

USGS Educational Event Report

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Event: 2003 National Indian Education Association

USGS Attendees: Susan Marcus (USGS Native American Liaison, Reston), Joseph Kerski (Geographer-Education, Denver).

Report Writer: Joseph Kerski

Event Date(s): 1-5 November 2003

Submitted Highlight to the US Department of the Interior: USGS Features Partnerships with Native Americans at National Indian Education Association Conference

The USGS conducted a workshop on how to obtain and use USGS maps, aerial photographs, satellite imagery, and Global Positioning Systems in the K-12 and college curriculum in an engaging way, and hosted an educational exhibit for over 3,000 Native American educators at the National Indian Education Association's annual conference in Greensboro, North Carolina, 2-5 November 2003. The NIEA is a nonpartisan nonprofit professional society founded in 1969 to improve education for all American Indians, Alaska Natives, and Native Hawaiians through advocacy, technical assistance, and communications. USGS Native American liaison Susan Marcus and USGS geographer Joseph Kerski met with NIEA staff to build partnerships between the two organizations for the future, featured past success stories of collaborative work between the USGS and Native Americans, and answered questions from participants in the conference. The conference attracted tribal college presidents, tribal chairpersons, and university, secondary, and elementary level educators from across the country. Native American educational initiatives are an increasingly important part of USGS education efforts



Figure 1: Greensboro Four Seasons Convention Center, site of the 2003 National Indian Education Association (NIEA) Convention. Photographed on 3 November 2003.



Figure 2: The 2003 NIEA conference featured over 200 exhibitors on two different floors, including universities, grant programs, educational programs, wellness programs, tribal journals and newspapers, Native crafts (beads, clothing, jewelry, and more), and computer software and hardware vendors. Other federal exhibitors included BIA and the U.S. Department of Education.

The exhibit halls provided an excellent venue to network with tribal college presidents, K-12 educators, university professors, educational consultants, students, and more.



Figure 3: Some of the participants in the “Explore Your Community With USGS Maps, Aerial Photographs, and Satellite Images” workshop hosted by Joseph Kerski.

Goals of Event: (1) Operate USGS informational exhibit; and share USGS educational materials with Native Americans attending National Indian Education Association (NIEA) Conference. (2) Conduct “Exploring Your Community with USGS Maps, Aerial Photographs, Satellite Images, and Internet Resources” hands-on workshop.

Outreach Focus Area Covered by This Event: Education and Native American Outreach

Summary: Staff from the USGS have participated in the NIEA since 1998. EDC staff Mark Barber and Carrie Jucht began our USGS efforts; due to funding, they were not able to participate this year. Sue Marcus has participated in the conference in years past, and Joseph Kerski has participated for three years. Thus, we have a longstanding relationship with the NIEA that we hope to expand into the future. Moreover, the USGS efforts with Native Americans are quite extensive, as evidenced by the annual “USGS Activities with Native Americans” book that Sue Marcus produces each year, and the web site <http://www.usgs.gov/indian>.

About the NEIA

NIEA is a nonpartisan nonprofit professional society founded in 1969. Their mission is to improve education for all American Indians, Alaska Natives, and Native Hawaiians through advocacy, technical assistance, and communications. NIEA serves as an educational organization for delivering future technologies, outreach strategies, and solid solutions to the Native American community. NIEA serves and represents tribal administrators, researchers, educators, and students nationwide in an effort to share best practices and the latest tools in providing educational services.

Audience: Native American educators from elementary, secondary, and university levels, guidance counselors, recruitment officers, tribal elders, college and university presidents, school principals, curriculum developers, researchers, teacher trainers, and students.



Figure 4: Joseph Kerski (L) and Sue Marcus hold educational material at the USGS information exhibit.

USGS personnel expertise required: Experience working with Native Americans and educators with knowledge about:

- Native American educational goals, issues, and concerns.
- USGS educational materials
- USGS partnerships with Tribal Governments and universities
- USGS subject experts in biology, geography, water, and geology related to use in K-12 and college education
- USGS products and services.

We displayed the following:

- One 8' x 10' display highlighting Native American history month, a Landsat scene of the White Mountain Arizona wildfires from 2002, a 100K satellite image and topographic map of Shiprock, and photographs of USGS work with Native American students all over the country.

The location of our exhibit was the main floor of the exhibit hall, which we appreciated, allowing us plenty of traffic, particularly between sessions and on Opening Day. The exhibits run for four days.



Figure 5: Sitting Bull Tribal College President Ron His Horse Is Thunder and Sue Marcus examine Indian Lands map at the USGS information exhibit.



Figure 6: We were honored to be visited by Miss Indian Nations XII: Cody Harjo. She is Seminole-Otoe-Creek and hosted an information exhibit about her activities and programs in the other exhibit hall.

We handed out 100-200 of each of the following materials and information:

- Most useful USGS websites pages.
- How to get information from the USGS, and useful USGS maps for Education (USGS CR)
- USGS WWW Information (Fact Sheet # 037-00)
- Appalachian Mountains USGS booklet
- Land and People Teachers Packet
- USGS GeoData booklet
- USGS Maps booklet
- Science, Society, Solutions: An Introduction to the USGS
- Map Mysteries Activities
- The National Map
- Teaching with Topographic Maps Guidelines
- Fossils Through Time booklet and posters
- Scientists in Action career book
- Sample Indian Lands in the USA thematic maps
- Indian Lands maps flyer (Gene Jackson)
- Native View information

- Terraserver download guidelines (Joseph Kerski)
- Native Scholar article we submitted about GIS in Native American Education and partnership with Sinte Gleska University (Joseph Kerski)

USGS Workshop



Figure 7. Joseph Kerski in a self-portrait in front of the auditorium and flyers describing the workshop.

At each conference we attend, we always seek to conduct a workshop. At the 2001 NIEA convention in Billings, Montana, James Rattling Leaf, Jhon Goes In Center, and Joseph Kerski conducted a GIS presentation. We built on this presentation for the 2002 convention with a hands-on GIS workshop, hosted by SGU, USGS, and ESRI. By hosting a hands-on workshop, our goal was to have the participants see for themselves the capabilities of spatial analysis and how to incorporate GIS into their curriculum.

In 2003, I conducted a workshop entitled "Exploring Your Community With USGS Maps, Aerial Photographs, Satellite Imagery, and GPS." The workshop's format was hands-on, and included the following segments:

What is the USGS?

What resources and data does the USGS produce?

How can USGS resources help me in the curriculum?

Cultural and physical geography activity using USGS thematic maps: Digital Landforms, Tribal Lands-Cultures-Languages.

Native American Tribal Headquarters quiz using USGS aerial photographs

Topo Bingo using USGS topographic maps

Map Mysteries Lesson using Topographic Maps

Coordinate systems, contours, map scale, landforms, land use, human-environment interaction

Landforms quiz using USGS topographic maps

Historical Aerial photograph to current aerial comparison

Historical Landsat imagery to current Landsat imagery comparison

Local studies using USGS topographic map of Greensboro NC

GPS: What is it, how can I use it with my students in the curriculum.

GIS: Geographic information systems, RezMapper, topo-GPS tools

Where to go from here: Future workshops, partnership efforts, training events

Questions and answers: What do you need from the USGS? What should the USGS education program focus on?



Figure 8. At the workshop, we distributed lessons, information booklets, and USGS thematic maps.

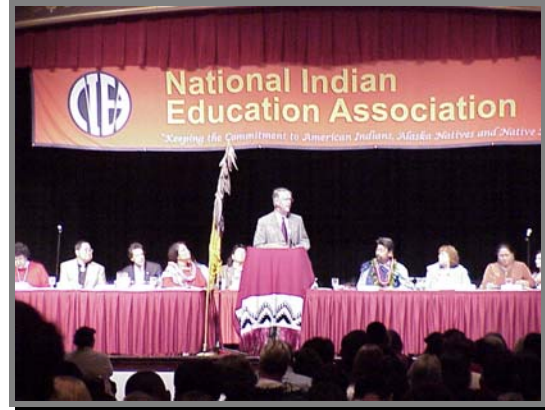


Figure 10. The NIEA board gathered for the General Assembly on Sunday.

Other Workshops Attended



Figure 9. One of the highlights of the conference was hearing Dr Maya Angelou, poet, author, educator, historian, producer, director, and civil rights activist. She was incredible!

I also attended a workshop by several people from Montana who are conducting hands-on technology training with educators, and a presentation entitled "Standing Tall" from excellent presenter Howard Rainer, the director of the Indian Education Program at BYU.



Figure 11. NIEA President Robin Butterfield.

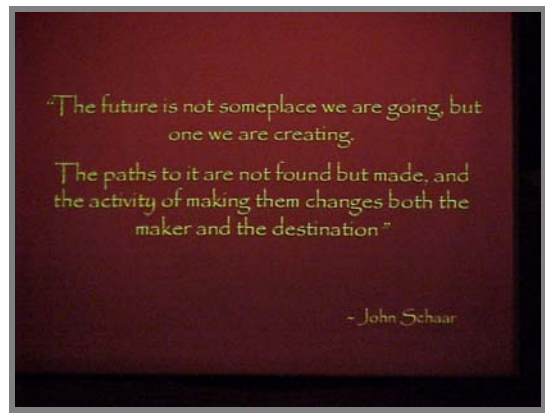


Figure 12. One of the memorable quotes from the Sunday general assembly at the conference.

Acknowledgements

USGS success at NIEA wouldn't have been possible without the support of the following individuals:

Mark DeMulder, for paying Joseph's travel.

James Rattling Leaf and Jhon Goes In Center from Sinte Gleska University, for their support and partnership.

Mary Wadding and Mark Barber for materials support.

The NIEA staff who granted us an exhibit at the nonprofit rate.

I wish to thank Sue Marcus for her expertise and enthusiasm in preparing for and working at this event with me.

I wish to thank the attendees at the conference for sharing their vision and plans for future partnerships.

Recommendations

This was the sixth consecutive year that the USGS has participated in the NIEA conference. It demonstrated the success that the USGS partnership with such people as Sinte Gleska University staff in South Dakota. I look forward to increased emphasis at the USGS on Native American education in the FY 05 budget year.

If we want to conduct hands-on technology-related workshops in the future, the USGS should invest in about 10 laptop computers in 2 shipping cases for this purpose. This is exactly what ESRI has done for all their off-site workshops, and it would serve us well for all of the conferences and training events that we conduct outside of our own facilities. Our data and products are best explored in a hands-on mode.

In 2002, a group of us thought of an idea toward the end of the conference—to include a geocoded map in next year's conference booklet and on the NIEA web page that indicates where conference attendees are from. This would demonstrate the value of spatial data and GIS, and be of interest to the association and to conference attendees.

By far, the most popular product that we distributed was the large thematic maps. These included several types of Indian lands maps. We handed out all of these maps—several dozen total—on the first day that the exhibit hall was open.

Given the increasing emphasis on USGS partnerships with Native Americans, as well as our continued work with Sinte Gleska University and tribal governments in training, recruitment, and spatial data use, we should exhibit and conduct at least one workshop at the NIEA 2004 conference. It will be held during November 2004 in Arizona. Thanks for allowing us to represent the USGS at these NIEA conferences.

I spoke with researchers from the Rosebud Sioux tribe and Standing Rock Sioux tribe about co-conducting a GIS workshop there during January or February 2004.

My only disappointments were that we had no participation in this conference from the North Carolina USGS staff, although we did distribute some North Carolina-specific information. We also were not able to meet with the NIEA President and board to discuss USGS-NIEA partnerships, although Sue and I did renew many acquaintances and make plans to talk with the board via email. I also wished time would have permitted me to attend some tribal ceremonies and the Pow Wow.



Figure 13. Sequoyah High School (Oklahoma) students singing beautiful hymns in the Cherokee language.



Figure 15. Middle school student (standing) works with—the learning goes both ways: from teacher to student, and vice versa!

Other Activities

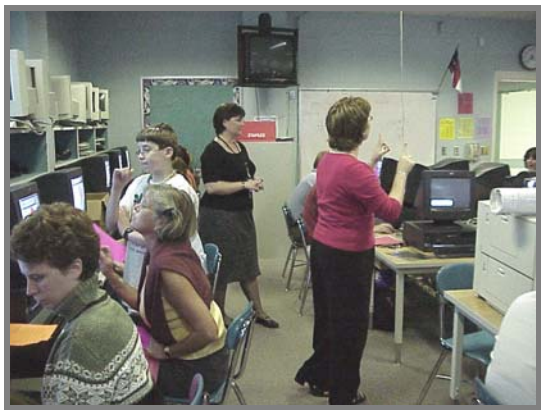


Figure 14. Shannon White and Barbaree Duke (standing) conduct GIS workshop for educators at Davis Drive Middle School, Cary, North Carolina. I have known them for several years and they are two of the country's leaders in GIS in education. Their web site is: <http://www.ncsu.edu/gisined/index.html>.

They invited me to this excellent workshop, where I observed, helped out where I could, distributed maps, and said a few words of encouragement to the group. The group worked through ESRI's "Where is the Missing Ship" lesson using ArcVoyager software.



Figure 16. I did manage to get in two short geography field trips, one to 36 North latitude, 80 West longitude.



Figure 17. Rest assured, I'm not planning to give up my day job to open a restaurant!

- end of report -