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- Neo-geography: No longer experts and non-experts. What are the implications for Education?
- Goal: Get people to do powerful things, even with simple tools. Current tools are sufficient for teaching/learning, but training now needs modification
- How well are we doing? How do we assess?
- Where are our students struggling?
- User interface: better structured, better used; example of Adobe software – new interface caused struggle. How can we structure activities for the user?
- ESRI books (author: Annie Mitchell?) useful, i.e. Geospatial Analysis. Need flowchart of data use similar to introductory statistic texts.
- Do students recognize that a problem is spatial?
- Struggle with what it means to learn GIS
- A question of expectations in courses
- What are the reactions of the group to Google Earth? “primitive GIS”
 - Each enables asking/answering of different questions
 - GIS allows evidence-based investigation
- How does neo-geography fit in?
 - Google Earth as a low-level tool; spatial analysis is not low level.
 - Neo-geography could be seen as an example of geography’s failure to convince the world what it really is.
- What is neo-geography: Where 2.0 conference

- People, not trained traditionally as cartographers, who use new tools to make maps; tools: GPS, Google Earth
- Can we use neo-geography as a launching point? How can we take advantage of it? Making the map is step one.
 - Example of teaching class of 4th graders to read aerial maps, derive directions from home to school, exercise at different scales
- What is the scope/sequence for what students can/should learn?
- Geography and spatial thinking can be taught across disciplines; intersections with geometry
- Where are the sweet spots – opportunities for greatest reach and impact?
 - Pre-service? Frustration as structures come from state education departments and we have to work within those structures.
 - Methods courses
 - Education Technology
 - Informal Education-- i.e. 4-H; They can do what has value for them, career exploration
 - In-school accountability – have to prove cost-benefits
 - Charter schools? Freedom to choose diff methods
 - Geospatial semester in VA – open to all students, not just gifted-talented; Career and Technical Education
 - Informal Education: Sunday School?
 - Summer Programs
 - A champion usually decides to bring it into a school system
 - Experienced teachers usually more open to technology – pre-service teachers don't know how they'd use it in their classroom.
- Policy Recommendations needed:
 - Partnership for 21st C Skills
 - NCLB: likely a change, but accountability remains
- Evaluation and Assessment – better instruments needed from Spatial Intelligence community
- Schools may be messy places for research, but needed
- Are there spatial abilities, skills, etc. that are developed well with Geo-Technology? What are these that we can point to in the curriculum? Many examples of how we can learn differently because of what can be done with computer.
- Third way of Science: simulation (Computational Science, Predictions)

- Net Logo: multi-agent, programmable modeling environment
- What should the geospatial people do, study? Recommendations from the SILC community?

Department of Education: open to proposals for science/math

Databases of classroom observations can be evaluated for spatial thinking

Need for basic technology/computer understanding when teaching teachers; need to establish basic understanding before moving into geo-technology training. Tables as data (that can be manipulated) difficult

Challenges in teaching latitude/longitude

Need for organization of spatial thinking skills -- priority to inform teachers/students of them

- But caution about hierarchies of skills – varies

Spatial skills vs. spatial tasks

Explore/ study spatial skills in Human Geography, similar to studies with geosciences

Stepping away from software, can we develop site of tasks that are comprised of spatial thinking? Consider applications in curriculum and assessment; start the argument toward agreement on terms and ideas