A Windowless Room With a View: How Digital Mapping Tools Can Change Our Perspective on Learning

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A Windowless Room With a View: How Digital Mapping Tools Can Change Our Perspective on Learning

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.01 Introduction

This is the last article in a three-part series examining the tools, practices, and communities that develop as a result of a changing digital perspective. I organized these views into three categories: the micro-point of view, the human eye point of view, and the macro-point of view. Each of these views gives educators new ways to think about designing learning environments. This article examines the digital macro-point of view and more specifically the rapidly evolving world of geospatial tools that are accessible to educators and students like Google Earth [1]. This means they are free, guided by open source development, and easily mashed with other digital information.

.02 New Learning Environments

In less than a year, Google Earth has fostered one of the most promising shifts in software and resource development for educators. In many ways the development of Google Earth and other geospatial tools are giving us a glimpse into the beginning of a paradigm shift pushed by the integration of digital imagery and digital information that is free and available on the Internet. Google Earth has become another application in a world of services and applications like Wikipedia [2] and deli.cio.us [3] that are designed to create and connect communities with no central content organizer. The premise and the power of these tools comes from the ability of users to create and thus define the content, features, and uses. The organic development of these communities has become a boon for educators interested in using the Internet in their teaching.
For educators, this works in part because of student, teacher, and community variance. The macro-point of view gives educators and students a different visual perspective. It’s a perspective that when used effectively can foster higher-order learning that is based in the understanding and development of community. In Google Earth the satellite images give users the opportunity to place these communities and locations in a context defined by what educators would like their students to learn. The actual contexts are selected and created by the communities that select the geotags and create placemarks and map layers.

The scalable nature of geospatial tools gives educators the ability to select perspectives and therefore gives them the chance to connect, elaborate, and create new ways of understanding. This enables teachers to create more student-centered and project-based learning environments where students can become authors of their own knowledge and create their own geospatial tools that might illustrate a deeper understanding of a place or a concept. The quick and easy way to think about using geospatial tools is through the lens of a geography teacher. But, that would be shortsighted. The concept of location is used in all subject matter.

.03 New Communities and Tools

Despite competition from Microsoft and Yahoo, Google has created a product quickly that has truly connected the world. It has created an on demand graphic tool that John Hanke, Google Earth’s Keyhole group general manager, describes as a “browser for the earth.”

Google Earth’s rapid pace of development has spawned hundreds of new communities. Underlying all this new development are two major communities: the technical developers and the educators. All these community members are interested in building communities and creating tools for learning. To be fair, we have to understand that geographers and Geographic Information Systems (GIS) specialists have been creating the content and features for geospatial tools long before Google Earth was created. Just as Google has helped people access and organize text and image content on the Internet, they were in the right place at the right time to create Google Earth.

Google Earth’s rapid pace of development can be attributed in part to the decision to make the Application Programming Interfaces (API) available to programmers. This was the stroke of genius which has in many ways become the modus operandi for successful program development. It follows a basic strategy that declares: If you want people to use and help you develop your applications, give them the information they need for development and let them go. You will be surprised at what they can create.

In essence developers are tagging information on the web with geographical coordinates. This has resulted in an explosion of mashups- websites or web applications that provide geographical information about content from more than one source. The process has been made easier because the API’s have been designed simply. A visit to the Google Maps Mania Blog [4] will keep you on the edge of development. As you read more, you get the feeling that a lot of people
are having a lot of fun with Google Earth.

Educators who have started to experiment with Google Earth have access to a wide range of learning tools at Google Earth Lessons [5]. This is a web site developed to support educators who are using Google Earth. It fills an often all too familiar need for educators. In many cases, educators would use more open-source applications if there was ample support in place. At Google Earth Lessons, they hope to create a community of users dedicated to the mission of using this tool in ways that expand educators’ perspectives about using the application in their teaching.

Some of the useful features on the site include: nifty tricks, libraries, and lesson links. In addition, and in the spirit of open source development, educators can actually take an online course that uses Moodle, an open source web-based course management tool. It’s a welcome addition for educators and students. In the spirit of new development the site has a link to what they call an idea bucket. It is a way for educators to share ideas they are developing. It is a wonderful way to welcome more people in the development community. It encourages the less technically inclined people to participate. Thus, it also serves as a bridge between the development community and the educational community. I could envision developers taking a number of the ideas and creating the actual mashups.

.04 Conclusion

Though it is often risky to be a prognosticator about new technology developments, I believe that geospatial tools will become widely integrated and adopted by educators in the future. The rapid pace of user development coupled with the ubiquitous integration into our daily lives and practices will make it seem natural. Just as students have begun to resist the idea that learning takes place in one place and in one way, they will help drive the future of change here as well.

As developers race forward to develop new geospatial tools and content, it’s helpful for some of us to stop and take inventory about the changes. It’s these phases of development that give educators pause and help them define things and create resources and tools that give teachers that flexibility to integrate these tools into their curriculum.

Earlier I used the term paradigm shift to describe what has and is about to happen when more people begin to integrate geospatial tools like Google Earth into their lives and learning. Initially, I hesitated to use the term, but the more research I did for this article, the more comfortable became using it. As educators and users of the Internet, what we learn depends on our point of view which we can now literally change without leaving the room.

References:

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14 THOUGHTS ON “A WINDOWLESS ROOM WITH A VIEW: HOW DIGITAL MAPPING TOOLS CAN CHANGE OUR PERSPECTIVE ON LEARNING”

**naija**

on **January 30, 2014 at 11:34 AM** said:

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