Digital Video in the Classroom: Communication Skills for Future Resource Professionals

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This article reinforces the need for effective communicators in natural resource organizations. It demonstrates the usefulness and accessibility of one communication format—video production—and provides a specific illustration of how Oregon State University is preparing future forestry professionals with a useful skill set. It draws on classroom examples to show how ideas can be merged with technology to deliver creative messages to citizens. It also describes the applicability of video beyond the university to forest agencies and organizations.

Keywords: Communication; educational video; classroom technology; natural resource management; student development

It is no secret that natural resource organizations could do a better job of communicating with citizens about management activities and proposed actions. Regardless of the issue, improving public understanding and acceptance is critical to its successful implementation (Shindler et al. 2002). Poorly communicated messages are certain routes to frustration and disapproval. In forest communities, managers can choose how they provide information about programs and what type of educational experiences will be created for citizens. Brunson (1993) notes that to be effective, public outreach programs must be tailored to specific formats and desired audiences.

The purpose of this article is to describe an emerging opportunity for practicing foresters and others in the natural resource professions. Video-based messages provide a compelling way to communicate important management ideas to citizens and, at the same time, to enlist their support in meeting management objectives (Veverka 1996). Thus, our intent here is to demonstrate the usefulness and accessibility of one form of communication—video production—and provide a specific illustration of how Oregon State University (OSU) is preparing future natural resource professionals to use video as part of a communication strategy. For the past 8 years, OSU’s College of Forestry has integrated video production skills into one of its core courses for forestry undergraduates. By raising awareness among management and research personnel, we hope they might look for opportunities to incorporate this technology—and those who can produce it—into their information delivery programs.

The Need for Effective Communicators

In recent years, numerous authors in the Journal of Forestry and elsewhere have recognized that natural resource management requires professionals to have more than the traditional technical toolkit (e.g., Parkinson et al. 2003, Thompson et al. 2003). It is becoming increasingly important for managers to possess a full repertoire of communication skills that enable them to effectively connect with their peers and the public. Internally, organizational decisions are based on interdisciplinary collaboration and effective use of information. Externally, achieving management objectives necessarily relies on public understanding and acceptance of program goals. Personnel who possess good communication skills are the cornerstone of our future interactions with the numerous publics we rely on to support our management programs (Shindler and Neburka 1997). Certainly, one prerequisite is the genuine, interpersonal qualities that enable resource professionals to successfully engage citizens at meetings or other face-to-face venues. However, these skills reflect just one aspect of communication; not everyone is well suited to the role of discussion leader. Other attributes are also important.

The nature of today’s communication systems—DVDs, cable TV, streaming video—requires agencies to provide citizens with targeted, useful information in a variety of creative formats. This is particularly true for younger audiences who may be more receptive to electronic media or visual images. This communication niche also can provide a special role for individuals in resource organizations who have creative abilities and understand existing technology, but may not necessarily see themselves as the staff person who takes center stage.

Seasoned professionals also recognize that simply providing citizens with information is no longer sufficient for helping them understand what we do or for enlisting their...
After participating in the Natural Resource Communication course as a student, co-author Ryan Gordon was inspired to extend his communication and video production skills into a graduate program. His graduate project is a video-based program designed to provide resource professionals with communication strategies for working collaboratively with the public on fire and fuel management. The production draws on innovative real-world examples from successful agency outreach programs to showcase effective communication activities in forest communities. If interested in this video project contact us by e-mail at bruce.shindler@oregonstate.edu.

Figure 1. Communication Strategies for Fire Management: A Video-based Program for Creating Effective Citizen-Agency Partnerships.

Support (Stankey 1995). People can receive technical information, but in forest communities the format used and clarity of the communication is likely to be just as important in helping them form judgments. Initially, opinions about conditions or management practices are often based on visual preferences from exposure to forests and interpreted through previous personal experiences (Bitgood and Cleghorn 1995). In today’s environment where agencies are promoting new (sometimes unfamiliar) forms of ecosystem-based management, citizens will likely reserve final judgment until they can see how these practices turn out (Shindler et al. 2002). Thus, visual messages about places that are important to people or about forest practices that may alter familiar sites are useful communication strategies. For instance, Brunson and Gilbert (2002) found that video messages were good for building awareness of fire management and interest among local residents about the importance of fuel reduction techniques.

Video can be particularly effective in the early stages of information transfer, where it can provide conceptual overviews of complex topics in a visually compelling manner (Valmont 1995).

Beyond the awareness-building stage, video is also a valuable tool for agency planning sessions where specific practices first can be demonstrated. The audience can then be engaged to discuss where and when these might best be used. For example, the authors are creating a video-based training tool for fire managers who need to engage local citizens about prescribed fire and thinning practices in the wildland-urban interface (see Figure 1). By showing how collaborative techniques work in specific settings, the program will help managers explore how they might be adopted in their own communities. It is not difficult to see how video messages could be crafted to target other problems and demonstrate potential solutions. Although other methods such as management-led field trips are valuable for exposing citizens to forest practices, these are relatively expensive and time-consuming events. Alternatively, capturing a field visit on video can reach a wider audience with a repeatable, standardized message. With training, the new cohort of resource professionals may be uniquely suited to making this tool a regular part of an organization’s public outreach program.

Digital Video in the Classroom

A significant trend in higher education is the movement to an “expanded classroom,” or methods that more directly provide ways for students to apply classroom concepts to real world situations (Katula and Threnhauser 1999). Those of us who are regularly in the classroom know the benefits of harnessing the current generation’s lust for learning through direct experience. There is also no denying the functional value of such methods for helping students find relevance in their work or obtaining a job when they graduate. As for employers, they continue to cite communication skills as the most important quality for job success (Winsor et al. 1997).

Still, walking into class on the first day of a new term and finding that, in addition to the standard complement of readings and exams, the professor expects you to produce a digital video can startle most students. While the idea sounds exciting—a welcomed departure from the usual assignments—students are likely to have serious questions about the task ahead. What equipment do I need to fulfill this lofty course requirement? What topic will I tackle in my video? And, most important, how in the world can I pull off this assignment in 10 weeks?

These are normal reactions among the 40 students who routinely face the realities of video production in the junior-level course, “Natural Resource Communications,” which is part of the undergraduate curriculum in OSU’s Department of Forest Resources. Yet, in the 8 years this project has been a required class project, every student has successfully teamed with another classmate to produce a 5-minute narrated video on a resource issue they find important. Designed to provide students with the concepts and techniques for successful communication in natural resource organizations, the class draws students from a variety of disciplines across campus—Forest Recreation, Natural Resources, Forest Management, Fisheries and Wildlife, and Environmental Science.

The class is organized around concepts that many forestry professionals now find integral to being a successful resource manager (Magill 1991, Brunson 1993): teamwork and group dynamics, meeting management, public relations, interpretation and public outreach, and skills for engaging citizens. The course includes a good deal of student-professor interaction along with exams and practical exercises in planning,
team building, and conducting meetings. While only one component of the course curriculum, the video project has achieved a reputation among students and faculty. Students come to know the project as a formidable assignment that demands planning, patience, and teamwork, but also offers substantial rewards in a valuable skill set. Each year faculty members enjoy the creativity and the relative ease with which students tackle both the new technology of digital media and complex issues in resource management.

Merging Ideas with Technology

OSU’s “Natural Resource Communications” course is designed to provide students with the skills to be effective members of a resource organization as well as with techniques for working in the public arena. The video assignment creates enthusiasm and brings course topics into focus. The project requires students to work in groups of two to plan, shoot, and produce their video. During the first few weeks of the term, students attend an orientation session that introduces them to the equipment and facilities and also submit a written design plan. This planning exercise forces the student teams to describe their target audience, program goals, contextual background, key messages, and important visuals. Additionally, one class period is devoted to a discussion of the nuances of videography. Otherwise, students are expected to commit time to mastering the basics of equipment operation.

With a hands-on approach, students gain experience using digital video cameras and computer-based editing equipment to enhance their production. They must also write a narrative text that is coordinated with their visual message. Students quickly recognize the benefit of choosing a focused theme for their 5-minute production. For example, one group who selected “ecosystem management” struggled to adequately portray the complex concept; while others with more targeted subjects (e.g., “Christmas Tree Production in Benton County,” “Recreation Impacts on the Pacific Crest Trail”) were able to deliver more meaningful, useful messages. Although class videos are not quite ready for the major broadcast networks, most result in products that are innovative and highly engaging.

At the end of each term, the final products are shown in a “film festival” atmosphere at a large video-projection facility (see Figure 2 for examples). In this forum, a good deal of additional learning occurs, and empathy demonstrated, as each project goes through a peer critique process. Students provide constructive feedback—everyone has experienced similar difficulties and pitfalls—and offer suggestions on improvements for “next time.” For example, some students attempted music-only videos, but this format was quickly ruled out by their peers. A narrative message is now required. The instructor and teaching assistant also provide comments and grade individual videos using a set of guidelines provided to students (Figure 3).

The video assignment was instituted 8 years ago using VHS camcorders and editing stations, directly reaching over 300 students. Because of the project’s success, College of Forestry administrators and alumni donors chose to further invest in the program—allowing it to take full advantage of new digital video technology. This involved the purchase of approximately $12,000 in digital equipment, including cameras, VCRs, iMac computers, software, tripods, and other accessories. While operation of this equipment might involve a rather steep learning curve for many of today’s resource professionals, the new technology is a reasonably easy-fit with the aptitude and interest of our youthful crop of natural resource students.

Benefits

Over the history of this class, many excellent short videos have been produced. Some have enjoyed an extended life on the local public access cable station, while others have been viewed (and admired) by forestry faculty, area resource managers, and local citizens. A number of students have gone on from this single class experience to produce high-quality video programs for other audiences. Examples include:

• A class video on Native American perspectives of resource management so impressed the organizers of a statewide Sacred Landscapes Conference that they asked the student team to scale down the piece for use as a public service announcement. The resulting PSA was televised throughout Oregon to help advertise the conference.

• For their senior project, two students produced a video documentary on the fate of the Fender’s Blue butterfly—an endangered species unique to a local site. The video explored management challenges and options and was viewed by state and federal resource managers as well as private landowners. It has played a key role in moving forward and focusing discussion of this complex issue.

• A recent graduate of the class was asked by the university’s extension forestry group to produce a video retrospective of award-winning Oregon tree farmers. It was subsequently featured at a statewide conference.

At its most basic level, the video project provides students with an abundance of new or expanded skills. Chief among these is an increased understanding of how to use this medium as part of an effective communication strategy. At the same time, most leave with improved confidence in their ability to work with others and contribute to a resource organization. In the end, the developmental process is more important than the finished product. The process of preparing a written design plan, collecting the necessary video footage that may include interviews with local professionals, distilling the information into a succinct message (editing the footage), and standing in front of their peers to deliver the product is the take-home treasure for students in the course. Students acknowledge this learning situation by their high ratings of the course on their course reaction surveys. Over the last 8 years, the class has consistently garnered approval ratings at the 98% level, regularly 10 points over the College average. In 2003, the Association for Communication Excellence, an international group of resource professionals, honored the course with its highest award for instructional design.

Each term students also provide written feedback of this project requirement. Most years pass without a negative comment (responses of this nature are usually about students learning to work as a team). Selected examples indicate students both understand and appreciate the value of what they have endured:

• “This was the most valuable experience I’ve had in my entire college career. . . I feel like I developed hands-on, real-life skills.”

• “This project incorporated so many aspects of communication—planning, design, shooting footage, editing, and working as a team—I loved it!”

• “This is the hardest I’ve ever worked on a project. . . and it was also the most rewarding.”

• “Now that I know what I’m doing, I intend to make a video for my senior project.”
From fire prevention to recycling tips, from the Tillamook Burn to the joys of composting, student-produced videos have always managed to grab the attention of faculty, administrators, and media personnel. In some cases, they have led to even bigger and more ambitious projects. Below is a sample of several recent productions.

**Fire Prevention**

Two members of the hip-hop generation methodically demonstrate best and worse practices in preventing (or starting) wildfires. Set to a rap music beat, this video has proven a favorite, and demonstrates how students can bring their own unique voice to the natural resource communication arena.

**Beaver Creek: A Heron’s Eye View**

This overview of the biological, historical, and recreation components of Beaver Creek Marsh demonstrates the effective use of students on camera, unusually high quality wildlife videography, and well-planned scripting.

**The Tillamook Story**

Student producers take a “Ken Burnsian” approach and combine historical photographs and interviews with local eyewitnesses to good effect in this brief exploration of Oregon’s Historic Tillamook Burn.

To view streaming video of additional projects, visit our website at: [www.cof.orst.edu/cof/teach/for391](http://www.cof.orst.edu/cof/teach/for391).

Figure 2. Examples of student projects.
"I know I am better prepared for my career... I believe I can really contribute something worthwhile to the agency I'll be working for."

**Applicability Beyond the University**

Although the video project might be seen as something more easily achieved on a college campus, we think there are realistic applications for natural resource organizations. First, the incoming cohort of resource managers generally views this technology as a normal part of doing business. Many have the aptitude to be quick studies and, given an opportunity, also have a keen interest in applying their knowledge of video to their jobs. For existing personnel, becoming sufficiently literate in video technology does not require a college course. Over the years, we have found a number of individuals who already have a basic skill set and just need access to the equipment and time to master it. In any natural resource organization, it is likely that one or two staffers exist who are already capable. It may just be a matter of providing the opportunity.

Second, the cost may not be as prohibitive as it sounds. The situation we have created at OSU is fairly sophisticated, but some of our reasons for this may not be necessary in other organizations. We accommodate up to 50 student users of equipment and facilities during any given 10-week term. Students are typically hard on cameras and computers, sometimes having less at stake in being careful or making sure batteries are charged or equipment is properly secured. With a smaller set of designated users, resource organizations may be able to get by with one digital camera and a single iMac computer or equivalent PC with digital video-editing software, all for under $2,500. Visit www.cof.orst.edu/cof/teach/for391 for more specific information on equipment costs.

Third, producing perfect, high-quality videos is not an absolute requirement. When viewing video of local projects in forest communities, most audiences can be very forgiving. These days everyone is accustomed to high-end programs on television or in movie theaters; however, providing people with the proper context about a video’s intended use can go a long way to offset less than Miramax quality. For example, BLM researchers in Utah’s Great Basin produced an in-house video to describe a project in which foraging goats were used to reduce fuels; the practice actually brought an escaped fire from a nearby military base to a halt in the affected area (Voth et al. 2002). While not quite ready for prime-time television, the grazing...
goats and unique research stole the show. Essentially, the video helped the audience learn more about a subject that was important to them. Once engaged, audiences are willing to look beyond our imperfections and become involved in the real task at hand.

Finally, be specific in your objectives for use of this medium. Video messages are not ideally suited for every purpose. For example, it is difficult to portray complex policy issues in a short visual presentation and expect to change the public’s mind about the problem. As with any communication format, being judicious about the intended use is important. For instance, videos can be used for general audiences to help develop awareness of an issue or for more specific purposes (as in the goat example above) to reach a local audience and spell out a problem relevant to a single community. It is important to know which type of message you are attempting to deliver.

Alternatively, video can be a powerful companion to written publications, especially in our visually oriented society. Not everyone who wants to know more about an issue has the inclination or the patience to read management or scientific publications. Video can bring a consistent and precise message to a large, diverse audience in a convenient and easily distributed product (Valmont 1995). This medium also allows experts and opinion leaders an efficient way to “multiply” themselves to reach large and geographically distant audiences.

**Conclusion**

Our intent here has been to raise awareness for digital video as a communication device. Experience indicates that it can be a valuable part of agency outreach, and we offer several ideas for getting started and planning projects. We are also suggesting there is a new group of incoming professionals who are highly suited to produce these materials and who can contribute to organizations as they help the public become more informed, thoughtful partners. Educational programs like those at OSU are already providing the technical skills to help them accomplish the outreach job.

**Literature Cited**


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