

Charting a Global Course for GIS Education for 2030

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Abstract

How and why has Geographic Information Systems (GIS) education been advancing in primary and secondary education, globally? How have GIS tools and approaches been spreading beyond geography and GIScience to earth and environmental science, business, data science, health, and other disciplines in higher education? The adoption and integration of GIS and related geospatial technologies into dozens of academic disciplines has led to worldwide high demand for instruction that is targeted and timely, a combination that is challenging to meet consistently with diverse audiences and in diverse settings. Over the past 40 years, methods and approaches for teaching and learning about geospatial technologies and with geospatial technologies have evolved in tight connection with the advances in the internet and personal computers. Academic degrees, concentrations, minors, certificates, and other programs abound within formal and informal education. During the educationally-disruptive COVID-19 period, online instruction has hastened the adoption of analysis-based and data-rich approaches such as GIS. What are the challenges that remain in the use of GIS in instruction and research, and how can these challenges be addressed? The author, who has been active in promoting and researching GIS in education at all levels for 30 years, will share his perspectives, research results, and offer a pathway forward.

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Geoliteracy is making progress worldwide



However, collaboration is needed to hasten adoption

All 21st Century problems are spatial

Solving spatial problems requires spatial thinking and geotechnologies

Spatial Thinking must begin in the educational system

4 Key Resources

[Esri Academy](#), [Esri Press](#), [Learn ArcGIS](#)

[Esri MOOCs](#)

[Geospatial Technology Competency Model](#)

[Spatial Reserves: Data Sources, Data, Societal Implications](#)

The Language of
spatial ANALYSIS

