

Interactive Maps for Developing Community in Online Classes

Terry Cavanaugh (t.cavanaugh@unf.edu)

Cathy Cavanaugh (cathycavanaugh@coe.ufl.edu)

www.drscavanaugh.org/mapping/

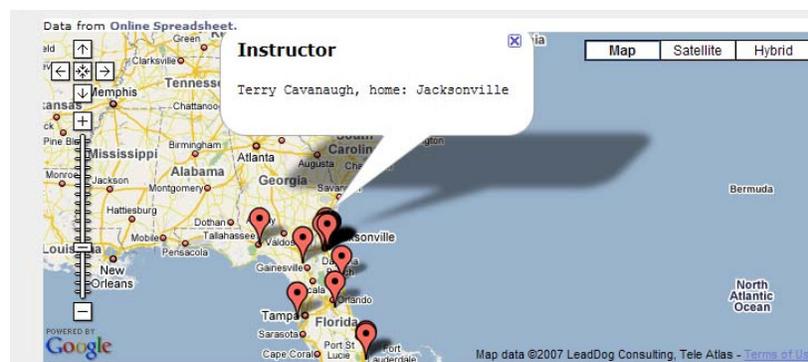
How can we help online students reduce the feeling of isolation? Learn how to integrate Web 2.0 mapping technologies into online classes to support class community.

Goals: Understand and implement a collaborative technique that can be used to increase the awareness of community within the virtual classroom. As virtual classrooms and schools are becoming more common, instructors need new tools for the new educational paradigm of the "classroom". In this session you will learn strategies and methods to implement Web 2.0 collaborative tools to create a form of classroom display. These displays or maps of the students in a class create a virtual classroom, allowing the students to see themselves as members of a class versus being isolated.

Getting Started: *(do this now)*

Add your location to our class map for today's NECC BYOL

1. Find the Latitude and Longitude in decimal form of your home town/school by typing in an address or city at a website like <http://www.maporama.com>. (From Google Maps, you can focus down to a location, double click to center the page and then find the latitude and longitude in the "paste link in email or IM" statement)
2. Go to the session map at <http://tinyurl.com/pkphqj> (or <http://www.drscavanaugh.org/mapping/SITE2008.htm>).
3. Follow the "**Online Spreadsheet**" link just above our class map and open to a new window.
4. Go to the spreadsheet with the name Sheet1 (tabs are listed at the bottom), in the spreadsheet go to your assigned row number (*it is on your card*).
5. To the spreadsheet: Add your name, location information, latitude and longitude as decimals into the spreadsheet. After adding your information, click the **close** button above the spreadsheet.
6. Return to the class map and refresh or reload the view to see your location. You can click on any map pin to see the details about that location.



Background

With today's technology it has become easy to integrate GIS (Geographic Information Systems) technology into online and in-person classes, and use those technologies to support class community. During this session educators will learn a variety of strategies and resources that can be used in integrating GIS technologies to add exciting and interactive spatial elements as activities that students can take part in and help develop a sense of community through the use of Web 2.0 mapping tools. Using tools such as Google Maps, teachers and students can easily create interactive digital maps that assist in developing a class relationship by creating a spatially associated class member display, a very elementary form of virtual interactive environment that does not require extensive learning or bandwidth to incorporate into the educational situation. Research results concerning the gains in community building and maps effects on transaction distance will also be presented. Using Web 2.0 tools will allow students, instructors, and others to participate in creating a class map. These maps are updatable and will allow class participants to update information and add content. Class maps can be used as an introductory activity which can lead to more advanced activities, such as data collection and display. Maps have successfully been used within online and in-person course environments, and have been incorporated into content management environments such as Moodle and Blackboard, used on webpages and within student personal learning environments (PLEs). Geographic Information Systems have become relatively easy to use and to integrate with reading activities, and have become an aspect of the broadening view of literacy. Integrating GIS technology as a strategy can excite students and distance learning students recognize themselves as belonging to a group and decrease the feelings of isolation.

Analysis has indicated that using the classmap within the online course environment has significantly impacted the following four areas, with positive medians and the modes, were:

1. decreased isolation (80%),
2. feeling connected (76%),
3. feelings of community (65%), and
4. feelings of relating to each other (61%)

Cost ~ Benefit

- free or open source applications,
- requires little time for an instructor to add to a course.
- relatively easy for students to learn how it use,
- time requirements to input information to map is short

Online Resources

Google Maps: <http://maps.google.com>

Flat map, easily updatable and collaborative

Google Earth: <http://earth.google.com>

3D map/globe

Google Latitude: <http://www.google.com/latitude/>

Live mapping from smart phones

EditGrid: www.editgrid.com

Web 2.0 spreadsheet tools

Map-O-Rama: <http://www.maporama.com>

Tool for finding latitude and longitude



EditGrid



Making a Map with Google Maps

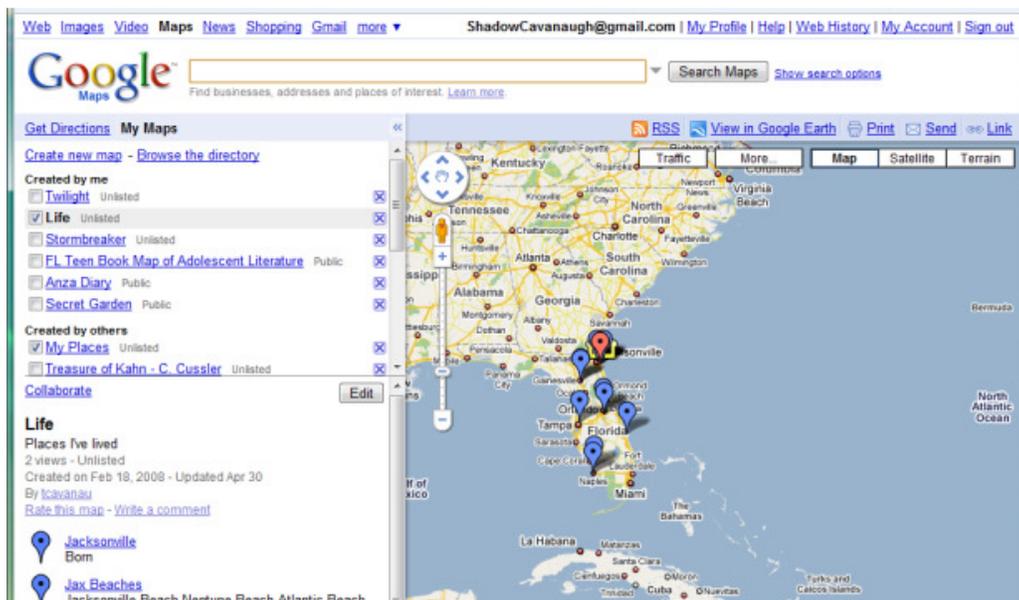
It's as easy as click and place.

1. Start by logging in or registering with **Google Maps**.
2. Select the tab "**My Maps**" and then select the option to create a new map.
3. Move the map, using your mouse, to the general location identified from the reading that you want to mark and zoom in using the screen tools.
4. Use the mouse pointer to select the **Map Pin** tool, then click on the map where you want the map pin to be located (it's ok if it is a little off at first, you can move the pin anytime you wish (only the correct login can change the map)). In addition to the map pin, it is possible to add a line or a shape.
5. As soon as the map pin is placed a pop-up box will appear for content to be added. Give the map pin a name and then add some content to the *description box*. This content could be student information, a quote, or a link, a picture, or a video online.
6. Once the description is set select the **OK** button. Now whenever the map point is selected the new content will be displayed.



Privacy and sharing settings for the map that you create:

- **Public** - Shared with everyone. This map will be published in search results and user profiles.
- **Unlisted** - Shared only with selected people who have this map's URL.

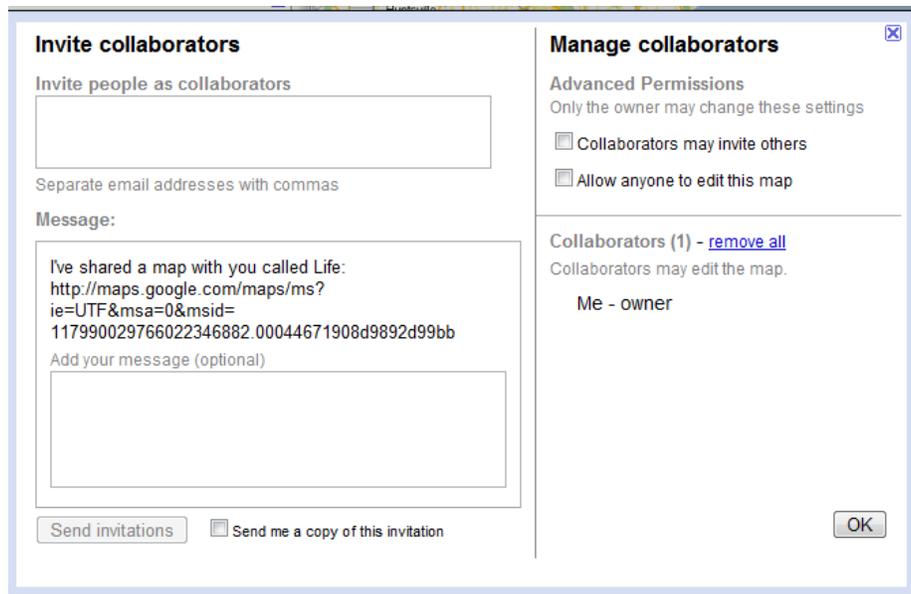


Making your Google Map collaborative

It is very easy to change a map that you have created from just being for you to work on to one that is collaborative. When you do this you can set the level of collaboration to either people you select, people you select and who they invite, or open to everyone. To make your classmap collaborative that you have created with Google Maps do the following:

1. Start Google Maps and open the map you wish to make collaborative from your My Maps listing.
2. With the map selected and displayed select the option to **Collaborate**, this will open an new pop-up window.
3. Now you can either add email address of people that you wish to invite to be able to add and change your classmap in the **Invite collaborators** section or you can select the option under **Manage collaborators** to "Allow anyone to edit this map."
4. If you are inviting others, then type in their email addresses and add a message about the classmap, and click the **Send invitation** button. If you are allowing anyone to edit, don't forget to send out or make available the URL to your map so that others can see and edit it.
5. Now click on the **OK** button and your classmap will now be collaborative.

Note if a map was set to Unlisted, it will still not be listed in a search if the option to Allow anyone to edit this map was selected



The screenshot shows a dialog box with two main sections: "Invite collaborators" and "Manage collaborators".

- Invite collaborators:** Includes a text input field for "Invite people as collaborators", a note "Separate email addresses with commas", a "Message:" section with a pre-filled text area containing a URL and a map name, and a "Send invitations" button.
- Manage collaborators:** Includes "Advanced Permissions" with checkboxes for "Collaborators may invite others" and "Allow anyone to edit this map", a list of "Collaborators (1)" with a "remove all" link, and an "OK" button.

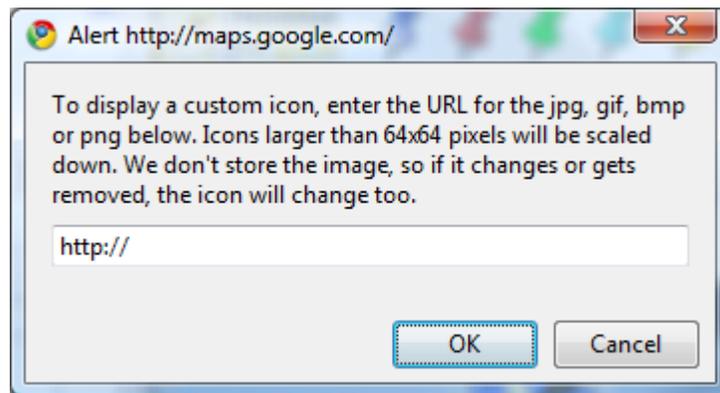
Adding Images or Video to Google Maps

If you have an image or video that you would like to include then the easiest way is to place the images online, such on a web page, Picasa Online, or other online image storage resource.

Making Your Own Map Icons

You are not limited to the default icons that Google Maps provides, you can make your own. To do this you will need imaging or drawing software and a place to put your custom icon on the internet, as Google doesn't store the image.

1. Start by drawing or editing an image to create your new icon. You can create a large icon, but be aware that the final image that goes into the map will automatically be scaled down if the image is larger than 64x64 pixels.
2. Once you have completed your new icon, save it as a .jpg, .gif, .bmp, or .png.
3. Now place your icon online in an openly accessible place, such as a web page, Picasa Online, Photobucket, flickr, or other online image storage.
4. In Google Maps, editing one of your "My Maps" add a new placemark using the map point icon.
5. Click on the map icon symbol to change from the default icon to a new one.
6. Click the link to "Add an icon," this will open a new pop-up window.
7. In the new window, type in or paste in the URL for where your icon is available online. This will add that icon to your "My icons" collection and will be automatically selected for the placemark that you are currently working on.



Course Management Systems and Class Maps

Directions for Students:

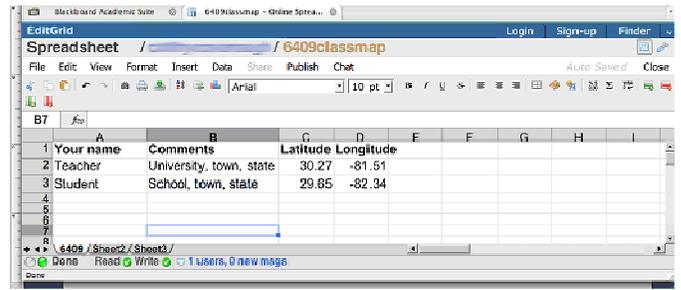
Add your location to our class map

1. Find your Latitude and Longitude in decimal form by typing in an address or city at a website like <http://www.maporama.com>
(From Google Maps, you can focus down to a location, double click to center the page and then find the latitude and longitude in the "paste link in email or IM" statement)
2. Follow the "**Online Spreadsheet**" link just above our class map
3. Go to the spreadsheet with the name _____ (course name)
4. Add your name, location information, latitude and longitude as decimals into the spreadsheet. After adding your information, click the **close** button above the spreadsheet.
5. Return to the class map and refresh or reload the view to see your location. You can click on any map pin to see the details about that location.

Edit Grid

To make a collaborative map using **EditGrid**:

1. Obtain an **EditGrid** account (www.editgrid.com). **EditGrid** is an online collaborative spreadsheet site that provides accounts and spreadsheets at no cost. After setting up the collaborative spreadsheet, it will be available for anyone to open and edit.
2. The first time you open your account there will be a spreadsheet workbook waiting. Give the spreadsheet a name. Notice that the site provides you with three spreadsheets in your "workbook" accessed by the three tabs at the bottom. It is best to set up your collaborative mapping spreadsheet on the first sheet. Any sheet can be used, but when visitors come to the site to add information they will always see the first sheet displayed and some users might get confused by having to go to another sheet to enter their data.
3. Publish your spreadsheet to read and write, and then save your spreadsheet.
4. Add titles to your columns to inform visitors about what they should add. It is possible to have up to five columns for information uses that the system will understand, but I would suggest just four: *Place Name*; *Location Description*; *Latitude*; and *Longitude*.
5. It is a good idea now to add at least one set of data that can serve as an example for others to see how the data is entered. For a location you will need to find its latitude and longitude in the decimal format, not in degrees, minutes, and seconds. [See the steps for using Maporama to find this data](#). For example, UNF's decimal latitude is 30.27 and its longitude is -81.58.
6. Once you have that information add it to your spreadsheet, give the location a name and a description of the location. The sheet will automatically save your data after each entry.
7. Currently EditGrid is restructuring its interface and is redesigning its plugin framework. To access the ability to take your data and place it on a map you will need to do one of the following:
 - o New method: Open a new tab in your browser and go to <http://www.editgrid.com/legacy/workspace/apps/run/1>
 - o The old method was in "My workspace" use the "Add-ons" tab to select **Grid2Map**.
8. From the menus, choose your spreadsheet file, the sheet on which you are adding data. The spreadsheet column you select for Title is the one that will appear with the map pin on the **Google Map**, and the column you select for *Description* will be added to the map pin. In one map I used *Name* and *Description* for these columns. You need to choose *Latitude* and *Longitude* columns, too.
9. After clicking the **View Map** button, copy the HTML code from the **Post to Blog** box to add to your web page or Blackboard item. The code includes the link back to your spreadsheet from the map. Include instructions on your website or course item for the users to help them add to the map.



After following these steps once, you will not need to work with this procedure again for the same map. All changes to the map can be made by clicking the Online Spreadsheet link shown with the map.

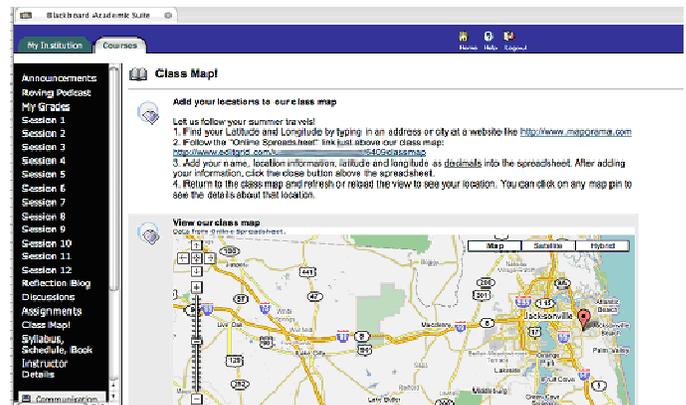
Users adding to your map will only have to select the link above the map to the **Online Spreadsheet** that will take them to the table where they can add the details for the next map point. Remember to tell them how to find the latitude and longitude in decimal form.

Course Management Systems

Blackboard

1. In blackboard, log in and go to tab for "My Institution"
2. Select the option in the Tools list for Personal Information
3. In the Personal Information window, choose the option for "Set Visual Text Box Editor Options"
4. In the "Set Visual Text Box Editor Options" window Set Availability to "Unavailable" (this will only need to be set during the time of adding the map, once the map is added then the Visual Text Box Editor can be made available).
5. Go to the control panel and then Announcements to add an announcement.
6. Give the announcement a title, such as "class map"
7. Choose the option to write your announcement in HTML
8. Paste the code from EditGrid (**Post to Blog** html code)
9. Choose the option to make the map announcement a permanent announcement.
10. Click on Submit.

It is important to turn off the visual text box because the map is added as an iframe tool to the web page. When Blackboard is using the visual text box, the iframe code is changed and causes errors to occur. The big error is that it doesn't allow you to re-edit the map code and then stops any further announcements.



Moodle

When logged in as the course instructor

1. Copy the map code from Edit Grid's Add-on feature.
2. In Moodle, create a new web page resource. In the body of the web page, using HTML mode (< >), paste the map code and then Save Changes.
3. For the map to appear as a Block on the main Moodle page, add an HTML block and paste the map code into the editing box, using HTML mode (< >).
4. The width should be changed to 200.

