

# Repositioning Geography Education

## From Neglect to Necessity

By Daniel C. Edelson  
National Geographic Society

**W**hen I accepted the job of vice president for Education & Children's Programs at the National Geographic Society, I did not anticipate that one component of my new job would be playing the straight man for jokes about geography. However, I have found that conversations about my new job frequently go something like this:

**Acquaintance:** *Wow, that sounds like an exciting job. What do you do?*

**Me:** *Well, the National Geographic Society has taken on the mission of geography education reform. My charge is to improve the quality and impact of geographic education in the United States.*

**Acquaintance [sarcastically]:** *Oh, that is important. I heard recently that the Chinese have gotten even farther ahead of us in map coloring.*

---

Daniel C. Edelson is the new vice president for Education & Children's Programs and executive director of the Education Foundation at the National Geographic Society, in Washington, D.C. He was formerly associate professor of learning sciences and computer science at Northwestern University.



National Geographic Photo Camp / Photo by Chiedo Ohanyerenwa

**Second acquaintance:** *No kidding. I believe that geography education should be a critical national priority. [Sly grin] We need more citizens who can name the capital of Iowa and list the major natural resources of Namibia.*

So, why would I leave a tenured position at a top university to champion a subject that has become the butt of bad jokes? It is certainly not because I had an exemplary geography education myself. In fact, true to the stereotype presented by my comedian friends, my experience of school geography consisted almost entirely of coloring in maps, memorizing names and locations, and learning obscure facts about remote locations. And this was in schools that were rated among the best public schools in the nation.

### Correcting geography's image problem

In my 15 years of work in Earth and environmental science educa-

tion reform, I have learned that geography is as misunderstood as it is disrespected. Geography clearly has an image problem. However, now that I understand what geography is really about, I believe that geography education reform is as important as any other item on our national education reform agenda, even more important than many that get substantially more attention and resources.

---

**Geography is something that you do.**

---

What could possibly be so important about the subject that most people think of as preparation for little more than crossword puzzles and foreign travel—that is, if they have any idea what geography is at all?

Geography is not, as its public image would suggest, about memorizing facts. Geography is something that you do. Geography is about explaining and predicting the events that occur on our

planet. Someone who is geographically literate may know a lot of facts, but what makes them truly literate is the ability to explain why certain things take place in certain locations and to predict what is likely to happen where. For example, the techniques of geography are what enable scientists to explain what the effect of changing fertilizer application methods in Iowa will be on the fish populations in the Gulf of Mexico.

What do you learn, when you learn real geography? When you learn geography properly, you develop a set of “geographic perspectives”—particular ways of asking and answering questions. You also learn a set of “geographic skills”—how to work with a particular set of tools and technologies, including maps and other representations of geographic information. Next come “geographic theories.” Geographic theories explain how systems of causes and effects play out over space and how spatial relationships develop and change over time. For example, geographers use theories of flow and movement to explain how innovative ideas travel from one culture to

### Geography in a nutshell

Geography is the study of how human, biological, and physical processes play out over space. Geography provides methods for using information about location to construct explanations and predictions, solve problems, and make decisions.



National Geographic *Geography Action!* “Rivers”  
Photo by O. Louis Mazzatenta

another or how pollutants travel through subterranean water systems.

What could possibly be so important about geography, which most people think of as preparation for little more than crossword puzzles and foreign travel?

Taken together, these geographic perspectives, skills, and theories enable geographically literate people to construct geographic explanations and predictions. For example, geographic perspectives, skills, and theories are critical to understanding how today’s global challenges—such as ethnic conflict, dwindling freshwater supplies, and climate change—have arisen from local processes, and how local action could prevent, mitigate, or reverse these global threats.

Of course, geography is not the only discipline whose goal is to explain and predict processes on the surface of the Earth. Many others, from geology to anthropology, do, as well, and these “geographic disciplines” all overlap. Two elements, however, distinguish

geography from these overlapping disciplines and make it particularly important for our students to learn, whether they are studying it in a course of its own, or whether they are studying it in the context of another course.

First, geography focuses specifically on the importance of location and spatial relationships in explaining the world. For example, an ecologist might study how individual species depend on each other, but a biogeographer would study how those dependencies influence and are influenced by where they live. Geographers often explain the role of location in geography by saying that space is to geography as time is to history.

Second, geography focuses not just on specific systems, but also on the interactions among systems. Where disciplines like biology, Earth science, and political science each focus on physical, biological, and social systems respectively, geography has always looked at the interactions among them across space. In this respect, geography is similar to history, in being a set of methods for inquiry that apply across different contexts.

### The importance of learning geography

Once people understand what geography really is, I have found that it is not very difficult to convince them of the importance of having a geographically literate citizenry. This is important for both society as a whole and for each individual.

From a society-wide

perspective, geography is probably the most important subject we can teach our young people to prepare them for the major challenges facing societies around the world, including illness, hunger, and poverty; environmental damage and unsustainable use of natural resources; and violent conflict rooted in cultural, ethnic, and religious difference.

### Space is to geography as time is to history.

But geography is not just about large-scale phenomena or remote and exotic locations. Geography also concerns the study of neighborhood and community. For example, students in a geography class of today might study where their food comes from, how it gets to them, what happens to the leftover food and packaging, and the economic and environmental implications of each stage in this process.

In addition to preparing students for the global challenges of their world, geography can prepare tomorrow's citizens to respond to the local challenges confronting communities across the country—the spread of drugs and gang activity to suburban and rural communities, the increasing frequency of property-damaging floods and wildfires, steadily rising commute times, and the lack of access to fresh meat and produce in impoverished urban communities.

Geography is also critical to maintaining the health of the American economy in a fast-changing global context. Retailers



National Geographic *Geography Action!* "Migration"  
Institute / Photo by Gwendolyn B. Faulkner

analyze geographic information to select locations for distribution centers and retail outlets. Military planners do the same to establish battlefield and supply-line strategies. In the increasingly global economy, corporations require expertise in human and cultural geography to understand overseas markets and forge multinational business relationships.

It would be hard to find a business or governmental leader who

### Who does geography?

When you stop to think about all the people who do geography as part of their lives or their livelihood, you realize how essential geographic literacy is to the functioning of our society. Just a sample of the different everyday people who do sophisticated geographic reasoning:

- Real estate developers
- Battlefield commanders
- Meteorologists
- Transportation planners
- Marketing analysts
- Epidemiologists
- Farmers

would deny the importance of geographic skills and knowledge for the core mission of their organizations. I expect it would be equally hard to find one who would say their workforce has been adequately prepared with these geographic skills and knowledge by our educational system. This would not be so true of their counterparts overseas.

Geographic literacy is increasingly important for individuals—for both their personal and economic welfare. In the personal domain, maps and geographic information systems are increasingly being used to help people weigh information about opportunity and risk. Information about weather, natural hazards, and real estate is now disseminated through sophisticated interactive mapping tools. To make decisions about where to live or travel and how to protect oneself and one's family against threats to their welfare in today's world, one needs to be facile with maps, visualizations, and analytical tools.

In the economic arena, geographic literacy is rapidly becoming a critical occupational skill in the modern world. Jobs involving geographic information systems are among the fastest growing category in today's economy, as are jobs that require an understanding of environmental processes, foreign cultures, or the dynamics of geophysical systems. Just as linguistic and quantitative literacies became critical for success in the information economy that emerged at the end of the 20th century, geographic literacy is becoming a critical skill for

success in the globalized but culturally fragmented and environmentally threatened economy of the early 21st century.

### The status of geography education today

Given the importance of geography for 21st-century citizens, how does it stack up against other subjects in terms of prominence in the K–12 curriculum and resources dedicated to improvement?

On the positive side, through the efforts of a small but vocal community of geography educators, 49 of 50 of our states have explicit educational standards for geography. Most of those states' standards are based on national geography standards that were authored by a consortium of geography organizations. And geography is listed as one of the core academic subjects in the No Child Left Behind (NCLB) legislation.

However, for the most part, geography is the forgotten stepchild of education reform. It is the only one of the core academic subjects that



Photo by O. Louis Mazzatenta

---

Geography is the only one of the core academic subjects that has no federally funded program for instructional improvement.

---

has no federally funded program for instructional improvement. Furthermore, as with the other social sciences, the NCLB legislation does not mandate state assessments in geography, which means that the elaborate accountability systems associated with NCLB provide a disincentive for schools to teach geography. For them, any instructional time

devoted to geography is time that could be spent teaching the math, reading, or science that schools are accountable for under NCLB.

As a result of this lack of federal funding and federal accountability for geography, in most locations it is a core academic subject in name only. While the other social studies disciplines such as history, civics, and economics have also been left out of the NCLB accountability system, they at least all have federal funding programs to encourage educational improvement. So, where geography does receive attention in the curriculum, it is the result of local initiative.

Clearly, improving the state of educational reform's neglected stepchild is going to be a substantial challenge. The community of committed geography educators across the country, which I have joined, has its work cut out for it. The first step, though, is rehabilitating geography's public image. As the ancient geographic proverb teaches us, "The longest journey begins with but a single step."

### Place and space in geography

Geography has its own specialized terminology. For example, when geographers define geography, they describe it in terms of *space* and *place*. The 1994 National Geography Standards describe geography as "the science of space and place on Earth's surface."

The terms *space* and *place* are very important to geographers. Space exists indepen-

dent of people, but place is a human construct. Places are defined by people, typically by delineating or naming them. For example, neighborhoods are places. A neighborhood comes into being when it is recognized by people as distinct from surrounding spaces. Countries, municipalities, and parks are all examples of places. Places are not constant, however. They

change. They can even cease to exist. Space, on the other hand, is constant. Space is where people and places exist. Space can be described in concrete terms that are independent of human experience (e.g., location, distance, size, density). Geographers recognize that both space and place are necessary to properly describe the world of human experience.