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Paper No. 7

Presentation Time: 10:00 AM

CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE: USING DYNAMIC DIGITAL MAPPING TO EDUCATE, PRESERVE AND PROVIDE ACCESS FOR ALL

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We interact with visitors to the Craters of the Moon National Monument and Preserve or in courses with persons without or with learning, vision, hearing, and physical mobility disabilities. Educators can best address the diversity of the people with which they interact by approaching information delivery using Universal Design (UD) techniques. UD has origins in the field of architecture but is now being applied in education, where it is defined as the preparation of curriculum, materials and environments so that they may be used appropriately and with ease by a wide variety of people (Bowe, 2000). Delivery using interlaced activities (e.g. digital delivery with tactile and graphical visualizations supplemented with sound and sub-captioning) is best practices pedagogy and achieves elements of the nine principles of UD for reaching a broader audience of learning styles and abilities (see [FacultyWare](http://www.facultyware.uconn.edu/principles.htm) <http://www.facultyware.uconn.edu/principles.htm>). We can effectively educate people, preserve natural and cultural resources, and provide more equal access to persons of varying abilities by providing a Dynamic Digital Map (DDM) as a part of our UD approach.

DDMs provide multiple displays of interactive maps, analytical databases, digital images, and movies to the desktop learning environment as a stand-alone presentation manager." A DDM is a complete cross-platform "geologic maps on disk" (CD-ROM and web-based; visit <http://ddm.geo.umass.edu/>). The use of a DDM is an inexpensive option allowing park visitors to experience a wide range of places at a low cost but with high educational value. A DDM can be used as a proxy to a hike in cases of inaccessibility issues for participants, thus providing a particularly useful tool for making otherwise inaccessible trails or resources accessible to those persons who cannot participate. Further, resource preservation is critical for the park service. There are natural and cultural resources that the park service must limit direct access to in order to preserve. With a DDM, photos or video clips of the feature can be placed in the model without disclosing the locality, thereby preserving the resource while making it available to the public. This DDM project is part of an undergraduate research internship. [Bowe, F.G. (2000). Universal design in education. Westport, CT: Bergin & Garvey]

Session No. 210

T117. Innovative Approaches to Teaching "Geology of National Parks": Tales from the Classroom, Field, Page, Web, and Beyond
Wednesday, 10 November 2004: 8:00 AM-12:00 PM