

Preliminary thoughts on Geoenabled Online Education

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Spatial thinking and computing has the power to *integrate* disciplinary perspectives, quantitative/qualitative models, and scale ranges. Our opportunity is to teach the necessary cognitive and computational skills to students and colleagues from all disciplines at all levels, through general education courses, micro insertions in degree programs, and specialized spatial computing courses. In this view of our educational mission, mapping and spatial analysis are the tools for, not the goals of learning. Our goal should be to educate everybody in using location for transdisciplinary problem solving.

Online courses on spatial thinking and computing need to convey problem solving skills, rather than just canning lectures and labs for online access. As our tools are moving into the cloud, learning and using them online is a natural evolution from the traditional GIS courses in computer labs. Spatial thinking and computing can now be *experienced* live and individually by students while they study the concepts underlying it. Online learning by doing avoids the dryness of theory taught without practice in lectures and the confusion resulting from clicking through labs separated from conceptual development. It allows for “practicing content” (John Seely Brown).

On the research side, we need to support this vision by pushing the *usability* of spatial computing tools to radically new levels, aiming essentially at zero hour software training for GIS. Our pride in the complexity of geospatial computing is our own worst enemy. It is time to reorganize our tools around a few core *content* concepts that make sense across platforms and data formats, and are useful across domains. The way to identify these concepts is to study real-world applications and teach entirely through these. If there is no documented case of anybody solving a problem or taking a decision with the help of a spatial computing concept or technique, it is not worth teaching.