Nine Recommendations for Enhancing e-Moderation Skills by Utilisation of Videoconferencing within an e-Tutoring Curriculum

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Abstract: As commonly known, a tutor's role changes when teachers appoint her/him as an e-tutor. A requirements analysis carried out at our university shows that more and more teachers believe that e-tutors have to be soft skilled particularly in e-moderation and online communication skills. To account for such requirements, existing university e-tutoring curriculums have to be adopted. This paper describes a curriculum design and investigates the utilisation of videoconferencing within e-tutoring. Videoconferencing's simultaneousness, multimodality and real-time characteristic suit ideally to training of e-moderation skills. So far, most publications about e-moderation only describe basic aspects of moderating within online learning or teaching, while hardly any publication considers using videoconferencing in e-tutoring in particular. With nine recommendations we thus try to close this gap. These recommendations are given for teachers as a reference on how to apply videoconferencing effectively in training of moderation-skills within the limits of university's e-tutoring curriculum.

1 Introduction

The intensive use of Computer Mediated Communication (CMC) tools in lectures and seminars at brick and mortar universities requires a complex set of skills of tutors. Their role is changing from face-to-face tutor to e-tutor (see Barker 2002, Denis et. al. 2004). Many teachers, especially at universities of technology, are of the opinion that e-tutors should be trained in using and organising the tools (e.g. Learning Management Systems) not in soft skills or e-moderation techniques. As an example, uploading content and answering forum contributions are seen as core tasks.

Assuming that students at universities of technology are already skilled in using New Technologies, many universities are working with e-tutors without having an e-tutor education available. Teachers or management of universities very often advance the view that students in general and e-tutors in particular do not require training in soft skills. As suggested by (Bennett & Marsh 2002), tutors are being asked "to run before they can walk" and that "the majority of tutors new to online teaching do not have the background of online learning experience upon which to draw". Of equal consideration are the e-tutor's existing competencies and any gaps in their competencies related to the roles they will be required to fulfil. Opposite to this opinion (which is expressed only informally), we determined a lot of programmes and research activities in which the importance of training of online moderation skills is expressed (see e.g. McPherson et al. 2003, Schröder & Wankelmann 2002, Cornelius & Müller 2004).

Based on a requirements analysis, the Teaching Support Center of Vienna University of Technology figured out that teachers see the tasks of e-tutors not only in handling technology but also in e.g. moderation of online learning communities.

Therefore, our e-tutoring curriculum is focusing on soft skills including e-moderation, organisation of online communication and tutoring of online communities. However, we assume that today´s students already have enough pre-experiences with these tools from a technical point of view.

More and more teachers are developing complex e-learning designs including online communication and online collaboration during lessons. Blended learning designs are implemented, more and more teachers are using so-called Webinars – seminars totally rest upon Web-Technology very often based on videoconferencing software. Therefore, e-tutors are more often required to support teachers by organising online learning settings. Skills such as time management, aspects of online collaboration, structuring online communication, and moderating online-groups are required to increase interest and learning outcomes-oriented learning arrangements. In addition, our concept includes theoretical and practical experiences with videoconferencing. Hereby we prepare future e-tutors to handle various e-learning scenarios within videoconferencing tools.

According to our opinion, videoconference sessions are well suited for making experiences with all aspects of online communication and organisational issues. Therefore, students are provided with the possibility to act as online-moderators during the lessons.

Including videoconferencing in the curriculum was based on the idea that videoconferencing is not only able to stimulate motivation but also mediated all aspects of online moderation and e-competences such as virtual time management, organisational issues, etc. Therefore, our concept is also an attempt to increase efficiency of e-tutors.

2 Development of e-Tutoring Concept

As described in the introduction, our training concept for e-tutors focused on competences such as e-moderation, e-grouping and didactic aspects of media literacy. In this chapter, we describe main parts of our curriculum by emphasising how these e-skills as well as various e-tutoring competences were learned during our training.

2.1 The Curriculum's Key Issues

2.1.1 Enhancing Soft Skills

To improve students' soft skills, especially moderating skills, the knowledge has to be learned not only by theoretical lessons but rather by practical tutorials (see Schröder & Wankelmann 2002, Bremer 2002). Our four online exercises during training (see chapter 2.3) were mainly based upon the *experimental learning* approach by (Kolb 1984). This approach enabled stressing students' self-awareness and particularly focusing on enhancing their e-skills. To further emphasise the linking between attending lectures and exercises, the following fundamental criteria were considered:

Responsibility: Each group had to have a different group leader at every online exercise. Group leaders were not only responsible for meeting the exercise's deadline, but also had to act as the group's e-tutor. They had to ensure continuous participation of all group members as well as to answer students' requests by supervising varying communications tools provided for each exercise. Hereby, the group leader acquired tutoring and moderating skills enabling him/her to experience aspects of future work. To provide a basis for their e-tutoring activities, lectures were set up with regards to content. Moreover, teachers monitored every action taken by the group leader. With qualitative feedback after each online exercise, group leaders' activities were reviewed and reflected.

Change of roles: According to (Merkt 2004), *change of perspective* is a key aspect of learning. Thus, one key course element of our concept was to mediate different experiences of communication technology, especially at videoconferencing. Hereby, not only technical skills were considered but also moderating guidelines and tutoring aspects (see Packham et al. 2006, Mündemann 2002) were trained. For example: *How can I technically supervise order of different (simultaneous) requests (in videoconferencing, forums, etc.)? How do I structure and moderate discussions? How can I identify lurking students and which actions could/should I take? Etc.*

Due to applying different CMC tools (see chapter 2.3), our course participants had to gain experience as trainers as well as students to understand characteristics of both perspectives. Change of roles enabled them to enhance their skills by varying the task of active moderation and tutoring (role of trainer) as well as simple

participation in collaborative learning (role of student). Hereby, change of roles always took place within a 'safe' setting as students worked together with their colleagues.

Step by step decreasing of guidance: This e-tutoring concept aimed to encourage students' self-reliance with regard to enhance their e-skills. To provoke self-reliance, the curriculum design particularly considered step by step decreasing of teachers' guidance. Using the example of videoconferencing, initial videoconferencing sessions were carried out on campus in 'safe' university settings, whereas final sessions were realised without spatial limits i.e. students could participate from various locations such as work or home. Another advantage of this strategy enabled teachers that they could take corrective action in case of technical difficulties or severe moderating problems faced (during the first videoconferencing session) by giving immediate as well as face-to-face feedback.

2.1.2 Increasing Motivation and Participation

To ensure highly motivated students who actively participate in our training, various strategies had been adopted:

Emphasising Online Work: All exercises, discussions, and collaborative working had been carried out on-line, hereby creating an 'unusual' learning scenario. Due to the fact that our course concept was realised at a brick and mortar university, working (merely) online is not commonly adopted. Therefore, student's curiosity was increased causing initial interest.

'Mixture of tools': To keep the level of interest alive, each online exercise focused on training of a different communication tool (see chapter 2.3). The curriculum design aimed to increase multimodality of interaction in a progressive manner. At the beginning of the course (exercise 1 and 2), asynchronous communication tools were used to mediate e-tutoring scenarios, whereas at the end synchronous systems were utilised. Through this strategy of incremental enhancement of interactivity, it was possible to teach students different levels of e-tutoring skills.

Videoconferencing as the curriculum's 'highlight': Due to videoconferencing's simultaneousness, multimodality and real-time characteristic (Meier 2000), it represents the most demanding CMC tool to moderate. So only after gaining experience with various other tools, students were allowed to take the next step and moderate learning sessions by applying videoconferencing. Due to its novelty in teaching at a brick and mortar university, an increase of students' motivation and participation was expected.

2.1.3 Education of Didactic Techniques

As indicated in the requirement analysis, soft skills and didactic aspects are more likely to be neglected at universities of technology than technical aspects of media literacy. To overcome underestimation of these competences, our tutoring curriculum set considerably high emphasis on didactical techniques within utilisation of CMC tools. Theoretical education of these aspects (adapted from Salmon 2000) was basically considered during lectures. Assessment of the online exercises always investigated to which extent students 'acted' upon didactical techniques. For example, e-tutors had to moderate and prepare e-content according to the specific target audience. As another example they had to support participation by stimulating collaborative. Moreover they had to encourage discussions and raise debates by enhancing critical thinking as well as look after ideal pacing (continuous monitoring of motivation and activity).

2.2 Videoconferencing

As mentioned before, videoconferencing represented an integral part of our e-tutoring curriculum. However, it is important to stress that videoconferencing was not used to improve transfer of knowledge or quality of teaching as there are many criticisms reported. For example (Knipe et al. 2002) and (Freeman 1998) describe that not only quality of teaching but also learning efficiency drop as compared to traditional face-to-face education.

In our investigation, videoconferencing was therefore applied as an integral tool that enables students to face immediate experiences in online moderation and communication skills. Due to the *immersive character* of videoconferencing, *responsibility* and also the *change of role* (mentioned in chapter 2.1.1) became more apparent hereby supporting the acquisition of desired e-tutoring skills.

In addition, students should experience tutoring situations more lively as well as actively. So, *self-representation* of students plays an important part. The e-tutoring situation within videoconferencing should remind students of 'television appearance' as video and audio channels are transmitted. This circumstance should implicate not only more intense preparation by students but also should stress immediacy of self-awareness compared to other online tutoring scenarios.

As videoconferencing is seen as the CMC tool that is closest to face-to-face communication, it should show students the limits of online communication as well as differences to face-to-face tutoring. Hereby, especially supervising of online collaborative work and managing group members' requests (within discussions of videoconferencing) were trained in order to gain tutoring experiences.

Within the e-tutoring course, Adobe Connect Pro was used as a videoconferencing tool. This web-based system integrates various communication forms (audio and video transmission, chat, whiteboard, presentation of files, survey tool, etc.), enabling not only to practice different tutoring scenarios but also the application of creative didactic techniques. Decision criteria for its utilisation were good quality of audio-, video- as well as data-transmission and role management that enabled changing of roles as described in section 2.1.1. Due to students' technical skills as well as Adobe Connect Pro's intuitive usability, hardly any software training was required, enabling teachers to start education of e-skills right from the beginning.

2.3 Conceptual Framework

The e-tutoring concept described above was realised within a practical course at Vienna University of Technology in Austria. To ensure applicability, this course was embedded within the curriculum of 'Informatics-Didactics' as well as the general elective course catalogue of 'soft skills'. The course has duration of one semester with a workload of two hours per week.

As mentioned before, four online exercises were carried out to enhance students' tutoring skills. In the following Table 1 the online exercises are summarised considering goals, didactic methods, major learning outcomes as well as applied CMC tools.

Exercise number	Objective and Description	Didactic Method	Learning Outcomes	CMC Tool
1.	*Evaluation:* Evaluation of real e-tutoring situations	Field analysis followed by online teamwork	Module essay, Enhancing e-grouping and e-moderating	Discussion forums
2.	*Synthesis:* Development of a self-contained e-tutoring concept	Online project work	Project Report, enhancing e-grouping and e-moderating	Discussion forums, mailing lists, chat
3.	*Application & consolidation:* Practical online tutoring experience of self-contained e-tutoring concept (Exercise 2)	Experimental learning (within a university setting)	Gaining practical experience in e-moderation, utilisation of didactic techniques	Videoconferencing (emphasising audio), chat, whiteboard
4.	*Application & consolidation:* Practical online presentation and experience of tutoring scenarios	Experimental learning (within individual settings, i.e. work, at home etc.)	Gaining practical experience in e-moderation, utilisation of didactic techniques	Videoconferencing (emphasising video), survey tools

Table 1: Online Exercises of the e-Tutoring Concept

3. Results

As indicated, results of this paper consist of two aspects. Firstly, we evaluated the quality and relevance of our e-tutoring curriculum. Secondly, nine recommendations are introduced (see section 4) in order to create guidelines how to apply videoconferencing in training of moderation-skills within limits of a university e-tutoring curriculum.

Evaluation Results: The e-tutoring curriculum introduced in this paper was tested as described within the limits of a practical course at a Vienna University of Technology in Austria. Time period for initial realisation of the course was in winter semester 2009 (October 2009 to February 2010). To review utilisation of videoconferencing, various evaluation techniques were used.

First of all, two qualitative evaluations were carried out. The university's official report investigated overall student's contentedness hereby verifying curriculum's qualification. Assessment of our course achieved 1.57 on a scale between 1 and 5 (where 1 is best value). In particular, the aspects 'peer collaboration' (1.00), 'quality of content' (1.43) and 'acquiring new insights' (2.14) were rated positively. As expected, some students reported unfamiliarity with the heavy load of online work which was an integral part of our curriculum. They suggested within the university's official report that there should be more 'offline' group meetings, as they were used to working within lectures at our brick and mortar university. However, despite of this comment, the curriculum's concept of working online won't be changed, as we believe future e-tutors have to become online literate.

The second qualitative evaluation was carried out as a questionnaire conducted by the course's teachers investigating the curriculum's key issues as described in section 2. Hereby, overall acceptance was evaluated as well as utilisation of videoconferencing was confirmed. Students especially acknowledged videoconferencing's 'immediacy of moderation experience' and the training of a large number of CMC tools. By contrast, scheduling of online exercises was rated negatively. Students reported that they did not have sufficient working time for the first and second online exercise.

Quantitative evaluation as well as comparison between utilisation of various CMC tools was considered. Hereby, for example, not only percentage of moderation (compared to overall communication), number of posts (forum) as well as comments (videoconferencing, chat) and contribution in 'whiteboard sessions' was quantified but also topic and relevance of comments was analysed. Results show for example that moderating students basically made up for 30 to 40 percent of total communication. However, there is remarkable variation of students' activities within different CMC tools. It is important to state that these differences can't be reduced to the asynchronous/synchronous character of the tool. Rather, motivational aspects were responsible for the fluctuations. Within videoconferencing, the differences in activity records balanced out. Due to videoconferencing's novelty in teaching, students' motivation increased as former inactive students participated in debates and also in other tutoring scenarios conducted within the limits of videoconferencing. Furthermore, collaborative workings as well as inter-student communication increased as 'overwhelming numbers' of personal messages were sent.

Report of Experiences: In Figure 1, several moderation scenarios are depicted, showing the diversity of e-tutoring settings considered within the conceptual framework of the course. Figure 1a shows utilisation of videoconferencing as a presentation tool, where students had to prepare various topics in advance and present them according to their own didactical concept. Figure 1b depicts the moderation exercise of an online debate, where the poll tool was applied to encourage the willingness to participate. To show effects of 'missing senses' a simple audio discussion was set up (see Figure 1c). Hereby, the future e-tutors enhanced their skills be focusing on (only) the audio channel. Figure 1d displays one student's creative solution to raise motivation of their colleagues. In reaction to reduction of colleagues' activities, one student organised to play the game 'hangman'. Hereby, other students guessed over the chat panel whereas hangman's framework was displayed within the whiteboard tool. This didactical technique not only increased participation but also noticeably contributed to building peer cohesion.
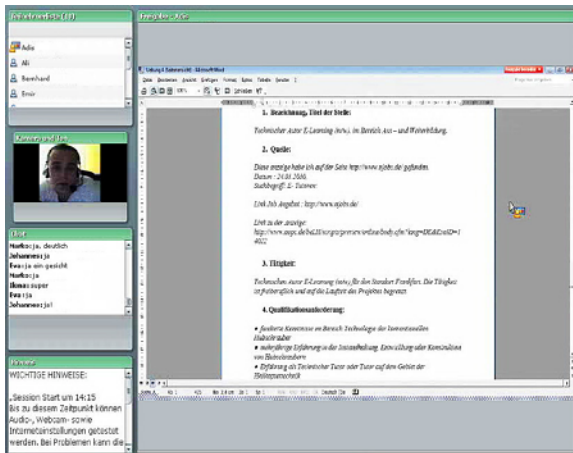
(a) Presentation of exercises
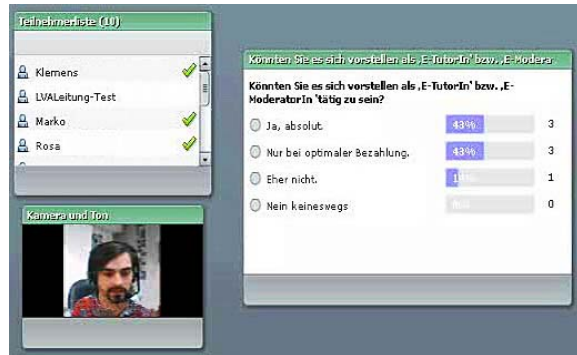
(b) debating poll's results
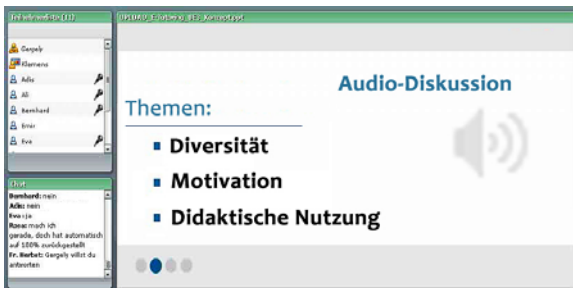
(c) moderating audio discussions

(d) increasing peer cohesion by online gaming

Figure 1: Screenshots of Videoconferencing Scenarios

4 Nine Recommendations: Using Videoconferencing in the Training of e-Tutors

In this chapter, we introduce nine recommendations for the effective application of videoconferencing in the training of e-moderating skills. Literature research revealed that most publications about e-moderating respectively soft skills of e-tutors basically describe general aspects of e-moderation relating merely to online tutoring or teaching. (Salmon 2000) introduces a framework for e-moderation, whilst (Zumbach et al. 2005) provides a good description of tutoring aspects in synchronous learning environments. (Mündemann 2002) brilliantly outlines general moderation factors in online moderation, but does not explore application of videoconferencing in particular. (Packham et al. 2006) summarises various publications relating to effective e-moderation in virtual learning environments from a student's as well as a tutor's perspective.

However, hardly any publications consider using videoconferencing in particular. The following recommendations try to close this gap. Hereby, experiences and findings of this investigation are summarised in 'nine recommendations'. These recommendations are addressed to teachers, showing how to apply videoconferencing in a didactically effective way for the training of moderating-skills within the limits of a university e-tutoring curriculum.

1. *Ensure technological skills and access:*

Similar to the first step of Salmon's five-stage-model (Salmon 2000), also in applying videoconferencing, teachers have to ensure that students are technically skilled and can access the CMC tool. We recommend setting up a test account for the videoconferencing tool in order to enable students to test the system. Furthermore, it is useful to prepare a short document (max. 4 pages) describing access and relevant videoconferencing features for the e-tutoring scenarios practiced within the curriculum.

2. *Decrease guidance step-by-step:*

It proved to be very useful to decrease guidance at videoconferencing sessions step-by-step. We recommend that initial videoconferencing sessions should be carried out on campus in 'safe' university settings, whereas final sessions should be realised without spatial limits, so that students can participate from various locations such as work or home. One major benefit is that shy or unconfident students who would have problems to 'act' in front of their colleagues can be supervised. Confidence in the system can be built up progressively. We believe that the experience of being on one's own is important in e-tutoring - however, it must be trained step-by-step.

As mentioned before, another benefit is that in a university setting, teachers can take immediate corrective action in case of technical (setup) difficulties or moderating mistakes.

3. *Foster possible forms of collaborative working:*

Videoconferencing can be used in different forms of collaboration. For example, as (Laurillard 1993) noticed, CMC tools can be used both as a presentation tool as well as a discursive medium. It is important that future e-tutors are not only capable of estimating and evaluating the potential of the videoconferencing technology, but also consider content-sensitive application of the system. Therefore, we advise to mediate moderating experience of various tutoring scenarios within several videoconferencing sessions.

4. *Emphasise the importance of structuring communication:*

Incoherently or loosely moderated learning sessions tend to get out of control, thus making tutoring more difficult. As most publications point out (e.g. Packham et al. 2006, Mündemann 2002), communication and also collaborative working has to be structured. This aspect is also valid for videoconferencing, as synchronous interactions and multimodality might complicate communication. Furthermore, we recommend teaching future e-tutors to always establish rules of communication. Especially community rules must be presented in advance within the videoconferencing tool or/and on the homepage of the e-tutoring course.

5. *Force change of roles in order to enable experiencing different perspectives:*

As described in section 2.1.1, change of role is important as different views of e-tutoring can be experienced. We recommend to structure videoconferencing in slots that do not last longer than 10-15 minutes and that a change of role occurs after each slot. Hereby, it is quite helpful if students of different groups have different roles. As an example (see Table 2), one of our videoconferencing sessions was set up to enable four students *direct e-moderating experience* within a total time of approx. one hour. This scheduling also benefits time- and cost-effective utilisation of the videoconferencing system.

Videoconferencing (First Session)							
Group 1					*Group 2*		
Slot 1		**Slot 2**			**Slot 3**		**Slot 4**
Moderation: member A of group 1	5 min. Break	Moderation: member B of group 1	10 min. Break		Moderation → member A of group 2	5 min. Break	Moderation → member B of group 2
15 min		*15 min*			*15 min*		*15 min*
Active participants → group 2		Active participants → group 2			Active participants → group 1		Active participants → group 1

Table 2: Scheduling of an exemplary videoconferencing session

6. *Videoconferencing is exhausting: Make breaks!*

Due to its synchronous character and the circumstance of working online, videoconferencing is demanding. Therefore, it is reasonable to schedule an adequate amount of breaks. Also, train your students to pace their sessions according to their didactical plan. Furthermore, don't expect thematically deep debates as (compared to forums) there is just not enough time for deep reflection of the subject.

7. *Encourage motivation by a 'Best Participation Award':*

In order to enhance willingness for participation, we recommend offering a reward for best presentation/discussion. Awarding itself should be conducted as an anonymous poll among students. Hereby, not only motivation as well as participation is increased but also peer cohesion is supported.

8. *Summarise and give feedback:*

In teaching, summarising and giving feedback must not be neglected. With regards to videoconferencing, immediate feedback (after each session) is important, since lots of experiences (even unconsciously) occur in synchronous settings. If videoconferencing is carried out on campus, follow-up meetings in lecture rooms are useful to share and discuss experiences. In case of conferencing without spatial limits, short oral sum-ups by teachers or written summaries provided on the lecture's homepage benefit learning and gaining skills.

9. *Consider a 'mixture of tools':*

This recommendation seems to be contradictory as we summarise only aspects of videoconferencing. However, it has to be stated that using videoconferencing exclusively is not sufficient for training of e-moderation skills. We recommend applying multiple CMC tools in e-tutoring education as students should experience characteristics of different communication situations in practice. Our concept advises a consolidated 'mixture of tools' (see Table 1). From our point of view, it is important to build up confidence first by referring to well-known schemata or commonly used CMC tools, such as forums. Only afterwards should videoconferencing be utilised.

5 Conclusions

E-learning scenarios require the availability of adequately trained e-tutors. Thus, e-tutors should be trained in appropriate skills that will enable them to fulfil the tasks they have to perform within tutoring of online learning communities. Interviews with our university's lecturers showed that teachers emphasise e-moderation and online communication skills. Therefore, an e-tutoring concept was developed that focuses with greater emphasis on these e-tutoring skills.

We used videoconferencing lessons to deepen e-moderation skills. Training programmes for e-tutors need to provide experience of online learning and teaching supported and mentored by experienced facilitators in order that online teaching and learning practice is of a high quality. As shown, videoconferencing settings can provide a very useful method to support these moderation experiences. However, we found out that various aspects have to be fulfilled if training of e-tutors should be effective. In succession, we gathered our experiences and findings into nine recommendations (see section 4), as so far hardly any publication considers videoconferencing in e-tutoring training.

The current concept has been tested with a small group of students. As a further step, we plan to investigate whether our didactical concept works with more then 50 up to 100 students in one course. Hereby, we also want to find out how scheduling can be optimised to provide all students with a high amount of direct e-tutoring experience. As a possible solution, clustering into further sub-groups might be adopted to maximise usage of videoconferencing.

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