

Using Virtual Globes in the Classics Classroom

Maps are an essential part of the Classicist's pedagogical toolbox. We rely on maps to relay specific types of information: the physical location of major settlements, the limits of empires, changes in the environment, movements of peoples across time and space, etc. Yet, we often do not ask our students to engage actively with maps as an analytical tool, that is, to employ spatial thinking (as we would ask them to use critical thinking) to recognize and understand patterns of human behavior. Geographers define spatial thinking as, "the ability to visualize and interpret location, distance, direction, relationships, change, and movement over space." (Sinton 2012) It is difficult for our students to achieve spatial thinking with static maps in classrooms thousands of miles from the places we are asking them to visualize and interpret. The world, however, is collapsing (not literally). Despite their lack of geographic knowledge, almost all college students carry a virtual globe in their pocket. This presentation highlights two mapping assignments that use virtual globes. These exercises are designed to take students through the process of spatial thinking with the goal of producing a dynamic map that can be used to address specific questions about the ancient Mediterranean world.

A virtual globe is a 3-dimensional representation of the Earth that can be manipulated digitally in a variety of ways. While the more sophisticated virtual globe software is proprietary (such as the ESRI suite of mapping products), there are now several applications available for free on the Internet or for download (e.g., Google Maps, Google Earth, and Bing Maps). These applications are continuously adding functionality that approximates some of the key features of high-end virtual globes, such as the ability to layer map data based on user-defined criteria, adding labels and other symbols,

measuring distance, and drawing polygons to define areas. Essentially, these virtual globes can be used to create a simple GIS (Geographic Information System), that is, a spatial visualization tool (a map) layered with historical, cultural, and chronological data. In the classroom, the interactive nature of the virtual globe allows students to become producers of knowledge as well as consumers.

I present here two classroom assignments that use Google Maps to visualize and interpret an aspect of the ancient Mediterranean studies. One example is collaborative and highlights the macro-level of analysis and the other is an independent project on the micro-level. In each case the learning goals are similar: I want the students to go through the process of locating sites accurately, contextualizing those sites with appropriate symbolism and description, evaluating distance and chronology, and reflecting on the experience. In the first example, students work collaboratively using Google Maps to create a map of the Mediterranean from the Iron Age to the late fourth century B.C. (the time span of the course). Each student researches a region and period and adds data to the map as appropriate. Students present their contributions to the class and they write a paper that is both analytical and reflective. The collaborative map also features in the final exam for the course. In the second example, students work independently to create a regional map (again using Google Maps) of the early Iron Age Argolid in response to an article by Susan Cole about early sanctuaries and the origins of the polis. Here they have to think carefully about topography and distance, as well as chronology. Their final product is the map as well as a written statement reflecting on what they learned from the exercise.

The students have a range of reactions to these assignments, and the quality of their work varies accordingly. Some embrace this method of learning, while others have a great deal of difficulty translating information from written sources into accurate visual data and then interpreting that information in relation to space and time. They are not alone. Spatial literacy, i.e., the ability to apply spatial thinking to a variety of situations, is a growing concern in education (see Learning to Think Spatially 2006). Ideally, spatial thinking would be infused throughout the curriculum, providing opportunities for students to practice this skill. For my purposes, I have found it important to emphasize *process over product*, breaking assignments down and spreading them throughout the semester. In the end, I believe virtual globes can serve to engage students with critical questions about the ancient world while enhancing their abilities in spatial thinking and, ultimately, their spatial literacy.

Bibliography

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