The Geography Fieldwork Imperative: Strategies for Designing K-12 Field Experiences

Jeffrey M. Widener, Ph.D. University of Oklahoma, Norman

Douglas A. Hurt, Ph.D. *University of Missouri, Columbia*

Gary Gress, Ph.D. *University of Oklahoma, Norman*

*Corresponding Author: jwidener@ou.edu

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Abstract

The Geographic Alliance Network and the National Geographic Society (NGS) have been instrumental in getting K-12 teachers into the field to experience geography firsthand through sponsored activities, including week-long institutes and shorter, geographer-led field trips. As monies and budgets tighten among these organizations, however, as well as with shoestring state appropriations, opportunities for teachers to learn geography through these activities are fading. The purpose of this article is to address the fieldwork imperative for training and inspiring K-12 geography teachers, to highlight the impact the Geography Alliance Network and NGS has had on geography, and to offer suggestions on how to run field-based institutes.

Keywords: Experiential Learning, Fieldwork, Geography Alliance Network, K-12 Geography Education

Introduction

In his presidential address to the Association of American Geographers in 1956, Carl Sauer expounded that in the process of observation "one orders by reflection and reinspection of the things one has been looking at," that with such "intimate sight comes comparison and synthesis" and that this is the conviction of geography. He continued, "the principal training of the geographer should come,

wherever possible by doing field work" (Sauer, 1956, 295-296). Fieldwork, observation, and inquiry have long been part of the geographer's craft (Freeman, 1967; Meinig, 1979). Geographers have been thought to be "students of landscape," trying to make sense of the world by exploring this palimpsest that reflects a society's values and ideas, allowing them to interpret how humans interact with places and regions (Wallach, 1997, 92; Salter, 1999). Thus, the cultural landscape is a creation and reflection of humanity. We can explore it secondhand in various ways, perhaps looking at historic photographs, doing virtual field trips, as well as using aerial, drone, and satellite imagery. However, experiencing landscapes firsthand by looking, touching, smelling, absorbing, reading, asking questions, mapping and then synthesizing that information is truly the heart of doing geography.

Being in the field is often the linchpin that attracts students to our everchanging discipline. But, over the past several decades fieldwork has waned in geography (Rundstrom and Kenzer, 1989; Clark, 1996). Field studies and field-based institutes for K-12 educators, in particular, have become increasingly rare occurrences, as National Geographic Society (NGS) and state funding has decreased and the nation-wide Geographic Alliance Network has been disbanded. Not having experienced places directly, K-12 educators are left standing in the front of their classrooms providing students with secondhand interpretations of the landscapes and regions they are expected to teach about. This confines teachers' experiences and emotions, limits students' ability to connect to the content, and may hinder students' constructivist learning and geospatial understanding (Chew, 2008; Almquist et al., 2011).

Our paper explores how field-based geography institutes for K-12 educators provide teachers with the experience, the content, and the pedagogical framework (particularly as it pertains to various academic standards) to effectively integrate geographic concepts and fieldwork into their curriculum. We begin by describing the evolution of geography education in America, discussing the development of the Geography Alliance Network and the importance of fieldwork and field-based institutes. Finally, based on several recent field-based institutes for K-12 teachers sponsored by the Oklahoma Alliance for Geographic Education (OKAGE), we turn our focus to offering repeatable strategies that instructors or other alliances can use to develop fieldwork opportunities.

Geography Education and Fieldwork in America

Since World War II, geographic literacy among Americans has continued to decline (Grosvenor, 1995; Hurt, 1998; de Blij, 2005). Geography achievement, based on general surveys and standardized testing, has shown dismal results compared to our counterparts in other countries. Indeed, government reports, popular magazines, and newspapers are quick to print

negative assessments of geography education, often pointing to those tests (Bednarz, 1989; GENIP, 1995; de Blij, 2005). While many rush to analyze the results of narrowly-focused geography tests, few steer their analysis toward the inadequacies in teacher education programs at the university level, including the shortfalls in course requirements and the lack of sufficient pre-service training opportunities offered to the future teachers of America (Widener, 2015). After decades of declining geographic literacy, in 1995 several geographers forthrightly noted that, "the discipline of geography...provides a unique challenge to teacher education...[the] lack of adequate preparation among high school social studies teachers teaching geography has lead [sic] to efforts to expand and strengthen the discipline of geography and to promote geographic education" (Doering, Engan-Barker, Johnson, Keen, and Lo, 1995, 524).

Concerned about the disappearance of geography from American K-12 classrooms, in 1986 NGS President Gilbert M. Grosvenor established the National Geographic Network of Alliances for Geographic Education, based upon the model created by Christopher L. Salter in California (Salter, 1986). Their goal was to have one group in every state that mobilized the grassroots energies of parents, teachers, administrators, professional geographers, and policy makers toward the improvement of geography education (Marran, 1989; Dulli, 1994; Grosvenor, 1995; Boehm, 1997). The NGS encouraged each Alliance to have college or university sponsorship as well as a university faculty coordinator. Advocates quickly formed two dozen geography Alliances and the movement eventually expanded to every state in the U.S., as well as Puerto Rico and the District of Columbia (Salter, 1987; Dulli, 1994; National Geographic, 2017).

From the late 1980s through the late 1990s, National Geographic, under Grosvenor's guidance, provided \$10,000 annually to each Alliance for operating expenses, with the potential for matching grants up to \$50,000 a year for teacher training workshops, summer institutes, curriculum conferences, or other projects intended to enrich geography education programs (Dulli, 1994; Grosvenor, 1995; Boehm, 1997). National Geographic required each new state Alliance to send a few highly qualified, energetic teachers to Washington, D.C., for intensive training in the early years of the Alliance network. Upon completion of this special two-week summertime training in Washington, D.C., these National Geographic-trained Teacher Consultants (TCs) were to lead future in-state institutes and workshops (Dulli, 1994).

According to the previous OKAGE Coordinator, in the early 1990s National Geographic implemented the Instructional Leadership Institute to train TCs on the arts of policymaking and advocacy for local curricular and fundraising activities, which further assisted Alliances in securing financing for workshops. By the late 1990s, National Geographic no longer offered the matching grants to all Alliances. However, they announced that a state Alliance could secure a \$1 million endowment by mustering a one-time donation of

\$500,000 in matching funds. National Geographic would administer these monies, called endowments, making the interest earned on the corpus of the \$1 million endowment available for Alliance programming, pending state-by-state agreements that dictated terms of use.

Not too long after the creation of state Geographic Alliances, some professional geographers began slighting the work Alliances were doing to promote and improve geographic education (Fuller, 1989, 1990), while others praised the efforts to provide motivated teachers opportunities to explore the world around them (Salter, 1987; Marran, 1989; Bednarz, 1989; Salter, 1991; Boehm, Brierly, and Sharma, 1994; Dulli, 1994; Grosvenor, 1995; Englert and Barley 2003; Boehm, Brysch, Mohan, and Backler, 2012). Summer field-based institutes became regular components of programming at most Alliances.

Geographers have long embraced the value of field study as part of their craft, and many have expressed the need for the training of students and teachers in place-based pedagogy and experiential learning activities. Geographer Barbara Zakrzewska explained that field institutes, if conducted correctly, train teachers to "observe, identify, and analyze geographic phenomena in the field" and enable them "to bring reality to otherwise remote ideas buried in textbooks" (1969, 219). Other geographers, too, found that training opportunities, such as Alliance Summer Geography Institutes, are effective ways to increase pedagogical content knowledge and to foster positive changes in the ways K-12 educators teach geography concepts (Goodman and Elam, 1970; Dulli, 1994; Cole and Ormrod 1995; Jurmu, Jurmu, and Meyer, 1999). Other geographic education researchers have gone so far as to argue that fieldwork in geography should be mandatory in the K-12 curriculum and in pre-service teacher programs (Chew, 2008; Hope, 2009; Balci, 2012).

Multiple geographers have looked at how international field experiences and place-based education can foster a better world. These experiences enable educators to teach more effectively about unique global concepts, such as political and ethnic conflicts, and they are likely to become more engaged and ethically conscious in their own classrooms (Steen, 2009; Israel, 2012; Oberle and Palacios, 2012). Additional geographers have investigated how field studies can bring greater understanding to environmental concerns (Klein, 1995; Alagona and Simon, 2010).

Indeed, fieldwork activities are effective foundations for geography education even though they produce varying levels of effectiveness in the day-to-day classroom and upon teacher subject knowledge (Hurt and Wallace, 2005; Dunphy and Spellman, 2009; Chang et al., 2012). Every year, however, it seems that chances for students and teachers to engage in geoscience-related field-based activities and institutes decline in number, even though students find their time in the field to be enjoyable (Baker, 2006; Boyle et al., 2007). Teachers find field experiences an effective way to learn and to teach; they are more readily able to

understand for themselves and then to relate the diverse concepts essential to geography to their students (Kent, Gilbertson, and Hunt, 1997). On the other hand, geographer Penny Munday explained that many teachers are apprehensive about implementing field study and/or field trips as part of their curriculum because they lack time for planning and training (Munday, 2008).

In order to effectively present geographic concepts in K-12 settings, then, fieldwork training must be available. Authors of *The Road Map Project*, a recent call to improve the effectiveness of American K-12 geography education, expounded that:

Professional development...should allow teachers to expand their repertoire of strategies, practices and representation for making geography understandable. This is particularly important for addressing challenging topics... Teachers should learn the strategies that are most effective for conveying geographic ideas and practices (e.g., place-based learning, fieldwork, inquiry, problem-based learning, etc.) [italics are authors' emphasis]. (Schell, Roth, and Mohan, 2013, 78)

Thus, before they have a foundation for designing field-based lesson plans, teachers need to have experience conducting their own fieldwork (Schell, Roth, and Mohan, 2013).

Historically, Geography Alliances across the United States have offered various opportunities for teachers to acquire such pedagogical content via fieldbased institutes. However, beginning in 2010, individual state Alliance funding, programming, and overall foci changed dramatically. In particular, the previous OKAGE Coordinator stated that every geographic Alliance was directed to participate in National Geographic's "capacity building/strategic planning" program, which required hiring an outside consultant and creating a strategic planning team to introspectively assess strengths and weaknesses and establish goals for building a more sustainable, self-sufficient operation. As such, any Alliance funding from NGS (mostly endowment interest) could be used only for office operations and the training of TCs, who became advocates for geographic education in their respective states. This new focus impacted classroom curriculum development, programs, and state geographic education funding. The likelihood of funding any workshop, program, or institute that did not focus on policy training and reform was slim. When the National Geographic Society ended financial support of the Geographic Alliance network at the conclusion of 2018, acquiring funding for meaningful field experiences became even more challenging.

Oddly, this focus is different than that of the *Road Map* for geography education. We argue that field experiences are imperative to the geographer's craft. Considering the declining opportunities for field exploration, in the next

section we will outline repeatable strategies that can be used by other Alliances to create fieldwork opportunities. We base our approaches on a series of recent field-based institutes for Oklahoma K-12 teachers sponsored by OKAGE.

Creating Field-Based Geography Institutes

During the past two decades, OKAGE has typically offered between one and three field institutes each summer. The themes have ranged from the cultural legacy of Route 66 to land use and water resources along the Arkansas River to the natural and human landscape morphology of northern New Mexico to urban explorations in the Oklahoma City metropolitan area. Even though the topics and locations have been diverse, each institute has followed a similar design plan and intended outcomes, as outlined below.

Origin and Design

Recent field-based institute ideas have come from various sources—OKAGE staff, TCs, evaluation forms from previous institutes, and even popular culture references (specifically, the 2006 Pixar film *Cars* inspired two Route 66 institutes). Institute organizers select a location, include academic geographers and other professional experts, as well as select one or two TCs to team up and lead the institute. Institute staff conduct background reading and research, scout potential routes (making connections at museums, landmarks, restaurants, and hotels), and reach out to potential guest speakers (including academic geographers and historians, authors, and local authorities). Typically, the length of recent institutes has varied between five and nine days. The expensive nature of fieldwork influences time parameters since the per person, per week cost for transportation, food, and hotels is approximately \$1,000. Our recent trips have included three or four staff and approximately twenty participants. Establishing the length of the institute occurs early in the planning process so that its design can realistically accommodate time (and budget) limitations.

Each OKAGE institute typically includes three foundational elements. Institute organizers select one or two broad topical themes that serve to focus content offered during the institute. Past examples include water resource use in the Arkansas River Valley, historic preservation and ethnic identities in Oklahoma City, and the literary landscapes created by Oklahoma authors. Institute staff emphasize several geographic concepts as well. Sense of place, cultural landscape change, and human-environment interaction are frequent choices as staff seek to empower participants to ask (and answer) geographic questions. Finally, institute leaders frequently reference elements of the OKAGE lesson plan template to aid participants' lesson plan development.

OKAGE institute leaders' model transformative learning strategies in each institute. Participants partake in activities such as daily field observations,

detailed community studies, interviews of local experts, mapping exercises, journaling, and lesson planning. All site visits involve meeting, inquiring, and interacting with knowledgeable local specialists to gather contextual and factual information for classroom lessons, and they place great emphasis on showing teachers how they can integrate their field experiences into their state educational standards. Often, pre-service, elementary, middle school, and high school teachers are mixed during group activities so that participants can be introduced to different grade-level perspectives.

Before the trip, participants are asked to complete a short reading list to familiarize themselves with the institute topic and region. Once the institute begins, teachers receive a detailed field guide created by OKAGE staff with additional readings, day-by-day summaries of the daily itinerary, maps, a bibliography, and additional resources.

Geo-Connections

All OKAGE institutes make connections to larger geographic concepts including cultural landscapes, sense of place, community, ethnicity, human-environment interaction, popular culture, and historic preservation. We introduce discussions on how to think spatially and interpret landscapes geographically with a heavy focus on the "Elements and Standards" in *Geography for Life* (see Heffron and Downs, 2012). We also habitually integrate the landscape interpretations presented in Donald Meinig's "The Beholding Eye: Ten Versions of the Same Scene" and Peirce Lewis's "Axioms for Reading the Landscape: Some Guides to the American Scene" (see Meinig, 1979). Often, participants begin by applying their new knowledge base to interpreting photographs of the study region. For our northern New Mexico institute, this exercise allowed participants to practice interpreting various scenes and gave the staff a chance to explain key terms, including virga, *kiva*, syncretism, alluvial fans, *Penitente moradas*, plazas, uplift, lineaments, Pueblos, land grants, Hispanos, UNESCO World Heritage Sites, historical preservation, *vegas*, *vigas*, santos, and *acequias*.

At the time, we focused on applicable elements of national Common Core strategies, shifting the emphasis from landscape interpretation and inquiry to lesson plan formation. We highlighted the "Process and Literacy Skills" that, though adapted slightly for each grade level, have the same themes across the Common Core document. In an effort to reduce repetition in these standards, the institute leaders worked at narrowing them down to a "Top Ten PALS" (Table 1) and then combining them into a "Top 5 GeoPALS in the Field" (Table 2). We find that introducing geographic concepts and relating them to Oklahoma state learning standards before beginning the road trip provides our teachers with a solid foundation for building upon their current curriculum and for engaging with the material during upcoming site visits.

Finally, on the first day of the institute a TC introduces the OKAGE "Lesson Plan Template" (Appendix A). Several weeks after the trip, participants submit a lesson plan based on an aspect of the institute to fulfill their continuing education requirements. After going step-by-step through each requirement, a TC models an original lesson on the institute topic and moderates a brainstorming session about potential subjects. Quickly immersing participants in geographic concepts and setting the stage for their curriculum development is a key component of OKAGE institutes.

Table 1. Top Ten PALS – OAS Process and Literacy Skills

- 1. Gather information and draw conclusions from a variety of sources using print and digital text, multi-media, distinguishing between primary/secondary sources.
- 2. Determine the main idea/topic (from various content sources, text, readings, visuals, auditory, etc.)
- 3. Distinguish between fact and opinion, understanding the use loaded/persuasive language in text.
- 4. Write routinely over a period of time (formal, informal, assessed, non-assessed).
- 5. Write explanatory/informative text. (assessing similarities and differences; comparing and contrasting information; asking key questions; providing opinions; connecting ideas, events and individuals; being able to sequence and summarize factual information).
- 6. Write arguments/opinions focused on discipline-specific content using facts to support claim.
- 7. Use domain specific vocabulary (key content and concept words/phrases in correct context for understanding).
- 8. Conduct short and sustained research projects, clearly presenting knowledge to peers (integrating qualitative and quantitative facts and analysis when possible).
- 9. Analyze and integrate visual/auditory information (pictures, drawings, political cartoons, maps, timelines, charts, graphs, audio recordings).
- 10. Collaborate and discuss information from a variety of sources (group "collaborative conversations").

Table 2. Top Five GeoPALS in the Field

Reading

- 1. Gather information and draw conclusions from a variety of sources and distinguish between primary/secondary sources (primary examples: archives, landscape observation, oral interviews, newspaper articles, court hearings, maps, photographs, etc.; secondary examples: books, journal articles, etc.).
- 2. Determine the main idea/topic in/from a variety of sources, including text (primary and secondary sources), maps, photographs, digital, and distinguish between fact, opinion, and the use loaded/persuasive language in those sources.

Writing/Reading

- 3. Write routinely, informative text using domain/content specific vocabulary (describing similarities and differences, comparing and contrasting information, asking key questions, providing opinions, connecting ideas, events and individuals; and sequencing and summarizing factual information).
- 4. Conduct short and sustained research projects, analyzing and integrating information from a variety of sources (text, photographs, drawings, political cartoons, maps, timelines, charts, graphs, audio recordings, etc.).

Dissemination of Knowledge/Information

5. Collaborate (w/peers) and discuss information from a variety of sources clearly presenting knowledge to peers (integrating qualitative and quantitative facts and analysis when possible).

On the Road

After orientation meetings and the initial presentations focusing on geographic concepts, content, and lesson plan organization, OKAGE institutes transition into the field for several days. Although a substantial amount time is spent in transit to and at site visits, it is important to create time for daily discussions, debriefings, and the processing of lesson plan ideas. Often, we've presented additional content and background information in the field, during rest stops, or even during the first minutes of lunch. Although windows to convey new information while on the road are brief, this strategy is particularly useful when creating a reset for afternoon material or as last-minute preparation for a specific site visit. Daily debriefings typically occur after dinner and offer opportunities to review after a busy day as well as to engage in discussions (and answer participant questions) regarding geographic connections to the material and to brainstorm lesson plan ideas (sometimes in groups organized by grade level).

Involving local experts who live in, work near, or research the study region is a key step to understanding the complex human and physical dimensions of our field sites. Authors and literary experts, guest geographers, local business owners, farmers and ranchers, as well as employees from state and local historical societies have provided extremely useful context and background information while meeting us in the field during past institutes. Overwhelmingly, local experts have been generous with their time and have been extremely willing to discuss their hometowns, livelihoods, and communities. In addition to providing unique perspectives of geographic issues, interacting with local experts have provided powerful moments for institute participants. Talking with a farmer at the edge of his irrigation ditch in the Arkansas River Valley of Colorado while discussing water challenges facing his family farm, or standing in the middle of an original two-lane Portland concrete section of Route 66 in Oklahoma with a road historian and preservation advocate delineating attempts to preserve the highway and its history, make the conceptual information presented in the field guide and supplementary readings come alive in a very meaningful way.

While on the road, one of our favorite approaches to introduce teachers to fieldwork are community studies, in which we incorporate journaling, field mapping, and interviewing local residents. Many of our institutes feature one, while some plan for two in order to allow for abundant comparisons and contrasts in our study region. We ask that participants become geo-detectives in order to capture the geographical essence of a small to medium size town. Over the course of several hours, teachers in small groups attempt to answer a series of questions including when and why was the town formed and established in its current location? What is the current role and economic function of the town? What are the current political and social concerns in town? What is the town's future? How does the town fit into the surrounding region (for example, explain connections to other towns and regions)? We also suggest visits to the local library, historical society, museums, newspaper office, and downtown cafes for unobtrusive conversations that will give insights into the community. By reading the landscape (using the frameworks of Meinig and Lewis), participants gather visual evidence by using field mapping techniques and photography to assess economic vitality in the urban core, housing types and occupancy rates, and the economic flows of goods and purchases. Final group observations, comparisons, and contrasts are shared at an evening discussion.

Lesson Plan Creation and Dissemination

Increasingly, OKAGE institutes focus on the development of quality lesson plans that can eventually be disseminated to a much wider audience than just the institute participants. The majority of the final day of OKAGE institutes allow teachers to research and finish a draft of their lesson plan. Often, participants group together by grade level (pre-service, elementary, middle school, and high school) in order to facilitate brainstorming and early revisions. TCs interact with each teacher multiple times, aiding in the translation of material to the classroom and answering final queries regarding the OKAGE lesson plan

format. Before the close of the institute, each participant presented their lesson plan idea to the group and walked through their lesson procedures in order to gain additional peer feedback, including reflections on organization and content. Lesson presentations and peer reviews lasted between 20 and 30 minutes per participant. They were held in a classroom at the University of Oklahoma so that teachers could project imagery and have access to the Internet and other amenities. Although this part of the institute was a significant time commitment, we found it to be a valuable investment that resulted in higher-quality lessons. Teachers submitted a hard copy version of their lesson plan (typically a few weeks after the institute). The institute staff reviewed, edited, and compiled each plan for dissemination on the OKAGE web site (www.okageweb.org).

Evaluation

Participant evaluations and a staff discussion immediately after the institute allowed the staff to reflect upon successes and discuss opportunities for improvement to shape future institutes. We discussed what we learned on the road, what strategies worked, and what ideas did not. At the end of each institute, we gave each participant an open-ended evaluation, asking about expectations and whether they were met, what they valued during the week, what was most useful, and what they would like to see next from OKAGE. For many educators, the impact of a field-based institute was sizable.

One participant on the northern New Mexico trip stated, "the entire trip was so much more than I ever could have hoped for," expressing that this "will be my first year to teach geography and I have zero background knowledge. Being able to absorb everything in from the speakers, everyone in my van...will help more in being able to teach the passion that I experienced from the people around me...!" Many participants explained that they definitely would use the materials and information they received on the institute in their classrooms. One teacher described it this way: "The skills I've learned in the [northern New Mexico] institute will go a long way in shaping what I do from now on. Being able to look at things differently & ask different questions will make all the difference in helping students get to the next level in their thinking." Another teacher remarked on how the institute helped them see the value in integrating primary resources such as photographs, recorded interviews, and maps to enhance students' processing and literacy skills.

A National Board-certified teacher expounded that:

I have used OKAGE to take students on Rt 66 & learn about how it effected [sic] culture as well as economics not just in Oklahoma, but across the nation. I have... gained knowledge to help my students in becoming better writers by looking at advertising on Rt 66 and making it modern, they have read

articles about the changing landscapes in urban areas on the Nitty Gritty Urban city trip I have taken w/OKAGE. P.D. James says a person learns writing by doing it. Aristotle-For the things we have to learn before we can do then, we learn by doing them. What better way to learn Geography than traveling the road, talking to other cultures experiencing their food and languages.

Another teacher penned:

How can you teach Geography without experiencing our world? Teachers who have been there and done that are a more reliable resource of knowledge than just a book. Students can learn through the eyes of their teachers and gain knowledge that may not be in a textbook.

These responses highlight the broad range of teachers' perceptions of geography institutes, as many expect a finite experience but come back from the field recharged and excited to share new geographic concepts with their students.

Conclusions

Historically, fieldwork has occupied a key place in the education of geographers and the training of geography educators. The decline of fieldwork in general, and field-based institutes for K-12 educators more specifically, has increased the imperative to develop repeatable strategies that can be used by other Alliances to create fieldwork opportunities. Like other researchers, we have found that many teachers attend these field-based opportunities to further their knowledge about ways to teach broad and unfamiliar concepts to their students, to interact with and exchange lesson ideas with other teachers, and to further develop their abilities to deliver solid geographic content. As one participant on our northern New Mexico institute put it, fieldwork enables educators to take "theory" and "make it more alive to my students through my own stories & pictures." This once again emphasizes the value of teacher-based field work that can be translated directly to classroom use. We hope these repeatable strategies can be utilized by other Alliances or instructors to develop their own fieldwork opportunities.

In the United States, the National Geographic Alliance network was one of the most valuable resources for the continued integration of fieldwork into our discipline. Ironically, in our opinion, the National Geographic Society's decision to minimize field opportunities and Geographic Alliance Network funding may lead to additional geographic illiteracy. Instead of diverting funding for dynamic field-based activities, we argue that NGS should look to spread innovative strategies that promote fieldwork and that new partnerships be formed in order to

offer more field-based institutes. In the meantime, the rigor of field-based institutes should be increased. Critical peer-review of Alliance-proposed institutes and grants, teacher lesson plans, and teacher delivery of their lesson plans would increase the impact and effectiveness of institutes. Partnership-wise, NGS should expand regional collaboration opportunities to *all* states plus institute organizers should work with regional divisions of the American Association of Geographers, other state Alliances, university faculty, and educational institutions in the humanities and social studies to offer interdisciplinary perspectives. Indeed, more research needs to be completed and disseminated on the positive ways institutes impact teachers and their students. For now, limiting funding and deemphasizing fieldwork may work to undermine the three-decade-long expansion of geography education in the United States.

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References

- Alagona, P. S. & Simon, G. L. (2010). The role of field study in humanistic and interdisciplinary environmental education. *Journal of Experiential Education*, 32, 191-206. https://doi.org/10.1177/105382590903200302
- Almquist, H., Stanley, G., Blank, L., Hendrix, M., Rosenblatt, M., Hanfling, S., & Crews, J. (2011). An integrated field-based approach to building teachers' geoscience skills. *Journal of Geoscience Education*, 59, 31-40. https://doi.org/10.5408/1.3543926
- Baker, M. A. (2006). Status report on geoscience summer field camps. *American Geological Institute*. Report GW-06-003. Retrieved from https:///www.americangeosciences.org/sites/default/files/fieldcamps-report-final.pdf.
- Balci, A. (2012). Geography teacher candidates' experiences of field study in Western Anatolia: A qualitative study. *Educational Sciences: Theory and Practice*, 12, 988-997.
- Bednarz, R. S. (1989). Geography education in the United States: A report on a 1988 geography survey of state education agencies. *Journal of Geography*, 88, 57-60.
- Bednarz, S. W. (1989). What's good about alliances? *The Professional Geographer*, 41, 484-486. https://doi.org/10.1111/j.0033-0124.1989.00484.x

- Boehm, R. G. (1997). The first assessment: A contextual statement. In R. G. Boehm & J. F. Petersen (eds.), *The first assessment: Research in geographic education* (pp. 1-16). San Marcos, TX: The Gilbert M. Grosvenor Center for Geographic Education.
- Boehm, R. G., Brierley, J., & Sharma, M. (1994). The bête noir of geographic education: Teacher training programs. *Journal of Geography*, 93, 21-25. https://doi.org/10.1080/00221349408979680
- Boehm, R. G., Brysch, C. P., Mohan, A., & Backler, A. (2012). A new pathway: Video-based professional development in geography. *Journal of Geography*, 111, 41-53. https://doi.org/10.1080/00221341.2011.584068
- Boyle, A., Maguire, S., Martin, A., Milsom, C., Nash, R., Rawlinson, S., Turner, A., Wurthmann, S., & Conchie, S. (2007). Fieldwork is good: The student perception and the affective domain. *Journal of Geography in Higher Education*, 31, 299-317. https://doi.org/10.1080/03098260601063628
- Chang, C. H., Chatterjea, K., Goh, D. H. L., Theng, Y. L., Lim, E. P., Sun, A., Razikin, K., Kim, T. N. Q., & Nguyen, Q. M. (2012). Lessons from learner experiences in field-based inquiry in geography using mobile devices. *International Research in Geographical and Environmental Education*, 21, 41-58. https://doi.org/10.1080/10382046.2012.639155
- Chew, E. (2008). Views, values and perceptions in geographical fieldwork in Singapore schools. *International Research in Geographical and Environmental Education*, 17, 307-329. https://doi.org/10.1080/10382040802401565
- Clark, D. (1996). The changing national context of fieldwork in geography. Journal of Geography in Higher Education, 20, 385-391. https://doi.org/10.1080/03098269608709381
- Cole, D. B. & Ormrod, J. E. (1995). Effectiveness of teaching pedagogical content knowledge through summer geography institutes. *Journal of Geography*, 94, 427-433. https://doi.org/10.1080/00221349508979346
- de Blij, H. (2005). Why geography matters: three challenges facing America: climate change, the rise of China, and global terrorism. New York: Oxford University Press.
- Doering, A., Engan-Barker, D., Johnson, C., Keen, C., & Lo, M. (1995). GEOteach: A preservice teacher preparation program in geography. *Journal of Geography*, 94, 524-526. https://doi.org/10.1080/00221349508979358
- Dulli, R. E. (1994). Improving geography learning in the schools: Efforts by the national geographic society. In R. S. Bednarz & J. F. Peterson (eds.), *A decade of reform in geographic education: Inventory and prospect* (pp. 121-123). Indiana, PA: National Council for Geographic Education.

- Dunphy, A. & Spellman, G. (2009). Geography fieldwork, fieldwork value and learning styles. *International Research in Geographical and Environmental Education* 18(1), 19-28. https://doi.org/10.1080/10382040802591522
- Englert, K. & Barley, Z. (2003). National Geographic Society alliance study. *Journal of Geography*, 102, 80-89. https://doi.org/10.1080/00221340308978525
- Freeman, T. W. (1967). *The geographer's craft*. Manchester, UK: Manchester University Press.
- Fuller, G. (1989). Why geographic alliances won't work. *The Professional Geographer*, 41, 480-484. https://doi.org/10.1111/j.0033-0124.1989.00486.x
- Fuller, G. (1990). The revenge of "why geographic alliances won't work." *The Professional Geographer*, 42, 366-368. https://doi.org/10.1111/j.0033-0124.1990.00366.x
- Geographic Education National Implementation Project (GENIP). (1995). Spaces and places: A geography manual for teachers. Skokie, IL: GENIP.
- Goodman, J. M. & Elam, W. W. (1970). The institute for regional geography of the American southwest. *Journal of Geography*, 69, 493-497. https://doi.org/10.1080/00221347008982298
- Grosvenor, G. M. (1995). In sight of the tunnel: The renaissance of geography education. *Annals of the Association of American Geographers*, 85, 409-420. https://doi.org/10.1111/j.1467-8306.1995.tb01806.x
- Heffron, S. G. & Downs, R., eds. (2012). *Geography for life: National geography standards* (2nd edition). Washington, D.C.: National Council for Geographic Education.
- Hope, M. (2009). The importance of direct experience: A philosophical defence of fieldwork in human geography. *Journal of Geography in Higher Education* 33, 169-182. https://doi.org/10.1080/03098260802276698
- Hurt, D. A. (1998). The framework of the standards: A history of American geography education. *Pennsylvania Geographer*, 36, 2-17.
- Hurt, D. A. & Wallace, M. L. (2005). Teaching American Indian geography and history with new perspectives: The Lodge Pole River project example. *Journal of Geography*, 104, 187-193. https://doi.org/10.1080/00221340508978983
- Israel, A. (2012). Putting geography education into place: What geography educators can learn from place-based education, and vice versa. *Journal of Geography*, 111, 76-81. https://doi.org/10.1080/00221341.2011.583264

- Jurmu, M. C., Jurmu, J. M., & Meyer, J. W. (1999). Mastery of content and pedagogy: Evaluation of strategies for teacher institutes. *Journal of Geography*, 98, 14-22. https://doi.org/10.1080/00221349908978849
- Kent, M., Gilbertson, D. D., & Hunt, C. O. (1997). Fieldwork in geography teaching: A critical review of the literature and approaches. *Journal of Geography in Higher Education*, 21, 314-332. https://doi.org/10.1080/03098269708725439
- Klein, P. (1995). Using inquiry to enhance the learning and appreciation of geography. *Journal of Geography*, 94, 358-367. https://doi.org/10.1080/00221349508979744
- Marran, J. F. (1989). "Why geographic alliances won't work"—a response. *The Professional Geographer*, 41, 486-487. https://doi.org/10.1111/j.0033-0124.1989.00486.x
- Meinig, D. W., ed. (1979). The interpretation of ordinary landscapes: Geographical essays. New York: Oxford University Press.
- Munday, P. (2008). Teacher perceptions of the role and value of excursions in years 7-10 geography education in Victoria, Australia. *International Research in Geographical and Environmental Education*, 17, 146-169. http://dx.doi.org/10.1080/10382040802148638
- National Geographic Society. (2017). National Geographic network of alliances for geographic education: Educators united to support geographic literacy. Retrieved from http://alliances.nationalgeographic.com/about.
- Oberle, A. & Palacios, F. A. (2012). Developing standards-based geography curricular materials from overseas field experiences for k-12 teachers. *Journal of Geography*, 111, 245-253. https://doi.org/10.1080/00221341.2012.662241
- Rundstrom, R. A. & Kenzer, M. S. (1989). The decline of fieldwork in human geography. *Professional Geographer*, 41, 294-303. https://doi.org/10.1111/j.0033-0124.1989.00294.x
- Salter, C. L. (1986). Geography and California's educational reform: One approach to a common cause. *Annals of the Association of American Geographers*, 76, 5-17. https://doi.org/10.1111/j.1467-8306.1986.tb00099.x
- Salter, C. L. (1987). The Nature and potential of a geographic alliance. *Journal of Geography* 86(5), 211-215. https://doi.org/10.1080/00221348708979487
- Salter, C. L. (1991). Geographic alliances: Be moved, but not alarmed. *The Professional Geographer* 43(1), 102-104. https://doi.org/10.1111/j.0033-0124.1991.00102.x
- Salter, C. L. (1999). The enduring nature of evocative regional geography. *The North American Geographer* 1(1), 4-22.

- Sauer, C. O. (1956). The education of a geographer. *Annals of the Association of American Geographers* 46(3), 287-299. https://doi.org/10.1111/j.1467-8306.1956.tb01510.x
- Schell, E. M., Roth, K. J., & Mohan, A. eds. (2013). A road map for 21st century geography education: Instructional materials and professional development. (A Report from the Instructional Materials and Professional Development Committee of the Road Map for 21st Century Geography Education Project). Washington, D.C.: National Council for Geographic Education.
- Steen, O. I. (2009). International field studies in Norwegian teacher training courses: Perspectives and experiences. *International Research in Geographical and Environmental Education*, 18(3), 199-209. https://doi.org/10.1080/10382040903054032
- Wallach, B. (1997). Painting, art history, and geography. *The Geographical Review*, 87(1), 92-99. https://doi.org/10.2307/215660
- Widener, J. (2015). Our place on the map. *Journal of Map and Geography Libraries*, 11(1), 91-98. https://doi.org/10.1080/15420353.2015.1009226
- Zakrzewska, B. (1969). The "pros" and "cons" of a field geography institute. *Journal of Geography*, 68(4), 218-224. https://doi.org/10.1080/00221346908981097

Jeffrey Widener is an Associate Professor of Geography and the Director of the Center for Spatial Analysis in the Department of Geography and Environmental Sustainability at the University of Oklahoma in Norman.

Douglas Hurt is an Assistant Teaching Professor, Director of Undergraduate Studies, and the Missouri Geographic Alliance Coordinator in the Department of Geography at the University of Missouri in Columbia.

Gary Gress is Emeritus Program Coordinator for the Oklahoma Alliance for Geographic Education and Past President of the National Council for Geographic Education. He is a Lecturer in the Department of Geography and Environmental Sustainability at the University of Oklahoma in Norman.

Appendix A. OKAGE Lesson Plan Template (V-15)

Lesson Title:

Grade Level:

Purpose/Overview:

Briefly describe the lesson or unit, and state your rationale and background information focusing on a geographic element/standard.

National Geography Standards from *Geography for Life* Geographic Elements & Standards:

(Choose <u>one or two</u> specific elements and standards which best apply to your lesson/unit for your focus.)

Physical Systems, Environment & Society, Human Systems, Places & Regions (main focus)

The World in Spatial Terms, The Uses of Geography (support focus) [Contact OKAGE for a copy of *Geography for Life*, or go to http://www.nationalgeographic.com/xpeditions/standards/matrix.html

Oklahoma Academic Standards for the Social Studies:

What specific OAS standards/objectives, listed by grade level/course, are you addressing with this lesson/unit?

Geographic Themes:

Choose <u>one or two</u> for your focus: i.e., Location, Place, Movement, Human-Environmental Interaction, and/or Region.

Objectives:

(Related to the National Geography Elements and Standards listed above) Each lesson plan should answer in a short narrative these questions:

- 1. What **key topic/issue**(s) is/are associated with this lesson/unit?
- 2. What should students know after this lesson/unit?
- 3. How will students apply this lesson/unit content?

Materials: List <u>all</u> tangible items needed for the lesson (e.g., hand-outs, atlases, calculators, colored pencils, construction paper, computer/LCD projector). Remember that your lesson is to incorporate a technological element (e.g., PowerPoint).

Time Frame: Approximately how many days or class periods are needed to teach the lesson?

Procedures: Identify each step/activity* driving the lesson in a <u>narrative</u> description ("students will"..."the teacher will"): i.e., opening the lesson, developing the lesson, concluding the lesson, closure (can be a product).

*Provide specific hard copy classroom-ready examples for each activity when necessary/appropriate.

Assessment Options: Summarize what your suggested assessment will be. Refer back to objectives above: how will the teacher know that students have learned the intended objectives?

Application assessment: Apply lesson content**

Performance-based assessment**

Authentic assessment (real world applications)**

Rubric assessment** (scoring tool) for grading

Assessment can be individual, group, project, product, long-term, short-term, student-directed, student-produced, written, oral, visual, field-based, research-based, etc. Ideally, an assessment will include several (3-5) multiple choice questions at "depth of knowledge" level 2 or 3 comparable to what students will see on the **Oklahoma CoreCurriculum Tests, i.e., criterion-referenced test (CRT) or end-of-instruction (EOI) exam, especially in those grades/courses for which there is state testing.

Resources: All resources/sources used in the lesson must be documented and cited appropriately, including web sites, videos, publications, personal interviews, etc.

Extension and Enrichment/Simplification: Describe how a teacher could adapt this lesson: to higher/lower grades, gifted or special needs students, and/or to reduce the amount of time needed to present the lesson (choose one.)

Connections (optional): Include OAS standards for other disciplines/subjects (e.g., English/language arts, history, science and mathematics) that are met by your lesson/unit.