



Alumni Associations Help Teaching Efforts on Many Different Levels

In 2006, I helped a group of energetic alumni establish an affinity alumni association called The Friends of Animal Sciences (FAS). Information about this group, including a brief "history" that I wrote about how it all got started, may be found at our newly formed website [<http://friendsofansci.org/>]. Although establishing this group took some effort, if your department does not have such an alumni association, my advice is to form one! In less than one calendar year, I can already envision how this group will aid my department's teaching efforts on many different levels.

Perhaps, the most obvious manner in which the FAS group will benefit us, at Washington State University (WSU), is through the donation of funds for new scholarships. My department is one of the lucky ones, in that it can afford to provide nearly \$60,000 in scholarships to students each year. This is on-top of what the students might have received from our college or university. Through a concerted effort, the FAS group has made a goal of providing at least two \$500 scholarships in 2008. Moreover, they have formulated a strategy to complete several (partially funded) endowments, which have (yet) to materialize with real dollars for scholarships. Eventually, the FAS group has determined that it will establish numerous different levels of accounts with our development office, in order to maintain flexibility over where/what donations to FAS are distributed.

Another way in which this group has vowed to facilitate our departmental teaching efforts is via outreach activities. Although only being (formally) in existence for about seven months (since the by-laws were recognized by membership and WSU) a few of the elected directors of FAS have made it a goal to establish numerous internship opportunities, site training events and short-courses. A driving goal is to have alternative teaching/learning activities for students that are "hands on" or visual learners.

An additional activity is designed, but not as yet established. My department has recently gone through an evaluation of its goals. One strong part of the effort was to determine where we (as a group) wanted our teaching program to be in the future. FAS has already gotten wind of this evaluation process and has suggested that it could serve at the pleasure of the department as an outside reviewer of any plan that the department firmly established/wanted to pursue.

As the faculty "ex-officio" member of the FAS group, I can think of numerous other areas in which a strong alumni association might aid teaching efforts:

job placement, student recruiting, and in word-of-mouth support of programs passing through the legislature, to name a few. All of these items (and more) are being planned, or have already been discussed by the FAS group....even though it is completely new and still trying to "find its way."

My department has never had an alumni association, in its > 100 year existence. When I joined the department > 22 years ago, there were numerous discussions about beginning such an organization, but no action was ever taken--due to the considerable time it would demand to establish the organization and keep it going. After having gone through the "hard" times [and yes it did take considerable time], I can now say that it was worth it. The FAS (alumni) association will exceed anything I ever thought it might, and this includes helping our teaching efforts on many different levels. Please feel free to contact me if you want more information about establishing an alumni association with affinity to your department

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A Case for Case Studies and Projects

In 2006, as I attended the sessions at the National Academies' "Leadership Summit to Effect Change in Teaching and Learning," in Washington, DC I was struck by the lack of progress in agricultural education. Fourteen years earlier the product of another summit, "Agriculture and the Undergraduate," (1992) was supposed to bring change. Unfortunately, we are overwhelmed by tradition and change comes slowly.

Much discussion revolved around teaching and learning "silos." Often students learn in a math silo, an English silo, a soil science silo, a biology silo, an animal science silo, etc. When students learn in silos they fail to recognize the relevance of what they are learning or the interconnectedness of knowledge, thus limiting their critical thinking abilities and problem-solving skills when entering the workforce.

Over the course of human history, many individuals acknowledged the source of real learning. Several hundred years ago Confucius understood education. He said: "What I hear, I forget; what I see, I remember; what I do, I understand." Goethe said: "Knowing is not enough; we must apply. Willing is not enough we must do." Industrialist Henry Ford said: "I learn

from the work itself.” The “doing” connects knowledge by providing relevance and real learning.

In the educational environment, case studies, project-based learning, or contextual learning can provide the “doing” that we recognize leads to real learning. Creating case studies, project-based learning or contextual learning in agricultural education supplies a rich abundance of relevant content to motivate and engage students. Agricultural content can be framed in case studies or projects for learning. To do this requires the instructor to “let go” and exchange traditional education methods and assessment to become a facilitator of learning. Consider these characteristics:

- A case study is a multidimensional problem presented a class to analyze. To solve the problem, students must gather information, learn investigation and analysis tools and techniques, and apply them to the case.

- Case studies require students to engage in problems and situations that parallel the world of work, to develop an understanding of key content and engage in critical thinking.

- Project-based activities are designed to answer a question or solve a problem and generally reflect the types of learning and work people do in the everyday world outside the classroom.

- A well-designed project provokes students to encounter (and struggle with) the central concepts and principles of a discipline while the instructor integrates the knowledge, skills and abilities required in a specific course of study.

- Assessment of case studies/projects occurs on an individual basis, and takes into account the quality of the product produced, the depth of content understanding demonstrated, and the contributions made to the ongoing process of project realization.

A bad experience with case studies or some type of project-based learning often leads to an instructor falling back on the “old secure ways.” With rapid advances in technology and the need for highly skilled, adaptable individuals in the workforce, case studies/project-based learning represents a tool using the rich content of agriculture, food, and natural resources to create real learning and to produce life-long learners.

Rick Parker
NACTA Editor

Funding for Enhancing Teaching in Agriculture

Over the last few years, funding for research projects has become quite hard to obtain. Alternatively, numerous funding opportunities have been established for teaching efforts, especially multidisciplinary, multi-state, team-teaching projects that may have a national appeal. National agencies like the USDA [HECG program--deadline is

February 1 each year] and NSF [numerous RFP's available on a cyclic basis for science teaching efforts] advertise for applicants, of which members of NACTA are eligible to apply.

Having begun to submit articles to NACTA Journal on a regular basis, I am struck by the potential power that this journal, and its parental society on shaping teaching efforts in agriculture colleges around the nation. However, not having attended a meeting of the society, I am at a disadvantage with respect to identifying the goals/strategies of this group in strengthening its future placement among teaching entities. I do, however, know about submitting grant proposals and obtaining funding. To me it seems like a sure bet that if some of the NACTA members banded together, they could be quite successful in obtaining funds for numerous projects.

Projects that make sense to me in terms of NACTA or NACTA Journal include the following examples: 1) Provide free access of NACTA Journal to all high school agriculture teaching programs. This would increase the exposure of teachers of future agriculture participants to helpful tools, which might be incorporated into daily class efforts. 2) Participate as an organization at national meetings, such as American Society of Animal Science, FASEB meeting, ASCB meeting, etc. If NACTA would obtain a booth and share information at these meetings, I would suppose that membership would increase dramatically. 3) Provide as a service of the society a current agriculture teaching job placement site, similar to HigherEd.com or the Chronicle of Higher Education. However, this site would focus on agriculture jobs, and would evolve into the premier of such sites in the nation. 4) Establish a national resource base for agriculture teaching efforts. On-line reference materials that could be useful in a variety of teaching/learning efforts, direct linkages to current class materials of classes being taught, and access to other teaching “tools” could be included in this site. All of these, as well as other types of projects could be submitted for national funding.

The stage is set for NACTA and NACTA Journal to become the preeminent voice of agriculture teaching. Both of these entities could (also) become national examples for others to emulate. To take a few weeks to prepare a proposal for potential funding to enhance the efforts of both does not seem to be out-of-line.

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Teaching Tips

Online Courses for Undergraduate and Graduate Agricultural Students

Current university students are a new generation of learners who grew up with computer and internet technology. These millennial learners use high technology in all aspects of their lives but often have little significant use of technology in the classroom¹. Many university and college instructors continue to use only the disorganized chalkboard or whiteboard to convey information to their students. There is a widening gap between perceptions of classroom learning between students and instructors². Online learning opportunities aid in narrowing this gap.

However, many instructors do not want to take the time to learn how to use the new technologies of online learning. As a result, many instructors often fail to see the advantages of non-traditional classroom settings. The following tips are offered as a way to overcome fears of instructors in developing and teaching online courses.

1. **Courses should be instructor-led.** Online courses are not correspondence courses and should be understood that they are facilitating learning by providing course materials, team activities, online discussion, and encouragement to the students. Students should not be seen by students as being “self-taught.” Feedback should be timely; instructors should be online everyday.

2. **Courses should be student-centered.** Students should be provided challenging activities in the online course. Example assignments may include: case study analysis, preparation of PowerPoint® presentations, computer-based simulations such as Patrick O'Rourke's ProStar® Fertilizer Management Simulation, or other student-centered activities that keep the student fully engaged into the learning situation.

3. **Courses should use a Content Management System (CMS) or Learning Management System (LMS).** Internet-based programs such as Blackboard® allow students to track their learning and assignment progress. Millennial students expect their instructors to use: online gradebooks, email, discussion boards, digital dropboxes, announcements, course documents and assignments, blogs, wikis, and online group management.

4. **Change PowerPoint® and other lectures to become more inclusive.** Since the instructor does not have the opportunity to impromptu add to lectures online, the course materials should have more complete outlines than would be provided in face-to-face lectures. That is, the instructor should ensure that bullets have enough detail to fully explain individual concepts that are being taught.

5. **Use both formative and summative assessments for students.** Online courses should continually assess students' progress and

enable to them to adjust or refocus their learning activities to meet course objectives. When using Blackboard®, it is easy to send emails to individuals, groups, and to the entire class simultaneously. It is easy as well as important to provide constant feedback to students.

6. **Encourage individual and group interaction among students.** When possible, groups can aid learning – even though the students may be in different locations. Emails can contain attachments of resources, partial and complete assignments. Therefore, distance is not a problem since students can comment and add to each others progress with a well-structured team assignment.

7. **Foster information, communication, analysis, and technology skills.** Twenty-first century graduates are expected to be experienced in communicating information, analyses, and recommendations. They are also expected to utilize the latest technology in conveying the information.

8. **Make course information clear and concise.** Without the face-to-face availability of immediate feedback to instructions and other information, there can be confusion about what is expected of students. Have a colleague read your online instructions and course information to ensure that you are providing clear and concise messages that your students will understand completely. Instructors should also be willing to clarify assignments when asked.

9. **Vary activities and assessments for different learning styles.** Just as with face-to-face learning, online learners vary in styles. It is important that courses are written in such a manner that everyone can learn some of the material with their personal best learning style. By thinking “outside of the box”, online courses can utilize the same variety as do other courses.

10. **Be careful when using teams due to divergence of locations and schedules.** One of the reasons that students often prefer online courses is due to flexibility of both time and location. More students than ever are commuting to school and many work as many as 40 hours per week. If assignments include materials that can be sent across the internet, the flexibility is appreciated by out-of-town students.

11. **Develop coordination methods for group activities.** Many students find group projects difficult since others may “leave them hanging” by not following through on group-assigned tasks. Often, the knowledge that teammates will grade each others' group contributions will keep everyone motivated to “do their part” in a timely manner.

12. **Develop opportunities for analysis and writing in the online course.** Reflective writing opportunities allow the student to think about how a principle or concept applies to his/her situation or future employment. This also aids their communica-

tion skills. One way to do this is to start the written assignment with: "I can apply this concept to my own situation by" When using a discussion board, structure discussion in the course; also, be prompt in grading student posts into the discussion.

13. **Consider collaborating across disciplines, departments, colleges, and universities.** Online instruction allows collaborating teachers and instructors to be at different locations at the same time. By utilizing the internet and a CMS, everyone can be up-to-date with what is going on in the classroom and can better interweave instruction upon whatever interval is needed.

14. **Interact with other online instructors.** Experiences of both experienced and new online instructors will help all to understand current situations and potential future problems.

15. **Incorporate experiences desired by potential employers of online students.** Research states that employers' desire for their employees to have gained: interpersonal communication skills, critical thinking skills, and writing skills³. A formal or informal visit with local employers will help you discover what they want to see your students learn.

References

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