Opportunities and Limitations in Teaching Forest Resource Continuing Education: Experiences with Southern Bottomland Hardwood Workshops and Shortcourses (An Update)

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Abstract

Continuing education workshops and shortcourses are playing an increasingly important role in the education of forest resource professionals. The "tug-of-war" between breadth and depth in undergraduate curricula, combined with pressure to reduce the number of credit hours required for graduation, create knowledge gaps in various disciplines. Workshops and shortcourses help to fill this gap by providing up-to-date information on specific topics pertinent to maintaining professional competence as well as professional registration or certification. We discuss the opportunities and limitations of teaching continuing education courses, especially those with a heavy field emphasis, based on our experiences with the hardwood workshop series taught by faculty at Mississippi State University (MSU) and colleagues. The key to developing a workshop or shortcourse is organization and preparation. In this paper, we review the planning process and conduct in the MSU hardwood workshops.

Introduction

Adult continuing education plays a critical role in forest resources education (Skean and Scragg 1994). Undergraduate curricula are undergoing constant change in response to perceived societal expectations (Brown and Lassoie 1998, Tombaugh 1998, Sample et al. 1999). Past curricula emphasized depth in technical subjects. Today's curricula emphasize greater breadth of a broader array of subjects at the expense of depth. In reality, we need both a breadth of subjects and depth in particular subjects to develop competent forest resource professionals, but we simply do not have the available credit hours to teach both concurrently (Robison 2005). Legislative mandates may limit the number of credit hours required for graduation. For example, 120 hours has been proposed as the maximum number of credit hours for an undergraduate degree in Arkansas (the current forestry degree in the School of Forest Resources,

University of Arkansas - Monticello requires 136 credit hours). These proposed credit hour maximums are placing additional pressure on changing curricula. Professional continuing education workshops and shortcourses fill voids from undergraduate curricula. For example, most southern forestry programs still place a heavy emphasis on southern pine management with little emphasis on hardwood management. A long-running series of hardwood workshops taught by Mississippi State University (MSU) helps fill this void.

Continuing education workshops and shortcourses, in addition to providing important information to participants, also provide continuing education credits that are necessary to maintain professional registration or certification. For example, Mississippi requires 16 hours of continuing forestry education credits every two years to maintain forester registration in the state, Arkansas requires 15 hours each year, and Georgia and Alabama require 10 and 12 hours, respectively, every two years. The Society of American Foresters requires 60 hours over a three-year period to maintain Certified Forester® status. Finally, continuing education workshops and shortcourses provide participants with the opportunity to learn the latest technological advances or new processes and procedures. Recent advances in computer technology, especially geographical information systems (GIS) and global positioning systems (GPS), have resulted in many shortcourses in these areas.

The objectives of this paper are to list and discuss opportunities and limitations in teaching professional continuing education courses that have a heavy field emphasis. We relate these through our experiences in teaching southern bottomland hardwood workshops and shortcourses. For purposes of this paper we distinguish between a workshop and a shortcourse. A workshop is a continuing education endeavor in which participants are exposed to relatively brief, to-the-point lectures on specific techniques and considerable hands-on experience in the field (forest), e.g., review a hardwood reproduction evaluation model in the classroom followed by collection of reproduction evaluation data, data entry, and analysis in the field or computer laboratory. A shortcourse is a continuing education endeavor in which participants are exposed to longer lectures that include theoretical and ecological background, i.e., the principles behind silvicultural practices and field techniques. Field experiences consist primarily of show-and-tell stops. In essence, a shortcourse is as the name implies – a shorten version of an actual college course. In reality, most forest resource workshops and shortcourses contain elements of each other, although the focus is on one or the other.

Mississippi State University Hardwood Workshops

A series of hardwood workshops offered through MSU was initiated in 1980 following several meetings between hardwood resource managers and MSU faculty and administrators. A one-page proposal, developed by Dr. John Hodges, stated that the objectives of these workshops would be “to give on-the-ground instruction and training in hardwood management, with emphasis on the latest research findings and on techniques which have been successful under operational conditions.” These endeavors would be “designed to give the greatest possible amount of field exposure” with “1-to-3 hours each day devoted to lectures/discussions and that the remainder of the day will be spent in the field observing and/or participating in silvicultural/management operations. As much variety as possible, in terms of sites and

approaches to a problem, will be covered. Emphasis in the courses will be on participation and interaction with the instructors. For that reason, enrollment will be limited to 15-20 participants."

The result from these meetings was the following series of hardwood workshops: (1) natural regeneration, (2) artificial regeneration, (3) management of existing stands, (4) growth and yield, and (5) economics of hardwood management. To date, about 40 of these hardwood workshops have been taught by MSU faculty and guest instructors, averaging one to two per year. Additionally, MSU faculty have been requested to teach hardwood workshops on-site at locations throughout the southern United States. The influence of these workshops and shortcourses has been passed on to former graduate students from the MSU hardwood program, who carry on the emphasis of these continuing education endeavors with their own hardwood workshops and shortcourses, most notably at the University of Tennessee, University of Georgia, Louisiana State University, and the U.S. Forest Service. Although an exact count of the number of hardwood workshops and shortcourses taught since 1980 has been lost over time, it is estimated that about 75 have been taught either directly or indirectly by MSU faculty and former graduate students.

Planning Process

The key to developing a continuing education endeavor, especially one with a heavy field emphasis, is organization and preparation.

Choice of Courses

The choice of which hardwood workshop to offer is based on need as determined by communications with forest resource managers and contacts from specific organizations requesting a course. Extra workshops are offered to cover participants on a waiting list when a previous course was closed due to maximum enrollment. Natural Regeneration of Hardwoods and Intermediate Stand Management have been taught most often. Artificial Regeneration of Hardwoods has been taught sporadically. Hardwood Growth and Yield and Economics of Hardwood Management have been taught the least of the five workshop offerings. Variations of these courses can be requested. For example, a variation of the Natural Hardwood Regeneration course, called Hardwood Regeneration Problems, has been taught five times over the past four years due to demand from clientele to deal with specific regeneration problems and possible solutions. Even a variation of a variation can occur. For example, the Hardwood Regeneration Problems workshop was recently requested by officials with the Mississippi Department of Parks, Wildlife and Fisheries. While the same lecture materials and field stops were used as with past workshops, both indoor and outdoor discussions were modified to emphasize more of the wildlife habitat aspects of hardwood regeneration and treatments that could specifically meet habitat objectives.

Schedule and Outline

Hardwood workshops and shortcourses are normally taught in the Spring and Fall.

Spring courses are often taught in either the Brown Loam Bluffs area near Vicksburg, MS or the Noxubee National Wildlife Refuge near Starkville, MS (using hotel meeting rooms or university facilities for the indoor lectures). These areas are less likely to be underwater during normal Spring weather due to utilizing upland sites or minor floodplains that drain quickly and have good roadside hardwood stands. Fall courses are more often taught near the Lower Mississippi Alluvial Valley due to the relatively dry conditions during this time of the year. Summer is avoided whenever possible due to the high temperatures and humidity that make for a less pleasant learning experience.

A detailed outline is an absolute necessity. The outline should include a specific timeline of indoor lectures and outdoor field stops. A special instructors' outline, different from the one participants receive, should include specific time allotments for each lecture presentation, travel to each field stop, and time allotted to each field stop. It is often easy to let the discussion carry on for much longer than time allotted, especially at field stops. Additional discussion can be conducted at the evening social gathering and an evening meal.

If the course is a repeat, using similar lecture presentations and field stops, then field stops are checked at least two days before the workshop. Sites may have been disturbed, either through natural events or by logging, or land ownership may have changed. Two days will allow time to find new sites and gather any needed plot data. If the course is new or located at a new area, at least three days will be needed to find stands, gather plot-level information, and locate specific trees and soil conditions to use for teaching. Help from local forest resource managers or companies is welcomed. Permission needs to be acquired from landowners, both private and public, prior to using their stands. Our experience has been that landowners welcome the opportunity to show their management practices and let others learn from their experiences – both successes and failures.

Length

The length of a workshop or shortcourse varies but most of the MSU hardwood workshops last two to 3.5 days. Originally, these workshops were for three to five days. This length is longer than most workshops, or even shortcourses, due to the amount of material covered and time spent in the field. Participants generally stay throughout the length of the coarse, not only because they want to learn and are paying for it, but also because certificates of completion and continuing education credit forms are handed out at the conclusion of the course.

Travel Logistics

Obviously, the field tour route should be traveled prior to the beginning of the workshop. Note mileage and travel time between stops and look for potential problems, especially with inclement weather, e.g., traveling on wood's roads that can become impassible with wet weather or drainage ditches that cross roads that can wash out with a heavy thunderstorm.

Regarding vans, keep in mind that most universities no longer allow 15 people in 15-passenger vans, usually 12 is the maximum (some universities have even taken the back seat

out). Furthermore, university costs for renting vans have escalated such that renting vans from private vendors may be cheaper, especially if the workshop is located far from the main campus.

If conducting field tours with private or public hosts, be sure to coordinate with field hosts. Preferably, meet with them prior to the workshop and go through all the tour stops as described above, especially if the hosts will be making presentations.

Continuing Education Credits

Many participants are required to track continuing education credits to maintain state registration and professional certification. Make sure to have the course evaluated for continuing education credits. This is usually completed by a state Society of American Foresters (SAF) Continuing Education Coordinator (see http://www.safnet.org/education/cfecoordinators.cfm for more information) who assigns one hour credit for each hour indoors and one hour credit for each three hours outdoors.

Backup Plans

In case of inclement weather, such as heavy rain or flooding of sites, be sure to have backup plans that can be quickly implemented. For example, tour stops that are underwater, even on a nice, sunny day can be changed to upland sites if available and previously prepared. Alternate roads may be utilized if low-water crossings become flooded. While forestry professors are noted for keeping students in outdoor laboratories regardless of weather conditions, such is not the case with workshop participants. Plastic ponchos and umbrellas should be made available if persistent rain continues. Most forest resource managers will have their own rain gear – instructing them to bring to the course would be a good idea.

Advertising

Advertising the workshop or shortcourse is critical to its success. A less-than-full course does not reflect well for the university and may require considerable budget adjustments, e.g., reducing the number of vans to be used. Advertising a workshop or shortcourse first requires the development of a mailing list targeted to a specific audience. We have utilized mailing lists from various professional organizations, such as the SAF (available upon approval and a fee). We have also advertized in organizations' newsletters and web sites, e.g., state forestry associations.

We have utilized a printed, colored brochure, but this is becoming unnecessary with advances in web technology and e-mail. Brochures will probably soon be electronic-only. Regardless of paper or electronic, the brochure must include an explicit schedule with key "buzz" words to spark interest in prospective participants; in hardwoods, phrases like "species-site relationships", "stand development", and "treatment costs" catch the interest of potential participants. Once a course is well established, especially niche courses like the MSU hardwood courses, word-of-mouth can usually fill the course with little explicit advertising.

Fees

Establishing the fee amount can be tricky. For one perspective, a continuing education effort should be self supporting. From another perspective, the continuing education effort should not be so expensive as to be exclusive of potential clientele. One extension administrator suggested charging $100 per day of the workshop or shortcourse. We believe it better to develop a detailed budget, then add 10 percent to cover any incidentals or emergency expenses.

Another aspect of fees is any inherent university or extension service policies. For example, prior to 1994, the fee for the Mississippi State hardwood courses was less than $200. When a continuing education program was established, including an administrator and support staff, the costs escalated to $490, with a majority of the fee going to support administration and develop a pool of money to pay for continuing education endeavors that "lost" money.

The Notebook

The notebook is the most important take-home item from a workshop or shortcourse, especially in the hardwood courses, since no textbook exists on the ecology, silviculture, and management of southern hardwoods. This "loose-leaf" textbook will serve as a future reference for the forest resource professional. Two questions that often arise when developing the notebook for a continuing education endeavor include (1) what type and size of notebook to purchase and (2) how will the notebook be organized, i.e., what quality and quantity of information will be placed in the notebook.

Type and Size of Notebook

We prefer steel ring notebooks over plastic or cardboard notebooks. Steel ring notebooks are more durable that plastic or cardboard notebooks. They also set better on a book shelf and have a longer lifespan for the participant. The one drawback to steel ring notebooks is the cost. Depending on the size of the notebook, costs can range from $8 to $13 dollars per notebook.

We also prefer D-ring notebooks to O-ring notebooks. D-ring notebooks can hold more paper than O-ring notebooks of similar size. D-ring notebooks also hold hole-punched paper better due to the long, straight ring. The bottom paper lays flat against the surface instead of somewhat bent as in a O-ring notebook, i.e., the hole-punch paper will less likely tear in a D-ring notebook. The one drawback to D-ring notebooks is the long, straight part of the D-ring is more likely to break than an O-ring.

When choosing a notebook, select one with a clear plastic slip cover on the front, side, and back. This will allow for placing sturdy cover pages containing pictures, workshop or shortcourse title, sponsors, and other miscellaneous information. In particular, a catchy picture, course title, and date should be place in the spline slot of the notebook as this will be the part of the notebook that is exposed on the shelf. Be sure to use thicker paper so it will slide better into these outer cover slots. We typically use either a plain white or black notebook. These notebooks will show the front, spline, and back pictures better, and they are cheaper than multi-

color notebooks. Be sure that the notebook has internal sleeves to place miscellaneous items that cannot be conveniently hole punched.

Organization

Regarding notebook organization, we use labeled tabs that can be easily referenced. Colored or numbered tags are okay, but it is better to have specific labels. These labels require typing or special printing, but this requires little effort today with printer-specific paper and suggested formats to printer settings. Sections are usually organized by day or major sections within a day. The front sleeve is typically used to store maps of meeting location, e.g., campus foldout map provided by a university information center, and field stops. It is important to try to get as much information as possible from other sources. This saves time and effort. Computer cds can also be easily stored in the notebook sleeves (the MSU courses have computer programs on cds for field tasks such as reproduction evaluation, site evaluation, and a hardwood decision model).

A tough question regarding notebook organization is how much reference material to include. In a workshop, there are fewer publications. Instead, the focus is on how-to guides, show-me sheets, and field sheets (or sheets handed out in the field). In shortcourses, more reference materials are included since more background is covered during lectures. When including publications, be sure to get copyright permission before copying journal articles to place in notebook. Whether a workshop or shortcourse, be sure to include paper copies of the PowerPoint® presentations with three slides per page. They are popular with the course participants for taking notes. Also, be sure to include quality copies (clean copies, quality control), especially photocopied publication pages. It may be necessary to check each page because of crooked pages, half-copied pages, or missing pages. Poor quality reflects poorly on hosts and hosting institutions.

Workshop/Shortcourse Conduct

Pre-Coarse Social

If possible, a pre-workshop social the evening before the start of the course (assuming an early morning starting time) should be conducted. Hotels have been willing to allow the use of a room assigned for the next two or three days the evening before the start of the course to conduct a pre-registration period. At this time, participants can pre-register for the course and pick up their notebooks. Beverages and snacks are provided and the opportunity to get to know each other begins.

Lecture Format

Schedule

Once a lecture schedule has been developed, stick to it. The lecture schedule should be included near the front on the notebook materials, in a clear, plastic page protector, so

participants can see content and timing.

Presentations

With today's technology, PowerPoint® slides are recommended for all indoor lecture presentations. Changes can be quickly made – this is especially important to tailor presentations to participants' needs.

Breaks

Typically, a 10-minute break should be scheduled following the first hour of presentations. Since indoor lectures last only two to three hours, an early, short beak helps participants stay sharp and attentive, especially following a long field day the day before.

Meals

Lunch should be catered each day throughout the workshop or shortcourse. Catering services are readily available, even in rural areas. Hot lunches are preferrable to cold sandwiches. Having lunch catered allows the hosts to concentrate on tasks more beneficial to participants. Be sure to have helpers readily available, usually graduate students, that can pick up lunches at designated times if the caterer cannot be on site.

It is important to have a cookout following the first day of the workshop or shortcourse. This meal represents an opportunity, in an informal and relaxed environment, to review the day's topics, answer individual questions one-on-one or in small groups, and, most importantly, provide a networking environment between participants. Good will created during this supper carries over through the remainder of the workshop or shortcourse. For example, several of the MSU hardwood natural regeneration workshops have been conducted near Vicksburg, MS in conjunction with Anderson-Tully Company (ATCO). ATCO has coordinated the meal following the first day's events. If a cookout is not possible, then a gathering to eat at a local restaurant, preferably not a chain restaurant, is acceptable. If cooking out, be sure to ask well in advance of special dietary requirements among the participants.

Field Conduct

Travel

Travel to and from field stops should be limited to as few vehicles as possible. We have had several occasions where participants who live close to field stops or are closer to home following the last stop of the coarse ask to take their own vehicles. We try to be as accommodating as possible, without sacrificing safety.

Fieldwork

Fieldwork is conducted during the hardwood workshops, but not during hardwood

shortcourses (see above). An example field work assignment involves dividing participants into four- or five-person teams and conduct a 0.01-acre circular hardwood plot for reproduction evaluation. Participants usually have an instructor with them as they conduct a reproduction inventory. The instructor helps the participants identify reproduction to the species level and how to assign points based on species and sizes. Participants then add their points and report to the class their team's finding. We have found that conducting several group exercises helps to improve group continuity and further promote networking opportunities and sharing of experiences (Harmon and Jones 1997). For those participants that are too shy to speak, calling on them to answer particular questions or provide their opinions regarding a treatment will help improve their communication skills.

Handouts

Handouts in the field should be limited to materials pertinent to the particular stop. For example, stand history and a recent inventory of current species composition, volumes, reproduction, etc., would be good information to provide in a handout. Handouts should also be labeled so participants can readily place them in the logical place in their notebooks. If material in the notebook is to be utilized on a particular stop, then participants should be informed prior to the stop so they can remove the necessary pages while traveling to the stop. Notebooks, regardless of size, should never be necessary in the field.

Breaks

Breaks are not as vital in the field as in the classroom. A chase vehicle, preferably an SUV, is recommended. This vehicle will follow the vans and any extra vehicles. Its sole purpose is to keep drinks and snacks available at all times during the field stops. Our experience is that when refreshments are always available, then there is less stress among participants. A short break in the middle of the morning and afternoon provides more networking opportunities, but these opportunities are also available in the vans while traveling between field stops. Numerous breaks throughout the field portion of the course will reduce the number of field stops and potentially lower the quality of the experiences by participants.

Wrap-Up

Evaluation

It is important to conduct a workshop or shortcourse evaluation following the conclusion of the continuing education endeavor. Many examples of evaluations are available in the literature and World Wide Web. Evaluations should include a ranking of the conduct of the course and each instructor, usually on a scale of 1 to 5 (excellent, good, average, below expectations, poor). A certificate of course completion is then handed out to each participant as he or she hands in the course evaluation. Handing certificates out early should be avoided whenever possible, and if necessary, done on an individual basis.

Acknowledgments

Everyone likes a little kudos once in a while. During the conduct of the course, publicly thank tour hosts during the last stop, or if they are available at the end of the course, thank them for their excellent tour stops and time spent showing them to the participants. Also, thank private and public entities that provided field stops, refreshments, and personnel to help with the workshop or shortcourse. Lastly, thank the participants for their participation and enthusiasm.

Instructors' Meeting

Once the workshop/shortcourse participants have left, it is important to have a post-course meeting of the instructors. A thorough review of the course planning and conduct is needed to determine what went well and where planning and conduct can be improved. Each hardwood workshop has developed its own "personality" due to the nature of the participants, and instructors cannot always plan for each event.

Conclusions

Pressure to reduce the number of hours required for graduation from undergraduate college programs will continue. This fact, combined with the need for credits to maintain professional registration and certification, will ensure that continuing education workshops and shortcourses continue to play a key role in the education of forest resource professionals.

With today's distance learning technology, an increased emphasis is being placed on delivering learning opportunities via the internet and teleconferencing (Cecil and Feltes 2002, VanDerZanden et al. 2002). Hardwood courses taught by MSU faculty and staff and courses taught by graduates of the MSU hardwood program are still conducted with traditional hands-on methods in the classroom and forest. Presternon (1986) stated "... teaching forestry topics using this rather traditional Extension technique generates excellent audience response, promotes understanding, and stimulates changes in attitudes and behavior.". The best teacher for forest-oriented courses is by being in the forest. This is especially true for hardwood-oriented courses.

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