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## THE I'S AND E'S OF NATURAL RESOURCES EDUCATION, OR, MOVING FROM LEARNER TO TEACHER

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**ABSTRACT:** Natural resources provide some of the most fertile and interesting subjects for an educator to present. Yet, our undergraduate and graduate students are poorly prepared to be educators. Few Master's or Doctoral programs require any education courses before a degree is bestowed. We touch hundreds of students each year in our classes who will become professionals, but are we giving them the tools to pass on their love of the resource to the next generation? Undergraduates and graduate students who are taking our courses should, in my opinion, have the skills and more importantly the desire to pass on the knowledge we impart. Therefore, I believe we need to think about putting the I's and E's into our teaching so at least, when our students are *Imitating* their professors, the models will be beneficial and positive. We should *Exemplify* the best we can be. We want students to *Emulate* our good *Examples*. I am suggesting that you try this *Invigorating* way of teaching so at the end of the semester everyone in class will move further along a continuum from learner to teacher.

### INTRODUCTION

Natural resources provide some of the most fertile and interesting subjects for an educator to present, particularly at the college and university level. For example, bird watching and wildlife photography are two of the fastest-rising outdoor recreational pursuits in the nation. There are hundreds of wildlife-related programs on television and all seem to be gaining increasing audience shares. Almost everyone has an interest and questions about some aspect of natural resources. Those of us here have the opportunity to teach future professionals about our passion. However, are we giving them the tools to pass this passion on to future generations? We teach some of our education-oriented students the skills they need to be teachers, but are we missing the chance to influence the larger cohort. Are you instilling the excitement of sharing and educating in all of your students?

Few Master's or Doctoral programs require any education courses before a degree is bestowed, and many Ph.D.s move directly into research, teaching, and extension positions: all of which require a strong element of teaching, for which they receive little formal preparation. For the most part, it seems that these new, young professionals, thrown into the arena of education, parrot what they have enjoyed or endured from their professors. It has made for some outstanding educators, and for some that are skewed at the other end of the distribution curve. However, this process is changing for the better in some program, but merits our attention.

Undergraduates and graduate students who are taking our courses for a requirement, an elective, or just for enjoyment should, in my opinion, have the skills and, more importantly, the desire to pass on the knowledge we impart. Whether they are practicing natural resource professionals or just enjoying the resources they work so hard to conserve, they will find curious people. The public's questions come from a genuine interest in what students and professors do and the flora and fauna we work with. Many of the public fancy our jobs as the best of the best. If it is our goal to make a difference in management and help others be better stewards of our limited and quite precious natural resources, I believe we need to move our students from learners to teachers.

### THE I'S AND E'S OF EDUCATION

Therefore, I feel we need to think about putting the *I's* and *E's* into our teaching so, at least, when our students are *Imitating* their professors, the models will be beneficial and positive. We should *Encourage* our students who plan to be formal or nonformal educators to take several *Education* courses. Such courses give students the philosophy of education, the learning theories, the techniques of educational testing, and the psychology of education—all of which build a solid theoretical foundation from which to teach about our resource base.

Some professors believe that their job is to put out the information and it is the students' job to get it. Yet, we all know in today's world of video games and the instant gratification of the Internet, we must be able to compete for at least their minds, if not their hearts. While most of us may not be entertainers, all of us can be *Entertaining*. We don't have to be good song and dance people, but we need to be better than boring and *Endorse* the idea that learning should be fun and we can all be *Exuberant* about our subjects. We can laugh and still be good teachers.

Educators should show *Empathy* with their students. While college might well be the most carefree segment of their adult lives, it is a tough time in many ways. Students have problems with school, life, roommates, professors, and we must understand and make reasonable allowances for these stressors. I believe we need to be rigorous and challenging in our education process, while being understanding, compassionate, and caring. We are witnessing in a small way the transition of child to adult, and we play a part in the ageless process that started with the dawn of our species. *Invest* some of yourself in your students; the dividends are remarkable. *Entrust* them to make good decisions and be comfortable with the ones they make.

Many of our students hide or just lose themselves in the numbers of larger classes, and frankly, some mornings it is easier to lecture to a sea of faceless names than to *Individualize* the process. I think we must *Engage* these students even at 7:50 a.m. Ask them for *Input* on ideas, on lectures, on exams; make them part of the learning process from the beginning. *Encourage* them to cast off passive learning models. *Enhance* and build on their *Examples* and draw out their willingness to *Express* themselves. Make them an *Important* attribute of your lecture. Their *Experiences* will enrich your lessons because they more closely fit the reality of your students' lives. Many of my students this year were only in the third grade when Desert Storm was in the headlines and 99 percent of them weren't even born during the Viet Nam era. Therefore, many of the stories I might relate from my college days do not fit their reality.

*Enlist* their support for your projects and programs; most of them would love to help if only asked. They will relate to you on a different level and learn that you put your boots on one foot at a time like everyone else.

Some of my advisees come in and complain that an instructor shows no *Enthusiasm* or *Emotion* for his or her subject. You and I are here because we are impassioned idealists about our subjects, our work, our ideas, or our specific natural resources genre. Look for ways to *Ignite* that same fire in their souls, as we have in ours. We should *Encourage* our students to keep their intellectual fires burning in the future. Lifelong learning is a concept we all should embrace.

It is all right to be *Enthusiastic* and *Excited* about what we teach. Stand on a chair, raise your voice, charge to the back of the room to make a point, leave the security of the lectern and move out into the room. They don't bite, even if you get next to them. Have them close their eyes and *Imagine* with you, using their mind's eye to move to new visions, to see an ecosystem, a biological process, or a unique animal behavior. Believe me— they won't fall asleep. Crank up the volume or kick it up a notch. Be *Innovative*, try new things—not all of them will work, but no one is keeping score.

As I already said and you likely know, often times, students try to hide in large classes, so they do not have to participate. *Encroach* on their space; *Invade* the seat next to them, talk with them as you lecture, ask them for help on a point or ask what do they think. Very few students won't talk with you when you sit down next to them and speak with them while the rest of the class *Eavesdrops* on your conversation. However, I must admit it was easier when they didn't bolt the chairs to the floor in nice neat straight rows.

*Involve* them in the teaching process and make them responsible for at least part of their education. On my best day, I don't think I could explain how to use a secchi disk or a clinometer nearly as well as a fisheries student or a forestry student who knows their field techniques. It is their class; make them a part of it. Make them teachers, as well as learners.

*Evaluate* them fairly and make them create a part of the testing *Instrument*. One of the requirements in my class is that each student writes five test questions. I use the questions on the exams and students are genuinely pleased to see their questions are part of the tests. Usually, they groan when given the assignment, but I have never had them tell me to get rid of that requirement.

*Empower* them to lecture to the class and test on their presentations. I want my students to know about some of the important writers in the field of natural resources; I assign group papers and presentations on selected writers. Early in the semester, students often do not show each other the respect of listening to their peers' presentations. However, that changes after the first exam when questions are drawn from the presentations. The class learns about authors and the groups have become part of the teaching process.

*Expose* them to the opposite view point from yours, *Embroider* them in the times, issues and controversies of the day, and then excuse yourself as a participant and referee the discussion. As a result of this *Immersion* into controlled conflict, they will learn how to disagree with peers in a professional manner.

*Invite* others to lecture in your class. Give yourself a break, but more importantly provide students a chance to *Envision* what they might become. These invited guests allow students to directly *Interact* and *Engage* a famous person or appreciate the experiences gleaned from the school of life. I would love to say that my students rate one of my lectures as the best of the year; however, that honor usually goes to our building custodian and his son. Both are trappers, and they have a wildlife damage management business together. They talk to my class about how to trap and why they trap. They express their respect and dedication to the resource they use. In five years of teaching this class, Dave and Nathan have won the best lecture title hands down—simple, honest men, making a living, in part, from the land, not educated in a formal manner, but teachers in the purest sense of the word. Their honesty and their commitment to their craft have never failed to win my students over.

## CLOSING

We should seek to *Exemplify* the best that we can be. We want students who will *Emulate* our good *Examples*. We need to escape from the same, old, traditional ways of doing things. We need to risk and give up some of the control that we, as teachers, have clung to in our classes. When you *Expect* more from individuals, more often than not, you will get it. I am suggesting that you try this *Invigorating* way to teach, but recognize that it can be frustrating. Yet at the end of the semester, everyone in class including me, have moved farther along a continuum from learner to teacher, and I believe that movement will enhance resource sustainability as we all teach about our world and more people learn to become teachers. *Enjoy!*