

AE in Marburg - idea & meta evaluation

- Seminar for the transmission of AE-knowledge -

Written design and evaluation for the second AE seminar in Marburg on 03.02.2016

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Date: 03.02.2016

Time: 9.40am – 6.40pm

Topic of the event:

AE- Sustainability, Teaching methods, agro ecological education, Awareness

Core aspects of the event:

The students recognize that agroecology is a suitable philosophy for sustainable agriculture and develop comprehensive entry-level concepts. The seminar follows a narrow curriculum defined by SAGITER (Florac Seminar). This event includes combining, testing and subsequently evaluating the basic assumptions of AE & sustainability.

Reader Content

1 Long-term teaching	3
1.1 Topic of the teaching project.....	3
1.2 Topic of the event	3
1.3 Curricular positioning.....	3
1.4 Structure of the teaching project	3
2 teaching unit AE in Marburg	4
2.1 Decision on the subject	4
2.2 Decision for module formation	5
3 Meta-Evaluation.....	7
3.1 Objectives of the project Sagiter and the compatibility with the block event	7

1 Long-term teaching

1.1 Topic of the teaching project

Integration of AE in continuous lessons: AE in the age of intensive agriculture. The role of traditional knowledge.

The linkage to the project SAGITER

1.2 Topic of the event

AE Knowledge in Geography

- learning that “sustainability” is an ongoing process
- making agroecology “visible”
- linking theory and practise

1.3 Curricular positioning

Content fields	1: Geography of peripheral spaces 2: Agroecology 3: Didactics
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1.4 Structure of the teaching project

M1

Time	Activity	Purpose, Tasks
15 minutes	Introduction and agenda review	Informing participants about the day’s purpose.
45 minutes	Pre-assessment on AE as a “resource” plus de-brief	Assessing participant’s prior understandings and modelling it for their teaching.
45 minutes	Honey – Insect – newspaper review in groups <i>“Agrarökologie - Wildbienen steigern die Erträge” (Sören Stange)</i>	Introduction to the concept and philosophy of AE and presentation of some of the ways in which farmers “could” use AE-knowledge
70 minutes	AE philosophy stations and de-brief. Participants justify at each station why each property of AE is important for an individual mind-set.	Exploring the various properties of AE that make it such an important resource of knowledge. Explaining why the properties are important. Managing stations in the seminar room.
15 minutes	Post-assessment, wind-up and workshop evaluation	Evaluation of the participant’s understanding. Reflection on the morning experience.

Overall Duration: 190 mins / 3 hrs 10 mins

M2

Time	Activity	Purpose
15 minutes	Agenda second part "teacher & teaching"	Providing general information about teaching and training. Pointing out duties of an AE teacher or trainer.
45 minutes	Learning in School	Assessing participant's prior understanding and modelling it for their teaching.
10 minutes 45 minutes 15 minutes	Tree cut Video YouTube https://www.youtube.com/watch?v=6eUQchsTKVA	Video: Learning vs. practical training. Video analysis, skill training, interpretation training. Competence training towards sensitive experience.
120 minutes	Article review in groups World Coffee	Exploring inductive and processual learning types in order to be able to understand different processes of learning.
15 minutes	Post-assessment, wind-up and workshop evaluation	Evaluation of the participant's understanding. Reflections on the day's experiences.

Overall Duration: 245 mins / 4 hrs. 5 mins

M 3 (Extra- Homework)

Time	Activity	Purpose
2 hours	Practical Training Go out and find examples (Put it on sagiter.eu)	Practical experience Further reflexion at home, about "know-what", "know-why" and "know-who".

2 teaching unit AE in Marburg

2.1 Decision on the subject

The subject AE is a hitherto hidden topic in the context of sustainable agriculture. It has gained little access to the universities and schools yet and is furthermore not explicitly mentioned in the curriculum of general schools (regarding all federal states of Germany).

The agricultural production and consumption today is closely linked to the consumption of ending resources, such as fossil fuels. The resources are often scarce and even finite. The autonomous approach of agroecology and its philosophy attempts to build on old traditional knowledge. Therefore, it tends to revitalize it in order to maintain its existence. The aim fo-

cusses on the sensitization of the students. The learner will gain awareness on different dimensions (A, B, C) of sustainability, such as A) Ecological - *understanding ecology and the interaction between different systems and subsystems*, B) Social - *Through the formalization of knowledge and its transmission through schools. The former generic, social systems of knowledge transmission is replaced by schools. New modes of knowledge transmission, due to the fail of the generation handover.* C) Economic - *the economization of sustainable production methods.*

The objective can create incentives that can motivate the continuation of the training even beyond this teaching unit, especially that of the multiplier "Lehramtsstudent".

Especially important is the everyday relevance of the topic. Therefore, it is necessary to carefully choose the learning content and to relate it to the actual reality and needs of the learner. The content variability of the teaching module as well as the length of the teaching units play a subordinate role. The individual modules are important for promoting and strengthening autonomous assessment, planning and implementing competences in the area of AE Transmission.

2.2 Decision for module formation

The reason for constructing the modules was to raise awareness for AE and its applicability in real life. As it turned out, the general conception of agroecology is extremely diverse. The modular approach helps in various ways, as, for example, through the use of different tools or for reaching the learner in order to initiate the first step sensitization, which is essential. The individual modules are building on each other. The coordination, therefore, is easy in terms of complexity, because the learner is not disrupted by far-reaching thematic fields.

Since the learning content moves on an abstract level, it is up to the learners themselves to switch to the concrete level. In module 2, therefore, the learners are given instructions for deciphering agroecological knowledge. It is important to sensitize learners and to show that the knowledge can also be non-verbal and in consequence non-codified.

Module 3 is difficult to implement for both, time and technical reasons, and has been set up as a homework task. The aim is to raise awareness. The task as such is hardly relevant for the outcome of the seminar, which has already encouraged the learners to learn more and other things than before the seminar. Due to a lack of time, there is no possibility to transform the voluntary task into a obligatory, in order to cultivate various individual experiences. Home-

work in general, and in AE also aims to deepen the seminar’s knowledge and to foster responsibility regarding the learning process.

The learning group was composed of different students with different subject backgrounds. Due to these different backgrounds, the pre-experiences with agroecology were very heterogeneous. Some of the participants, for example, did not have any experience with agroecology beforehand. The start, therefore, was designed to be open. Through discussions and exchanges of experiences the students were to get their own experiences in this session.

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Characteristics	Features	Situations & Consequences for implementation
<p>Performance and motivation</p> <p>Previous knowledge / previous experience</p> <p>Work- and social-forms</p> <p>External conditions and material</p>	<p>Relatively heterogeneous learning group</p> <p><i>Bio/Demeter, <u>no AE</u></i></p> <p>Good group composition, High performance motivation, reflected teachers</p> <p>No great effort needed</p>	<p>Internal differentiation is necessary. The students are attentive as well as very motivated and interested in the subject and have different statuses of knowledge, which are used constructively. In the fishing games (fishing-game), they act independently and largely open and assertive in terms of their expected outcome.</p> <p>Only a few students are familiar with AE. To some extent, some prior knowledge in the field of bio or demeter is known.</p> <p>Many of the students do not know that agriculture is based on resource consumption. Therefore, it is explained in detail which resources are consumed (energy resources, water, etc.)</p> <p>Draw motivation from the curiosity of the "new".</p> <p>Illustrate potential everyday relevance by referring to actual consumption. Everyday examples like <i>apple tree cutting</i> and <i>honey bees on wild meadows</i> clarify and create incentives outside the university context.</p> <p>Create team spirit to promote individual motivation.</p> <p>Successive familiarity promotes positive forms of self-organization and self-creation, this consequently helps to enable long-term independence, self-reliance and self-sufficiency.</p> <p>Promotion of critical assessment competence through the application of self-selected criteria to the group results of others.</p> <p>Request a seminar room. Prepare group work. Video player, whiteboard, and group work mate-</p>

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3 Meta-Evaluation

As mentioned in the introduction, this teaching experience is based on the SAGITER project. The meta-evaluation of the content carried out here should, therefore, also be in line with the objectives of the project. For this reason, the individual objectives are named below, followed by a commentary on the learning content and the implementation.

3.1 Objectives of the project Sagiter and the compatibility with the block event

- (O1) In order to be able to participate in the development of the agricultural sector,

The expansion of consciousness is achieved primarily by module 1. The learner should be able to form his own AE philosophy. In addition, the learner should contribute to the dissemination of the idea.

The learning unit is used to spread Agroecological knowledge. Although it does not serve any purpose in the technical sense, M1 sensitizes the learner for different learning resources.

- (O2) To exchange on the approaches to the concept of agro-ecology, the notion of agro-ecological knowledge, the different pedagogical experiences.

Modules 1 & 2 are used to exchange experiences. The learners are actively animated to exchange their experiences with the other learners. Particularly M 2 serves as a channel to exchange experiences and convictions.

It has been shown that only a few participants have experiences with agroecology, so good examples are an important part of the knowledge transfer. However, some good examples have emerged from the memories of learners, which were partially supplemented by other learners. A group of people with knowledge shows better results and deeper discussions and discussions with learners.

- (O3) To revisit the modes of acquisition and transmission of knowledge by the trainer to move from a stance of transmission of knowledge (teacher) toward a stance of a facilitator / mediator // The learner

M2 aims at the deciphering of AE knowledge. M 3 is exposed to the homework and is intended to animate the learners themselves "find". Due to its non-obligatory nature, this task is limited to the interest of the learner.

The modules have no claim for documenting or transmitting technical knowledge, in fact, the teacher here takes a mediating position. The teacher has no further access to the results from homework since they only serve as self-reflection.

- (O4) To develop a learning strategy by observations, an inventory of practices, farmers' opinions and experimental practices, to train the trainers to understand this position, and to integrate this acquired knowledge into the reference data of initial and continuing training of trainers.

M2 has the task of rethinking the role of teachers. Teachers are rather links than a source of knowledge.

In this embodiment of the teaching unit, the sensitization is brought to the fore, the mediation of tools to formalize agro-ecological knowledge. This teaching unit lacks substantial knowledge about the formalization processes of agro-ecology.

- (O5) To develop teaching tools to the ways of communicating this knowledge, to their particular features, and the relation between the trainer and the learner.

The selection of the tools for the respective modules is selected so that the learner can choose his own way. Openness is desired since it is difficult to predict both, the complexity of the knowledge and the complexity of the learner.

M2 is designed to teach teachers to teach more than formalized knowledge. The tools and, thus, the design of module 2 contribute to the learning for sensitive knowledge. Module 3 paves the way to independent research for knowledge. Unfortunately, there is no return with the results, the individual experiences. In a future learning unit, such a return should take place.

- (O6) To be able to get to the end of the course.

The actual task of the mind-set-building comes with all three modules. The result should be the "visualization", which is not visible.

The time, as the strongest limiting factor, has a great influence on how well and how many learning contents should be taught. The modules implemented in this form create an increase in consciousness, but the performances remain limited.

Objectives	Module 1	Module 2	Module 3
O1	+	0	0
O2	+	+	0
O3	0	+	+
O4	0	+	0
O5	0	+	+
O6	+	+	+

