# What is the status of online geospatial education and its impact on traditional educational offerings?

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As all the panelists will note, online geospatial education is a fast growing enterprise. There are many motivations for this growth, many often seen as financially motivated. However, there is also a great deal of benefit arising from this trend. I believe teaching online has become a key catalyst for helping educators think very differently about how we teach, what we teach, and more importantly, how students learn.

One of the themes often addressed now in teaching and learning forums is the need for everyone to become prepared for lifelong learning. This is particularly important in the context of geospatial information science and technology. Learning to be comfortable with the uncertainty of constant change and evolution is essential for those who are using those technologies. I believe this is one place where online education has an edge. Because online courses tend to force students to become independent learners, I find it is a much easier context in which to push them to "figure it out yourself". When my students are learning something new with the technology, rather than giving detailed directions, I lead my students to find the instructions they need in the on-line help, to search for solutions on the web and among their online classmates, and, most important, to not be afraid to try and fail. Becoming agile learners and taking control of one's learning is key to success in both GIS and online education.

As a result of this focus on helping students learn to learn, I have found my own approach to be rapidly moving away from content presentation (aka lectures and online course notes) to the increasingly widespread practice of content curation. The online environment makes it much easier to organize and deliver curated collections of relevant information for students to explore as the need arises. There are many content curation sites popular amongst educators– my current favorite is Scoop.it.

My next big challenge in thinking about what and how I teach in GIS&T is the movement towards "teaching students to code", or more correctly "teaching computational literacy". Indeed, this is the analytical thinking and problem solving that we all espouse in GIS education, and I'm glad that it is getting more attention generally. However, thinking about how to teach programming to all students, from environmental scientists to humanities scholars, without the safety net of the face-to-face classroom, is a bit daunting.

Perhaps the greatest challenge in online education is building a learning community among students who have no physical or synchronous contact. Yes, the fun of learning how to solve a problem together in the GIS lab is difficult to reproduce online, but the rapidly growing online education community has created many solutions for this challenge, all of them just waiting for the agile online teacher to try.