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**Author(s):** Isosomppi, Leena; Maunula, Minna

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# **Adult students in web-based thesis seminars - insights and challenges for supervision**

Isosomppi Leena, Maunula Minna  
University of Jyväskylä, Kokkola University Consortium Chydenius  
leena.isosomppi@chydenius.fi, minna.maunula@chydenius.fi

## **Abstract**

We examine the web-based thesis seminars in the context of academic adult education in our article which presents and reflects on the development of web-based teaching. Our reflection is based on our own web-based teaching experiences in the open university and in the class teachers' adult education programme aiming at the Master's degree, and in the feedback material that has been collected from the students. We first examine web-based seminars from the point of view of educational equality and accessible learning environments. Then we will analyse the requirement of scientificity of university context and the objectives related to the interaction and the adult educational solutions in web-based seminars. From this basis we describe and propose adult educationally good practices for web-based thesis seminars and also more widely for science-based online education. Our evaluation material which is related to the pedagogical development consisted of the group feedback discussion of adult students (N=60) who had participated in the web-based thesis seminars and of written self-assessments and feedback. As the theoretical mirrors of pedagogical solutions we use the sociocultural learning theory and the dialogical model of learning (Paavola & Hakkarainen 2009).

**Keywords:** adult students, web-based thesis seminars, accessibility, supervision

**Main Conference Topic:** E-learning

## **Introduction**

Lifelong learning and the current adult educational objectives challenge traditional education towards new practices and their continuous development. Web-based studying and blended learning are both possibilities and challenges for adult students and they require special adult educational points taken into consideration in the planning and implementing of the teaching (also Sharma & Hannafin 2007; Makkonen 2003). In this article we examine the thesis seminars carried out in the open university and in the class teachers' adult education programme in University of Jyväskylä, Kokkola university consortium Chydenius, from the perspectives of academic expert skills as well as the learning and studying of adults. We have functioned as supervisors of seminars by ourselves and collate our own experiences as well as the students' experiences and feedback about the two separate study modules that utilise the Adobe Connect (AC) – web-based environment: the proseminar of the subject studies of pedagogy and adult education (10 study credits) and the thesis studies of the advanced studies in education for the degree students (38 study credits).

We examine a web-based thesis seminar firstly from the point of view of the educational equality and secondly from the requirements of scientificity. Then we will reflect the experiences gained from utilising web-based environment to the starting points of the sociocultural conception of learning. We also touch on the dialogical model of building knowledge (Paavola & Hakkarainen 2009), which is based on the tradition of investigative learning practices. In the article we also discuss what kind of seminar and studying practices

and features of the practice community were built and would be possible to build among the adult students through the web-based communal studying.

### **Implementation of web-based thesis seminars**

The open university's proseminar of the subject studies in education and in adult education consisted of 30 hours of group-style seminar sessions which were carried out in a web-based environment and of about 100 hours of independent study. The open university's proseminar studies took place during one semester and were carried out as a process consisting of 6 - 7 seminar meetings. 40 students participated in these seminars at the faculty during the study year. Some of the seminars were carried out purely as web-based and some on the principle of choice, in other words the students could, according to their choice, participate in person or participate through a shared web-based environment.

The students of the class teachers' adult education programme were also offered the opportunity to participate in the thesis seminar (40 h) which lasted for one study year from their own localities through a web-based environment. The contact teaching weeks of the teacher education were busy and the majority of the adult students travelled every week or every day between their place of residence and the studying locality. About half of the 35 teacher students who studied in three separate groups utilised this opportunity for distance participation in at least some parts of the seminars.

From the teachers' point of view the careful planning of web-based teaching in advance is necessary, which Sharma & Hannafin (2007) and Makkonen (2003) also emphasize. At the planning stage the contents, technology and interaction of the teaching as well as the wholeness of pedagogical solutions (also Wang 2009) must be intertwined with each other. The actual teaching situation is intensive – the contents and the pedagogical sensitivity must not be lost under the technology. Adobe Connect – web-based environment enabled real-time video connection, text based interaction (Chat), sharing of documents and working also in the smaller virtual premises when necessary. In practice, the different views of the AC web-based environment (layouts) and the virtual small group premises (breakouts) had to be created and prearranged, the technical preparations had to be carefully carried out and a pedagogical manuscript drawn up for the four hour seminar sessions. Attention had to be paid also to taking breaks, web-based learning required intensive participation both from the teacher and the students.

The pace of the unit as a whole was set by a schedule requiring commitment which directed the progress of individual thesis processes and created a time frame which was common to the progress of the group. The study modules were built to be a unit of independent and group-style learning processes which were structured with the intermediate assignments. The studying of the modules was made up from many different working methods. According to Sabry and Baldwin (2003) the balance of the multiform learning methods promotes the effectiveness of learning experienced by the students in web-based teaching (Sabry & Baldwin (2003)). The significance of group collaboration and social operation in learning have both been justified through a number of learning theories and have been researched extensively. Teamwork increases peer support, motivation and satisfaction, and furthermore, interaction is naturally intertwined in the learning process (Leow 2013).

Attention was paid to utilising a web-based environment both at the scheduling of seminars and in reserving the class premises and equipment. All the teachers of the seminars had earlier experience of web-based teaching. The students were given, if necessary, guidance in the technical use of web-based environment as they had varying degrees of experience in this. The students were able to become acquainted with and to test the virtual room spontaneously, and furthermore, the common practices in the use of the web-based environment were arranged. The distance participants were required to register and to

technically test the connections before every seminar. There were some technical problems at first but as experiences were acquired and the program became familiar, the technical problems which were mainly related to the sound quality decreased.

### **Equal and accessible seminar**

Making distance participation possible can be seen not only as a pedagogical but also as a solution of education policy: with the aid of technological solutions equality in education is promoted. Lifelong learning and innovative web-based solutions are globally expanding in use and the expectations towards them are high (among others, Wang 2009). In connection with different study modules an attempt was made to solve challenges in combining work, study and family life in different adults students' situations in life with the help of the web-based environment. This way not only the geography but also the social distances were defied. For example, in the proseminar group of the open university an adult student who was responsible for the staff training of an international company on the other side of the globe studied together with a working parent with young children who was living far from any city centres.

We believed that the real-time transmission of speech and image in web-based environment supports positive interaction. Nonverbal communication has been seen as a valuable addition in the web-based teaching but unexpectedly some of the students experienced the visuality also as a burden. According to them, seeing the teacher was sufficient and minimizing all extras (the images of several web-cameras) in the web-based environment helped them to concentrate on the essential content and in the discussion stemming from it. To these students the audibility of the voice and the contribution of contents were more important than an image, so restricting the use of cameras was incorporated in the seminar. On the other hand, some of the students in another group emphasized particularly the importance of video images in strengthening the interaction. It was experienced that the distance attendance was more strongly conveyed through image and from the point of view of community, seeing all the participants was regarded as important. In planning web-based seminars a purposeful orientation which is in accordance with using the cognitive capacities of an individual and their limited scope has to be remembered, concentrating on several factors burdens and even weakens the quality of the learning process (Feinberg & Murphy 2000).

The reasons for the "information overload" may be connected to the students' sensitivity that they are born with in relation to the stimuli of the environment, to the difficulties in visual perception or the lack of familiarity in regard to operating in web-based environments. Attention should indeed be paid to the overlap of cognitive processes at the planning stage of web-based teaching (Feinberg & Murphy 2000). Withdrawal from face-to-face interaction in a study situation may be motivated also in university studies by the feeling of tension and uncertainty, at the extreme level even by panic attack symptoms or simply by the aspiration for an easy minimum participation. However, clarifying the starting points of the students is a challenge for the teacher.

Adapting the learning environment and making possible the working methods suited to different students can succeed in a web-based environment with small everyday solutions (also Mohorovicic, Lasic-Lazic & Strcic 2011). The students who want to avoid abundant visuality can, for example, be asked to leave their cameras on but to mark off distracting elements from their own view of the web-based environment. If an individual student withdrew from interaction in the online situation, the individual supervision which is part of the seminar studies gave opportunities to clarify the student's starting points and also to support individually in preparation for shared group situations. The use of a web-based

platform in the seminars as such promoted accessibility at least in regard to the obstacles relating to the situations in life, use of time and mobility.

### **Requirement of scientificity and social pressure in the thesis seminar**

The thesis seminar has strong traditions as an academic form of teaching. Many of the adult students already had experiences of thesis seminars from another discipline and of the ways of argumentation or roles in the seminar, for example, of the opponent procedure. For a majority of the students, however, building a relationship with the academic or working on research were usually at a beginning stage. The requirement of understanding the academic and scientificity and the different expectations which are related to the seminar practices may have caused a particular tension and they may have affected interaction in the seminars.

In scientific seminars, on one hand the objectives of the academic community and the institution of science overlap in a special way, on the other hand pedagogical and the versatile objectives for supervision also overlap (Annala, Korhonen & Penttinen 2012). The thesis seminars can probably be considered as a kind of a simulation of academic debate where the roles of the scientific community are practised. At its worst, the social threat of humiliation can also hover in the thesis seminar, which is provoked by uncertainty of the requirements of scientificity and of one's own abilities relating to research. In the seminar the participants are also protected by different supervisory and linguistic methods.

The pedagogical challenges of thesis seminars arose from the social context that has been described above, from challenges of socialising in to an academic community, from heterogeneity of the adult students and from challenges of adopting the study material and expert knowledge. The thesis seminar should be sufficiently safe as a studying situation but also a learning environment which is based on the academic ideals, and where the expert skills can be practised together. The supervisors of seminars can aid this process by their example and also by wording the values and principles of the scientific community in authentic situations as well as by helping students to also adopt the language and practices of the academic science community consciously. In that case the academic and the scientific appear as matters to be learned and not, for example, as indications of a capability or intelligence one has been born with.

The supervision relationship between the supervisor of the seminar and the students has a significance: the students who have received supervision bring their project more often than others to a conclusion and understand more profoundly what they have learned (Sharma & Hannafin 2007). According to our experience the significance of supervision is emphasized especially at the beginning stage in the web-based teaching. The starting points and expectations of the students strengthen this arrangement. The supervision connects to the ways of producing scientific information (to the methodology), and to the contents of scientific knowledge (to the theoretical perspectives) as well as to the meta-knowledge of scientific operation (for example, to the principles of scientific argumentation). In the seminar situations making visible the social practices creates a framework for the interaction. The supervisor sets an example in creating a safe atmosphere, in realizing the different starting points of the adult students (also Makkonen 2003) and in promoting interaction. When examined from the perspective of sociocultural learning the supervisor creates a social learning environment strongly through their own operation and models practices of the scientific community and the use of cultural facilities.

The power relations which are manifested in social situations are dynamic and built through negotiation in the social situations. In this context, supervision of a seminar community has its own logic. Examining socioculturally, the pedagogically skilful seminar supervisors use communicative supports (scaffolds) and regulate their own supervision appropriately, in which case students are offered information, for example, about the

definition of the task and about the possible ways to interpret it when they need it (Sharma & Hannafin 2007; Säljö 1999). On the other hand, room must be made for the adult students' knowledge and the sharing of experiences at every stage of the process. As the thesis process proceeds, the operation culture is gradually established and the practice community strengthened, the supervisor can partly withdraw to the background in the social situations and emphasize the students' responsible roles.

### **Towards participating web-based culture**

The adult students who had participated through the web-based environment studied actively and the interaction required by the seminar work was realized mainly naturally according to our own evaluation and the student feedback. However, the students' prejudices at the beginning of the studies were more sceptical and the adequacy of their own e-skills were doubted but with the received supervision and acquired experiences the confidence in their own e-learning skills increased. Familiarizing themselves in advance with the AC web-based environment, the supervised testing of the equipment, the clarification of practices and the small and close community were regarded as important.

The experiences of the students participating in the teacher students' seminar regarding the student colleagues' distance participation in the thesis seminar were mainly positive, only a few students experienced technical problems or the online facility itself as interfering with the interaction. After the initial guidance the adult students were reassured by the clear instructions and by contact information to manage the problem situations. The students thought maturely about the possibilities of using online facilities and they evaluated as, for example, Makkonen (2003) that e-learning was successful for the committed adult students. According to the student feedback, there are also pitfalls in the web-based teaching, such as the fact that a student may not dare to ask. According to the students who were more experienced in e-learning, face-to-face participation was more rewarding than following the recordings and experience of participation was stronger. The adult students emphasized the significance of interaction, discussion and sharing of experiences (also Leow 2013) in their feedback. According to the students, the first web-based teaching session was especially exciting and at the same time also the most challenging. The technology and especially transmitting one's own image in a new group was bewildering. Already in the second meeting of the web-based seminar the experience was more pleasant and more familiar.

The received feedback also confirms the significance of supervision in web-based studying. Students appreciated the fact that the teacher was approachable and that attention was paid in the supervision to the student's start level and to the different needs (also Sharma & Hannafin 2007). According to the adult students, the teacher's stories about their own experiences relating to web-based teaching and about carrying out research increased the depth and genuineness of the learning. All the communicative nuances are not conveyed in the web-based interaction. Still, according to the students there was a pleasant and appreciative atmosphere in web-based seminars. It was emphasized beforehand in the guidelines that the skills of giving and receiving feedback are an essential part of the scientific dialogue. According to the students, they expected and received critical constructive feedback from other students as well as from the supervisor. The criticality can be loosely compared with Mercer's (1996) exploratory talk, in which the high-quality group interaction is analytical, critical and constructive.

The students thought about the forming of roles of the group in the web-based seminars. A few students experienced participation and web-based interaction as challenging. It was difficult to join in the heated discussions at times: the subject was challenging and participation that felt natural to themselves was leisurely. However, the discussion was rewarding according to these students also even though all the comments weren't addressed

by themselves. A few students thought about a possibly aggressive tone in their own speech and others' experience of the different communication styles. However, it was stated jointly as a strength that everyone was allowed to participate in a way that was natural to themselves, this was experienced as strengthening for the forming of a group. The students stated that they understood properly only during the process, what was meant by the process-like nature of the seminar.

We teachers were challenged by a form of implementing the seminar in which there were students simultaneously in both contact and web-based teaching. At least according to our experience, it split the teacher's attention and over-loaded cognitive processes (cf. Feinberg & Murphy 2000). Participation in the web-based teaching increased when the seminars proceeded. In the student feedback more web-based teaching was hoped for, likewise more encouragement for critical constructive interaction and on the whole, interactivity was hoped to become more strongly a part of other forms of teaching also.

### **Towards communal learning**

According to the students, the shared thinking of the group, the received feedback and the versatile supervision clarified their own thoughts and deepened learning (also Sharma & Hannafin 2007; Wang 2009). Also the progress of others in the studies was experienced as encouraging. Progressing as a group enabled the formation of a shared foundation of experience and understanding as well as identifying with the experiences of others, which is a core component in communal learning (also Wang 2009). The discussion about the phenomena of the discipline was at its best rich, cooperative and constructive building of knowledge according to the criteria of meaningful learning (Jonassen, Peck & Brent 1999). Also the ownership of one's own research, responsibility for one's own progress and an understanding, the choice of subject and its definition were experienced as factors which increase commitment and meaningfulness (see Jonassen, Peck & Brent 1999; Paavola & Hakkarainen 2009.)

Adult students have experiential knowledge about the phenomena in education, which helped in forming the relevant research subjects and points of view. One central criterion for meaningful learning is the authenticity of the matter to be learned (Jonassen, Peck & Brent 1999), in other words its connection to the learner's own situation in life and the areas of interest. Kim and Frick (2011) emphasize that the relevance of the subject to be studied, the technological capability and the age of the students support the adult students' web-based studying. Older students act more competently and they realize the significance of the learned matters in work and in other parts of life. Adult students are motivated by authentic, real problem solving tasks, the integration of new knowledge with already existing knowledge capital is important (also Sabry & Baldwin 2003). Meaningfulness, motivation and commitment form a positive circle. Paying attention to the starting points and needs of the students in web-based studying promotes the enjoyment of the learning process and also the flexibility and autonomy of the students (Sabry & Baldwin 2003).

### **Conclusions**

From the point of view of sociocultural learning the seminar studies which lasted from 30 - 50 hours and for 6 - 12 months gave the opportunity for discussion and adopting the operation culture but also for development as a learning community. As a result of participation in web-based and seminar culture the students progressed in adopting the expert practices of the discipline and in participating in the interaction (see Mohorovicic, Lasic-Lazic & Strcic 2011). The web-based environment appeared to the students as one working tool to be taken alongside the other more traditional tools of the studying activity. In the work of seminar groups the spontaneous development of the new tools of learning activity can also be

seen socio-culturally: some of the student groups continued interaction independently outside the seminars by networking through, among others, Facebook, Skype and the associated groups.

When examined theoretically, the seminar groups developed and strengthened during the seminar work as practice communities which utilise web-based interaction. The so-called dialogical approach for learning developed by Paavola and Hakkarainen (2009) and ideas of situated learning presented by Lave and Wenger (1991) are suitable as starting points for the web-based teaching. The approaches emphasize the importance of communally shared subjects of the operation in communally and individually significant building of knowledge. The approaches support the completion of web-based seminar assignments and study papers in pairs and working together with others who are studying the same subject matter. A thesis which is completed alone supports neither the communal ability to solve problems in the best possible way nor the academic awareness relating to research. The web-based environments can contribute as the tools for creating communal knowledge in the adult students' communal learning processes, but the fine nuances of learning and the different possibilities for the use of the learned matters in the changing contexts further challenge web-based teaching.

Paying attention to the starting points of the different students at the planning stage of web-based teaching (Makkonen 2003) and anticipating the different supervisory needs (Sharma & Hannafin 2007) as well as the individual modifying of the learning environment are starting points for planning an accessible learning environment (Universal Design for Learning). The supervisor also varies the nature of supervision and activity according to the starting points of the learners by structuring interaction or activating students.

### **Brief biographies of the authors**

#### **Isosomppi Leena**

PhD (Education) works in University of Jyväskylä, Kokkola University Consortium Chydenius as a university lecturer. Her interests relating to research focus on, x, x and x.

#### **Maunula Minna**

PhD (Education) works in University of Jyväskylä, Kokkola University Consortium Chydenius as a university lecturer. Her interests relating to research focus on the wholenesses of adults' lifecourse, the significance of education in the global time and also on developing web-based and multiform adult education.

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