 

**AE in Marburg - idear & meta evaluation**

- Seminar for the transmission of AE-knowledge -

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

**Lead:**

Markus Hassler

Tim Roesler

Nicolai Dellmann

**Staff involved:**

Nicolai Dellmann

Benjamin Raith

**Date**: 03.02.2016

**Time:** 9:40 - 18:40 Uhr

**Topic of the block event:**

AE- Sustainebility

**Core aspects of the block 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.

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## 

# 1 Longer-term teaching

## 1.1 Subject 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 Block Event

AE Knowledge in Geography

- learning that “sustainability” is an ongoing process

- make agroecology “visible”

- to link between the theory and the practise

## 1.3 Curricular positioning

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| **Content fields** | 1: Geography of peripheral spaces  2: Agroecology  3: Didactics |

## 1.4 Structure of the teaching project

**M1**

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| Time | Activity | Purpose |
| 15 minutes | Introductions 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  modeling this for their teaching. |
| 45 minutes | Honey – Insect- newspaper review in groups  *“Agrarökologie - Wildbienen steigern die Erträge”*  Sören Stange | Introduces the concept and philosophy of AE and  Shows 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 mindset | 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 participant understanding. Reflection on the morning experience.* |

**Duration: 190 mins / 3 hrs 10 mins**

**M2**

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| Time | Activity | Purpose |
| 15 minutes | Agenda second part “teacher & teaching” | Informing participants about the special issue. Pointing out duties of an AE teacher or trainer |
| 45 minutes | Learning in School | Assessing participant’s prior understandings and  modelling this 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 skills training, interpretation training. Competence training towards sensitive experience |
| 120 minutes | Article review, groups.  World Coffee | Exploring the different learning types of people.  Inductive and processual learning types are important for the development of AE transmission |
| *15 minutes* | *Post-assessment, wind-up and workshop*  *evaluation* | *Evaluation of participant understanding. Reflections on*  *the day’s experience.* |

**Duration: 245 mins / 4 hrs. 5 mins**

**M 3** (Extra- Homework)

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| 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”. |
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# 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, which has gained little access to the universities and schools. It does not have an explicit mention in the curriculum in general schools (in 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 resources. The autonomous approach of agroecology and its philosophy attempts to build on old traditional knowledge. Therefore, it tends to revitalize it, therefore it’s maintain its existence. The aim focusses on the sensitization of the students. The learner will raise 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 channelling through schools. The former generic, social systems of knowledge transmission is replaced by schools The fail of the generation handover*. C) Economic - *the economization of sustainable production methods*.

The object can create incentives that can motivate the continuation of the training even beyond this teaching unit. Especially by the multiplier "Lehramtsstudent".

Important is the everyday relevance of the topic. Therefore, it is important to choose the learning content and there especially the topic close to the reality of the learner. The variability in the content of the teaching module, as well as the length of the teaching units play a subordinate role. The individual modules are important for the promotion and strengthening of autonomous assessment, planning and implementation competencies in the area of ​​AE Transmission.

## 2.2 Decision for module formation

The reason for the construction of modules was to promote awareness for AE and its applicability in real life. As it turns out, the general conception of agroecology is extremely diverse. The modular approach helps in various steps, through the use of different tools, to reach 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, the learners are therefore given instructions for deciphering agroecological knowledge. It is important that the learners are sensitized and that the knowledge can also be non-verbal and 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 also 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.

The learning group was composed of different students, with different subject backgrounds. Due to the different backgrounds, the experiences beforehand with agroecology are very heterogeneous. Some of the participants had for example no experience with agroecology. It was therefore recommended to start with an open approach. Through discussions and exchanges of experiences, the students should get their own experience in this session.

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| Characteristics | Features | Consequences for implementation |
| Performance and motivation  Previous knowledge / previous experience  Work- and socialforms | Relatively heterogeneous learning group  *Bio/Demeter, no AE*  Good group composition,  High performance motivation,  reflected teachers | Internal differentiation necessary.  The students are consistently as well as very interested and motivated for the subject. The students have different states of knowledge. In the fishing games (fishing-game), they acted independently and largely open and assertive in terms of their expected outcome.  Only a few students are familiar with AE. To some extent, only prior knowledge in the field of bio or demeter is known  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.)  Motivation draw from the curiosity of the "new", reflection and application  Illustrate potential everyday relevance by referring to consumption. In everyday examples like *apple tree cutting* and *honey bees on wild meadows,* clarify and create incentives outside the university  The team spirit was also very important. It promotes the individual motivation.  Successive familiarity promotes positive forms of self-organization and self-creation, this consequently helps to enable long-term independence, self-reliance and self-sufficiency.  Promotion of critical assessment competence through the application of self - selected criteria to the group results of others. |
| External conditions and material | No great effort needed | Request a seminar room. Prepare group work.  Video player, whiteboard, and group work material |

# 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 again 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 to 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. In particular M 2, serves as a channel to exchange above all own experiences and convictions.

It has been shown that only a few have experience 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".

The modules have no claim to document or transmit technical knowledge, in fact, the teacher here assumes a mediating position. The teacher has no further access to the results from homework.

- (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 treating the teacher in his position as a teacher as a topic.

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 open. 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.

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