Going blended learning in rural education

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Abstract: *Knowledge society, knowledge economy, information society, learning society - these are, among OECD 2000, the several names used to capture the essence of the current age, characterized not merely by the flow of information and pervasiveness of technology, but by gaining value from mental activity and human ingenuity. This context has deep implications for education, and for the role of teachers and teaching.*
In order to develop deep cognitive learning in their students, the OECD study said that teachers must reflect how they themselves interact and learn. The teacher in a knowledge society is seen as the consummate problem solver, using inquiry, analysis, and adaptation to maximize student understanding and insight, and cultivate continuous self-learning and improvement. These processes require teachers to work collaboratively to make tacit knowledge explicit, and apply their shared experience and expertise to solve common problems. An effective learning organization will further link experienced practitioners with researchers and policy makers.
Following these assumptions and the view on the new teachers´ role the paper focuses on the "educational newcomer Blended Learning" addressing rural areas. Blended Learning is used as synonym for face-to-face seminars didactical well combined with Online-Teaching and Training. The author gained experiences by educational programmes following the Blended Learning - approach addressing staff members at Berlin Universities on conceptualising global projects. To get on with the Blended Learning - approach in rural areas specific steps to go are necessary. The author experienced further qualification courses at education organisations in the north-eastern Germany, addressing farm manager and extension workers in face-to-face seminars and did research about qualification and knowledge transfer. Matching the above mentioned experiences the following is advised and planned for project conceptual design on qualification via Blended Learning in rural areas, exemplified at North-East Germany.

Keywords: *Blended Learning, rural areas, collaboration*

Learning advantages by E-Learning in rural areas

The Today´s knowledge society produces abundance of non-specific information. Some seminal developments, matching societal requirements, are on the first eye not immediately visibly worthwhile by the farmer but might be worth to be tested and discussed from the view of an applied researchers´ perspective. Empower farmers and rural citizen as well as extension workers for sustainable concurrence on public welfare and arrangement of integrated rural development needs self-inflicted co-operation and communication structures that support exchange on local and other expert knowledge, e.g. of applied researchers.

Virtual learning environs, following a blended-learning approach, prevent new challenges for local experts like farmers´ and research experts´, official workers´ or advisors´ interchange on innovative thematic issues, i.e., agri-environmental regulations (by EC), methods and procedures on sustainable agriculture including practical experiences. Example topics already tested into face-to-face training programmes are further described in Heiden et al. (2001), Heiden (2004, 65). Long distances can be overcome by e-learning tools and lack of time of learner groups, e.g. advisors as participants, can be overcome by asynchronous learning and discussion methods.

At online communication examples the time lack arising in asynchronous communication is valued advantageous, because time for consideration arises before commenting. Face-to-face identities become less important, as well as age, gender and standing. Another advantage of learning online is the option of paperless office arrangements and archiving the learning processes and personal results easily. The learner is encouraged to be her- or himself. "Existing hierarchies and relationships can change and even fade" (Salmon 2006, 19).

Knowledge sharing becomes simplified via weblog (digital journal, e.g. on learning processes), link-lists (e.g. to guide through one´s own library) or wikis (wikiwiki on Hawaiian means quick; page

collection for joint writing and changing online), audio- or video-podcasting (for lessons) and virtual classrooms (synchronous learning in an internet provided room).

The advantage of learning via open source CMS MOODLE (http://www.moodle.org) is the self-contained learning group in an online learning environment for group learning on module wise thematic issues. Same learning contents can be presented and uploaded with different assignment of tasks addressing different learner groups.

First impressions surveyed

With a view to learning in other sectors and regional context the question is risen whether e-learning initiatives might encourage learner groups in rural areas to participate on. The overall aim of the survey described in the following, is to reach an assessment by extension and education experts and local practitioners whether there is a need seen on a media-didactic designed learning environment in the rural area their working loops belong to.

Which learning contents in the field of sustainable agriculture and development are on demand by potential learner groups and how are the needs of these topics seen by extension workers and trainers? The thematic setting of such e-learning environments might be the following agri-environmental issues: erosion, soil compaction, plant protection, fertilisation, crop production techniques, preservation of the cultural landscape, nature and rural conservation, Cross Compliance regulation, benefits on ecological services, reallocation of land, municipal solid waste, marketing/eco-audit, Natura 2000 and other EU regulations. These are given as incitements plus fields without specification in the survey.

Which vertices are known and with which do we have to deal with regarding user groups´ media equipment and level of competences? Hints on co-operation options for proposals in rural areas for Blended Learning initiatives are welcome and asked as well.

Method: Two partly differing questionnaires have been directed towards two main addressee groups:

a) Farmers/ practitioners and extension workers and associations as user or learner group;

b) Education and extension organisations or associations which are considered as potential executive organisations and / or lecturer in future learning courses.

The overall thematic field asked for is sustainable rural development in agriculture.

Pre-study-activities on fairs in the North-East of Germany (BraLa 2007, Green Week 2008) gave initial hints on present internet skills and for future user group needs and expectations on Blended Learning in rural areas (the following data is based on the group a) - not yet representative - results):

One to three times a year the interviewees of the farmers group (between 40-50 years old, biological farmers, all having internet approach at the working place) are visiting vocational further qualification courses. 71 – 100 % of those courses are matching agricultural and environmental topics.

At a ratio of 2:1 the interviewees would like to participate at online-based trainings. Those you would not like to participate at online-based trainings demur a feasible lack of knowledge exchange with colleagues and face-to-face meetings. The proportion of online parts in the course should not be higher then 50%, favoured up to 30%. Concerning the didactical approach most interviewee prefer facilitated discussion groups including a high level of local expert exchange in a closed user group, in minimum a provision of learning material combined with organised group discussions among colleagues.

The above named pre-study-activities addressing the two interviewee groups mentioned above showed main interests on the following agri-environmental issues:

Once-only mention:
Soil compaction, pest management, crop production techniques, preservation of the cultural landscape, benefits on ecological services, reallocation of land, marketing/eco-audit, Natura 2000.

Manifold mention:
Fertilisation, nature and rural conservation, Cross Compliance regulation.

Mention without presetting in the enquiry:
Biogas, disposal of digestate.

As target objects for future qualification courses the two groups do not differ in general terms:
Additional mention by group b) Education and extension organisations or associations have been: Soil erosion, crop production without genetic engineering, further EU regulations, land use, including tourism.

Matching thus information about issues most wanted (not yet representative study) plus didactic process knowledge on e-learning, an expert pool has to be built up, consisting of those trainers capable in training online and to give thematic input into the learning environment.

Framework conditions, target activities and success difficulties

Funding foundations that need to be laid:

- Finding a request programme reference for the project which matches well to the grant policy objectives and fits to the idea
- Decide about a national or international pilot to run and a thematic field of the study by means of need identification surveys
- Design a stakeholder analysis and find national or international co-operation partners at the very beginning for a deeper survey
- Write a project application and secure online interchange with the co-operation partners connected
- Networking activity with national co-operation partners and lecturer to secure learning quality management.

Several structural and infrastructural adaptations in rural areas are foreseen:

- Major quick access to internet for use by e.g. farmers and rural citizen in general
- Building up server-equipment, media competence and process capacity/ skills to secure quality during the blended learning process and to get over e-learning and technical barriers
- Integrate user guide modules into learning programmes on the topics identified as need: a) from teachers´ perspective addressing advisors, b) from users´ perspective addressing farmers.
- Win rural academies and associations for pilot co-operation – participant acquisition.

Learning support and motivation via e-moderation and coaching of learning processes encourages participants´ media competence and virtual communication skills. In each e-learning qualification we additional need technical support. Exploring the five-stage model of Salmon (2006) we notify both main tasks, e-moderation and technical support, all the time during the qualification.

While the intensity of technical support is higher at the beginning of the course, then during the one, the e-moderation has its working peak in the middle to keep participants active and motivated.

The grew fields in table 1 show technical support tasks while the white fields show the e-moderation tasks in general.

The disciplines involved during a qualification programme are Project Management (as e.g. described above) plus E-moderation: tele-tutoring, coaching learning processes, coordination between face-to-face and online phases, evaluation processes. The most intensive modules for e-moderation support are those in the middle of the time span. The additional field of coaching is the technical support as: technical CMS MOODLE support, support by communication technology staff, didactical well visualisation, setting linkages, web-surveys on additional tools, etc.

Thematic disciplines presented by external teachers and trainers should be based on learning issues chosen by participants to major the qualification management of the Course. Following Kerres (2001) quality of e-learning can only be achieved in the process of learning itself and becomes codetermined by learners.

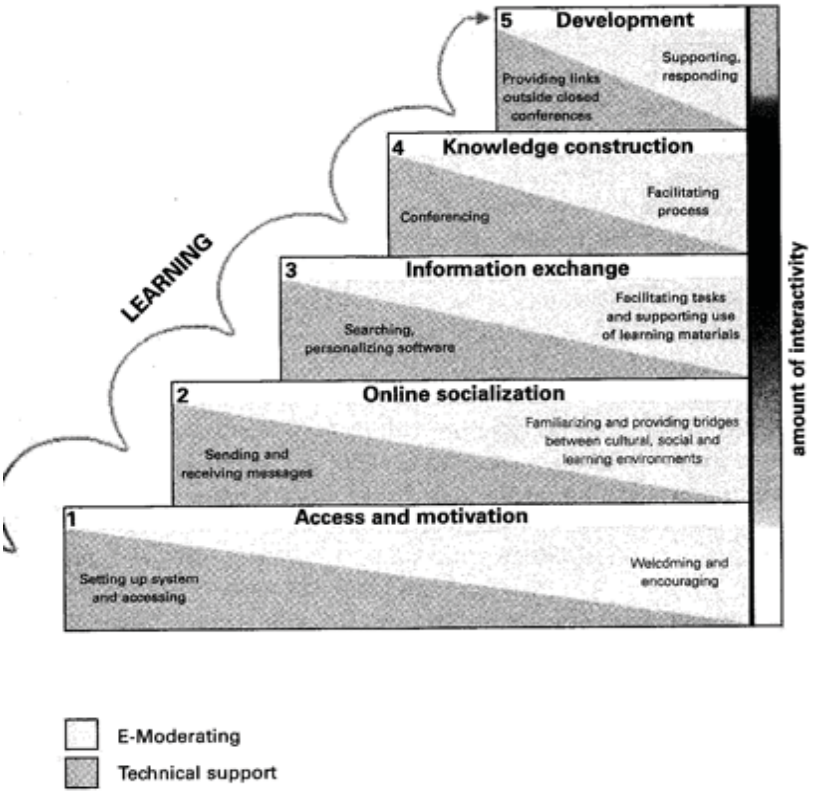

Figure 1. Model of teaching and learning online – consolidated by action research (Salmon 2006, p. 29)

The courses should be organised in modules, so the module wise qualification structure is following a thematic red line (e.g.: pre-module: how to deal with the platform; three to five thematic modules depending on the project run and outlook) through the whole course. Herewith, integrating topics on sustainable development, the learning processes of the participants (each with its disciplines) have interdisciplinary aspects. Moreover the building of learning-groups to realise thematic works will help to derive interdisciplinary solution on complex tasks to solve.

The responsible organisations of these qualification courses should be those responsible for knowledge transfer and further education and training in rural areas, e.g. central organisations of universities and research centres, education centres, science shops, multi-media centres, (e-)-academies, extension organisations, in fact those who are addressed at calls for project proposals and capable for co-funding of those finance-intensive qualification programmes plus administrative facilities.

Under the conditions of third party funding central organisations of universities and research centres are able to follow the local actors in these projects with competent tele-tutors and technical staff.

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