Imagine yourself at home in your favorite chair, dressed comfortably in sweat pants and a T-shirt while actively increasing your knowledge and understanding of wilderness. You choose when to participate in the “virtual classroom,” when to communicate with your instructor, and when to interact with your classmates from around the world (Gunderson 2006). The Wilderness Management Distance Education Program (WMDEP) removes the constraints of time and location, and presents the most current wilderness knowledge available through a suite of online courses sponsored by the Arthur Carhart National Wilderness Training Center and the Wilderness Institute, College of Forestry and Conservation at the University of Montana.

The WMDEP offers accredited university courses for a comprehensive study of wilderness management. WMDEP is a valuable tool for understanding the wilderness resource and the issues surrounding its management, including topics ranging from philosophy and ecology to recreation and planning. It is a joint federal agency and university effort to increase wilderness scholarship among professional wilderness managers, outdoor recreational planners and educators, members of conservation groups, students, and interested citizens.

The History of Wilderness Management Distance Education
Distance education is not a new concept. Dating back to the early 1700s, advertisements first appeared for courses offered by mail through correspondence study. Distance learning took advantage of rapidly advancing technologies, incorporating radio, satellite broadcast, interactive TV, video, CD-ROM/DVD, Internet, computer, mobile/handheld devices, and social media. During the 1960s and 1970s, distance learning expanded to address people who live in geographically isolated areas. Reasons for the popularity included escalating costs of traditional residential education, interest in informal and nontraditional education, a more mobile population, the growth of career-oriented activities, and the need for learning new skills. By 2012, more than 85 percent of postsecondary institutions offered courses or degree programs online (Hanover Research 2014).

Peel (1999) conducted a study of the WMDEP program and found that learners in academic online courses learn as effectively as they do in the classroom and that attitudes and satisfaction regarding distance education are generally positive. WMDEP has increased in popularity since its inception in 1978 and is the longest running academic wilderness management program offered in the United States (E. Krumpe, personal communication, December 2, 2015).

WMDEP was first piloted in 1995 as a partnership arrangement between the University of Montana and the University of Minnesota (Peel and Freimund 2000). The purpose of the effort was to refine recreation management curricula, improve the program's efficiency in developing future curricula, and increase the reach (access) for potential students to the information within the WMDEP. Functions of an effective learning environment were also
examined during the pilot course. Each function corresponded to a characteristic of online education identified in the published results of early studies in other disciplines. The characteristics included:

- Access to information
- Relevance
- Currency of information
- Role of the instructor
- Student control over the learning environment
- Interactivity, collaboration, and engagement
- Knowledge creation
- Problem-solving ability
- Higher-cognitive domains

Feedback from students indicated good access to information. The Internet format allowed material to be updated easily and quickly. The instructors successfully fulfilled their roles of technical facilitator and pedagogical collaborator. Students and instructors interacted well, and knowledge creation and problem solving were also apparent.

WMDEP Delivery Methods

WMDEP courses are offered in two formats: Traditional and Online. Traditional distance education (correspondence) courses using a study-guide format are self-paced, allowing students the freedom to learn when and where they wish. Upon enrolling, students receive a study guide for the course that explains how the program works, including how to apply for academic credit, providing the option of one additional six-month extension for course completion if needed, and preparing for the final exam. Students can register and start any of the four courses at any time and have six months from the time they register to complete the course requirements, including taking the final exam.

Online courses utilize online resources to help students augment their learning experience by engaging with the material and interacting with the instructors and other students. These courses generally adopt an asynchronous learning style in which students are encouraged to regularly check in on the course website for information and to participate in weekly discussion forums with experts. The discussion forums enable interaction between students and leaders in the field of wilderness management. These online courses are designed to cover the material in about 16 weeks; however, just as in the correspondence course, students have six months to complete all course requirements. The online format is offered twice a year (fall and spring), and the undergraduate-graduate courses are cycled and repeated with an every-other-year offering.

WMDEP Course Descriptions

The courses within the WMDEP graduate and undergraduate curriculum target key competencies for wilderness professionals, managers, and advocates. The WMDEP courses have recently been revised and updated for accessibility so they are in compliance with the Americans with Disabilities Act. These courses are:

1. Wilderness in the American Context (undergraduate)
   American Wilderness Philosophy and Policy (graduate)
   - Lays the groundwork for all other courses in the program
   - Provides a broad perspective of what wilderness is and how the idea developed
   - Exposes students to differing values, ethics, and expectations of wilderness held by society

2. Management of the Wilderness Resource (undergraduate)
   Managing Wilderness Ecosystems (graduate)
   - Covers the principles of ecosystem ecology and applications in wilderness management
   - Explores the management of specific wilderness resources (e.g., fire, wildlife, and cultural and historical sites, nonconforming uses)
   - Investigates the use of traditional skills and tools

3. Managing Recreation Resources (undergraduate)
   Managing Recreation Resources in Wilderness Settings (graduate)
   - Examines recreation management in a wilderness setting
   - Provides strategies for addressing visitor use, measuring and monitoring biophysical and social impacts, and communicating effective wilderness education, including interpretation and conceptual approaches to communication

“WMDEP is a valuable tool for understanding the wilderness resource and the issues surrounding its management, including topics ranging from philosophy and ecology to recreation and planning.”
4. Wilderness Management Planning (undergraduate)
Wilderness Planning: Theory, Management Frameworks, and Application (graduate)
• Capstone course that explores basic planning theory, planning concepts, and effective plan writing
• Examines the role of public participation in planning

Impact of WMDEP
WMDEP students come from all walks of life, from across the United States and around the world.

The courses provide a foundation in wilderness management and offer the skills needed to become a successful wilderness manager, they can help earn credits toward a degree, or they can be taken solely for personal satisfaction. WMDEP students might be seasonal wilderness rangers; interpreters in the national parks; backcountry law enforcement rangers; outdoor educators and teachers; staff members from nonprofit organizations; regional wilderness directors; wilderness fellows; state, county, or municipal park planners; or university students. Some students with permanent positions with federal land management agencies are taking the courses to qualify for a different job series or higher pay grade. Seasonal employees take the courses to make them more competitive for permanent positions.

The WMDEP courses also offer an educational opportunity for US Forest Service Pathways students, who are required to be enrolled as full-time students in a certificate program. Others are considering a transition into a different career path and are exploring a long-held interest in wilderness. The four WMDEP courses taken for graduate credit also lead to a graduate certificate in wilderness management. Established in 2009, the graduate certificate provides students and professionals with training and expertise to pursue careers in wilderness management. As part of the graduate course requirements, students in the certificate program write research papers that can be submitted as manuscripts to the International Journal of Wilderness and other natural resource professional journals for publication (McKinney 2011). Alumni of the certificate program have reported that the WMDEP courses helped them obtain permanent positions with one of the four US federal land management agencies with wilderness management responsibilities.

Overall, the impact of WMDEP can be seen in the personal narratives of students and alumni. These narratives illustrate multiple key themes, which include:
• Online instruction knows no geographic boundaries.
  “I am a recreation manager in Iceland and the information, guidance, and encouragement I received from the instructor is very useful in my position.”
• Distance learning is convenient.
  “The WMDEP staff was incredibly supportive and flexible. They wanted me to succeed and worked with my ridiculous schedule to make that happen.”
• Online courses promote contemplative and reflective learning opportunities.
  “I entered the program to gain a foundation in wilderness management in my quest to acquire the skills I would need to be successful as a resource manager. I was selected into my dream job because of the knowledge base I gained through the WMDEP program.”
• Online courses can provide a depth of interaction from instructors and students not achievable in a large classroom environment.
  “The WMDEP enhanced my understanding and appreciation for modern wilderness management within the federal land management agencies by developing a solid foundation and appreciation for the diverse issues land managers and the public face to permanently protect wilderness resources and character.”
• The online format reduces preconceived notions based on students’ age, gender, race, background, or level of experience.
  “I have worked for the Forest Service as a trails and recreation manager for many years and it has been a long time since I last attended college so I questioned how well I would do in the program. I was able to apply much of what I learned immediately to my current position.”
• With tight budgets, WMDEP courses provide professional development that is cost effective.
  “This is my fourth course in Wilderness Management Distance Education Program with the University of Montana and I have never been disappointed. Great classes! Got my money’s worth!”

Conclusion
In a recent survey, wilderness managers rated the degree to which they believed goals and objectives of the 1995 Interagency Wilderness Strategic Plan had been accomplished. In the area of “Public Awareness and Understanding,” wilderness managers rated wilderness education as underachieved (Ghimire, Green,
2015 Was a Banner Year for Ocean Protection

More than 1 million square miles (260,000 ha) of highly protected ocean were set aside in 2015, more than during any prior year, according to the Pew Charitable Trusts. The Pacific island nation of Palau designated a 193,000-square-mile (50,000 ha) fully protected marine reserve that became the sixth largest such area in the world, safeguarding more than a thousand species of fish and some 700 species of coral. The single largest marine reserve ever created – the Pitcairn Island Marine Reserve, at 332,000 square miles (86,000 ha) – was dedicated by Britain to the Pew Charitable Trusts.

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Cordell, Watson, and Dawson 2015). The 2020 Interagency Vision (Wilderness.net 2015) also prioritizes fostering relevancy of wilderness to contemporary society by inspiring and nurturing lifelong connections between people of diverse cultures and wilderness. Thus, education is one of the most effective tools in managing wilderness, and wilderness management distance education is one tool in the toolbox to help achieve this goal. A quote from an alumnus of the WMDEP graduate certificate summarizes it best:

I consider graduation from the WMDEP program among the most important (and treasured) accomplishments in my professional career. It has connected me with wilderness, other professionals, and helped me understand how to talk about wilderness to our decision makers and the public so that it is clearer to them why our actions (or lack thereof) in wilderness are important.

For more information on WMDEP, visit our website at: http://www.cfc.umt.edu/wmdep/default.php

References


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