Participatory Learning Experiences: What These Mean to Me as an Agroecology Instructor

Introduction
Participatory learning and action (PLA) are well-known activities in the development community. A robust literature has been developed over the past several decades. The International Institute for Environmental Development in the U.K. [http://www.iied.org/participatory-learning-action] has published over 65 documents in 25 years on PLA.

Farmer learning as a component of transfer of technology has been described by Warner (2008) as critical to adoption of new ideas about how to prevent pollution from agriculture. He maintains that technologies related to large issues in agriculture need to be spread through social networks. This concept is similar to our social learning in agroecology classes and team projects. Learning in agroecology courses that is initiated with phenomena in the field and close interactions with farmers to uncover the bases for decisions have been found to increase effectiveness of education on practical challenges in farming. This is best accomplished by teams of students, instructors and stakeholders (Francis et al., 2012a). Jordan et al. (2005). incorporated the idea of transformation, defined as a “systemic change that addresses a certain ecological problem in an agricultural system, into an action learning component of agroecology courses.” Francis et al. (2012b) described the importance of students exploring the agroecological learning landscape as part of their immersion in the real situation of farmers, and a path toward active learning. These concepts are being incorporated more every year into courses on organic farming and agroecology.

In a recent teachers’ workshop in Plovdiv, Bulgaria, we began an interactive session with the assumption that a lecture of participatory learning would be an unacceptable contradiction in terms and process, thus the session itself should reflect the principle of participation. To explore the topic, we asked people to reflect on their personal experiences and write down specific impactful learning activities, discuss these with one or two colleagues and then share with the group. After a larger discussion among everyone, we attempted to draw out commonalities. The conclusions were summarized.

Methods
Sixteen participants in the European Network of Organic Agriculture/Agroecology Teachers [ENOAT] workshop were given five minutes to write a response to this challenge: “Think of one personal learning experience, as a student or as a teacher, when you thought participation was the most important part of learning?” After writing down one or more experiences, participants were given ten minutes to discuss their personal learning highlights with one or two others and why they were important. We followed this in a plenary session with the instruction to “Share one or two of these experiences with the larger group in plenary and think about key issues we have to consider?” Key issues were recorded and individual written papers were collected to summarize and to identify commonalities.

Results
Part 1: Personal learning experiences as student or teacher: A wide range of unique personal learning experiences were shared by participants, including memories both as students and more recently as teachers. Some noteworthy examples follow:

Experience 1: Over a decade ago we were focused on the potentials of biotechnology and genetic engineering in a discussion group of 18 students and instructor. Each person voted “yes,” “no” or “no opinion” on a series of new technologies that were available only by GMO techniques. One technology was use of human growth hormone to stimulate growth early in life to achieve normal height. Seventeen out of 18 voted against using this medical technique due to potential abuses. In the discussion that followed, the normal-looking young man, who voted in favor, told his personal story. “I was born with a hormonal deficiency and without this treatment with implants and later injections of the hormone, I would now be only 1 m tall instead of 1.60 m – this is why I voted for the use of HGH technology.” As a class we voted again, and of course everyone voted in favor of HGH use in appropriate ways. As an instructor, I was amazed at the power of this situation for learning, and was delighted with the safe...
learning space and level of trust we established in that discussion group which empowered this student to share his story.

[NOTE: This type of learning situation cannot be created, but could be called an emergent property of the classroom environment where trust among discussion participants was high enough that people felt safe in sharing their personal experiences. The example speaks to the importance of establishing a trusting and caring learning community, that can be called the social capital associated with this particular group.]

Experience 2: When I started as an academic teacher, I organized the final oral assessment of students for the course. One student told me it was possible to have the cysts of Trichinella, a dangerous parasite from wild pigs, in the human heart muscle. I was angry with him, because in a textbook written by a respected specialist this possibility was not mentioned, so of course I wanted to give him a negative grade. But he told me, “I am personally ill because of this parasite, as is my father.” Therefore, I understood that we can learn from our students, and knowledge is not a closed area, so we can never know everything.

[NOTE: We learn every day, if we are open to new ideas and evidence about the world around us. To ever assume that we are the experts and should have the last word on a topic is to miss out on a wealth of experience and learning that is possible if we value the life experiences of others, especially our students. To affirm their prior knowledge and experience, and to provide students with confidence to express themselves, even to disagree with instructors and with others, is a valuable gift we can provide as a useful tool in education.]

Experience 3: As a student, many years ago, I remember the soil science practical work when a group of students, supervised by the professor, dug a soil profile to study. We worked hard, but we had the opportunity to explore layer after layer while digging through the profiles. The most important part was the group work involved in this educational, field experience.

[NOTE: This field group activity combined the practical and academic dimension of learning different soil strata while opening the profile, with the social learning that goes along with the group effort to accomplish the task.]

Experience 4: As a teacher, I find the most exciting learning experiences are when my students visit real organic farms and learn directly from farmers about their problems and successes. As a student, I liked field trips because when I saw what we were learning, and not reading it from a book, the experiences stayed in my mind so I could see them later. They were not just concepts from a book.

[NOTE: Seemingly, nothing can substitute for the direct student discussions on site, on farms, with people who are making the decisions and living with the consequences. This type of reality is difficult to achieve in the classroom, and somehow we need to find the mobility funds to use more field excursions as an integral part of our classroom teaching.]

Experience 5: Good results are achieved when students work in groups. Preparing reports, seminars or other output helps them build communication skills, learn effective ways of exchanging knowledge, and practice responding to questions to clarify their ideas and information.

[NOTE: In reality that most people will be working in teams for the rest of their agricultural careers. – In business, in academia, in government, or in non-profit sectors. Improving group learning skills in the relatively safe space of the classroom environment benefits students.]

Experience 6: As a student, in one course, I read about 200 pages of scientific text and prepared three questions. In order to ask a good question, you must be familiar with the topic. To understand something well enough to ask good questions is an excellent way to learn. In the same course, the next task was to read about 200 pages of text and make a 30-minute presentation. Effective presenting means clearly explaining the topic to others.

[NOTE: New instructors soon recognize that teaching a topic is one of the best ways to learn. Although one can never anticipate all the questions students will raise, having the confidence to present a topic requires a basic appreciation and understanding of the subject. Pressure to do a good job in front of one’s peers is also beneficial.]

Experience 7: As a student, I did practical work in ecology involving a small research project on fruit trees in meadows with bees compared to those without bees. I still remember this work in detail, cooperating in a group of three, and completing the difficult statistical analyses. Working in the field made the project fun and I really liked the course.
经验8: 个人经验，作为一名学生，任务是解决一个有机农场的问题。农场的背景提供了动机和相关性。

经验9: 高中生在他们的首门农业课程中，去了一个猪场，老师会演示阉割。他把小猪放在桌子上，切开腹部，一半的内脏就出来了。老师平静地解释说，有时会出错，把内脏放回去，缝合起来，完成了预期的手术。这是一次真正的学习经历，展示了在压力环境下保持冷静和坚韧的重要性。

经验10: 一位教授在农业与药理学中总是面带微笑走进教室。他的课从不照本宣科。他知道自己的工作。

总结: 基于研讨会参与者和全体讨论的书面体验，参与式学习的普遍观察包括以下想法或要求:

- 小班制更佳: 在大班中组织有意义的参与和讨论很困难。
- 三人群组: 经过对参与式工作在课堂中最佳小组规模的详细讨论，一般认为两个人的团队不能提供必要的能量来完成复杂任务，而超过三人则有可能出现有人“搭便车”而不做贡献的高概率。项目的性质可能会影响团队成员的确定。
- 创新性资助方案: 交通、住宿和餐饮等后勤挑战需要创新解决方案和资金。
- 实践性练习，良好时机: 计划参与式学习活动通常需要比讲座或简单实验室练习更多的时间。明确的学习目标、清晰的目标和富有成效的沟通尤为重要，确保所有人了解。
- 参与式讲座: 即使在相对较大的团队中，也有可能在课堂中鼓励讨论和提问，例如：“点击器技术”允许学生迅速回答调查或多项选择题。结果立即可见，供所有学生和教师调整演示。更复杂一些的手机应用程序也可用。如果没有这种技术，有很多其他方式可以鼓励课堂投票、将小组分开进行讨论，形成共识，分享一对一或一对二的，以及其他创造性方法来激发分享和捕捉学生经验。
- 准备数据表和地图: 准备一张社区、景观或农场的地图，或者一份包含农场基本信息的重要数据表可以节省实地考察的时间，确保数据的准确性，这样可以节省在讨论上的宝贵时间。另一方面，发现也是有价值的，学生应该能够讨论并决定什么是重要的东西来学习。需要平衡。
- 清晰的演示: 就像任何课堂活动一样，清晰的学习目标、充分的准备是必要的，以使教师和利益相关者了解期望的类型。应使用结构化的评估来评价练习或演示，以审查所学内容和改进的方面。
- 出发前的考察和准备问题: 学生在出发前应有足够的背景信息，以便准备阅读材料并发展关键问题。出发前学生应有更多的背景信息，以便他们可以准备阅读材料并发展关键问题。出发前学生应有更多的背景信息，以便他们可以准备阅读材料并发展关键问题。
decide to specialize their questions, to be sure different individuals ask about production, economics, environmental impact and social aspects, and specifically listen for answers to their questions.

Establish motivation for individuals and groups: To improve the value of the learning experience, an imbedded evaluation or other type of post-experience validation of learning is useful. This can be in the form of reports, presentations, short quiz, or other type of feedback. This serves to legitimize the experience in learning and provides information on how to improve the exercise in the future.

Confidence to say “I don’t know:” One method of establishing trust through transparency is to clearly admit that you, as an instructor, do not always have the answers, both in the field or in the classroom. Useful questions to expand the discussion include, “What do you think are the possibilities?” “How does this depend on the context or the situation?” “How important is this question relative to others?” “Where do you think we can find the answer?” or “Who would be willing to research this and report back to class in the next session?” Given that many classrooms are connected today, the last suggestion could be, “Who can quickly look this up on the internet and give us some relevant ideas?”

Conclusions

The ENOAT participants concluded this was a useful topic to explore, and that using a participatory method to capture individual past experiences was a valuable process to uncover unique learning situations from our time as an instructor or as a student. Several specific experiences were given under methods, and then a number of general comments were taken from the group discussion. Participatory learning can build interest and enthusiasm in the classroom and in the field, and that every possible effort should be made to include hands-on and active learning for individuals and for groups in agroecology and organic farming learning environments.

Useful References


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