Thinking Geographically about Asia

Online Case Studies and Collaborative Projects for High School and Undergraduate Students

By Michael Solem and Waverly C. Ray

Improving Geographical Understanding of Asia: A Crucial Educational Challenge

America's future in virtually every sense is tied inextricably to Asia's. As a continent with subregions encompassing a stunning array of industrial activities, technological innovations, economic inequities, political systems, and environmental habitats, Asia provides a seemingly endless supply of opportunity, worry, mystery, and possibility. Also, Asia is a source of enormous markets for American exports, an increasingly competitive source of labor, and a lucrative environment for corporate outsourcing. As countries throughout Asia continue to grow and develop economically, so too will their influence in negotiating global climate treaties and trade agreements. One need look no further than North Korea or the contested areas of Kashmir to appreciate the geopolitical significance of Asia for America—indeed, for all nations.

For these and a multitude of other reasons, it is quite distressing that most American students lack even a cursory knowledge of Asian geography.[1] This problem goes far beyond not knowing basic facts about Asian capitals, religions, economic activities, and population centers. Too many students simply cannot understand or explain why Asia matters because they lack the fundamental geographic perspectives and analytical tools to make sense of the continent's complexity and how they, as individuals, their communities, and their country, are connected to Asia's people, places, and environments through an increasingly interdependent system of global economic, political, and environmental change.

Fortunately, strides are being made at all levels of education to improve students' comprehension of geographic concepts, their familiarity and understanding of geographic issues in different regional contexts, and their capacity for intercultural learning and collaboration. In this essay, we present one such project led by the Association of American Geographers (AAG) to make high-quality geography educational resources on Asia accessible to anyone with an Internet connection. That project, the AAG Center for Global Geography Education (CGGE), has produced an online digital library of educational modules focused on important geographical issues: *Population and Natural Resources, Global Economy, National Identity*, *Global Climate Change, Migration,* and *Water Resources.* Each module has interlocking content sections that have different but complementary instructional functions (see Figure 1):

- The foundation of a CGGE module is the *conceptual framework* that presents some of the key theories and perspectives that geographers use to examine issues related to the module's topic.
- Drawing on the conceptual framework are several *case studies* based on geographic research in different regions. The case studies feature a variety of activities and interactive animations for teaching spatial thinking, mapping, and analytical skills.
- Case studies feature *collaborative projects* that are designed to connect geography classes internationally for online discussions and opportunities for students to engage the perspectives of their peers. Student interactions are supported with Moodle e-learning technologies, such as discussion boards, blogs, and wikis.

Although the modules were originally designed for undergraduate education and high school Advanced Placement (AP) human geography courses, most, if not all, of the case studies can also be used in many high school geography classes.

To use these free CGGE Asia case studies in your classroom and possibly collaborate with other educators, visit the CGGE website at http://globalgeography.aag.org.

All of the modules were written collaboratively by geographers from several countries to incorporate diverse international perspectives.[2] Each case study is built on a geographic question designed to engage students in structured inquiry and analysis of geographic issues. This approach is rooted in social constructivism, a theory of learning that conceives knowledge as developing through a process of inquiry, dialogue, and interactions among individuals and their environments—including virtual environments.[3]

Using CGGE Case Studies for Educating Students about Asia

Asian countries and regions are prominently featured in each CGGE module, and the modules offer teachers plenty of flexibility in selecting content and activities for their classes. This is because each case study can either be used as a stand-alone resource or combined with other case studies to create a thematic unit or sequence of lessons that span environmental, political, and economic issues in Asia. Their educational value is not limited to geography classrooms; indeed, a broader goal of the project is to provide teachers in other subject areas with resources that can introduce geographic and spatial perspectives to complement the content that they regularly teach.

For instance, teachers of history or political science might be interested in the *National Identity* module's case study entitled "How is globalization transforming the borders of national identity?" Drawing on concepts from economic and political geography, this case study investigates how national identity in the Indonesia-Malaysia-Singapore growth triangle is affected by increasing global economic and cultural connections that easily cross state borders. In doing so, it counters a common observation that globalization is leading to the end of the nation-state as we know it.

For teachers of economics, there is a case study focused on Asia in the *Global Economy* module. Asking the question "Where are new forms of manufacturing promoting economic development?," the case study introduces the fascinating machine tool industry and its role in shaping the manufacturing strength of countries such as Japan. Through a variety of examples and activities, students investigate global patterns of machine tool production, consumption, and trade, exploring relationships among partial clustering, downriver industries, and regional economic development.

Environmental educators with interests in Asia also have case studies from which to choose. The *Population and Natural Resources* module features two case studies with environmental themes: "What are the challenges of meeting the resource needs of very large populations?" focuses on China, and "Is population growth responsible for the loss of rainforests?" draws on geographic research in Việt Nam. The China case study teaches students methods of spatial analysis for determining how populous urban centers can better access safe and adequate supplies of water. In the Việt Nam case study, the causes and consequences of

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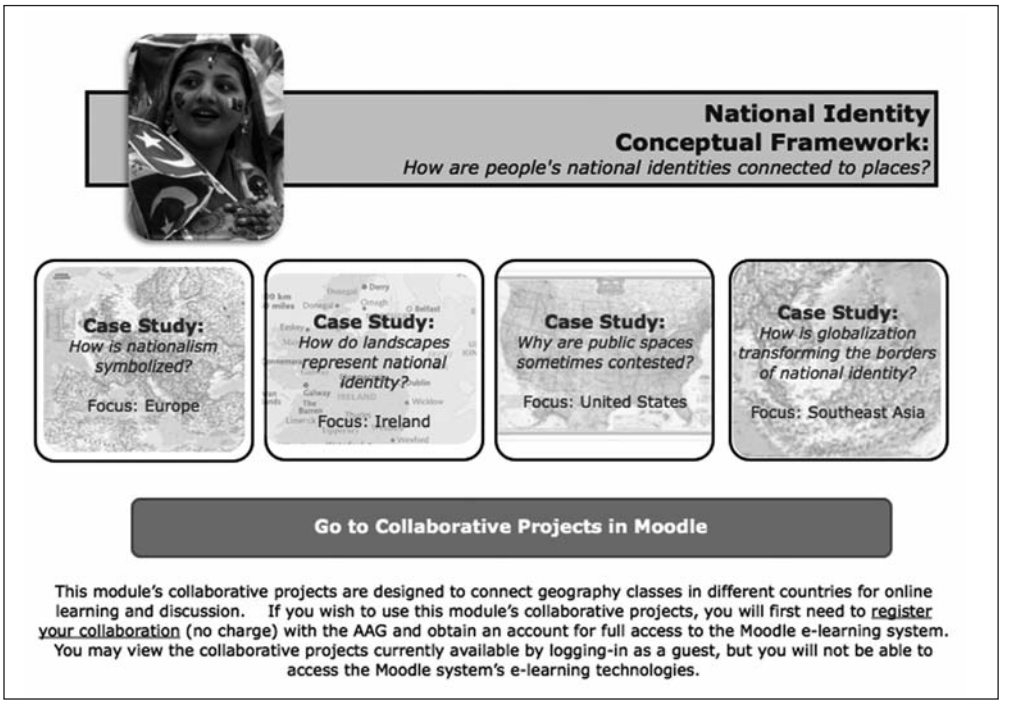

Figure 1.

the conversion of forests to coffee plantations is analyzed, noting the influence of global economic pressures and national policies on internal land-use changes.

Water issues in Asia are further explored in a case study available in the *Water Resources* module, "How do different countries practice Integrated Water Resources Management?" This case study draws on the ideas of Integrated Water Resources Management (IWRM) to examine principles of water quality in Cambodia and competing water uses in Malaysia. Students consider reasons why water management issues can be international and transboundary in nature, specifically with regard to the physical, social, cultural, political, and economic factors that vary regionally and influence the path of IWRM implementation.

Asia is also an excellent context for studying the causes and consequences of global warming. Two Asia case studies appear in the *Global Climate Change* module. The first, "How are countries adapting to climate change?," introduces students to Singapore's "carbon footprint" of greenhouse gas emissions. Using maps, students examine the impacts of climate change on this island nation and learn the ways that Singapore is adapting and attempting to reduce its carbon footprint. The second case study, "Where are rising sea levels threatening human and natural environments?," examines changes in sea level off the coast of Việt Nam and the resulting impact on coastal populations and a natural park.

Finally, the *Migration* module offers a case study of interest to Asia educators interested in population, demographics, and labor migration. "Why does gender matter in migration?" investigates the gendered nature of immigration, looking at issues affecting female migrants from that region. Students study a variety of primary and secondary data sources in order to understand migration patterns of women from Việt Nam and other Southeast Asian countries.

Many of the concepts presented in the CGGE modules align with the curricula of AP courses. Embedded web-based activities in the *Global Economy* case study provide AP macroeconomic students with an opportunity to compare investments in human capital across Asia, North America, and Europe. For the AP environmental science course, the *Global Climate Change* module offers dynamic learning interactions about plate tectonics, climate classifications, and glacial decline. Also applicable to AP environmental science students is the *Population and Natural Resources* case study concerning deforestation in Việt Nam. Many topics from the *Population and Natural Resources*, *Migration*, *Global Economy*, and *National Identity* modules fit into the AP human geography curriculum, including China's population growth, distribution, and density; theories of migration; variations in economic development; and symbolic landscapes.

Enhancing Education about Asia through International Collaboration

Teachers also have the option of using collaborative projects directly linked to each case study. Deployed in Moodle, the collaborative projects are designed to connect classes in different countries for online learning activities that extend and probe more deeply into the content presented in the case studies. Some examples include:

- Students, grouped in international teams representing industries such as cotton textile or semi-conductor manufacturing, apply their understanding of competitive advantage theories (*Global Economy*).
- Students analyze remotely sensed images available from NASA's Earth Observatory and identify landscape changes in coastal Việt Nam and other areas vulnerable to sea level rise (*Global Climate Change*).
- Students select a topic related to female migration (e.g., national economic structural change, human trafficking) and prepare an online news article that discusses current issues in a specific Asian country (*Migration*).
- Students compare the physical, biological, and cultural characteristics of their local watersheds and discuss the differing stakeholder groups, competing uses, and water quality standards (*Water Resources*).

We recognize that teaching online is an unfamiliar practice for some teachers and that conducting an online international collaboration is an even greater challenge for teachers and students alike. To assist those interested, we created a *Facilitator's Guide* that walks teachers through a step-by-step process for organizing classes in different countries using the CGGE Moodle system. The *Facilitator's Guide* is available in PDF format as a free download on the CGGE website.

We view the collaborative projects as a worthy investment of time and have compiled a convincing amount of evidence that the experience results in significant learning dividends for participating students.[4] In many ways, the collaborative projects represent the essence of the CGGE approach to transforming how geography is taught and learned in schools and colleges. Though much of the content of the K-12 geography standards, as well as the undergraduate geography curriculum, is demonstrably international in its topical focus, the actual *process of teaching that content*—and by implication,

learning that content—is largely performed by individuals without engaging the perspectives of their peers in other parts of the world. Fewer than 25 percent of geography professors in the United States have ever been involved with an educational project involving some form of international collaboration or interaction.[5] Among all undergraduates, fewer than 2 percent participate in study abroad programs, and those who do so mostly travel overseas for less than a month in a Western European country, such as the United Kingdom or France, with relatively similar cultural histories, languages, or economic systems.[6]

Through the CGGE, we hope to provide open access to educational resources that equip learners with the geographical knowledge and international perspectives that increasingly define the working environments, environmental challenges, and political realities of the twenty-first century. Perhaps the need for improved geographical understanding and international cooperation is nowhere as great for America as it is in relation to its global neighbor, occasional provocateur, and hungry giant, Asia. ■

NOTES

1. "Survey of Geographic Literacy," *National Geographic*, last modified May 2006, accessed November 21, 2010, http://www.nationalgeographic.com/roper2006/findings.html.
2. Phil Klein and Michael Solem, "Evaluating the Impact of International Collaboration on Geography Learning," *Journal of Geography in Higher Education* 32, no. 2 (2008): 245–267.
3. See, for instance, Kenneth A. Bruffee, *Collaborative Learning: Higher Education, Interdependence and the Authority of Knowledge* (Baltimore, MD: Johns Hopkins University Press, 1993); David W. Johnson, Roger T. Johnson, and Karl A. Smith, *Active Learning: Cooperation in the College Classroom* (Edina, MN: Interaction Book Company, 1998); Leonard Springer, Mary Elizabeth Stanne, and Samuel S. Donovan, "Effects of Cooperative Learning on Undergraduates in Science, Mathematics, Engineering, and Technology: A Meta-Analysis," *Research Monograph* no. 11 (Madison: University of Wisconsin-Madison, National Institute for Science Education, Review of Educational Research, 1998); and Rena M. Palloff and Keith Pratt, *Collaborating Online: Learning Together in Community* (San Francisco: Jossey-Bass, 2005).
4. Klein and Solem.
5. Waverly Ray and Michael Solem, "Gauging Disciplinary Engagement with Internationalization: A Survey of U.S. Geographers," *Journal of Geography in Higher Education* 33, no. 1 (2009): 103–121.
6. "Study Abroad Participation by State, 2006–2007," NAFSA: Association of International Educators, last modified November 17, 2008, accessed November 21, 2010, http://www.nafsa.org/resourcelibrary/Default.aspx?id=9080.

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