Social aspects of e-learning and blending learning methods

Authors:
Ileana Hamburg, Institut Arbeit und Technik, Wissenschaftszentrum Nordrein-Westfalen, Gelsenkirchen, Germany, e-mail: hamburg@iatge.de
Christiane Lindecke, Arbeitszeitberatung Dr. Lindecke, Gelsenkirchen, Germany
Herbert ten Thij, I.E.R., Eindhoven, Holland

Abstract: e-learning approaches particularly collaborative ones have many advantages but their use raises also questions like the social ones. The IAT carried out some research in this context on collaborative learning and blending methods and about effects of e-learning on the roles and relationships of the learners and trainers within German and European projects together with the organization Arbeitszeitberatung Dr. Lindecke' and I.E.R., Eindhoven.
In this paper some results are presented.

1.   Introduction

"The Internet is revolutionizing all parts of society, but its impact on education is just beginning to be understood. " said the Web-based Education Commission in the year 2000, when still the beliefs in the potencies of the Internet were as vast and high as its hype. And indeed, forms of Internet-based learning (e-learning) do offer the "affordance" of online socialization and networking. Which means in a sense also that this technology too enables or creates a next opportunity for a further social component.

The past and present e-learning approaches using multimedia demonstrate many advantages of e-learning like flexibility (in time and place), needs-oriented learning, a wider facilitating of searching information and learning content on the Internet. Besides that they can have also an additional function to conventional learning like computer-supported acquisition, distribution and creation of knowledge.

However, also some disadvantages of e-learning have been identified such as lack of peer contact and interaction, high initial costs for preparing multimedia content of learning materials and also substantial costs for it's maintaining and updating, as well as the need for flexible tutorial support. And exactly those important soft factors of traditional learning like cooperation and personal contact tend to »get lost« in e-learning concepts. Most of the existing approaches on the e-learning do not consider such disadvantages and in particular the missing of actual, face-to-face social interaction.

Based on recent pedagogical and social research as well as on technical developments of the other day, e-learning platforms have been developed (3rd generation – Leister et al., 2001) which try now to focus on the social aspects of learning. An important facet in this is to support collaborative learning in virtual communities and to blend learning methods in order to make also the change from traditional classrooms to e-learning easier for the users.

The IAT carried out some research on collaborative learning and blending methods (Hamburg et al., 2003) and about effects of e-learning on the roles and relationships of the learners and trainers within German and European projects. One of these is the cooperation project ÖFTA: Consequences of new Internet-based education technologies supported by the ministry of School, research and Technology of North-Rhein-Westfalia (NRW). This research has been done together with the organization 'Arbeitszeitberatung Dr. Lindecke'and I.E.R., Eindhoven.

In this paper some results are presented. The following chapter concentrates on the changing roles of teachers and participants in e-learning. The next part analyses collaborative learning as a concept which includes social aspects of learning.

2.   Changing Roles of Teachers and Participants / Learners

An important change as well implicitly as explicitly of the tasks and roles of both the central actors in learning processes, the teachers and the learners, is involved with the establishment of computer and internet aided learning structures (e-learning). E-learning as a variant of self-governed learning requires »new« abilities and capacities of teachers and learners, that contain as well opportunities as risks.
These changed requirements of the roles and abilities are sketched shortly in the next paragraph.

2.1 From trainers to education advisors and process moderators – the changed role of the teachers

The figure below summarizes the main differences with regard to the roles of the teachers between the »traditional« concepts of teaching and the concepts of self-governing learning. Defined in headlines it can be put into the formula: teachers versus advisors of learning processes. It is the task of the teachers in the traditional concepts of learning to determine the teaching ends and to offer it so. In e-learning the learners

take over the role of (equally entitled) partners -a change from a vertical into a horizontal relation- with whom a learning contract is concluded which purport is determined by both parties together.

Relevant differences are also present in the preparation. It was the task of the teacher in the traditional model to prepare the subject-matter , to choose the methods and to plan the realisation. In the concept of self-governing learning it is rather the duty of the teachers to collect the learning material and to place it at the disposal of the participants.

Traditionally it was the role of the teacher to give the learners ideas and to hand them solutions patterns; in autonomous learning the trainers have to aim on the contrary to mobilise the solution finding capabilities of the participants.

Finally the traditional concepts of learning were inciting to an extrinsic motivation and to teachers who were acting in learning according their self-consciousness. The self governing learning incites on the contrary to the intrinsic motivation as well as to a self-consciousness, in which the aspect of advising is in the limelight.

Figure 1: The role of the teachers in self governing learning

Characteristics	*Traditional concept of learning*	*Autonomous self governing learning*
Determination of the ends of the learning	Determination of the ends of the learning by the teaching staff	Contract concerning learning content and evaluation criteria
Preparation	Preparation of the subject-matter, choice of methods, planning of the learning programme	Collecting the learning material, library, collection of alternatives
Methodical realisation	Placing at disposal ideas and clues for solutions	Mobilising capabilities
Use of professional knowledge	Direct by teaching the learning content	Indirect by offering help
Motivation	Extrinsic	Intrinsic
Self-consciousness	Learning, teaching	Advising, helping

(after: Graf/Motamedi 2000: 154)

In other publications the role of the teacher is even further alienated from the »traditional« role of the trainer. Teachers are not just moderators, but they have to take over „the introducing, moderating and motivating role of a learning process supervisor and so that of an education advisor in the broadest sense" (Hohenstein/Poetsch 2001: 110). The trainers are made responsible in this notion increasingly for the preparation and the updating of the proper phase of training. The preparation of the seminars as well a control of the transfer can be moderated – in particular by using interactive media – e.g. by tele-tutoring. This development means for the trainers at one hand an increase of tasks; at the other hand it can induce an overcharging as well. For this reason learning platforms are increasingly criticised in the USA, because they can overcharge the learners by their continuous presence and their individual appeal (cf. ibid).

Conclusion: the starting point is that the trainers loose their position as „omniscient mediators of knowledge" and give it up in favour of moderation- and advising tasks and activities. Henceforth lesser knowledge abilities are required from trainers but more abilities and capacities that lay in the activation of potencies of other people – the learners – . The trainers need of course in e-learning in completion to these „advising- and activation abilities" also media capacities. (cf. also Hohenstein/Poetsch 2001: 111 , as also Hagedorn o.J.).

2.2 From passive listeners to active learners – the roles of the participants

Also learners do need media capacities to use e-learning for their own learning processes. Besides they are multiply challenged as a matter of course in the framework of „self-governing" or „autonomous" learning processes.

The central thesis of self-governing learning is that everybody who wishes to learn something he or she

but only can do so by him or her self. The »learning work« cannot be taken away by the teachers. Therefore the learners decide in autonomous learning structures also on the learning ends, the learning contents and the learning structure. Their role changes from passive »consumers« of didactical presented knowledge to self responsible initiators and organisers of learning (cf. Graf/Motamedi 2002: 154).

Advantages for the participants are connected with this change of role and presented in many publications that deal with the consequences of self-governing learning. That somebody can decide by him or her self when, where, with whom, how and in what sequence and with what intensity one learns is considered as an essential advantage of e-learning. Exactly therefore much depends on the learners. The participants of an on-line course can form and shape themselves the learning the way they like.

They can
- choose themselves the themes they are interested in,
- adapt the speed of learning to the difficulty of the learning content and
- take up contact with the supervisors or other learners the moment they feel it meaningful (cf. Projekt SeGel).

This „variegated bouquet" of chances for the learners that is developed in these texts, neglects partly that for making use of these chances a number of abilities are needed for the learners to be able to learn self-governed and self responsible.

The particular individual must be able e.g.
- to grasp the need of learning and to develop his or her aims
- to plan and to prepare his or her own learning process
- to decide which things he or she can and wants to learn self-organised and where in the process it makes sense to follow offers of institutionalised learning
- to realise the learning process with the help of proper learning strategies and to regulate the learning with the help of control- and intervening strategies as well as to valuate the learning results
- to keep motivation and concentration up to the mark.

For this it is conducive that de learner
- develops a changed self-consciousness in self-governed and self-responsible learning
- knows the own learning pattern, learning behaviour and individually appropriate learning strategy
- knows as many as possible learning media and learning ways and can make able use of these.

If someone does not have these abilities at his or her disposal, than self-governing learning will end quickly into learning frustration or will loose itself in arbitrariness. (Projekt SeGel)

In these new structures of learning and learning media there is besides the danger of arbitrariness also the danger that some people cannot profit from those requirements of abilities of e-learning. All who have not learnt to learn, are without instruction »delivered« to the requirements of self-governed learning structures.

Apart from these problems also another disadvantage can occur in e-learning. Qualification- and continuing education seminars do not only function as an education as such, but take over also many social tasks. These vary from awards for employees up to the function that in seminars (held company wide) contacts are made that also help to shape an entrepreneurial culture.

„However: In classical face-to-face seminars not only the contents count, but also the meeting with colleagues from other divisions or other companies. A great disadvantage of e-learning is therefore in the opinion of every second interviewed person that social effects have disappeared..." (Hartmann 2002: 88).

The risks and dangers of e-learning that follow from the disappearance of social relations and contacts have led in the mean time to the situation that in the theory and in the practice of e-learning is switched from pure »human being – computer – interactions« to »human being – human being – computer – interactions« (characteristic: Blended Learning, e.g. see Interview 2003). A start that uses the social components of learning for the realisation of effective e-learning concepts is that of collaborative learning which is presented in the next chapter.

3.   Social aspects of e-learning: collaborative learning

Different social aspects of e-learning from learning of social behaviour to social interactions in learning processes have been researched (Salmon et al., 1989).

Our focus in this part of the paper is on social interactions and in particular on collaboration in learning processes as well as on methods and on tools to support them.

It is known that through the development of virtual learning environments (VLE), particularly Web-based ones, the potential of the Internet and other media can be better used to support a searching and

exploring process having the learner as focus point and the trainer more as a person who models the frames for a determined learning situation of the student.

Important in this is to increase the social presence of the learners and trainers in a VLEs e.g. by "transporting" various issues of real-world environments in VLEs. Knoll and Jarvenpaa (1995) show that a combination of some categories of skills like the following is required for an efficient work in virtual environments similar with the work in real ones:

- virtual socialization skills by performing informal small talks or exchange of private information,
- specific e-moderation skills for the social host role of the trainer,
- virtual collaboration skills by defining a set of rules for collaborative work,
- technical skills by using the system.

Another important researched factor when using virtual environments is the impact of the lack of non-verbal and visual clues on online interaction. Some participants regard this as having negative feelings, others consider it to be a freedom. For getting the users however a feeling of social presence, the VLE should support a variety of interaction stimuli and cognitive orientation. The learners should at least be informed who is present in the session, how the group is composed and who participates actively in the learning process at the moment. They need to recognize each other, to develop a sense of direction on-line and they need some guide to judgment and behaviour.

A trainee reflected:

"For me, the key point from taking part in learning in a VLE is the realization that I am not alone in the problem I encounter. This is where this medium of communication and learning scores over all others. Through reading the other messages you quickly find that whatever is concerning you, others have faced the same problem and that gives you confidence to carry on " (Salmon, 2000).

Experience shows that the participants in a learning process by using VLE display all these feelings and needs immediately following their gaining access to the system.

So it is important that the e-moderators (trainers) help them by initiating and supporting "chat" conferences and online socializing.

Another aspect is that when the trainees feel "at home" with the online culture and reasonably comfortable with the technology of the virtual learning environment, they move on to contributing. In this context the (trainers) moderators should use their skills to ensure that the participants develop a sense of community in the medium.

It is good to keep in mind that a learning community offers more than the transitions of ideas and knowledge transfer: it first of all offers a way of establishing connections.

For the virtual learning community we use the definition of J. Preece (2000) as consisting of :

- people who interact socially to satisfy needs, perform roles, etc
- a shared purpose, that provides a reason for community,
- policies that guide people interaction,
- virtual environments to support and mediate social interaction.

Research results show that collaborative learning (e.g. by using learning communities) compared to individual and competitive learning scenarios brings students to a higher achievement level, raises their problem-solving abilities, offers cognitive advantages to learners and also has positive influences in enhancing the development of personality traits. These are beneficial for future learning or future autonomous or cooperative learning and working (Tozer et al., 1995).

In order to achieve such objectives, learning communities should offer (Preece, 2000):

- facilities for communication between group members and with the trainer collaboration in projects, shared work, resources access through the Internet,
- effective guidance by the trainers,
- feedback which can come from the tutor, from peers or automatically by the system,
- learning enjoyment.

For producing an optimal learning outcome it is therefore important to "blend" various pedagogical approaches (e.g. constructivism, behaviourism, cognitivism), different learning modes like real and virtual classrooms (e.g. web-based ones) and self-paced and collaborative learning. A harmonious effect of learning and working can be created by mixing instructional technology with actual job tasks. Using blended learning benefits:

- organisations to gradually move learners from traditionally classrooms to e-learning, making change easier to accept and to supplement or complement their existing (sometimes very expensive) learning materials rather than replace them;
- trainers and training designers to move small sections of their materials online and to develop skills needed for e-learning in small increments;
- learners by choosing the way of learning suitable to their abilities, objectives and wishes.

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