Can video cases stimulate in-depth learning in PE teacher education?

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Abstract: This paper has been prepared at the halfway stage of a two-year research and development project. It draws attention to if video cases in PE teacher education can support and stimulate reflective teaching and in-depth learning. 33 students worked during their first course of Physical Education (PE) Methods, with an assignment consisting of filming each other during various practical teaching situations within the teaching process. The evaluation of the course was done with a questionnaire. The results shows that working with film seem to enhance a reflective approach about the students own teaching. The students thought, for instance, that working with film had forced them to think about pedagogical models and methods. The results indicate that video cases can be a fruitful way in order to stimulate in-depth learning in PE teacher education both in PE methods and in teacher training practice.

1. Introduction

In order to guarantee the knowledge and competence needed in today’s knowledge-intense society, information and communication technology will be an important element. Information and communication technology is getting more and more integrated in educational context and will probably have an important role in the future. It isn’t obvious though, which role it will take (Säljö 2001). Säljö suggest that information and communication technology gives partly new conditions for learning in society in general but also for the individual.

However, learning including information and communication technology as well as other ways of learning, can work in various ways. Information and communication technology can function as a tool to package, distribute and supply education where individuals learn knowledge of facts. In addition a well-designed virtual environment can also stimulate to a more qualitative learning. The quality of learning in virtual environments is to some extent determined by what assumptions the environment is built upon.

There are many different kinds of learning theory. Each emphasizes different aspects of learning, and each is therefore useful for different purposes. To some extent these differences in emphasis reflect a deliberate focus on a slice of the multidimensional problem of learning, and to some extent they reflect more fundamental differences in assumptions about the nature of knowledge, knowing and knowers, and consequently about what matters in learning (Wenger 1998 s 3-4).

In this paper we will draw attention to information and communication technology and the quality of learning by focusing the use of virtual video cases in educational settings. If video cases in PE teacher education can support and stimulate reflective teaching and in-depth learning? 36 students worked during their first course of Physical Education (PE) methods with an assignment consisting of filming each other during various practical teaching situations within the teaching process. During the course the students were given a technical introduction in how to use the camera and how to edit with digital technique. This was done through a practical lecture about the equipment and then a part with learn-by-doing experience. Their first task was to be filmed in various teacher/leader situations during their teaching exercises.

The evaluation of the course was done with a questionnaire. The questionnaire focused on the students’ computer habits, their apprehensions about working with video and how it was related to their learning, course structure and the tools. In this study we focused on the quality of learning. Out of 36 students participating 33 of them answered the questionnaire, 16 men and 17 women. In this paper we give attention to whetter virtual video cases can stimulate in-depth learning. Because of the limited sample size, the results should be seen as indications and not as generalizations.
1.1 The course and the project

The course was a pilot-course in the project “Virtual Video Cases in PE Teacher Education” The main objective with the Virtual Cases project is to develop a virtual learning environment, which facilitates theoretical and practical integration in PE teacher training practice. By providing room for reflections and discussions about real situations the project strives to accomplish a more in-depth learning in the PE teacher education teacher training practice. One major purpose of the project is to strengthen the relation between teacher training practice and campus education.

The design of the courses and the virtual cases in PE teacher education are based on the idea that a student following a course should have a deep approach to his or her learning. In short, researchers mean that in-depth-learning is for instance when a student reading a textbook focuses on the content and tries to "get under its skin". This requires both an active thinking about the context at hand, and manipulations of the relations between the different phenomena within that context (Marton, Hounsell & Entwistle 1986). Hence, in-depth-learning deals with understanding on a personal level through the manipulation of relations, and through the making of experiences (Laurillard 1986).

By using video for reflections about theory and practice we believe that the courses can be more meaningful to the students, since they will get the opportunity to relate theories and concepts to their perceptions and experiences. Previous research has showed that this is an important aspect for in-depth learning (see Dahlgren & Karp 1995). It will also be possible for the student to use theoretical perspectives in practice. Teacher training practice is supposed to be a place for reflection and a place where theories are applied. Laurillard mean that this is essential if the problem-solving task is to give anything more than mechanical learning of the facts related to the task at hand (Laurillard 1986).

During their first course of Physical Education (PE) Methodology, the students were given the assignment to film each other during various practical teaching situations within the teaching process. In other words, one student was filming another student as he or she was performing a certain teaching-task. The purpose of task they were given consisted of two things. The first was to film different ways of giving feedback, both orally as well as using body language, getting the class started etc. The second was to plan, perform and film different types of sport activities and the methodology and progression that are related to that activity, for example hammer-throwing in track and field. The assignment was followed by a seminar to summarise the experiences of the entire student group. The aim for this introduction in virtual cases, was partly to prepare the students for the coming teacher training practice periods where they are to film each other in authentic teaching situations, as well as, at an early stage in their educational program, to stimulate them to a reflective approach on their roles as teachers in physical education. What’s worth doing. And is what I’m doing working (see Hellison & Templin 1991).

2. Results

The results show that the students are familiar with working with computers. 70 percent of both men and women use the computer on a daily basis. In average the students spent between six and eight hours on planning, filming and editing, etc. before the final product was finished.

When it comes to how the students feel about working with video, we find that a majority of the students consider it to be easy. 75 percent of the men and 40 percent of the women all agreed to this. 47 percent of the women stated that it was neither easy nor difficult. (The students were asked to state how well they agreed to various statements on a scale between 1 and 5. Where as 1 on the scale was “do not agree at all”, and 5 was “I agree completely”. In the presentation of data we assume that 4 and 5 on the scale say that they agree and 1 and 2 that they disagree. The middle alternative is considered neutral).

The students also consider working with film as being meaningful (82 percent of the men and 59 percent of the women). When it comes to their anxiety concerning working with video cases, only a small minority of the students feel worried (totally amongst men and women 12 percent). 29 percent of the women and 50 percent of the men state that their motivation regarding working with film is high. 50 percent of the men and 29 percent of the women say that working with film has motivated them to spend more time working on the teaching process (38 percent of the men and 35 percent of the women stated no difference). The results show further, that the students highly valued seeing themselves perform as teachers (fig.1).
Figure 1. Students agreement on the value of seeing themselves perform as teachers.

Figure 1 shows that a majority of the students agreed completely that it is of value to see themselves perform as teachers. They also feel that it is of value to see peers perform as teachers (100 percent of the men and 94 percent of the women). The students also think, according to figure 2, that working with film has contributed to them being forced to think about pedagogical models and methods.

Figure 2. Students agreement to the question that the film-task contributed to them being forced to think in ways of pedagogical models and methods.

When asked about the type of knowledge and skills the students think the film-task encouraged them to acquire, only one (man) thought that it is knowledge of facts the course and film-task has encouraged him to acquire. The rest of the students say that the course has encouraged them to understand, critically review, to take a stand and to develop their own personality.

They all agree to the fact that the teaching process can be viewed upon more deeply as well as stimulated by working with virtual cases (video). The following statements emphasise that idea:

One is given the opportunity to come under review, show techniques that you don’t control.
Fun and different from the traditional methods.
You learn from seeing yourself perform.
It has made me think of how our teachers instruct.
3. Concluding discussion

The results show that the students think that working with film, in the way they worked with it during the course (course design, tasks etc), can stimulate more depth learning since they have to reflect more deeply about their teaching. The students thought for instance that they had to think in ways of pedagogical models and methods. They felt that working with film was meaningful. And 50 percent of the men and 29 percent of the women said that working with film had motivated them to spend more time working on the teaching process etc. This does not mean that the question about if video cases can stimulate learning is properly answered in this paper. It can be so that the novelty of working with video could have influenced the students to apprehend the learning outcome more positively than it really was. The results from this study show that the students think that it was fun to work with video but when the novelty is gone there may be changes in how the students apprehend what kind of learning the course is stimulating.

In this stage of the project we see the results from this study as preliminary indications and we will follow up the learning aspect in future evaluations. Further evaluations over time make us able to draw better conclusions about how video cases relate to learning in relation to the visual aspect, course design, technology, gender differences etc. As this paper is being written, the same students are out on their first teacher training practice period where they are filming each other in authentic school situations as they teach their pupils physical education. The course has been evaluated and we are in the middle of the process of analysis.

The results from this study also show that there are many things that can be improved regarding how the task was designed, student support, feedback from teachers etc. For future assignments we will work on improving the things mentioned above in order to let the students be more focused on the content rather than the framework of the assignment. The problems we have had during the course have mostly been of a practical-technical nature, when it comes to being able to use computer laboratories, borrow video cameras etc. In order to be able to develop education where the use of virtual cases is an important part, we must see to that the practical issues function properly for the students. Focus must not be removed from the content of the tasks they are about to take on. To sum up, we are aware of, as we mentioned in the beginning, that the sample in this study is to small for us to be able to draw any real conclusions, but we think that the project are on the right track.

References


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