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Will the ever-increasing use of navigation devices and GPS-enabled smartphones further decrease our geographic literacy, possibly to the point where most people can no longer read a map?

It's difficult to believe that navigation tools and GPS-enabled smartphones are going to decrease our geographic literacy, impound our spatial thinking ability and take the edge off our "maptitude."

GPS-enabled devices will invoke more spatial intelligence in the decisions we make in our daily lives. The onset of consumer-centric devices in the GIS industry as well as the availability of mapping and Web applications on TVs, mobiles, smartphones and iPads have dramatically changed our relationship with geography. These devices are stimulating a greater interest and use of geography in society. In comparison to earlier days, we are much more location-aware and dependent on these devices to plan trips, meet friends, find good local restaurants and so on.

Navigation devices serve maps in an easy-to-consume format. This has made maps more convenient to a larger section of society, including those who earlier weren't comfortable with using maps at all. It can be argued that, in a way, these devices are leading to an overall <math>\lt;\/math>increase<math>\lt;\/math> in spatial literacy and helping people relate more to geography by seeing it in action.

To reinforce spatial literacy, we should focus on nurturing students at an early age by creating awareness about spatial logic and its use in everyday life.

What is the state of geography/geotechnology education? How can it be improved?

Geography and geotechnical education are complementary to each other. However, various gaps still exist in terms of pedagogy, body of knowledge and curriculum.

Recent and notable successes, which both disciplines share, have two important dimensions. The first is the domino effect of Harvard's decision in 2006 to call back geography in the form of the Center for Geographic Analysis and help achieve a subject facelift across academia. The second is contributions of non-geographers in industry, especially the computer scientists and programmers who came up with smart GIS software, applications and solutions from the mid-1990s.

As a result, we now are more equipped than before to counter the most complicated and remote spatial or geographic problems.

In the future, we need visionary geographers and future-thinking geotechnicians. Actually, we need to bridge the gaps in terms of required skills and competencies for academic and professional accomplishments in both fields.

Geographers need to hone more analytical and programming skills to support application development in GIS, while developers need to understand various theoretical underpinnings in geography and develop cartographic skills.

To help bridge such skill and competency gaps, some systematic approaches have been put forward for focused learning as well as research and development in this sector.

The Geospatial Technology Competency Model is a concerted effort in this direction from the U.S. Department of Labor Employment and Training Administration, and it specifies various foundational, occupational and sector-specific competencies to streamline and benchmark the best practices for GIS/geotechnology education and professional development.

In addition, a comprehensive national job analysis for GIS technicians has been undertaken by the National Science Foundation's GeoTec Center, using a unique DACUM (Developing A CUrriculUM) technique based on various meta-knowledge, skills, tasks and behaviors in the geospatial sector.

All these efforts are aimed to steer new training, certification and curriculum development for various academic institutions and professional bodies such as the GIS Certification Institute.

It's not too ambitious to claim that the state of geography and geotechnical education is quite positive and promising for the future. An increasing number of students are expected to opt for a variety of structured GIS programs in the universities and institutes across the globe to meet the vast market needs of the geospatial industry.

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