

Importance of GIS in Education

A new report from the National Research Council (NRC) stresses the importance of spatial thinking in everyone's life. *Learning to Think Spatially: GIS as a Support System in the K-12 Curriculum* recommends embedding spatial thinking across the K-12 curriculum. According to the report, GIS technology can play a powerful role in promoting spatial thinking.

The study, supported by grants from the USGS, NASA, National Geographic Society Education Foundation, National Science Foundation, and ESRI, began in 2000 and brought together experts in geographic education and educational psychology. The panel heard from key organisations and individuals active in GIS education and outreach including instructors and curriculum developers who promote integrative and problem-based inquiry approaches to education. As constant proponents of the value of GIS and geographic inquiry in education, ESRI and a number of educators who use ESRI technology gave substantial input.

Ultimately, the NRC report had six formal recommendations:

- There should be a national commitment to the systematic educational efforts necessary to meet the goal of spatial literacy.
- There should be a coordinated effort among GIS designers, psychologists, and educators to redesign GIS to accommodate the needs of the K-12 education community.
- A federation of GIS education partners should be established.
- Working in collaboration, GIS system designers, educational IT specialists, and teachers should develop guidelines for a model GIS-enabled school.
- Working in collaboration, representatives of colleges of education and GIS educators should establish guidelines for pre- and in-service teacher training programs for teaching spatial thinking using GIS, and develop a model standards-based curriculum for teaching about GIS.
- A research program should be developed to see whether or not an understanding of GIS improves academic achievement across the curriculum.