

# The discourse on added value and adoption impediments of a distance learning-format in Brandenburg, North-Eastern Germany

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**Abstract:** *Qualification organisations in the rural area of Brandenburg spent a lot of effort to trace out most relevant information needed by their participants, e.g. by means of an extensive continuing educational and agricultural skilled personnel need-analysis or regular evaluation inquiries. Up to the present qualification programmes in a distance learning-format in the rural Brandenburg are not pre-processed into media-didactic concepts nor brought into the market yet. To identify the discourse level on distance learning and if required to develop application concepts towards the specific continuing education management and extension, author's questionnaires have been directed towards two main addressee groups: a) farmers, extension workers and associations as potential learner groups, b) qualification and extension organisations which are considered as potential lecturer and teletutors in future learning settings in the thematic field of sustainable agriculture. The discourse on added-value of any distance learning-format in Brandenburg will be summed up. The paper closes with a conceptual approach about fading in Blended-Learning values into the regional education management in Brandenburg.*

**Keywords:** *blended-learning, continuing education, new media, rural area*

## Introduction

In the currently discourse of continuing education in Europe, extension is setting a new incentive to rethink learning cultures and didactics. Looking beyond one's own nose of constructivist subject-oriented continuing education, new media-technology widened the discourse towards the participant oriented learning support focussing self-directed module-wise learning (Gieseke, 2000; Arnold et al., 2002; Heiden, 2009). The main hypothesis in my PhD work on "*public goods and privatised extension*" highlights that "*the acceptance of demand driven and locally adapted agro-environmental contents for knowledge exchange is the entrance door towards ecological effects in rural areas*" (Heiden, 2006), mainly under the conditions of a fully privatised agricultural extension system and decentralized, diverse structures of continuing education structures in the rural area of Brandenburg, North-Eastern Germany.

Learning, supported by new-media – its challenges and impediments – focused on the agri-environmental qualification need in Brandenburg will be the key-content of the paper. Taking the context at the rural area of Brandenburg and discourse on added value of distance learning-formats in consideration, a concept for continuing education extension will be reasoned. Addressees are qualification organisations and their implementation partners (ministries, communal administration departments, funding organisations, research institutes and external trainers). Funding options and regional specifics will be disclosed.

## Context analysis

The regional context of the "as is" analysis in January 2009 is the rural area of Brandenburg, North-Eastern Germany, equipped with fibre optic cable, not interoperable with high data rate DSL internet solutions (status about 1500 megabits in download, the upload options are less than a half).

The extension system of the German Federal State of Brandenburg is privatised since 2002, i.e. not direct, nor indirect funding is given for extension work. This means that all farmer - advisor contacts

are determined by direct contracts and involves with a lack of knowledge exchange based on public goods issues (Heiden 2006). Further disadvantages in Brandenburg, compared to other Federal State extension systems in Germany (e.g. the neighbours' in South-west and South: Saxony-Anhalt, Saxony), are low budget agricultural funding guidelines.

Under these conditions, to 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 and local experts (Heiden 2007). Additionally the importance of supra-regional knowledge transfer, exchange of experiences and quality management of extension and qualification arises.

The Brandenburg specific qualification structure in the context of farmers' and extension workers' further education is partly funded by the local government, project driven or sponsored by SME or associations. The governmental funding is based on the "guideline on agricultural vocational training - LBb" or projects funded by local budget. The LBb guideline budget is accessed in the same manner by municipal or entrepreneurial qualification institutions. To reach the feasibility on gaining a local budget funded pilot- and implementation project, a high structural and resource input is voluntarily anticipated: pre-experiences and skills, information meetings, project calculations and the expensive project application process. Such activities are parallel to those to keep the structures for successful continuing qualification, realise a qualification management and to offer complex need based qualification programmes. Qualification offers by large scale industry and professional initial training or transnational qualification are not further mentioned in the article.

The "as is" analysis by January 2009 results on new-media regional training and information supply can be summarised as follows:

### **Web Based Training (WBT), Computer Based Training (CBT), Social Software**

A literature and internet inquest [January 2006], searching for Web Based Training - WBTs, Computer Based Training - CBTs, „Social Software" like Wikis and Weblogs in the thematic field of Agriculture and Environment showed existence of some older interactive CD about birds in rural areas or path along biosphere reserves and lots of databanks and newsletters for active information retrieval.

### **Interactive projects and decision support systems**

Combined with searching for communication science an about ten years ago BMBF funded project titled "AgrarDialog" (former: <http://www.barumlive.de/agrar-dialog>) has been the only result. This project, developed at Humboldt-Universität zu Berlin with co-operation partners, aimed at extension for farmers in Brandenburg as project region. Media based information and teaching material has been conducted, and online success has been expensively supported on farm. But the former interactive contact site for farmers, communities and researchers is no longer actualised with news of interest, and has ever lacked of adapted actualised knowledge and people willing to perform. The implementation failed to keep people willing to give input on discussion material or to e-moderate, the link is no longer hosting the "AgrarDialog" [e-mail information local authorities, October 3rd, 2006].

Decision support systems have been developed in research institutes. Transnational methodological approaches underlie a complex regional and local adaptation, as e.g. MODAM (developed at ZALF e.V., Müncheberg), integrating environmental quality objectives, REPRO (developed at Universität Halle) for nutrient and energy balance or profit-research-results like PRO\_Plant for plant protection implementation (Gesellschaft für Agrar- und Umweltinformatik mbH).

An interregional decision support system on plant protection is the information system on integrated plant production - isip, as partly with costs portal and subscription addressed to extension workers. The Brandenburg "isip-portal" integrates guidelines, ministerial hints and qualification offers

addressed to extension workers: <http://www.isip.de> and the Brandenburg site: <http://www.isip2.de/coremedia/generator/isip/Start,Region=flaeche0000114.html>.

### **Offer of information online**

In the World-Wide-Web - WWW an amount of unfiltered, online readable information is present, some of these web-pages offer download-files, but seldom thematic discussion fora, protected via login (Pohlmann, 1999, 158). An additional category is built by data-benches and search-engines: agricultural information nets, calendar of events, address data-benches including newsletter (e.g. ZADI newsletter: DAINet).

Catalogue entries are mainly found in the following sections: pesticides, calculation tools, reports on market observations and latest agriculture and education, agriculture and environment.

A nationwide example in the thematic field of Integrated Agricultural Development - ILE in the continuing education work is the qualification offer information service "Der Grüne Bildungskatalog" unter <http://www.gruenerbildungskatalog.de> (since 2001, BML und ZADI). The "green continuing education catalogue" aims at combining the multifaceted qualification offers in one central internet portal. Qualification institutions have to apply as participant institutionsto continuously present their offers at the portal. Main offers should address farming and rural areas and facilitate access on information by users as participants on continuing education.

Latest complex information portals are „AGRAR@Umwelt Brandenburg“, hosted by the Landesamt für Verbraucherschutz, Landwirtschaft und Flurneuordnung (LVLF) unter <http://www.mugv.brandenburg.de/cms/detail.php/5lbn1.c.107907.de> Ministry website. Combined with the Agriculture and Environmental Information Portal Brandenburg - LUIS-BB actualised information reports are provided online about the status on Agriculture and Environment: under [http://www.mugv.brandenburg.de/sixcms/list.php/mugv\\_portal](http://www.mugv.brandenburg.de/sixcms/list.php/mugv_portal), and transregional: <http://www.luis-bb.de>.

### **Conclusion**

In the last 10 - 5 years lots of portals have been built by the ministries and communities, mostly offering one way streets for downloading information, but without interaction or dialogue options, some even cost-intensive by the clients, e.g. privatised extension workers. Other portals addressing continuing education participants are free on access.

The inquired new-media offers represent a broad information option on several decentralised websites on diverse institutional levels. None of them is representing a complex media-didactic Teaching and Learning offer for interactive learning settings addressed to the learning group farmer, regional advisor or extension worker. They do not fit with didactical criteria for self-study-material as e.g. first mentioned Web Based or Computer Based Trainings do. For what it's worth, those are already at an end, because of limited editions. Even the portals do not offer web-links yet guiding towards interactive learning offers in closed groups following any Distance Learning approach. Also link-lists are missed to be thematically guided through the websites themselves.

Though farm manager in Brandenburg do have a high basic qualification level, and as professional category they are an information active decision making group in their fields of work, the conceptual media-didactic approach on distance learning, by means of new media adoption, in the agricultural rural areas of Brandenburg and compared to other sectors, is at the very beginning of adoption discourse. The only interactive continuing education project, offered by research organisations has been ahead of the times. Incentive systems have caused farmers as pilot-participants, but the use for researchers, communities or industry partners to prevent on the top information have lacked to implement the portal after the pilot period.

## Adoption impediments of a distance learning-format and its added value

Former own studies and a GRANO-project acceptance study (Heiden 2006) resulted the addressee group “farmers in Brandenburg” as sceptical of change but open-minded about farmer-by-farmer exchange and direct contacts to researchers by-passing intermediaries as costly advise by extension workers. The acceptance analysis as well resulted, as the most accepted, the combination of on-farm-visits aiming experience exchange with local and research experts, plus short information-flyer as handout. Interviews with advisors (personal consultations of the author during the GRANO project run 1989-2002) brought to surface scepticism and rejection on introducing innovative agri-environmental information material towards farmers, or even start the dialogue and networking activities on these topics. Advisors met concerns to inflict the loss of atmosphere of trust and acceptance between advisor and client, the farmer, particularly while integrating not specific demanded extension topics (Heiden, 2006<sup>2</sup>).

The addressee group, private extension workers based in Brandenburg, face the problem of being a reduced amount of small freelancers’ organisations and few huge extension firms left, compared to times, when agricultural extension work has been co-funded by an EU-extension-guideline (Platen in: IALB 2008, p. 30). This resulted as challenge a highly marked orientated extension work, while the farmers just asks for the services and topics they really need and are of direct economic effect. Qualification of extension work has to become visible in short-time periods, thus freelancer need a well organised information network and qualification options. Main disadvantage of the fully privatised system can be seen in the lack of thematic influence not by the government, nor by civil society, as end consumer. As Platen (in IALB 2008) comments as disadvantage for even huge extension firms is the difficulty to develop successor at the entrepreneurship itself. An interregional or even international exchange with colleagues is nearly not realisable. Half the extension workers nowadays compared to 1990 have to be much more mobile to physically reach their clients and require the obligation to perform information towards them by experts. We might summarise that within a privatised extension setting, especially in former socialist states, effective and durable co-operation, requires networking and informal linkage activities over a long period of time and a sensible implementation of intermediary work.

What we can learn by the statements above and former own studies is the matter of fact, that timely and locally flexible, on the job solutions matched with on-farm-experiments and exchange might help to realise interchange of both addressee groups of agri-environmental qualifications.

Long distances can be overcome by e-learning tools and lack of time of advisors as participant groups, 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 (Heiden 2008).

Mainly 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, methods, procedures, practical experiences (Heiden 2008). Blended Learning is used as synonym for face-to-face seminars didactical well combined with Online-Teaching and Training.

Advantages, for the addressee group „farm manager“, might be seen in the local independence of qualification and networking. The manager need not leave his working place, phone and farm, just for on-farm events that are not taking place at the own farm. Thus the farm manager keeps available for his farm staff and processes and is investigating a minimum of men-power resources to stay up-to-date and innovative. Under the condition, the course is targeted on asynchronous assignment-processes and interactions, the individual learning time-table is considered. For the red line and learning coaching an e-moderation is needed, in particular for group work of the participants.

The addressee group „extension worker“ is arguing less with the aspect on local flexibility, but time flexibility of learning and discussion time and to be capable to extend the information and expert pool. International or interregional thematic online qualification offers, matching with locally needed thematic fields of interest, may prevent special advantages.

Advantages for both addressee groups are the guided collection of focused thematic information, flexible handling of thematic survey data and a huge amount of online-publications, plus the access towards experts, colleagues and whole networks experienced in the main fields of interest. This includes yet unknown elsewhere extended handling of situations, working processes or global changes, like climate change, which lead to learning situations with colleagues.

Blended Learning settings, combined with CBT, WBT or Web2.0 solutions and web-films, e.g. to train farm staff members on-farm – single or in groups – to handle innovative farming production techniques towards agri-environmental farming, might be a viable road.

## Matching of analysis results and discourse

How can online teaching support discursive, action-oriented learning and network learning? In the row of behaviourism, cognitivism and constructivism we find with Siemens (2004) an approach named connectivism, linked with the digital age. Along connectivism the starting point is the individual. Personal knowledge is included in a network. The network nurtures its organisations and institutions, which reflect back into the network and obliges learning for the individual. The knowledge cycle allows learners to stay up-to-date on the connections linked.

The author's distance-learning dialogue with key-stakeholder in Brandenburg started at the regional fair called BraLA - Brandenburg's agricultural exhibition in 2007, the green-week-fair 2008 and with a private conversation at the working congress of IALB 2008 about the trendsetting interactive and communicative way of social dialogue and learning via Blended Learning concepts, including innovative practicable knowledge, particular applicable in Brandenburg, known by its privatised extension system. On all three events two partly differing questionnaires have been directed towards the 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. Preliminary results are published in Heiden (2008, p. 1006): "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 than 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."

Matching thus additional information about issues most wanted by both addressee groups, the surveyed need analysis results on agricultural qualification LVL (2002) plus didactic process knowledge on e-learning, I concluded, that 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, on the thematic topics of most interest.

Six of seven interviewees have already participated on qualification programmes in the past, which underlines the high importance of continuing education in rural areas and the disposition on

participation. Even mainly the regional programmes are chosen by the interviewees, that gives a hint on a delicate adoption situation for distance learning in Brandenburg and endorses former results on demur that local face-to-face learning and on-farm exchange might get lost.

Those interviewee, who never have participated in any continuing education, explain their absence with time-lack. It has to be further surveyed, if learning “at-the working desk” will reach an added value combined with an asynchronous communication style and time-flexible, individual defined learning periods. The Blended Learning-approach provides the above mentioned learning settings.

### **Continuing education extension**

The request on continuing education extension after the conversation at the IALB working congress (2008) has been followed by means of an informal initial consultation within the group of three representatives. Whilst the consultation, the competences for problem solving of the decision-making group became clear, but attended by prejudice, impediments and formal obstacles. Thus an introductive „*information advisory*” (following the typology of Gieseke, 2000) has been realised, including the definition of future goals and perspectives. Defined objective is to interlink the further qualification programmes, continuous offered by the local qualification organisations with the surveyed need analysis on broad agricultural qualification LVL (2002) and update with pilot projects’ outcomes, e.g. on distance learning in other branches to be transferred into local pilot-projects in the agricultural branch someday.

The testing project called “Agri-environmental e-learning platform” (owner of Account: the author, 2006) using the course management system (CMS) “MOODLE” at Humboldt-Universität zu Berlin (<http://moodle.org>, an Open Source Software) has been presented at the above mentioned information consultation in 2009. The advantage of learning via the open source CMS MOODLE 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. In the case of Brandenburg it seems to be best to separate the learner group “farmers” at basic learning settings from the learner group “extension workers”, because agri-environmental issues might be a new field of interest and knowledge for both - clients and advisors - but re-unite them for joined virtual discussions in facilitated thematic telephone conferencing or, if the technical equipment and infrastructure requires, in virtual classrooms.

The equipment while presenting the tool and options of a MOODLE course has been placed in a famous qualification organisation in Brandenburg, lacking high speed DSL and using antiquated modem interface. Therefore it has been helpful to present already printed coloured handouts, too, integrating screenshots and a small profile, plus offering the login to provide a later insight.

First advantages of Blended Learning settings seen in the group of representatives are self-learning phases combined with asynchronous and synchronous contact to the trainer, expert or other learners in the team (informal networking challenge). From the experts’ point of view an advantage is the re-use of course settings and the options to upload face-to-face seminar preparation material or to continue with fora, wiki or chats after the seminars. Even after the end of the course glossary, wiki-texts or training material keeps archived to consult by time. The first input to give as trainer or qualification organisation in the development process has been estimated as very high, plus the learning coaching and teletutorial support required.

### **Conceptual outcomes**

The types of continuing educational counselling (extension) experienced have been “information extension” and “situation adapted extension” (Gieseke, 2000). At the first the requester defines their qualification or consultancy interest. The advisor is capable, by means of diverse, up-to-date information systems, to inform about innovations and alternative options and decision making contexts. To realise a deliberative extension process, the continuing education advisor needs an

overall overview on the specific continuing education and extension system, plus regional specific knowledge about the organisations requiring the advice, their decision making structures and favoured learning cultures. A supportive atmosphere has to be developed by the advisor. The advice requiring key-actors need to have all cognitive, emotional and motional questions exchanged and in a consent, such to be capable to communicate their self-concept or even group-concept.

At the “situation adapted extension” the advice requiring group knows about the circumstances “as-is” and the question searching an answer by using continuing education for. The group defines the situation as clear, explicit and detailed. The advisor’s task is to inform and analyse with the group how the situation might change, develop or become satisfying by means of continuing education approaches. Main importance is laid on the needs of the requiring group. The motives, interests and realisation options must be detached to close the extension process (Gieseke, 2000).

The described extension approaches initiate the discourse on Blended Learning-options adapted to the Brandenburg case. For the follow up an institutional extension approach, leaned by organisation extension theory by Schiersmann et al. (2002, pp. 7-8) to continue with the continuing education consultations addressing positioned qualification organisation. Expecting a high rate of dynamic by change via new-media input into current education and the incidence of agri-environmental discussions, the addressees will transform into continuing education institutions themselves. Thus media-competences need to be developed by time, to empower these qualification organisations for future tasks and their addressees, e.g. farm manager and staff and rural citizen. Last mentioned need supplemental support to reach technical access and understanding on the education opportunities as challenge for themselves and their future in the rural area.

## Conclusion

Distance learning, e.g. by means of media-didactic Blended Learning-approaches is not familiar for a) farmers/ practitioners and extension workers and associations as user or learner group, nor to b) education and extension organisations or associations which are considered as potential executive organisations and / or lecturer in future learning courses in Brandenburg. Therefore continuing education extension might be implemented as sensitive as possible and programmes to approve the media competence of all regional actors might be installed.

As an additional actor group, the thematic trainer, are not yet qualified in online teaching and learning. With the added values of Distance Learning, brought towards the regional and „at the desk“-solutions, didactically well combined with face-to-face events, e.g. on farm, distance learning makes sense in the future in the agricultural sector in Brandenburg.

To survey regionally adapted and need based distance learning concepts, pilot-projects on virtual qualification programmes matched with face-to-face-events (Blended Learning) to implement at the existing Brandenburg specific qualification structure, are advised to be applied for. The process on conceptualising the branch and regional fitting Blended Learning-setting is a time-, resource- and cost intensive process.

Information policy funding and entrepreneurial activity on ICT structural nets to realise high speed access on internet in the rural area of Brandenburg will be a future crucial point to decide on chances or weaknesses on a broad set educational opportunity.

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