

## Meaningful Learning through Video-Supported Forum-Theater

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This paper presents the first cycle of a design-based study at Mikkeli University of Applied Sciences, Finland, during which a video-supported forum-theater approach was implemented and evaluated. Students enrolled in the Drama course in the Civic Activities and Youth Work degree program produced and recorded forum-theater performances about elderly people's use of alcohol, with the recordings used first as learning tools for themselves and later as video cases for social work students enrolled in the Substance Abuse course. The study sought to refine the design of these courses by analyzing the Drama course students' experiences of the video-supported forum-theater approach from the viewpoint of meaningful learning and then the Substance Abuse students' experiences of the video cases. The results indicate that, according to the Drama students, video-supported forum-theater facilitates both teaching and meaningful learning, enhancing the acquisition of domain-specific knowledge, methodological skills, and the ability to solve every day social problems. The Substance Abuse students perceived the video cases as useful for learning. According to students, the videos were authentic and represented working life well. The results suggest several practical refinements to both the Drama and the Substance Abuse course designs and to the teaching activities.

### Introduction

One of the challenges facing higher education is to provide students with learning environments in which they gain the experience of working situations that experts encounter. Teaching practices are required which integrate the study of domain-specific knowledge and promote students' ability to recognize, identify, and solve problems (Tynjälä, 2001). In social work education this challenge has been described as the theory/practice dilemma, the problem of readiness to practice, and the problem of integrated learning (Knowles & Ballantyne, 2007). Different pedagogical approaches, such as forum-theater, case-based teaching, and problem-based learning, can and have been used to meet this challenge. Digital video cases can support learning by illustrating real-life problems, triggering discussion, and bringing out relevant issues and tacit beliefs (Schwartz & Hartman, 2007).

This paper presents the first cycle of a design-based study at Mikkeli University of Applied Sciences, Finland, during which a video-supported forum-theater approach was implemented and evaluated. Students enrolled in the Drama course in the Civic Activities and Youth Work degree program produced and recorded forum-theater performances, with the recordings used first as learning tools for themselves and later as video cases for social work students enrolled in the Substance Abuse course. The Drama students produced two video cases which portrayed elderly people's use of alcohol. The study sought to refine the design of these courses by analyzing the Drama course students' experiences of the video-supported forum-theater approach and then the Substance Abuse students' experiences of the video cases. Of special interest was the students' emotional

involvement, which is considered one of the characteristics of meaningful learning in this research.

### Literature Review

#### The Forum-Theater Method in Higher Education

Forum-theater is an interactive technique based on Augusto Boal's Theater of the Oppressed (see Boal, 1979), which has been used worldwide as a tool for community building and organizing for direct democracy (see Picher, 2007). The basic idea of forum-theater is that a problem of current interest can be investigated by means of drama (Boal, 1979, 1992, 1995). The technique seeks to transform people from spectators (objects) into actors (subjects) in their own lives and to make audiences aware of oppressed-oppressor relationships and how the consequences of such relationships can be avoided (Boal, 1979, 1998; Hakemulder, 2007). According to Picher (2007), Theater of the Oppressed "highlights theater not as a spectacle but rather as a learning process that fosters critical thinking" (p. 79).

In a forum-theater workshop, participants first take the role of audience: they are shown a play (performed by actors) in which a central character encounters a situation of conflict involving oppression that s/he is unable to overcome (see, e.g., Seeley, 2008; Picher, 2007). The audience then discusses the central character's strategy for resolving the conflict, and the play is performed for the second time. This time a facilitator prompts the audience to consider the problem from multiple perspectives and to search for different solutions (Boal, 1979). S/he encourages members of the audience to come on stage to replace actors and act out

their own strategies for resolving the conflict (see Picher, 2007).

Imagining oneself in the position of someone else is considered to support learning in several settings, for example, in philosophical thought experiments, in counselling and therapy, and in training programs in which role-play is used (Hakemulder, 2007). Experimental role-playing studies have demonstrated that active involvement in imaginary situations shapes people's attitudes and beliefs, and Hakemulder (2007) has argued that this may apply in the case of forum-theater as well. In addition, Wasylko and Stickley (2003) have proposed that forum-theater supports the development of participants' empathy and emotional intelligence.

Forum-theater has been advocated by several practitioners in a number of initiatives in higher education (e.g., McClimens & Scott, 2007; Wasylko & Stickley, 2003; Humak University of Applied Sciences and project partners, 2006), with the technique being used to support students' transition to university studies and to reflect on tutoring issues with students (see Clerehan, 2003). However, research evidence of the long-term effects of Boal's Theater of the Oppressed on participants' attitudes and actions is still limited (Österlind, 2008; see also Burgoyne et al., 2007).

Among the several case studies in the literature is that conducted by Placier et al. (2005), in which teacher and theater students collaboratively prepared forum-theater scenes portraying oppressive classroom practices that raised issues of equity, social justice, and multiculturalism. Some students experienced forum-theater as an effective method for learning problem solving and for promoting empathy and awareness of oppression. Others, however, reported initial discomfort with acting and a preference for more traditional methods of instruction. In a nursing education program, students responded favorably to the use of drama methods, forum-theater included (Ekebergh, Lepp, & Dahlberg, 2004), with most reporting that the methods helped contextualize the theoretical knowledge in the program and "made it alive" (Ekebergh et al., 2004, p. 627).

Monks, Barker, and Mhanacháin (2001) describe the use and impact of Boal's techniques in management education and development programs that aimed to create a positive attitude toward problem solving by focusing on individual agency and self-empowerment. One of the scenes prepared by the students portrayed a female manager who was trying to negotiate at a large meeting where no one would listen to her. Monks et al. (2001) found drama to be a powerful learning tool, yet one requiring that the right conditions be provided, such as a suitable timetable, an environment for acting, and advance information to the group regarding the types of exercises. Also needed is a trained facilitator who is able to handle challenging and emotional situations.

## Video Cases in Higher Education

Case-based multimedia and hypermedia learning materials that include video have been used as tools for teaching and learning in the fields of social work education (e.g., Knowles & Ballantyne, 2007), business, law, medicine (e.g., Elliott & Keppell, 2000; Kerfoot, Masser, & Hafler, 2005; Parkin & Dogra, 2000), foreign language teaching, teacher education (e.g., Brophy, 2004; Hmelo-Silver, Nagarajan, & Derry 2006), architecture, and engineering (McLellan, 2004). Knowles and Ballantyne (2007) examined social work students' perspectives and experiences of problem-based learning (PBL) in a setting that compared multimedia and text-based case scenarios; the research also sought to provide insights regarding the use and reuse of multimedia case studies. The scenario consisted of five video clips illustrating the perspectives of key players in the case, all played by professional actors and filmed by a university film production unit. The results indicated strong support for the use of multimedia case scenarios in social work education in preference to text-based case studies. According to the students, the multimedia case scenario significantly enhanced their learning, and it was more enjoyable, realistic, engaging, and motivating than the text-based one.

The use of video cases in medical education is relevant for the present research. Both in medical education and in the present research, video cases present problematic situations that students may encounter in their future work. The aim of the video cases in both contexts is to promote students' ability to recognize, identify, and solve problems. Problem-based learning in medical education often comprises simulations of patient encounters (Elliott & Keppell, 2000). The simulations may be paper based or draw on the use of various multimedia documents, including audio, graphics, still images, and video. The multimedia documents present and illustrate doctor-patient encounters, the patient's medical history, and the progress or results of physical examinations (see, e.g., Elliott & Keppell, 2000; Kerfoot et al., 2005; Bergdahl, Fyrenius, & Persson, 2006). Videos have been used to portray different kinds of patient encounters, and they have featured staff members, amateur actors and, in some cases, even patients (see e.g., Bergdahl, Fyrenius, & Persson 2006).

The superiority of video- over text-based cases has been demonstrated in previous research on medical education. Balslev, de Grave, Muijtjens, and Scherpbier (2005) investigated whether adding a brief video case instead of an equivalent written text improves the cognitive and metacognitive processes of university hospital residents in a PBL setting. The results demonstrated that a video case prompted more frequent

exploration, theory building and theory evaluation than a text case. The findings of De Leng et al. (2007) indicate that video cases in the pre-clinical phase of undergraduate PBL medical education were generally perceived as a valuable stimulus for group discussions. According to the students, the advantages of video cases were their authenticity, illustrative ability, comprehensiveness, and power to motivate. In addition, students were better able to remember and to apply in practice actions and procedures that they had watched on video.

The use of video cases has limitations, however. De Leng et al. (2007) concluded that productive use depends on specific conditions, one such condition being that cases should be viewed in a structured, purposeful manner, with instructions and prompts to focus attention on essential issues. Previous research on the use of patient video cases has also highlighted the need for video triggers to be as realistic as possible in order to stimulate students' problem solving (Elliott & Keppell, 2000; Boud & Pearson, 1984). Finally, Albanese (2005) argues that the power of video cases may be limited in that they do not automatically apply to novice learners as compared with learners who have already gained clinical expertise. For novice learners, solving a video case may be too complex and realistic a task.

Previous research by Hakkarainen, Saarelainen, and Ruokamo (2007, 2009) indicates that, according to student perceptions, the design and production of video cases in the context of a video-supported case-based teaching approach promotes meaningful learning. In addition, student-produced video cases appear to have played a supportive role in the learning processes of peers who used the videos as learning resources.

In higher education teaching, video production has been combined with forum-theater as a way of creating and promoting dialogue, interaction and understanding between students and different minority groups (see e.g., Humak University of Applied Sciences and partners, 2006). However, previous studies have rarely focused on approaches which integrate video production and forum-theater. In usability studies and inclusive design, Carmichael, Newell, Dickinson, and Morgan (2005) have integrated video production and forum-theater to support designers in achieving empathy with their potential users and in gaining sufficient knowledge about their intended end-users' needs and abilities. Carmichael et al. (2005) commissioned a forum-theater script writer and a professional theater company to produce narrative videos portraying elderly people's experiences of information and communication technologies (ICTs). The results suggest that watching the videos raised applied computing undergraduates' and ICT designers' awareness of older people's special needs.

### Students' Emotions in Higher Education Settings

Emotions are an integral but under-researched part of learning (Kort & Reilly, 2002; Pekrun, Goetz, Tizt, & Perry, 2002; Linnenbrink, 2006). In the last 10 to 15 years, however, there has been an increase in research on emotions in educational settings (Schutz, Hong, Cross, & Osbon, 2006). To cite Op't Eynde and Turner (2006), "students' affective processes (e.g., moods or emotions) are no longer treated as the positive or negative side-effects of learning" (p. 362), and, not surprisingly, understanding the interrelations among students' cognitive, emotional, and motivational processes is an emerging focus of educational psychology research (Op't Eynde & Turner, 2006). Theoretical considerations and the existing research evidence suggest that the emotions which students experience in academic settings play a central role in their motivation to learn and academic achievement (Meyer & Turner, 2002; Pekrun et al., 2002; Op't Eynde & Turner, 2006). The relations among motivation, emotions, and cognition are bi-directional and reciprocal, and none of the three factors should be given precedence (see Linnenbrink, 2006).

Forum-theater acknowledges the role of emotions, since it views all five human senses as being linked. In other words, Boal's conception of the interwoven character of emotions and beliefs accords with the current research on emotions in education. The basic problem-solving steps of Boal's theater techniques are seeing, hearing, *feeling*, analyzing, and acting (see Picher, 2007). Hakemulder (2007) argued that the fact that forum-theater participants have the *bodily experience* of actually being in situations unfamiliar to them may boost the effects of forum-theater on participants' learning considerably. The significant role given to emotion in forum-theater can be seen, for example, in the fact that experiencing *empathy* (e.g., Wasylko & Stickley, 2003; Carmichael et al., 2005), *empowerment* (e.g., Monks et al., 2001), and, contrastingly, *fear of powerlessness* (see Picher, 2007) has been considered one of the aims of using forum-theater in educational settings.

Since emotional processes "are very much present and co-directing the learning process", research should raise teachers' awareness of the nature and role of emotions in learning so that they can better organize their instruction and support students' learning (Op't Eynde & Turner, 2006, p. 363). Several researchers have studied emotions from this perspective. Pekrun, Goetz, Tizt and Perry (2002) propose the term "academic emotions" to denote emotions that students experience in school or university settings and "that are directly linked to academic learning, classroom instruction, and achievement" (p. 92). Using samples of university and school students, they concluded that

frequently experienced positive emotions included enjoyment of learning, hope, pride, and relief, whereas frequently experienced negative emotions included anxiety, anger, boredom, and shame. With the exception of relief, positive emotions predicted high achievement, and negative emotions low achievement.

Kort and Reilly's (2002) Four Quadrant Model relates phases of learning to the following six emotion axes: anxiety-confidence, ennui-fascination, frustration-euphoria, dispirited-enthusiasm, terror-excitement, and humiliated-proud. Kort and Reilly argue that a typical learning experience involves a range of emotions, with students' emotions fluctuating dynamically along the emotion axes. The effect of negative emotions on learning is not simply negative: a successful learning process may include occasional negative emotions (Kort & Reilly, 2002; see also Op't Eynde, De Corte, & Verschaffel, 2001; Pekrun et al., 2002). However, Pekrun et al. (2002) have suggested that boredom and hopelessness are "detrimental for students' academic motivation" (p. 99).

Hakkarainen et al. (2007, 2009) studied university students' self-reported emotions in a case-based teaching approach in which students acted out video cases of possible working life situations. These video cases were then used as learning material by their peers in an online course. The results indicated that students in both face-to-face and online modes reported positive as well as negative emotions, although positive emotions were reported as clearly having a higher intensity. The most frequently reported positive emotions were satisfaction, interest, feelings of challenge, and enthusiasm. These emotions were mostly associated with the course topics, a new teaching approach, i.e., case-based teaching and production of video cases, and small-group collaboration. Interestingly, some of the students reported that the new teaching approach, which included scriptwriting and acting, evoked negative emotions of uncertainty and worry.

## Method

### Research Strategy and Questions

The research was conducted as a design-based research (DBR) process. Following Barab and Squire (2004), DBR was understood as developing, testing, investigating, and refining learning environment designs and theoretical constructs, such as the pedagogical models that support learning and illustrate and predict how learning occurs. This dual goal of meeting local needs and advancing theory is a critical component of DBR (Barab & Squire, 2004; Edelson, 2002; Wang & Hannafin, 2005). According to Wang and Hannafin (2005), the goal of DBR is to generate

pragmatic and generalizable design principles. A DBR process proceeds through iterative cycles of design and implementation, with the researcher using each implementation as an opportunity to collect data to support subsequent design (Edelson, 2002).

The present research focused on ascertaining the students' perspectives on the following research questions:

1. How does designing and acting out social cases for digital videos support meaningful learning for the Drama course students?
2. How do teaching activities support meaningful learning for the Drama course students?
3. How do the videos produced in the Drama course support learning among the Substance Abuse course students?

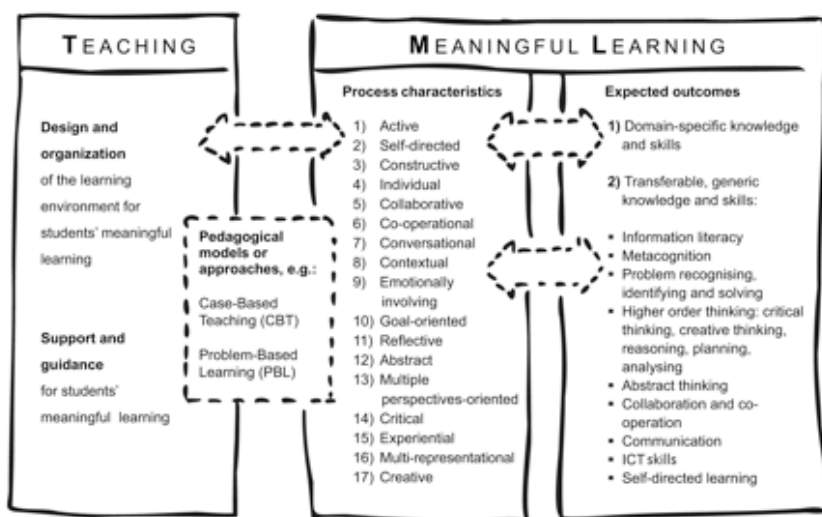
### Teaching and Meaningful Learning

The general design and assessment framework used in the Drama course was the pedagogical model for teaching and meaningful learning (TML) (for a more detailed description, see Hakkarainen, 2007, 2009, 2011; Hakkarainen et al., 2007, 2009) (Figure 1).

The TML model defines teaching and meaningful learning in terms of 17 process characteristics and their expected outcomes, which encompass domain-specific and generic knowledge and skills. Teaching activities should provide a learning environment that fosters the realization of the process characteristics of meaningful learning. A central feature of the TML model is the interrelationships of its components: teaching, meaningful learning process and outcomes. No direct causal relationships can be demonstrated between the components: the relationships are reciprocal and conditional, which is indicated in the TML model with dashed two-way arrows.

Anderson, Rourke, Garrison, and Archer (2001) have proposed the concept of teaching presence, by which they mean "design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (p. 5). Echoing the work of Anderson et al., the concept of *teaching* in the TML model incorporates a broad view of teaching activities, with these understood to include the design and organization of the learning environment. Support and guidance are needed to prevent students from being overwhelmed, particularly in ill-structured and complex problem-solving activities. Above all, teachers must provide an environment that is safe for the students, that is, one that encourages them to try new things without being punished or belittled (Dunlap & Grabinger, 1996). The TML model conceives

Figure 1  
*The TML Model*



(Hakkarainen, 2007, 2009, 2011; Hakkarainen, Saarelainen, & Ruokamo, 2007, 2009)

teaching as drawing on a variety of activities for designing and organizing a learning environment, and providing support and guidance for students. In the model, teaching and meaningful learning are viewed as processes triggered by various pedagogical models or approaches, such as case-based teaching, PBL, and forum-theater.

In the TML model, meaningful learning is defined in terms of 17 “process characteristics” that may lead to expected learning outcomes. Central to the application of the TML model is that not all 17 characteristics of meaningful learning processes need to be present at any given time. Moreover, the characteristics can be intertwined, interdependent, interactive, partly overlapping, and synergetic. The expected outcomes of the meaningful learning processes in the TML model include: (1) domain-specific knowledge and skills and (2) transferable, generic knowledge and skills such as metacognitive skills, higher-order thinking, and problem-solving (Tynjälä, 2001).

### Participants

The first group of participants consisted of 11 first-year students (eight females and three males, aged from 19 to 29) enrolled in the Drama course in the Civic Activities and Youth Work degree program. Seven of them had some experience in shooting and editing digital video as part of their studies. Six students had prior experience in theater production, although none had prior experience in forum-theater. The second

group of participants consisted of 38 social work students (36 females and two males aged from 19 to 51) enrolled in the Substance Abuse course.

### Course Descriptions

The research process was implemented during the eight-week Drama course (3 ECTS European Credit Transfer System credits, graded from failed to five points) held in November and December 2008, and during the eight-week Substance Abuse course (5 ECTS, graded from failed to five points) taught in January and February 2009. The course implementations are presented below.

**The Drama course.** The course is part of a module of compulsory professional studies called Creative and Cultural Methods. The aim of the course is (1) to support students' ability to use the methods related to cultural youth work and (2) to support students' own expressive skills when using creative and cultural methods in education. The students were allowed to choose between two learning projects, one of which was the video-supported forum-theater. The Drama course started with an introductory meeting (two hours) in which students were provided with basic information about the two projects and forum-theater. Eleven students selected the video-supported forum-theater project. The students were asked to design and act out a fictional, but realistic forum-theater dramatization about elderly people's use of intoxicants. The students investigated the topic using sources on the Internet,

group discussions and discussions with the Substance Abuse course teacher. The dramatization had to end with a conflict. The purpose of this was to activate the audience in becoming conscious of the problem of elderly people's use of intoxicants, to discuss ethical ways to behave in such a situation, and to try out different solutions in order to resolve the conflict. Students devised theater techniques (see Oddey, 1994) and forum-theater techniques (Boal, 1992) in designing the dramatizations.

Forum-theater as implemented in the present study involved two modifications of Boal's original ideas. Whereas traditionally participants decide on the topic to be investigated (see, e.g., Boal, 1979, 1992, 1998), in the present study the topic was provided by the Social Work teacher as an example of a current and complex problem. The second modification was that the dramatizations were video recorded for subsequent use as digital learning material by social work students enrolled in the Substance Abuse course. Social work students watched the videos and then wrote essays in response to the problems depicted in them. Therefore, instead of being a forum-theater experience organized for an audience from outside the Drama course, the workshop was conducted more as a learning demonstration in which the students acted as the audience and in addition undertook the role of the facilitator. An additional function of the workshops was to test whether the dramatizations prompted active discussion.

The Drama students produced two dramatizations, nine and twelve minutes in length. Both of the videos portrayed elderly people's use of alcohol in response to the problems of loneliness and of their relatives seeming to have no time for them (Figure 2). The videos depicted these problematic cases without offering any solutions. The video production was realized within nine teacher-led sessions (15 hours), six independent small-group sessions (approximately 10 hours), and two shooting sessions (three hours each). The students managed the entire production process: designing the dramatizations, writing the manuscript, directing, acting, costumes, and staging. The Drama teacher, the Substance Abuse teacher and the second author of this paper guided and supported the students. The actual shooting was done by students from the cultural management program with the help of professional media production services at Mikkeli University of Applied Sciences. One of the Drama course students was involved in the editing process with the media production services. At the end of the project, a final reflection session (3 hours) was organized.

**The Substance Abuse course.** The course was conducted in January and February 2009. The aims of the course are to enhance students': (1) ability to consider intoxicant addiction from multiple viewpoints;

(2) knowledge and skills in recognizing and encountering clients with intoxicant problems in an ethical way; and (3) knowledge of different preventive and restorative methods in work against substance abuse.

A DVD showing the two peer-produced forum-theater dramatizations functioned as the starting point for the Substance Abuse students. After watching the videos, the students were given 45 minutes to write their individual essays, in which they were asked to define the problems as well as to find and justify solutions to them. The students were given question prompts (see Jonassen, 1997; Ge & Land, 2003) such as the following: How would you define the problem you saw on the DVD? Why do you think it is a problem? What would you do as a social worker in the situation presented? Do you see any alternative solutions to the problem? The essays did not affect students' grades, which were based on exams and other assignments.

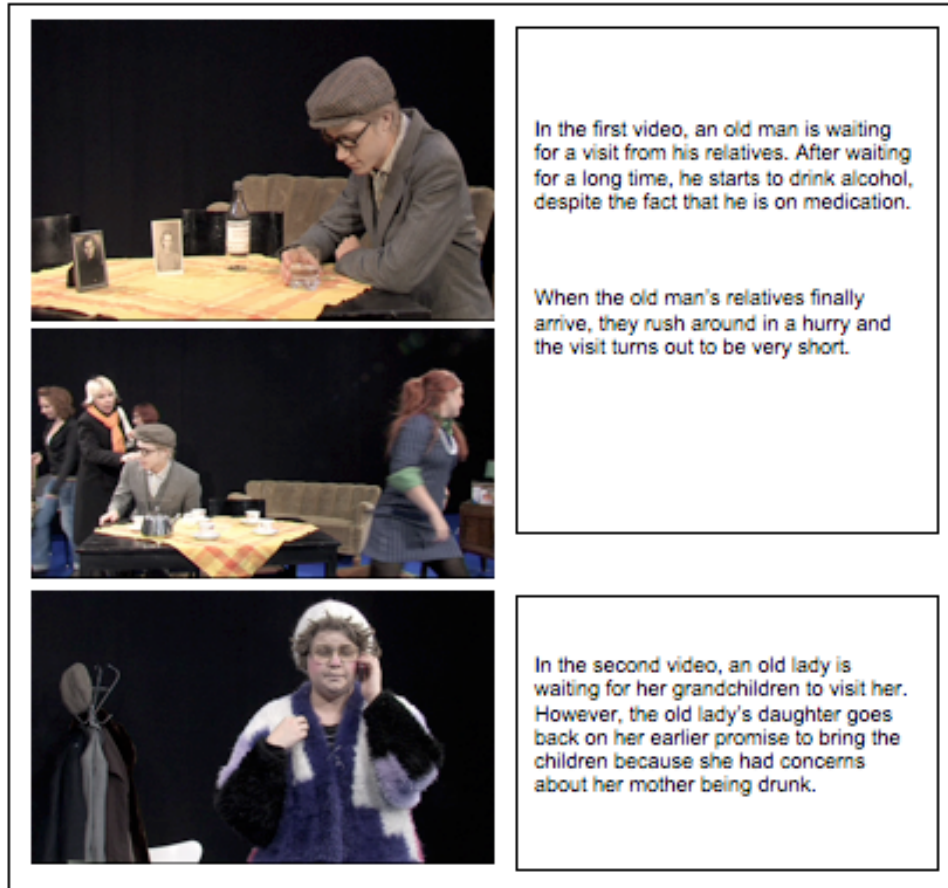
### Data Collection and Analysis

The data were collected through two questionnaires. The Drama students ( $N = 11$ ) completed the first questionnaire anonymously during the final reflection session (for a description of the design process of the questionnaire and its previous uses, see Hakkarainen et al. 2007, 2009; Hakkarainen, 2009). The questionnaire included six items relating to students' demographic variables: gender, age, the year they began their studies at the applied university, and previous experience with producing theater, forum-theater, and videos. Three questions focused on what learning activities they participated in and what kind of independent knowledge acquisition they engaged in.

Practical implementation of the TML model was measured using a set of 47 question prompts, which the students were asked to evaluate on a five-point Likert scale (1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree). Seven question prompts focused on the teaching component of the TML model, that is, on teachers' support and guidance activities (see Table 2). These question prompts were formulated on the basis of the coding scheme for teaching presence in e-learning used by Anderson et al. (2001). Forty question prompts were formulated to operationalize the process characteristics and outcomes of students' meaningful learning. Table 1 presents the question prompts that we have analyzed for this paper.

Twenty-one question prompts focused on students' emotions. The students were asked to indicate to what extent (0 = not at all, 4 = to a great extent) they had experienced a given emotion during the course and to state what, in their view, had evoked the emotion. Twelve of the twenty emotions appearing on the

Figure 2  
*Still Images from the Videos*



questionnaire were chosen from those proposed by Kort and Reilly (2002) as possibly relevant to learning: worry, comfort, boredom, interest, frustration, uncertainty, dispiritedness, disappointment, satisfaction, enthusiasm, tension, and embarrassment. To these we added three social emotions relevant to collaborative learning – trust, sense of community, and irritation – as well as joy, stress, relief, feelings of inadequacy, and challenge. Out of the twenty emotions appearing on the questionnaire, four – joy, relief, boredom, embarrassment – have been identified by Pekrun et al. (2002) as frequently experienced academic emotions.

The questionnaire also contained five closed- and open-ended questions focusing on students' experiences of the video production process. Questionnaire data were analyzed quantitatively in terms of means, frequencies, and percentages, and qualitatively through content analysis of the open answers. As this was a case study that did not seek statistical significance, quantitative analysis was applied as a tool for describing and interpreting the data.

The second questionnaire ( $N = 32$ ), which comprised 15 items, was completed anonymously by the Substance Abuse students in their reflection session at the end of the course. We will present the results of six items focusing on students' perceptions of the video. Two of these items focused on students' perceptions of the usefulness of the videos in learning, while two focused on students' willingness to use or produce equivalent videos in the future. These four items all included a closed question as well as an open space for justifying the answer to the closed question. The remaining two items were open questions, an essay question about students' emotions while watching the videos, and a question about the technical quality of the video.

### Limitations

This study has limitations. The highly positive emotions reported by the students may be explained in part by the novelty of both the topic and the method.

Moreover, the research questionnaires did not include the emotion of empathy, which would have been a well-grounded addition considering the aims and effects of forum-theater (see, e.g., Wasylo & Stickley, 2003; Carmichael et al., 2005; Placier et al., 2005).

The research data presented in this paper describe only students' *experiences* of their learning processes and outcomes. Obtaining a more valid picture of students' learning would have required additional data sources, such as video and audio data from the Drama students' small-group sessions, as well as the Drama students' performance results (videos and essays produced by students) and interviews.

## Results

### Support for Drama Students' Meaningful Learning

Table 1 presents questionnaire data on student perceptions of how meaningful learning processes played out in practice. The data indicate that digital video-supported forum-theater supports meaningful learning processes, especially the collaborative, co-operational, conversational, experiential, individual, self-directed, multiple perspectives-oriented, constructive, creative, critical, and active characteristics; 46 to 100% of the respondents agreed or moderately agreed with the statements focusing on these characteristics. Interestingly, with respect to the individual characteristics of learning, students rated the following two statements favorably: "I was able to apply my own practical experiences during the project," ( $M = 4.55$ ,  $SD = 0.52$ ), and "It was possible for me to study according to my own personal style that suits me," ( $M = 4.18$ ,  $SD = 0.87$ ). However, the statement, "Studying in the project enabled the achievement of my personal goals," had the lowest mean value in these data ( $M = 3.55$ ,  $SD = 0.69$ ), with only 46% of the respondents agreeing or moderately agreeing with this statement.

In contrast, the students indicated in their responses that the reflective ( $M = 3.82$ ,  $SD = 0.75$ ), abstract ( $M = 3.82$ ,  $SD = 0.98$ ), multi-representational ( $M = 3.73$ ,  $SD = 1.01$ ), and goal-oriented ( $M = 3.55$ ,  $SD = 0.69$ ) aspects of meaningful learning were not fully realized; 46 to 64% of the respondents agreed or moderately agreed with the question prompts focusing on these characteristics.

Students were also asked to assess how different course activities had supported their learning. They were not convinced that working on the topic through small-group, teacher-led discussions and independent knowledge acquisition supported their learning ( $M = 3.90$ ,  $SD = 0.57$ ). Furthermore, they only moderately agreed that their learning was supported by the articles and materials provided to them during the project ( $M = 4.09$ ,  $SD = 0.94$ ).

All of the students reported that the video production added value to the project. Two students specified that producing the dramatizations for video made them really think about the topic. For three students, the fact that the videos were produced for a real purpose added value. The questionnaire also asked the students how it felt to produce learning material for other students. Only one of the students reported not having thought about it at all, while ten students mentioned that it felt "great," "exciting," "fun," "rewarding," "very nice and challenging," "new," and even "pretty funny, us being amateurs and not good at acting." Overall, the students reported a highly positive emotional involvement in learning (Figures 3 and 4).

The mean values of the ratings (0 = not at all, 4 = to a great extent) showing positive emotions were clearly higher than those indicating negative emotions. The students reported that their most intensely positive emotions were enthusiasm ( $M = 3.91$ ,  $SD = 0.30$ ), joy ( $M = 3.73$ ,  $SD = 0.47$ ) and interest ( $M = 3.70$ ,  $SD = 0.48$ ). The novel and interesting topic and the forum-theater approach were identified by students as principal sources for these emotions. Small-group collaboration was cited by seven students as the principal source of the intense feelings of trust. In addition, students gave relatively high ratings ( $M = 3.55$ ,  $SD = 0.69$ ) for the sense of community they experienced.

The intensity of negative emotions reported by the Drama students was very low, with mean values of students' ratings ranging from 0.09 to 2.00. Of the negative emotions (Figure 4), tension ( $M = 2.00$ ,  $SD = 1.18$ ), stress ( $M = 1.73$ ,  $SD = 1.27$ ) and frustration ( $M = 1.55$ ,  $SD = 1.04$ ) exhibited the highest intensity. Three students mentioned that producing the videos and acting had caused some tension. Six students cited the following reasons for having experienced stress: changes made to the forum-theater dramatization at a very late production stage, the tight schedule, and many projects going on simultaneously in their studies. Ten respondents cited the following reasons for having experienced some frustration: difficulties in memorizing lines, normal "setbacks," not being as good as they would have liked, changes in the plans, not making enough progress at times, and receiving many different instructions.

All of the students agreed or moderately agreed that they learned about collaboration, acting and forum-theater as a genre. Between 82 and 91% of the students agreed or moderately agreed that they had learned video production and problem-solving skills and improved their knowledge of the topic of the dramatizations, that is, elderly people's use of intoxicants. Two statements in the questionnaire dealt with the transferability of learning outcomes. Eighty-two percent of the students agreed or moderately agreed with the following



Table 1

*Drama Students' (N = 11) Ratings of the Practical Realization of Meaningful Learning process*

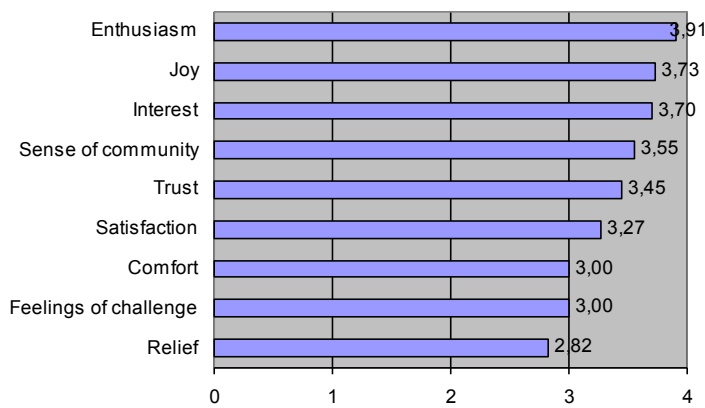
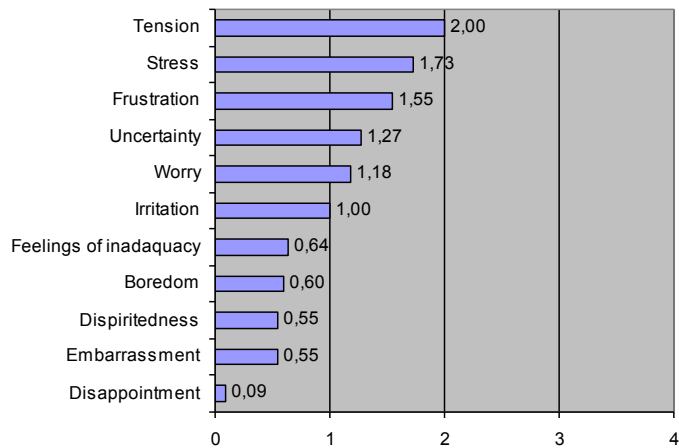
| Process characteristic of meaningful learning | Mean value | Standard deviation | Neither disagree or agree % | Moderately agree or agree % | Question prompts focusing on the process characteristic 5-point scale: 1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree |
|---|------------|--------------------|-----------------------------|-----------------------------|--|
| Collaborative                                 | 4.73       | 0.47               | 0.0                         | 100.0                       | The students were committed to collaboration.  |
| Co-operational                                | 4.45       | 0.69               | 9.1                         | 90.9                        | The independent small group work outside the face-to-face teaching sessions helped me to learn.  |
| Conversational                                | 4.45       | 0.69               | 9.1                         | 90.9                        | The studying developed my collaboration and communication skills.  |
| Experiential                                  | 4.55       | 0.52               | 0.0                         | 100.0                       | I was able to apply my own practical experiences during the project.   |
| Individual                                    | 4.55       | 0.52               | 0.0                         | 100.0                       | I was able to apply my own practical experiences during the project.   |
|   | 4.18       | 0.87               | 0.0                         | 90.9                        | It was possible for me to study according to my own personal style that suits me.  |
|   | 3.55       | 0.69               | 54.5                        | 45.5                        | Studying in the project enabled the achievement of my personal goals.  |
| Self-directed                                 | 4.45       | 0.69               | 9.1                         | 90.9                        | I was able to influence the content and realization of the project.  |
|   | 3.82       | 0.75               | 36.4                        | 63.7                        | I was able to evaluate my own learning during the project.   |
| Multiple perspectives-oriented                | 4.36       | 0.51               | 0.0                         | 100.0                       | The project helped me to understand different perspectives related to the topics under study (forum-theater, video production, elderly peoples' use of intoxicants).         |
| Constructive                                  | 4.36       | 0.67               | 9.1                         | 91.0                        | I was able to utilize my prior knowledge about the topics of the project.  |
|   | 4.18       | 0.87               | 27.3                        | 72.8                        | The project deepened my understanding of what I had learned before.  |
| Contextual                                    | 4.18       | 0.87               | 27.3                        | 72.8                        | The cases handled during the project promoted the learning of skills and knowledge needed in working life.   |
| Creative                                      | 4.18       | 0.98               | 9.1                         | 81.9                        | Our video assignment enabled creative thinking.  |
| Critical                                      | 4.09       | 0.70               | 18.2                        | 81.8                        | The studying developed my critical thinking skills.  |
| Active  | 4.00       | 0.89               | 36.4                        | 63.7                        | Students' role in the project was to actively acquire, evaluate, and apply information.  |
|   | 3.64       | 0.67               | 45.5                        | 54.6                        | The studying developed my skills in acquiring and evaluating knowledge.  |
| Reflective                                    | 3.82       | 0.75               | 36.4                        | 63.7                        | I was able to evaluate my own learning during the project.   |
| Abstract                                      | 3.82       | 0.98               | 27.3                        | 63.7                        | In the project, practical examples were studied in a theoretical framework.  |
| Multi-representational                        | 3.73       | 1.01               | 36.4                        | 54.6                        | The learning materials utilized during the project were presented in multiple forms.   |
| Goal-oriented                                 | 3.55       | 0.69               | 54.5                        | 45.5                        | Studying in the project enabled the achievement of my personal goals.  |

Table 2  
*Drama Students' (N = 11) Ratings of Teaching Activities*

| Question prompts on the questionnaire focusing on teaching activities          | Mean value | Standard deviation | Neither disagree or agree % | Moderately agree or agree % |
|--|------------|--------------------|-----------------------------|-----------------------------|
| Teachers supported my learning process and learning outcomes significantly by: |            |                    |                             |                             |
| giving advice on questions related to the subject matter of the course         | 4.55       | 0.69               | 9.1                         | 90.9                        |
| setting positive climate for learning  | 4.36       | 0.67               | 9.1                         | 91.0                        |
| providing feedback that focused on matters relevant to the project             | 4.36       | 0.51               | 0.0                         | 100.0                       |
| designing clear project guidelines for the project                             | 4.00       | 0.78               | 27.3                        | 72.8                        |
| providing individual feedback about my progress                                | 3.91       | 0.70               | 27.3                        | 72.7                        |
| formulating clear project goals and objectives                                 | 3.91       | 0.54               | 18.2                        | 81.8                        |
| providing feedback and advice in a sufficiently timely manner                  | 3.91       | 0.70               | 27.3                        | 72.7                        |

5-point scale: 1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree

Figures 3 and 4  
*Mean Values of the Drama Students' (N = 11) Ratings of Negative and Positive Emotions (0 = not at all, 4 = to a great extent)*



statement: “I can utilize what I learned in the course in other situations,” ( $M = 4.27$ ,  $SD = 0.79$ ), and 73% agreed with the statement “Cases under study supported the acquisition of knowledge and skills needed in working life,” ( $M = 4.18$ ,  $SD = 0.87$ ).

### Teaching Activities

Table 2 presents the questionnaire data pertaining to the practical realization of teaching activities. Between 73 and 100% of the respondents agreed, or moderately agreed, with these statements focusing on the teaching activities. This clearly indicates that most perceived the teaching activities positively. However, the students were not quite convinced that the teachers had supported their learning significantly by “providing individual feedback about my progress,” ( $M = 3.91$ ,  $SD = 0.70$ ) and “providing feedback and advice in a sufficiently timely manner,” ( $M = 3.91$ ,  $SD = 0.70$ ). In addition, students were not unanimous in their assessment of how the teachers had formulated the project goals, objectives, and guidelines.

### Social Work Students’ Perspectives on the Peer-produced Videos

Of the respondents, 94% ( $N = 30$ ) agreed that the videos were useful in learning to solve everyday problems in their future work. In the space provided for the purpose, 29 of the respondents specified the reasons for this. The videos supported contextual characteristics of learning crucial to meaningful learning because, according to the students, they presented realistic working life situations. In their answers, 16 out of 32 respondents stated that the video represented working life well, as indicated in the following remarks:

- “The situations seemed real” (Student 8).
- “The situations were similar to those which social worker will encounter in his/her work” (Student 18).
- “The situations were realistic and there are a lot of elderly people, so surely one has to solve those kinds of situations” (Student 21).
- “They covered a very common problem that is discussed too little” (Student 26).

Five respondents assessed the usefulness of the video from the perspective of their own learning:

- “Afterwards thought about the situations and their solutions” (Student 5).

- “[I was able to get] a little foretaste of this job, when I haven’t got any experience about anything” (Student 13).
- “[I was able to get] some idea about reasons behind elderly people’s substance abuse” (Student 16).
- “At least I got to know that kind of situations” (Student 19).
- “[The situations] taught me to encounter (made it easier) different kinds of substance abusers” (Student 30).

Some students mentioned “illustrativeness” as a value of the videos, as illustrated by the following: “Videos are always nice. At least, I myself learn best by seeing (visuality)” (Student 19). The videos provided students with “concrete” and “realistic” situations:

- “It is easier to learn and understand things when you have something concrete like videos” (Student 21).
- “[The videos] showed snapshots of real situations from everyday life, so it was not just lectures” (Student 8).

In light of the abstract characteristics of learning, it is interesting that only two of the respondents believed that the video illustrated theoretical viewpoints (cf. Ekebergh et al., 2004):

- “They illustrated theory” (Student 18).
- “[They demonstrated] practice in the middle of theory” (Student 27).

The reason for the lack of such responses may lie in the fact that the students were only just beginning their studies (first semester), and thus their skills in integrating theory and practice were not yet very developed. One student expressed this by saying: “More thoughts would [sic] surely appear when the theoretical knowledge will [sic] increase” (Student 32).

In the TML model, students’ emotional involvement in learning is seen as a central characteristic of a meaningful learning process (Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). Accordingly, students were also asked through an open question to report how they felt about watching the videos and writing an essay about them. Thirty-one percent ( $N = 10$ ) of the respondents took a positive stance and replied that it felt “fairly good,” “fairly educative,” “fairly nice,” “interesting,” and “pleasant.” Another 31% stated that it was “okay,” “interesting,” “pleasant,” but that writing the essay was challenging and too little time was provided for it. One of the

respondents in this group stated that essay-writing in itself was perhaps not the best learning task for the situation:

Instead of writing I would have wanted to solve this problem, for example, through small group conversations, and I think that would be a more working life centered operation model, to discuss things together. The rapid analysis of the situation (that is, writing on paper) 'locked me up' a little bit, and after this I felt a bit uncertain. (Student 31)

Twenty-two percent (N = 7) were of the opinion that too little time was provided for writing the essays, which made the task challenging; as one student expressed, "Writing [the essay] straight after watching the video was a pretty 'bad' thing. More time for thinking should have been given. Coming up with alternative solutions would have required more time, too" (Student 2). Thirteen percent (N = 4) stated that the essay writing was difficult: "Tricky" (Student 27) and "Quite difficult situations. They felt pretty challenging and at one point I got the feeling that I'm not able to answer anything reasonable yet" (Student 9). Of those two students stated that discussion of the solutions to the problems would have been easier and more useful than writing the essay.

When assessing the quality of the technical realization of the video, all but one of the students who answered this question took an overall positive stance, stating that the videos ranged from "fairly okay" to "very successfully done." However, although indicating a generally positive reaction, seven students reported that the quality of sound was poor and at times inaudible, and seven students commented on the poor quality of either staging or acting.

Most of the students – 28 of 32 – answered that they would be willing to write problem-solving essays about the cases on the videos. Many (N = 12), however, set some conditions for their readiness to participate, most pertaining to the limited time provided for writing. The other conditions stipulated were interesting cases, no effects on course grades, grounding in the theory before the writing, more detailed information about the meaning of the essays, group work, and feedback sessions. The feedback discussion was in fact organized at the end of the course, but clearly it should have focused more on solving the problem. Two students justified their unwillingness to participate by saying that this type of study was too challenging or unsuitable for them.

### Discussion

The results of this study show that the Drama students (N = 11) either agreed or moderately agreed

that designing and acting out social cases for digital videos supported most of the process characteristics of meaningful learning investigated in this research, including students' emotional involvement. According to the students, the video-supported forum-theater promoted most clearly the collaborative, co-operational, and conversational characteristics of meaningful learning (see Jonassen, 1995; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). This is no surprise, considering that forum-theater has mainly been used as a tool for community building (see Picher, 2007; Schutzman & Cohen-Cruz, 1994). Students' self-reported emotional involvement was clearly positive: enthusiasm, joy, interest, and sense of community were the most intensely experienced emotions. This is an encouraging result from the point of view of academic achievement, since positive emotions predict high achievement (see Pekrun et al., 2002). However, students also reported negative emotions, albeit low in intensity. These included tension, which for some students was associated with acting (see also Placier et al., 2005).

The results suggest several practical refinements to the Drama course design and to the teaching activities. To better promote the reflective and goal-oriented characteristics of meaningful learning (see Jonassen, 1995, 2000; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009), the course teachers should support students in setting their own learning goals and reflecting on their achievement in online or face-to-face settings. To promote the abstract characteristics of meaningful learning, the course teachers should support students' knowledge acquisition about the topic such that their knowledge reaches from the level of their practical experiences to a more abstract and theoretical level (see Lehtinen, 1997; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). One way to achieve this could be to integrate a writing assignment, e.g., a reflection paper, or content-specific visualization techniques, e.g., concept mapping (see Fischer, Bruhn, Gräsel, & Mandl, 2002), to the course. The students reported that instructions and goals were sometimes unclear, which caused frustration. Clarifying the project goals, objectives and guidelines at the beginning should thus be a priority.

The Substance Abuse course students perceived the videos produced in the Drama course as useful for learning: 94% of the students agreed that the videos were useful in learning to solve everyday problems in their future work. The results confirm the previous research on video cases in PBL contexts (Knowles & Ballantyne, 2007; De Leng et al., 2005) in that students perceived the video cases as authentic and illustrative. In Substance Abuse, students' perceptions of the video cases indicate that the cases supported the contextual characteristics of meaningful learning. Contextual

learning resorts to learning tasks that are either situated in meaningful, real world tasks, or simulated through a case-based or problem-based learning environment (Jonassen, 1995, 2000). However, there is a need to refine the learning task (i.e., essay) that the students were asked to do after seeing the video cases. More time should be allocated for writing and to support the collaborative, co-operational, and conversational characteristics of meaningful learning (see Jonassen, 1995; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009), and further opportunities should be provided for collaboration and conversation.

The courses that this study focused on require many types of collaboration: between teachers, between students and between students and teachers. Presently, diverse and complex learning environments, which require teachers to orchestrate different forms of class coordination (see Dillenbourg, Järvelä, & Fisher, 2009), are preferred over single teaching sessions. Teachers need to improve their skills in orchestrating multiple activities, groups, and media related to these kinds of technologies and learning projects. Instead of working alone, teachers need to collaborate with other teachers, students, and staff. This collaborative culture is important for higher education, because it will enhance the skills required of students in their future workplaces.

### References

- Albanese, M. (2005). Coming to a medical school near you: Full motion video medical education [Editorial]. *Medical Education*, 39(11), 1081–1082.
- Anderson, T., Rourke, L., Garrison, R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1–17.
- Balslev, T., de Grave, W. S., Muijtjens, A. M. M., & Scherpbier, A. J. J. A. (2005). Comparison of text and video cases in a postgraduate problem-based learning format. *Medical Education*, 39(11), 1086–1092.
- Barab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *Journal of the Learning Sciences*, 13(1), 1–14.
- Bergdahl, B., Fyrenius, A., & Persson, A.-C. (2006). EDIT-projekti – PBL:n verkkoskenaariot haastavat opiskelijan ajattelaan. In T. Portimojärvi (Ed.), *Ongelmaperustaisen oppimisen verkko* (pp. 185–196). Tampere, Finland: Tampere University Press.
- Boal, A. (1979). *Theater of the oppressed*. London: Pluto Press.
- Boal, A. (1992). *Games for actors and non-actors*. Translated into English by A. Jackson. London: Routledge.
- Boal, A. (1995). *The rainbow of desire. The Boal method of theater and therapy*. London: Routledge.
- Boal, A. (1998). *Legislative theater. Using performance to make politics*. London: Routledge.
- Boud, D., & Pearson, M. (1984). The use of trigger films as stimulus for affective learning. In O. Zuber-Skerritt (Ed.), *Video in higher education* (pp. 196–204). London: Kogan Page.
- Brophy, J. (2004). *Advances in research on teaching: Using video in teacher education*, (Vol. 10). Amsterdam: Elsevier Ltd.
- Burgoyne, S., Placier, P., Thomas, M., Welch, S., Ruffin, C., Flores, L.Y., Celebi, E., Azizan-Gardner, N., & Miller, M. (2007). Interactive theater and self-efficacy. *New Directions for Teaching and Learning*, 2007(111), 21–26.
- Carmichael, A., Newell, A. F., Dickinson, A., & Morgan, M. (2005). Using theater and film to represent user requirements. *Proceedings of INCLUDE – International conference on inclusive design*. Retrieved from <http://www.hhc.rca.ac.uk/archive/hhrc/programmes/include/2005/proceedings/pdf/carmichaelalex.pdf>
- Cleahan, R. (2003). Transition to tertiary education in the Arts and Humanities: Some academic initiatives from Australia. *Arts and Humanities in Higher Education*, 2(1), 72–89.
- De Leng, B. A., Dolmans, D. H. J. M., van de Wiel, M. W. J., Muijtjens, A. M. M., & van der Vleuten, C. P. M. (2007). How video cases should be used as authentic stimuli in problem-based medical education. *Medical Education*, 41(2), 181–188.
- Dillenbourg, P., Järvelä, S., & Fisher, F. (2009). The evolution of research on computer-supported collaborative learning: From design to orchestration. In N. Balacheff, S. Ludvigsen, T. de Jong, T. A. Lazonder, & S. Barnes (Eds.), *Technology enhanced learning: Principles and products* (pp. 3–19). Netherlands: Springer.
- Dunlap, J. C., & Grabinger, S. (1996). Make learning meaningful. In P. A. M. Kommers, S. Grabinger, & J. C. Dunlap (Eds.), *Hypermedia learning environments: Instructional design and integration* (pp. 227–238). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Edelson, D. C. (2002). Design research: What we learn when we engage in design. *Journal of the Learning Sciences*, 11(1), 105–122.
- Ekebergh, M., Lepp, M., & Dahlberg, K. (2004). Reflective learning with drama in nursing education: A Swedish attempt to overcome the theory praxis gap. *Nurse Education Today*, 2004(24), 622–628.
- Elliott, K. A., & Keppell, M. (2000). Visual triggers: Improving the effectiveness of virtual patient encounters. In R. Sims, M. O'Reilly, & S. Sawkins

- (Eds.), *Australian Society for Computers in Learning in Tertiary Education. Ascilite 2000 Conference Proceedings* (pp. 275-283). Southern Cross University, NSW.
- Fischer, F., Bruhn, J., Gräsel, C., & Mandl, H. (2002). Fostering collaborative knowledge construction with visualization tools. *Learning and Instruction, 12*(2), 213-232.
- Ge, X., & Land, S. M. (2003). Scaffolding students' problem-solving processes in an ill-structured task using question prompts and peer interactions. *Educational Technology Research and Development, 51*(1), 21-38.
- Hakemulder, F. (2007). *Forum Theater effects on beliefs about business*. ILO Enter-Growth Programme. Retrieved from [www.entergrowth.com/download.php?type=projects&id=38](http://www.entergrowth.com/download.php?type=projects&id=38)
- Hakkarainen, P. (2007). *Promoting meaningful learning through the integrated use of digital videos*. (Doctoral dissertation). University of Lapland, Finland.
- Hakkarainen, P. (2009). Designing and implementing a PBL course on educational digital video production: Lessons learned from a design-based research. *Educational Technology Research and Development, 57*(2), 211-228.
- Hakkarainen, P. (2011). Promoting meaningful learning through video production-supported PBL. *Interdisciplinary Journal of Problem-based Learning*.
- Hakkarainen, P., Saarelainen, T., & Ruokamo, H. (2009). Assessing teaching and students' meaningful learning processes in an e-learning course. In C. Spratt & P. Lajbcygier (Eds.), *E-Learning technologies and evidence-based assessment approaches* (pp. 20-36). New York: IGI Global.
- Hakkarainen, P., Saarelainen, T., & Ruokamo, H. (2007). Towards meaningful learning through digital video-supported case-based teaching. *Australasian Journal of Educational Technology, 23*(1), 87-109.
- Hmelo-Silver, C. E., Nagarajan, A., & Derry, S. J. (2006). From face-to-face to online participation: Tensions in facilitation problem-based learning. In M. Savin-Baden & K. Wilkie (Eds.), *Problem-based learning online* (pp. 61-78). Open University Press.
- Humak University of Applied Sciences and partners. (2006). *You can act you'll see the change: A handbook inspired by Augusto Boal for using culture for ourselves*. Retrieved from <http://www.actandchange.eu/en/index.html>
- Jonassen, D. H. (1995). Supporting communities of learners with technology: A vision for integrating technology with learning in schools. *Educational Technology, 35*(4), 60-63.
- Jonassen, D. H. (1997). Instructional design models for well-structured and ill-structured problem-solving learning outcomes. *Educational Technology Research and Development, 45*(1), 1043-1629.
- Jonassen, D. H. (2000). *Computers as mindtools for schools. Engaging critical thinking*. New Jersey: Prentice-Hall.
- Kerfoot, B. P., Masser, B. A., & Hafler, J. P. (2005). Influence of new educational technology on problem-based learning at Harvard Medical School. *Medical Education, 39*(4), 380-387.
- Knowles, A. J., & Ballantyne, N. (2007). Enhancing student learning with case-based multimedia: The views of social work students in Scotland and Canada. *Journal of Online Learning and Teaching, 3*(4), 363-374.
- Kort, B., & Reilly, R. (2002, June). Analytical models of emotions, learning, and relationships: Towards an affective-sensitive cognitive machine. *Proceedings of the ITS 2002 – Intelligent Tutoring Systems Conference, 955-962*. Retrieved from <http://web.media.mit.edu/~reilly/its2002.pdf>
- Lehtinen, E. (1997). Tietoyhteiskunnan haasteet ja mahdollisuudet oppimiselle [Challenges and possibilities for learning in the information society]. In E. Lehtinen (Ed.), *Verkkopedagogiikka* (pp. 12-40). Helsinki, Finland: Edita.
- Linnenbrink, E. A. (2006). Emotion research in education: Theoretical and methodological perspectives on the integration of affect, motivation, and cognition. *Educational Psychology Review, 18*(4), 307-314.
- McClimens, A., & Scott, R. (2007). Lights, camera, education! The potentials of forum theater in a learning disability nursing program. *Nurse Education Today, 27*(3), 203-209.
- McLellan, H. (2004). The case for case-based teaching in online classes. *Educational Technology, 44*(4), 14-18.
- Meyer, D. K., & Turner, J. C. (2002). Discovering emotion in classroom motivation research. *Educational Psychologist, 37*(2), 107-114.
- Monks, K., Barker, P., & Mhanacháin, A. N. (2001). Drama as an opportunity for learning and development. *Journal of Management Development, 20*(5), 414-423.
- Oddey, A. (1994). *Devising theater: A practical and theoretical handbook*. London: Routledge.
- Op't Eynde, P., De Corte, E., & Verschaffel, L. (2001). "What to learn from what we feel": The role of students' emotions in the mathematics classroom. In S. Volet & S. Järvelä (Eds.), *Motivation in learning contexts: Theoretical advances and methodological implications* (pp. 149-167). Amsterdam: Pergamon.

- Op't Eynde, P., & Turner J. E. (2006). Focusing on the complexity of emotion issues in academic learning: A dynamical component systems approach. *Educational Psychology Review*, 18(4), 361-376.
- Parkin, A., & Dogra, N. (2000). Making videos for medical undergraduate teaching in child psychiatry: The development, use and perceived effectiveness of structured videotapes of clinical material for use by medical students in child psychiatry. *Medical Teacher*, 22(6), 568-571.
- Pekrun, R., Goetz, T., Tizt, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, 37(2), 91-105.
- Picher, M-C. (2007). Democratic process and the theater of the oppressed. *New Directions for Adult and Continuing Education*, 2007(116), 79-88.
- Placier, P., Cockrell, K. S., Burgoyne, S., Welch, S., Neville, H., & Efereakorho, J. (2005). Theater of the Oppressed as an instructional practice. In C. Kosnik et al. (Eds.), *Making a difference in teacher education through self-study* (pp. 131-146). Dordrecht, the Netherlands: Springer.
- Schutz, P., Hong, J., Cross, D., & Osbon, J. (2006). Reflections on investigating emotion in educational activity settings. *Educational Psychology Review*, 18(4), 343-360.
- Schutzman, M., & Cohen-Cruz, J. (1994). Introduction. In M. Schutzman & J. Cohen-Cruz (Eds.), *Playing boal. theater: Therapy, activism* (pp. 1-16). London: Routledge.
- Schwartz, D. L., & Hartman, K. (2007). It is not television anymore: Designing digital video for learning and assessment. In R. Goldman, R. D. Pea, B. Barron, & S. Derry (Eds.), *Video research in the learning sciences* (pp. 335-348). Mahwah, NJ: Erlbaum.
- Seeley, C. (2008, October). *Palama: A bridge to a different way of working: Case study of the Palama Forum theater project for enterprise culture, Sri Lanka 2005-2008*. ILO Enter-Growth project Sri Lanka. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/---led/documents/projectdocumentation/wcms\\_112296.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---led/documents/projectdocumentation/wcms_112296.pdf)
- Tynjälä, P. (2001). Writing, learning and the development of expertise in higher education. In P. Tynjälä, L. Mason, & K. Lonka (Eds.), *Writing as a learning tool: Integrating theory and practice* (pp. 37-56). Dordrecht: Kluwer Academic Publishers.
- Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development*, 53(4), 5-23.
- Wasylo, Y., & Stickley, T. (2003). Theater and pedagogy: Using drama in mental health nurse education. *Nurse Education Today*, 23(6), 443-448.
- Österlind, E. (2008). Acting out of habits: Can Theater of the Oppressed promote change? Boal's theater methods in relation to Bourdieu's concept of habitus. *Research in Drama Education: The Journal of Applied Theater and Performance*, 13(1), 71-82.

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