

Transforming Conference Presentations into Involved Conversations: An Agroecology Model

Introduction

How many times have you attended a scientific meeting, listened to numerous lectures with little time for discussion and left the session convinced there was minimal communication or sharing of ideas? How often have you found it difficult to remember the content of the presentation, just a few hours or days after the meeting? How often have you left one of these meetings without even knowing the names of the people sitting next to you? At a conference of the International Farming Systems Association (IFSA) in Berlin in April 2014, we decided to catalyze an interactive session with brief presentations of a maximum of five minutes and to dedicate most of the time to discussion and generating further questions and ideas for action. The theme for instructors who presented papers was “Returning to the farming and food systems as they are – action and phenomenon-based learning as prerequisite for transdisciplinarity.” The workshop was well attended, with spontaneous and exciting discussions, and resulted in excellent feedback from participants and an action plan. Here we share the background, planning, and implementation as well as evaluation of what could be a model for future interactive workshops for educators and a prototype for involved learning in the classroom.

Methods

Characteristic of planners for many professional meetings, the organizers of IFSA asked for submissions of papers for the conference and then organized these into 62 categories with a 90 minute session allocated to every four topics and 20 minutes for each lecture. We were given two sessions for the topic on action and phenomenon-based learning, with four lectures expected in each session. In consultation with the authors and with agreement of the organizers, we decided to have five-minutes for each presentation and ten minutes for discussion in small groups in a “world café” type setting (www.theworldcafe.com/method.html; Brown, 2004; Brown et al., 1997). Abbreviated titles for the topics included:

- Bridging the gap between academia and food systems stakeholders (Norway)
- MSc agriculture students working with ex-campus stakeholders (Denmark)

- Creating student confidence for communication with stakeholders (USA)
- Facilitating international education doctoral program in agroecology (Sweden)
- Action- and partnership-based PhD research (France)
- Engaging researchers with learning and innovation networks (Poland/Hungary)
- Experiential learning in a transdisciplinary setting (Germany)
- Transdisciplinarity as an emergent property in agricultural research (Australia)

In the middle of the first session of four papers, we, as moderators shifted the order of presentations to provide a more logical flow in the subject matter; this is adaptive management of the facilitation process, and workshop participants agreed with the change.

To facilitate the session with short presentations, and to create an alignment between the different presentations, the presenters were asked to design their short talk as a response to three questions:

- What is the essence of the approach you have used?
- What have been the positive outcomes thus far?
- What are the main lessons you have learned?

Most presenters followed these guidelines and were careful not to exceed the time limits. Seven of them used brief PowerPoint presentations, and one posted a hand-drawn diagram of the educational activity in front of the room.

The session was opened with the facilitators presenting the rationale for the workshop. Workshop participants were divided into small groups of three or four per table with ten minutes to discuss each presentation. The groups were shuffled between the two workshop sessions. Based on the assumption that one of the prerequisites for success in communication and building of a shared understanding, is that participants become acquainted, we invited short personal introductions at the outset. What they were asked to share was 1) where do you work, and 2) what have you done during the past six months that you are most proud of? Then after each presentation the small teams were asked to discuss two questions:

- What about the approach did you find new, useful, and exciting?
- What are the two questions you would like to ask the presenters?

After eight minutes of discussion, and an attempt to build a shared understanding around the two key questions, we asked each group to report briefly on their conversations. Although questions were raised for the presenters, there was no time for them to answer or elaborate. Our observation was that each group fully engaged the two questions, recorded their major points on A-4 sheets, and were enthusiastic and animated during this discussion period. The reports out to the larger group were varied and relevant. These reports as well as our evaluation of the process follow. A wrap-up of the sessions was planned to address three questions:

- What one idea am I taking home with me and why?
- What do I plan to do as a first step, and what are the details?
- Where can I find other sources of assistance, and what steps can the community take?

In fact there was not time for this wrap-up, but we asked people to quickly comment on the learning process in the two sessions, and to record their individual comments on papers that we collected, along with all the other notes from the groups. An action agenda was prepared by the conveners based on the general discussions and their observations. This agenda added to the workshop notes. These notes resulted in an eight-page summary that was sent within five days to all participants for comments.

Results

Among the lessons learned by participants and reported from the discussions were several on content and even more on the process in the workshop. Many comments centered around the topic of phenomenon-based learning and the need for more frequent and in-depth interaction with stakeholders. The importance of students being involved in practice on the farm was one key element. Another was building observation and reflection skills. One participant remarked that “structured reflection by students is rarely a part of the teaching agenda.” The importance of scale was suggested as key to understanding systems, and this is a foundation for agroecology learning. One person designated this type of learning as “engaged scholarship,” and further suggested that some things cannot be learned, only experienced, and thus the importance of experiential learning. Several participants pointed out that evaluation is really a critical part of the instructional process, and although we evaluate students and provide written and oral feedback as well as grades in a course, we are too often less concerned about evaluating the learning process itself. There were many more comments that resulted from this rich conversation following the talks, and these will be analyzed more carefully in another venue.

There were more comments about the process than on the content. There were positive remarks about the organization of the topics, the value of the short presentations and time for discussion, and the active and flexible facilitation of the two workshops. The low level of formality was noticed by several, and we established familiarity and a certain level of comfort by having all participants introduce themselves at the start of each session. This created an informal, though short-term, “learning community” with encouragement to fully participate and feel some ownership of the process. One person mentioned it was “*good to avoid the ‘lecture-type’ presentations and put weight on interaction, giving added value to the sessions.*” The five minute presentations were popular, helping speakers to “get straight to the point,” urging participants to think about the essential take-home messages, and not investing valuable time pursuing interesting but probably marginal side issues. This was reflected in the intense conversations in the small groups, since they had only eight minutes to deal with two evaluation questions on each talk and two minutes to reach consensus. There was scarcely time for small talk or deviation from the topic at hand. Although the process and schedule may sound a bit “authoritarian,” our experience is that when you have eight presentations and two ninety minutes slots, AND would like to have interactive conversations with everyone participating, then the sessions need to be carefully planned and managed by the facilitators. The response from participants was highly positive and there was respect for the leadership and facilitation model.

The action agenda summarized by the conveners included seven steps. These are being implemented by the conveners with collaboration of interested participants. Steps include:

- Circulate notes to all 16 participant to solicit edits, add comments, and keep the topics alive and encourage feedback
- Invite speakers to answer specific questions posed by the group in writing, and distribute the answers to all participants
- Provide participant evaluation comments to conference organizers to provide ideas for planning future conferences
- Survey authors to assess interest in developing a comprehensive article on their topics, and explore having a special issue of an education journal
- Develop a short article for the NACTA Journal on the workshop planning process and the results
- Perform a ‘compare and contrast’ evaluation of the eight papers in the workshop including comments from participants, and prepare a journal article
- Encourage IFSA to include workshops on active learning topics in future international conferences

The implementation of this action agenda will be catalyzed by the conveners, but we expect to share ownership and action with the entire group of participants.

Conclusions

Needless to say, as conveners of the two sessions, we were delighted with the reactions of the participants who provided highly positive feedback on both the topic and content of the workshops and especially on the process. Their active discussions during the café-type sessions following each presentation were productive and resulted in valuable sharing as well as written summaries of the conversations. The general comments on the conduct of the sessions provided in the last few minutes of the second workshop indicated that they thought this was a valuable learning experience and a model that should be used more often in scientific and educational conferences. At the danger of sounding self congratulatory, we as conveners reflected on the process and concluded that it was a great success. We think there is continuing activity and added value to the workshop because of the elaboration of an action plan, and the pursuit of workshop objectives far beyond the two 90-minute session in Berlin.

Many comments from participants were highly positive, and there was consensus that this model should be extended to the entire conference. One said, "Do it again, and I will join you people in this learning environment." Another remarked, "My paper is going to be presented in another workshop, which is obviously a mistake." A participant from Belgium reflected on the excitement of teaching, and wrote in his comments: "Thanks for a very nice workshop, full of life and joy." One scarcely hears either "life" or "joy" associated with learning at a meeting of professional educators! And in the words of a Danish agroecology instructor, "I came out of the workshop with much more energy than when I went in." What better testimonial could we have about success of this approach to a conference meeting?

In our subsequent reflections about the process of the workshop, we are exploring how a similar process could be planned and managed for the university classroom? Assuming that we can provide adequate stimulus and rewards for students reading relevant materials before coming to class, could we present a five-minute 'speed lecture' and pose appropriate questions that could be explored in small student groups? Each team could report back on their consensus about the topic and raise further questions, and the educator could briefly respond. It seems that we could structure a 45-50 minute class period to explore two topics in some depth using this model, and we are anxious to test this strategy in coming semesters.

References

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Collaboration between University Faculty, State Education Staff, and High School Teachers to Create Instructional Material: The Creation of Secondary Agricultural Communications Curriculum

Introduction

Today's high school agricultural science programs are required to teach a breadth of disciplines related to agriculture. As a result, high school agriculture teachers have reported a need for instructional material and specific skill development enabling them to improve teaching (Calico et al, 2013; Roberts et al, 2006). Therefore, it is critical for university faculty, state staff members and high school teachers to build collaborative relationships to educate and prepare high school students for a future in, or as a supporter of, agriculture. By capitalizing on curiosity piqued through innovative technology presented to secondary students, teachers can present knowledge and skill development activities to engage students in more meaningful learning.

Procedure

The most recent National Research Agenda for agricultural education and communications identified priority areas important to visual communications curriculum and training in secondary education programs: (a) sufficient scientific and professional workforce that addresses the challenges of the 21st century (priority area three); (b) meaningful, engaged learning in all environments (priority area four); and (c) efficient and effective agricultural education programs (Doerfert, 2011). The need for agricultural communications curriculum is evident and supported by teachers and students (Calico et al., 2013). Quality instructional material made available to instructors will create interest and career opportunities in agricultural communications for students in the future (Doerfert, 2011).

As agricultural communications becomes a more prominent area of the industry, it is important for post-secondary institutions to work with secondary agricultural education programs to build student interest in agricultural communications. With collaboration from a secondary agricultural education teacher advisory board, comprised of Arkansas agriscience teachers, and the Arkansas Career and Technology Education Department, agricultural communications curriculum was developed by faculty and staff, with expertise in agricultural communications and agricultural education. Instructional materials incorporate the theory of constructivism and direct instruction along with both experiential and authentic learning to foster an engaging learner experience. Through class discussion, group

projects and evaluation, students participated in research and presentation opportunities to gain real-world skills to create awareness for college and career opportunities post high school graduation (Calico, 2014).

Additionally, the graduate assistant responsible for curriculum development traveled to high school agricultural programs and educational cooperatives across the state recruiting for the Department of Agricultural Education, Communications and Technology at the University of Arkansas and facilitating inservice opportunities for teachers interested in learning more about the agricultural communications curriculum and skills needed to teach the agricultural communications curriculum material confidently.

Assessment

The collaborative effort between university faculty, state staff members, and secondary agriculture teachers to develop agricultural communication curriculum resulted in:

- An increase in student knowledge and skill development in areas of agricultural communications desired by employers in the field and necessary for success in pursuit of a degree in agricultural communication post high school graduation (Akers, 2001; Calico, 2014)
- An increase in secondary agriculture teacher's confidence and enthusiasm in teaching and promoting agricultural communications in their agricultural education program (Calico 2014).
- A working relationship between university faculty, state staff members, and secondary agriculture teachers. This relationship provides quality education for students in high school and a collegiate link for students interested in pursuing agricultural communications as a career of study post high school graduation.

Collaboration between university faculty, state staff members, and high school teachers should be utilized to create quality instructional material and resources for other non-traditional secondary agricultural courses. Expertise from faculty in university departments specific to the curriculum being developed should be contacted from collaborative efforts. An example of this is the Food Science course taught in numerous high school agriculture programs across Arkansas. Teachers currently rely on curriculum frameworks developed for Family and Consumer Science to teach the course. University faculty from the Food Science Departments at University of Arkansas should work to develop food science curriculum in collaboration with state staff and secondary agriculture teachers. There are many other applicable areas of study that would add value to the secondary school system both in and outside the state of Arkansas. We encourage all post-secondary agricultural faculty and departments to work with their high school agricultural programs to assist teachers with content specific curriculum development. This opportunity

serves as both an educational and recruitment activity that can add value to post-secondary institutions across the U.S.

Additionally and in cooperation with the Department of Career and Technical Education, teacher inservice training should be scheduled to introduce secondary teachers to newly developed curriculum, software, and equipment, and to increase their confidence in teaching the content. Representatives from the collaborating university should continue to interact with secondary agriculture teachers and prospective students to further educate both students and teachers on opportunities within areas of agriculture they may not be familiar with.

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Personal Biographies Used to Build a Learning Community

Learning is a social activity and enhanced when students are in a supportive environment (Johnson and Johnson, 1989). Providing the space and opportunity for students and faculty to become well acquainted is essential in the first steps of building a learning community. In workshops, courses on campus, and distance or blended courses, we have found that creating comfortable avenues for communication and building confidence can be achieved by students preparing and presenting a short personal biography of their experience, prior courses, personal interests,

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and motivations for participation in the particular educational activity. Sharing a personal biography is also an opportunity for the instructor to provide more background on her/his career beyond the typical resume of degrees, fields of study, and prior teaching or research experience. We have found that this space and opportunity provides a rapid and somewhat in-depth resume of what each person brings to the class, and is a good first step toward community building (Wiedenhoeft et al., 2003).

Learning Objectives for starting a class with personal biographies include: 1) providing space for people to learn about each other's prior classes, as well as professional and life experiences in order to build interpersonal interactions, 2) giving instructors a general overview of the composition of the class as well as individual expectations, 3) involving each individual in a presentation that can build ability to communicate and self-confidence, and 4) giving students a window on their instructors' backgrounds, expectations, and world views. Often students recognize shared interests with others that could easily remain undetected during a week-long course or an entire semester.

Methods can range from simple introductions of name, major, and expectations, with students and instructors sharing around a circle during the first class meeting. We have found that these are often cursory, provide only the scarce facts, and lack creativity, i.e. the rank and serial number approach. A more robust approach is to provide a more in-depth introduction using visuals such as a flip chart of 50 x 80 cm paper and wide markers of various colors with instructions to write, draw, or otherwise illustrate individual backgrounds, experiences, and other information relevant to the course. As a basic minimum, we request name, major, home town or state or country, what each person brings to the course that will be useful to others, and expectations for the course or workshop. We generally provide up to 10 minutes for everyone including instructor(s) to prepare their biographies before they present their resumés to the learning community. Biographies could be posted around the wall of the classroom, and left up for at least that day or the first week so that people can get better acquainted. In short workshops, they may be posted and left in place if appropriate space is available.

Outcomes of this initial class or workshop exercise include 1) an in-depth acquaintance with other students or participants, 2) some familiarity with the background and interests of the instructor(s), 3) the breadth of experience represented by the people in the community, and 4) the diversity of expectations for the course.

The community building that can be achieved by personal biographies presented at the start of a course can be supplemented by activities outside the class, such as time together during travel, at meals, and informal sports or cultural events shared by the students and instructors. When students learn about the professions and backgrounds, courses, and research experiences of others, it becomes much easier to connect and to ask

specific technical questions about areas in which they may need information. Students with strong experience in soils, for example, have organized evening seminars to help bring peers up to speed on this topic. Knowing more about personal backgrounds can bring people together around common interests. For example in one course in Estonia, half of the participants had dogs at home as pets. This provided a rich context for extra-curricular discussions. One method used in longer courses is the community potluck supper, which can be organized around dishes prepared by everyone that represent their family, culture, or ethnic background, or around dishes made from only local ingredients. Another is to schedule waffle breakfasts with small groups of students together with local residents, held in a faculty home, to introduce students to a new culture. This has been especially useful in an international agroecology course in Norway (Francis et al., 2011).

For instructors, another outcome of the personal biographies is a more in-depth knowledge base about the backgrounds and capabilities of the participating students. This is often used as one criterion for forming student project teams, as we build groups that are diverse in academic majors, work experience, gender and age, and complementary knowledge and skills. Some of this can be gleaned from the application information or from pre-course essays submitted to the instructors, but a much broader picture including personality traits generally emerges from the biography exercise.

One key objective of most academic courses is building confidence and experience in oral communication skills. The ability to quickly summarize one's background into a summary biography requires a degree of synthesis of many years of experiences, and a need to quickly decide what is really important to share with the class. Although we observe that some students are quite nervous when first sharing in the whole group, the presentations help to establish a level of trust and acceptance that we are all in the learning landscape to undertake a shared journey, and all will contribute and learn from the experience.

Although students may have known their instructors from previous classes or reputations on campus gleaned from other students, the faculty is often perceived as a group of experts in forages, plant breeding, prairie ecology, or agronomic practices. Seldom have they been viewed as 'whole people' who also have a rich background of study, field experience, and interests outside their job. Learning about their instructors through the biographies – including family histories, job experiences, international travel and professional activities, hobbies – students begin to build a level of trust in the faculty now seen as 'real people' with both the joys and the challenges that all of us have. One of us (C. Francis) has shared the personal family tragedy of losing a son to suicide when this promising young person was 22 years old; a story that has a powerful impact on students of about the same age and an experience that has motivated this instructor to quality teaching and

to the recognition of the importance of education and building confidence in the next generation. Although this is a rather extreme example of transparency, it is an illustration of one way to connect with students and reinforce the importance of every course they take – especially those where success depends on mutual trust and sharing.

In summary, we have found that sharing of personal biographies among students and instructors has been a powerful first step in creating a trusting and sharing learning community. This process has been used in conventional classes that will convene for an entire semester, in full-time classes that may last from one week to sixteen weeks, and in other group venues where it is important to quickly establish rapport and shared understanding. Some have suggested that this is a large investment of time – for example spending an entire 50-minute class period in a semester that includes only 45 classes – yet when success in a course depends on well-functioning teams working on projects and productive sharing in class discussions, we have found this to be a priority activity. In short courses of one week, this is a good way to jump start the course and demonstrate to students that they are important and that their information and experiences will be a key resources

to be shared during the course. We strongly recommend that instructors try this type of class building exercise and to report their results as related to achievement and future value to students.

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