's time.

App Used: iThoughtsHD

App Notes: the capacity to integrate direct access to the visuals of the cartoons with the concept map structuring elements is important here. Additionally, as in Steps 5 and 6, the concept map should act as a tool for visualization and analysis, as well as a gateway to other information and as a tool for integrating it within a narrative.

SAMR Level: M
Step 8: Synthesis and Communication

Students can now pick one element out of the many that they judge to have played a significant role in the decisions and events surrounding the Panama Canal, and place it within a full historical context, based upon the research from Steps 1-7. Using screenshots from the tools already employed, they present this analysis and synthesis to their teacher and peers, harvesting their feedback, while recording the presentation at the same time.

App Used: Explain Everything

App Notes: A key aspect of using the app is to get away from the Powerpoint model of presentation - i.e., the presentation is driven by the evidence as viewed by the student, with a full range of visualization tools, rather than by a skimpy set of bullet points. Additionally, the capacity to modify and annotate slides on the fly while recording the presentation means that it can be used to readily create OER materials in Step 9 without introducing an undue burden.

SAMR Level: R
Step 9: Reflection and Creation

Based upon the feedback received, students take their recorded presentation, refine it, and create a final version for posting online, as a presentation of their independent research, and a resource to other students.

App Used: iMovie

App Notes: the project-based design of iMovie allows for the creation of revision processes - as in more traditional essay writing, effective revision feedback loops are crucial for students to develop good digital storytelling patterns.

SAMR Level: R