

It is Only about the Science

All too often faculty members of agricultural colleges miss obtaining grant funding, and the trend of low funding will proceed into the distant future. During this same time, annual review numbers will only “meet expectations” if funding is obtained, and the larger the grant the higher the annual review score. Reasons for this have been discussed in this journal previously, as have suggestions to make scientific progress (even) during the low funding periods. In order to make present faculty members whom lost grants and presently possess only small levels of grant funds, sold on the idea that progress is still possible, administrators at all levels must re-think how science might be conducted. Indeed, instead of the “individual investigator” grant being important, administrators need to re-align their thoughts towards “team” grant proposals being submitted, funded and projects conducted.

Team research efforts involve plenty of problems. However, they (also) may provide more effective solutions to basic and applied research problems. Moreover, team efforts make everyone in the team stronger [not weaker]. So, if one possess only a small amount of research funding, but provides an important element in a larger mechanistic problem/solution, it will soon be apparent just how efficient progress can be made.

Team efforts, whether in research (or in any effort), require a new understanding (by administrators) that 1) an individual scientist can develop as strong a reputation as any member of the team, 2) that individuals conducting team research efforts are capable of juggling numerous tasks at one time, and 3) that outcomes/impacts are more numerous. We are living during a time whereby few areas of research in the animal sciences are being fully funded. Albeit hard, the remainder of us still need to make some sort of scientific progress. Creating a team effort allows such to occur, re-energizes tired efforts and provides tangible outcomes that are more solid than that obtained by struggling individuals. Alternatively, individuals involved in the team effort must be assured that their efforts are only about the science. By thinking

of the science, and making progress (even in small steps) team members will (actually) make more progress.

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Faculty Prerequisites for Dialogue-Based Education

Dialogue-based education has been slow to gain general acceptance among instructors in agroecology and organic agriculture, as elsewhere in higher education in agriculture. We facilitated a dialogue-based workshop in Lyon, France in August, 2012 with university instructors from 13 European countries to identify prerequisites for implementing this learning strategy. Results included a mapping of questions that teachers need to consider before launching a major modification of class procedures. We organized these into structural and personal issues to be resolved at institutional and individual levels (Lieblein and Francis, 2012), and conclude with specific recommendations on how to implement changes in classroom methods.

For more than a decade, we have explored how to use experiential learning in agroecology, using examples of complex and integrated systems on organic and biodynamic farms. Agroecology was defined as the ecology of food systems (Francis et al., 2003), and we focused on student-centered learning through steps on two related learning ladders (Lieblein et al., 2007), with the goal of learning and research for responsible action (Lieblein and Francis, 2007; Lieblein et al., 2012). The modern foundation for dialogue comes from the British physicist David Bohm (2004), and emphasizes an open, explorative and listening approach to learning. The principles of dialogue-based education have been summarized by Vella (1980) and described as transformative learning, or a means of popular education through participation.

“Dia” means “through”, and “logos” translates as “meaning”, thus a dialog creates a flow of meaning, and creates one way of taking energy out of differences and channeling it toward ideas that have not been created previously. Dialogue is a creative, multi-way mode of talking together between two or among more people, clearly different from a one-way lecture to transfer knowledge from teacher to student. Dialog initiates sustained collective inquiry that challenges the processes, assumptions and certainties that structure much of our everyday experience (Hannevig and Parker, 2012).

Assuming that change needs to start within ourselves, we facilitated an interactive workshop with 24 instructors from 13 countries, all currently teachers in European universities. We provided one key question, then time for individual reflection, and two methods for structured response. The question was: If we are to move from a linear mode of education to an education that is based on dialogue, then what would that require from us?

We introduced the concept of dialogue, in contrast to a linear mode of education based on knowledge transfer. A three-step process was introduced: five quiet minutes of individual reflecting and writing down ideas, an exchange of ideas in small groups, then discussion in a plenary session while we recorded issues on a white board creating a mind map of ideas. The guidelines for group dialogue included:

- Listen – without thinking about response.
- Reduce the urge to defend old positions.
- Be curious and suspend certainty and judgment.
- Abandon a need to hear only what you agree with.
- Ask: Am I willing to be influenced?
- Suspend a need for specific outcomes.
- Leave teaching roles and administrative positions outside.
- Slow down to allow for silence and reflection.

Based on discussion following these rules, groups chose three important issues to share in plenary session related to dialogue-based education.

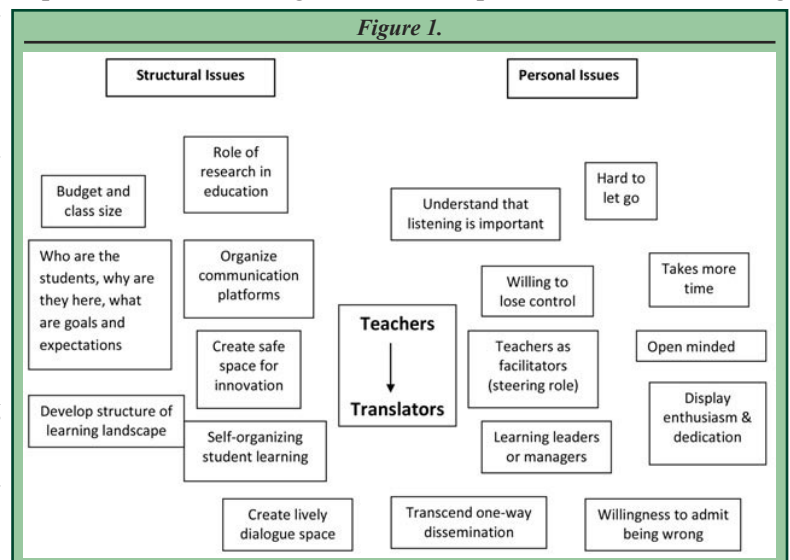
Workshop participants reported that a dialog-based mode of education will require us to make several changes to stimulate participation by students and infuse them with a sense of ownership in the learning agenda. As stated in their words, these changes would require that we:

- Train ourselves as teachers in dialog.
- Create a clear framework to structure dialogues and avoid superficial chatting.
- Give up overt authority over the learning agenda to empower students.
- Recognize prior experiences of students and what they bring to the group.

- Value humility, as a “learning leader” or facilitator, and give up the “sole source of knowledge” mentality.
- Be patient and respectful, clear and concise.
- Provide safe space for new and creative ideas, insist that everyone suspend judgment on new ideas, and encourage further exploration.
- Integrate new actors – policy makers, consumers, farmers – into the learning process.
- Drop conventional thinking about roles and positions.
- Move out of faculty “knowledge silos” and accept new roles as catalysts for learning.
- Become more open-minded and willing to take risks, showing a willingness to “lose control.”
- Cultivate diversity in class and have discussion without reaching consensus.
- Create a lively and tolerant dialog atmosphere.
- Focus on the process of identifying and describing complex situations, without jumping to conclusions and priorities.
- Move the learning process toward exploring opportunities and visions.
- Find creative ways of enabling dialog-based learning with large student numbers and small budgets.

We later organized these into structural or university issues and personal or individual issues, as shown in Figure 1.

The structural organization of a class and activities may be more easily dealt with, although limited budgets, appropriate facilities, present infrastructure and administrative procedures may have to be overcome. Such issues likely can be resolved without posing a personal threat to instructors’ integrity or questioning successful past performance. Issues include class size, available budget for off-campus activities and relating



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research more closely to education. On the other hand, issues such as willingness to “let go” and potentially lose a degree of control, called by some a pedagogy of no mercy (Freire, 2000), may be less palatable. To see oneself as an effective facilitator rather than as an authority figure could be threatening to an instructor’s self-image and perceived status in the classroom, as well as in the academy in general.

In the plenary session we heard that perception of the value of dialog-based education is vitally important for a change from a linear mode of teaching to an interactive, participatory mode. If a shift is perceived as vital and necessary, this provides a platform for changes at the individual level – a move out of the comfort zone, give up some control, and easily accept multiple sources of knowledge. Some issues may be more threatening than others. It may be easier to become a good listener, find more time for planning, and be enthusiastic in class than to let go of authority and admit being wrong. When an individual shift has taken place, there are other ways of dealing with institutional barriers. When status quo dominates, then the structural, institutional barriers will be used as excuses for not making any changes in our personal approaches to teaching.

Dialogue-based communication as a foundation for creating an energetic and stimulating classroom and discussion-based learning environment has been explored in the Norway MSc course in agroecology, and also in several venues including ENOAT annual workshops. In each of the last five years, results of similar activities have been summarized in the workshop proceedings. Near-universal positive comments from participants about the value of dialogue-based interactions and projections of how these could be used to benefit student learning in agroecology and organic agriculture, apparently has not been implemented in other courses. We urge our colleagues to report on successes and frustrations with these types of methods, and hope the process will lead to new and creative learning environments.

As one participant summarized the experiences from this workshop:

“At the beginning of the session I was just so tired after listening to all the presentations, and thought I had no ideas and nothing to offer. But after a while the ideas started to come and I had plenty of new ones and at the end I was full of energy and not tired at all.”

Such a reaction articulates well the vision and rationale for dialogue-based education: creating empowered, energetic and knowledgeable students. Our main conclusion from this workshop and from conversations with individual teachers in the academy, is that the obstacles for moving towards this educational strategy include an uncertainty about methods and fear

of losing control when moving from the comfort zone of the known to an unfamiliar and unknown approach. Giving the method a try in our classes can help remove these obstacles.

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Flipping the Classroom and Furthering Our Careers

Introduction

Lynda.com is an online learning website that offers video tutorials for a variety of topics and software programs. Subject matter experts create the course tutorials. While using the site is not free, many universities have purchased access for all students and faculty at their institutions, providing a valuable resource for learning. Even at institutions where access has not been purchased campus wide, there are educational options for courses and faculty development for purchase. Two basic uses of the site will be discussed. First is the use of Lynda.com to flip the classroom experience. Second is the use of Lynda.com for faculty members to learn new programs and skills.

Flipping the Classroom

The idea of flipping the classroom has been receiving a lot of attention lately. One example that has been very successful is the Khan Academy, which offers free educational materials. The concept of the flipped classroom is to allow students the opportunity to learn the material outside of class at their own pace and then be able to apply that information in class when the teacher is available to help. This contrasts with the traditional model of learning the concepts in class and then applying the material with homework when the teacher is not available to help. The benefit of this approach is that students are able to ask for help with specific questions regarding the content and the work they are trying to accomplish.

One benefit of Lynda.com for flipping the classroom is the wide variety of video tutorials and materials that are available. Some of the subjects include new media, career development, computer skills, data analysis, business, finance, and video, though the list of subjects available is much more extensive. Once students have access to the site, they are able to peruse the materials at their leisure. They first access the Lynda.com course, and they are then able to view multiple lessons that walk them through the materials. The lessons range in skill level and the time taken to complete each lesson. Some extensive learning modules are as long as 13 hours, while others can be completed in one to two hours.

If an institution has not purchased a site license for all faculty and students, Lynda.com offers an educational course option. The instructor can choose up to five Lynda.com lessons/topics to be used in the course. The institution can pay this cost for the student or Lynda.com can be set up for the student to login and pay for the course. This can be used instead of having a textbook.

The cost per student usually ranges between \$35 and \$40, which is cheaper than a textbook in many cases.

Skill Development

While Lynda.com is a resource for enhancing the classroom experience, it is also a resource for faculty members looking to learn new skills and programs. There is a need for faculty members to stay up to date on trends in technology, and Lynda.com offers a means of doing so that is not as time intensive as going to live training sessions or scouring books for programs that are often costly.

Lynda.com also has the ability to take off some of the workload for teaching necessary technologies for graduate students to accomplish their tasks. Data analysis programs like SPSS that are commonly used have tutorials online that could help graduate students learn the programs in a structured manner that does not take away from the time of faculty members.

If an institution has not set up site licensing, an individual faculty member can purchase a yearly or monthly membership to access lessons and tutorials. Prices vary depending on the level of access and the length of commitment.

Conclusions

Please note that the authors of this teaching tip are in no way affiliated with or paid by Lynda.com. We offer these suggestions as a way for you to enhance classroom instruction and work on professional development related to technology based skills. In a busy world, Lynda.com offers solutions for instructors to flip their classrooms and/or improve their skills one tutorial at a time.

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A Hint of Things to Come

When I retire from academia in a few years, I want to “go out” without any fanfare. No cake, no party, no presents and (I am hoping) no attention will be focused towards me on “that day.” I just want to be capable of walking out the door of Clark Hall the same way I have done for decades: quietly, briskly and without turning around. By that time, my office would be cleaned of anything I wished to keep (very little). Moreover, I

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foresee of nothing that would make me want to ask for anything....other than freedom.

Yes, I want to be free from mind-numbing meetings. You know the type. Meetings that could (in reality) be completed in twenty minutes, but that take two hours, or more. Also, I want to be free from always feeling like I am not doing my job. There is NEVER sufficient grant dollars for everyone, never enough publications, and never enough recognition for faculty members to suit administrators. Finally, I want to be free from indecision. It seems as though no one at the university level is quite capable of making decisions without convening a group (usually of their immediate friends) to provide consensus.

This leads to favoritism, leadership by a few and low morale in academic units. The low morale is compounded by the stress of possessing huge amounts of grant funding, and lack of rewards for doing what we are supposed to do best: teach our students and make them competitive.

Over time, I will miss the students—both good students and average students. Even with being a few years away from retiring, I know that I have impacted 20 to 30 lives in such a manner as to make these (past) students into viable, contributing members of my discipline. Perhaps, I have made more of an impression on students I have taught for decades, but even if only one were made better by my teaching efforts my career is a success. With our world of academia changing due to political agendas, limitations of state and federal agencies, lack of competitive support, a changing population base, and world strife—to me, students will not change. Over the years, students have taught me things that have made an impact on my life, as well. The interaction will be missed. I only hope that the same might be said of my replacement, who will likely retire (someday) with a similar reality.

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