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Steven E. Jungst
Iowa State University

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Instructional Methods at ISU—Tradition and Change

by Steven E. Jungst

If you are prone to thinking about instructional methods (though I realize such thought patterns are not common among most), the first things which typically come to mind are textbooks, lectures and laboratory sessions. If you are an I.S.U. forestry graduate, you may also include summer camp which is really only an extended lab session complete with picnics in the woods and dust baths in the back of the truck.

Those things are certainly a part of forestry instruction at I.S.U., and they probably won't change much in the future. There are instructional methods which have been changed, however, in hopes of finding methods which better prepare young foresters. Admittedly, I'm not old enough to trace through all the changes which have taken place in instruction here. (I do detect an occasional gray hair, but so far, they are infrequent enough that I can yank them out without fear of looking like a miniature clear cut.) In the past 15 years, however, I have experienced a number of instructional changes both as a student and an instructor.

Much of the change has been computer oriented. It wasn't long ago that a student wasn't one of the elite unless they had a 12" Post Versalog slide rule dangling from their belt. I hadn't been on campus very long before I joined the elite and then spent a whole quarter in a hot little room in Marston Hall learning how to use all those scales. I was quite proud of that slide rule until two years ago when I chanced on a clearance sale at the book store and found 12" Post Versalogs on sale for $5.98. Everyone, it seems, now has a pocket calculator, and the instructional trick is no longer one of giving problems short enough to solve during a three hour lab, but of being sure that students understand all the numbers that flash out of the calculators at them. It is interesting to note, though, that dead calculator batteries cause almost the same panic during an exam that a warped slide rule did 15 years ago.

The technology from which those calculators sprung, however, has also been responsible for our ability to allow the students to do things which would have been impossible a few years ago. Computer simulation allows students to "manage" hypothetical areas for many simulated years in the space of a lab period. They can realistically incorporate management constraints, and, depending on their ability, wind up a successful manager, or a temporary failure, without fear of losing their job. In addition to simulation, they can now do calculations which would have been very time consuming a few years ago. Many problems that we used to avoid, we can now do rather
painlessly, and the student who thinks while using the computer is bound to benefit.

The University has recently gone a long way in supporting this type of approach by providing computer systems free of charge to students and departments. We currently have several terminals in the building for student use with more planned for the future. Student acceptance has been very good, and the number of computer related problems is continually increasing.

With most everything except interest rates getting smaller these days, it seems natural that instructional methods should take advantage of the trend. The forest pathology course is making use of microfiche, 4" by 6" transparencies containing up to 84 color slides, to help teach pathology. A new set is currently being prepared which will deal with both pathology and entomology, and students in the courses can use microfiche readers in the department or in the library to study and review various aspects of forest pathology.

The whole concept of education is really one of exposing students to new ideas from different viewpoints. Seminars, which take place at irregular intervals, are a good way of providing this exposure to students and faculty. Speakers range from students reporting on special topics work or Honors Program projects, to faculty discussing research or travels, to outside speakers talking about either forestry or nonforestry topics. Such seminars are an enjoyable break from formal classroom activities, and give students the
chance to experience what will form the mainstay of continuing education once they graduate.

Even with continually improving instructional methods, experience is still the best teacher. The requirement of a forestry related job for students during the summer still exists, and although most students see it as a way to get away from books for the summer, it is an extremely valuable instructional tool. More and more, we are encouraging students to go beyond the minimum department requirements and get as much summer experience as possible.

Another form of experience comes in one of the last courses foresters take at I.S.U. It is designed to give outside experience while maintaining classroom ties. The course has evolved over a number of years, but in recent years, it has become a capstone course dealing with actual natural resource management problems, and requiring students to integrate things they have learned from other courses. Problems are solicited from a number of areas around the state, and teams of students are allowed to chose the problem on which they wish to work. Students are responsible for contacting the client to clarify the problem, developing management alternatives, and presenting findings to the client at the end of the quarter. Since they are involved in solving real problems rather than hypothetical ones, interest runs higher, and they begin to really understand the complexity of working within numerous constraints to obtain a workable solution. The course continues to be refined, and presents a very timely bridge between 4 years of college, and a career in resource management.

The future of instructional method is limited only by the instructor's creativity and the students' desire to learn in new and better ways. My dusty slide rule brings back some pleasant memories, but the real fascination is dreaming of where we are going, and playing a part in changing and improving instructional methods at I.S.U.