**EDUCATIONAL PARTNERSHIP EVENT REPORT AND RECOMMENDATIONS**

Workshop, University of Northern Colorado Education Program

Location: Denver, CO

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Instructor's Name and Report Author:
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**Summary**

Upon the request of University of Northern Colorado, I gave a hands-on workshop in mapping, geography, and GPS to preservice teachers in the Education Program.


*Joseph Kerski at the University of Northern Colorado Education Program Denver Campus. The Denver program was the initiative of a former DPS Superintendent and has been incredibly successful.*

*I distributed material that I thought would be pertinent for those learning how to be teachers—USGS maps, books, and Internet resources, and GIS and GPS-based lesson plans and guidelines that I and others have written. We discussed resources that would make good next steps for educators wishing to know more about teaching with geographic technologies, and I invited them all for a USGS tour. I mentioned our GPS classes, summer GIS in education courses that I am teaching, and conferences we will be presenting at this spring, including NSTA, AAG, and NCSS Regional.*

*I had a large group for this workshop—probably at least 60, and it was a pleasure to work with them.*

*Two of the participants in the course with one of the professors who invited me.*

*Following the in-class exercises, we went outside to use the GPS receivers and to demonstrate their educational applications. We discussed tracks, waypoints, coordinate systems, datums, geocaching, and more.*

**Recommendations**

1) The first decade of the 21st Century is an exciting yet challenging time for preservice educators—teachers to be. Never before has society demanded so much of our teachers. Students are receiving daily information in volumes unheard of in times past. Some students' home environments makes it difficult for them to learn. Our society faces complex problems of human health, natural hazards, security, biodiversity loss, urban growth, and others. Society needs students who can make critical decisions, and these students are shaped in our educational institutions. In school, more important than learning facts, is learning *how to learn.* Students can develop a love for lifelong learning. I encourage all scientists to become involved with educational initiatives—to communicate what you do to educators, help them to use your research, and aid those who develop curriculum around your research.

2) As one of the nation's largest scientific organizations, the USGS can and has provided great input to publications, data sets, software, and other items related to science education. The value added in our involvement with the education focus area of communications is that we work with educators to demonstrate *how* our data and products can be used in conjunction with national educational content standards.

It is not enough to tell educators which data and products are available. When we get involved with teachers—getting their input and working with them—we can better understand how to meet their needs. Preservice workshops are one of the best ways to do this, because here, teachers form their own teaching style and body of knowledge. Many will teach as they have been taught, and if spatial thinking is emphasized in preservice education programs, then they are much more likely to be used when these students have their own students and classrooms.

3) As I hope I have made clear in this report, hundreds of excellent applications of USGS data, maps, GPS, GIS, and geography exist in education.

**End of UNC Preservice Workshop Report**