

# The Meaning of Reflection to the Learning of the Student Teachers and the Evaluation of Professional Knowledge and Skills in the Teacher Education

Outi Pylkkä, Jyväskylä Polytechnic, Finland  
Anna Liisa Westman, North Karelia Polytechnic, Finland

## On the way to the teaching world

In this paper we study the meaning of reflection in the learning and evaluation process in teacher education during years 2003-2005. The theoretical viewpoint is based mainly on a critical theory and applied participatory action research. Personal knowledge can be developed in the processes of the participants. The goal of critical self-reflection is that student teachers are able to recognize and evaluate their own action principles and preconceptions. The observation of own action can develop consciousness of student teachers' practical theory. In this way a pedagogical interaction is a process which guide student teachers towards professional growth. (see Väisänen and Atjonen 2005.)

From the viewpoint of the critical theory the reality has been constructed as a social process. The action and truth have been constructed by social contexts. Personal knowledge is developing in the processes of the participants. Our aim is to support the professional growth of reflective teachers who are able to continuously develop new approaches to their work. In our vocational teacher education experiential learning is based on learners' reflection. According Carr and Kemmis (1986, 180-191, 201-205) the personal knowledge can be developed in the interaction with the participants and the truth can always be achieved in the critical dialogue. The participatory action research is central for the emancipation from the traditional and self-evident thinking and action models. It is important that participants have the possibility to discuss with each other.

Critical reflection and applied participatory action research has been included in this paper in the literature review and two cases. The aim of literature review was to show the importance of critical theory and the action research with critical reflection for the development of the student teachers. The selection of the books was based on educational perspectives. The empirical findings consist of two cases: Firstly, the case of the teacher education with critical self reflection. Secondly, the

case of the student teachers self and peer evaluation. The last case is based on the computer's networked learning environment. The aim has been to understand the influence of the critical reflection and didactical thinking to the teacher education (Atjonen 1996, 106). In addition, an aim is to see and understand the individual growth of self consciousness (see Freire 2005).

## The critical theory and participatory action research

Our theoretical viewpoint is based on the critical theory developed firstly by Hegel and Marx. The tradition builds on the view that the relations of production and material conditions of society determine people's consciousness (Brookfield 2005, 40). On the everyday level critical theory is based on the social situations of people trying to find truth and knowledge for development (Habermas 1987, 72-73). Some present important representatives in educational thinking are Freire (2005), Mollenhauer (1972) and Mezirow (1995). The critical theory emphasizes the approach of critical thinking. It means consideration of the premises, possibilities and limitations of the knowledge. The reflection will be seen the evaluation of the own action. The critical action can be orientated towards emancipation of student teachers. They can see their knowledge, conceptions and preconceptions in the new way. The critical action and the emancipation presuppose dialogue with other people so we can create conversation circles of the critical discussion. We can see the emancipation in the teacher education so that the student teacher constructs her/his own practical theory so that s/he recognizes her/his own pedagogical principles, which direct her/his action. S/he can gradually construct the practical theory during her/his study time reflecting the thoughts and experiences of the theory and

practice. The practical theory is expansive and systematically personal theory of teaching and it creates the frameworks for the planning and implementation of the practical action.

The critical and emancipatory action research based on it that research is always, one way or another, connected to the social action. According Kemmis (1993) as well as Swantz (2001) it is a concrete and practical expression of desire to move social reality developing social practices. It is a shared social understanding from these practices and shared situations, in which these practices occurs. It is critical in this meaning that we have the aim to improve our action and we will create collaborative learning situations. Working together in the group, in which there is open and authentic practices of communication is improving this process.

The critical reflection makes it possible to understand how the preconceptions of the action can be socially restricted and so it helps to find new, emancipatory ways of thinking and practices. The critical reflection facilitates the social change at the individual level. Not all of the reflective practice is orientated towards critical reflection. When we use the critical reflection in practice the aim is to do the process explicitly so that student teachers could take the responsibility of this process instead of being unaware of it. Argyris and Schön (1976) have drawn attention to the thinking of the reflective practice to the academic professions. Dewey (1910) was concerned with theoretical thinking and cognitive activities. Schön (1983) postulated the idea of the reflective practitioner and he is concerned with practical thinking and reflection in action. Here the reflective practice is a process in which the student teachers take part in the creation of their own practical theory by connecting the experience and the theory. It is useful to explore own practices so that it is possible to see yourself as a producer of the knowledge. This helps to see connections between you yourself as an individual and the extensive, social, cultural and structural environment. It is possible to understand how the conceptions and preconceptions can be determined as part of social contexts.

Student teachers were supported to understand and explore themselves and their problems. The aim is that the originating knowledge and understanding would be constructed and found by each of student teacher. The knowledge is not given from the outside. The educator has to process and evaluate her/his own approach and understanding. The learning occurs when we associated the meaning for our experience. We must fasten our observations and reflections in proportion to the outside being. Then the reflections and evaluations of the others become important. In the reflective intervention it is possible to recognize the obstacles of learning in respect to the learning subject. The development of a teacher is possible in the empowering processes. So that s/he will develop her/his own thinking methods and action ways in those processes as critical theory emphases (Peltomäki 1996). In that sense, our aim is to see how the student teachers can evaluate in a critical way their own actions and prejudices in the different situations. This critical evaluation and analysis of the student teachers develop the consciousness of own practical theory during the teacher education as well as later work in the classrooms (see Aronwitz ja Giroux 1991, Heikkilä 1999). Saarenheimo (2001, 38) believes, that the reflection is one of the core elements of the study and the professional growth. She hopes that the reflection is carried out in the relevant lightness and seriousness. The lightness means that too much seriousness prevents opening the question.

Kemmis and Wilkinson see the spiral of self-reflection as a collaborative process:

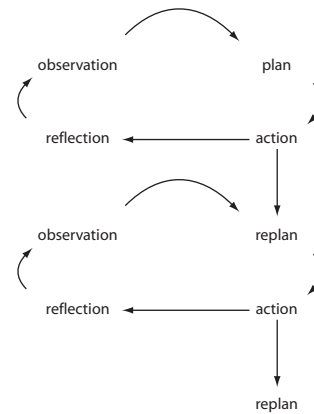


Figure 1 The cycle of self-reflection in the action research

Kemmis and Wilkinson (1998, 21-24) focus on six key features of action research. Participatory action research is a *social process*. The educator and students work together to improve processes of learning and teaching. *Participatory* means that action research engages people in examining their knowledge; understandings, skills and values. It engages individuals to interpret themselves

and their action in social and material world. It is *practical and collaborative*, because it based on social interaction. *Emancipatory* can see so that it helps people to recover, and unshackle themselves from, the constraints of irrational, unsatisfying social structures which limit their self-development. When we see action research as *critical* it is a process, in which people deliberately see out to contest and to reconstitute irrational, inefficient, alienating ways of interpreting their world (discourses), ways of working (work), and ways of relating to others (power). Action research is *reflective*. People can learn through reflective action more about their practices, their knowledge of practices, the social structures which constrain their practices, and the social media in which their practices are expressed and realized. Kemmis and Wilkinson argue that each of the steps outlined in the spiral of self-reflection is best undertaken collaboratively by co-participants in the action research process. The process of action research is described in terms of a mechanical sequence of steps. In reality the process is likely to be more fluid, open and responsive. The criterion of success is not whether participants have followed the steps faithfully, but whether they have a strong and authentic sense of development in their practices, their understandings of their practices, in which they practice.

Jyrkämä and Heikkinen (1999, 25) described action research, in which persons reflect and develop their work, analyze, how their acting is historically and culturally developed into such like it is. The people evolve alternatives to solution of the problems so that they can achieve the aims. Participatory action research is based on the development of every situational case. The aim is to transform the teaching practices. In the context of student teacher education it means intervention from the "saving information" towards critical analyzing of information. The critical theory can be used as a framework for the participatory action research and for the participatory student teacher education. The education of student teacher bases equal co-operation between teachers, student teachers and researchers. All of them have the same aim: transforming the understanding of teaching work.

## Understanding training experiences of student teachers

The selections of the books based on our common idea to use critical theory and applied participatory action research for this paper. As Swantz (2001) argues, theoretical knowledge is not enough. We need practical information for developing our teaching methods. When we combine theoretical knowledge and practical issues, the knowledge of teaching practices will be built together with the students and the teachers. This kind of method demands open minded attitudes both from a teacher and from a student teacher. The meaning of silence will be noticed also. A researcher/teacher is a listener and living friend/ partner with her/his student. Her/his duty is to break the cultural and ideological walls between students as well as between students and teachers. Also her/his duty is to keep a balance between different ideas, creating empowering atmosphere into the study group. In this situation we can speak about hermeneutical circle. In this circle the interaction will grow up.

We justify our methodology choices from standpoint of learning process. One aim is to develop learning and teaching by developing our action models together with teaching students. Action research is seen as the learning process. Seeing the acts of the teachers it is essential in the context of history and culture. The practice has both externally given and internally understood and interpreted views. In the vocational teacher education college we are teaching in regional student teacher groups. We rarely have opportunities to be in the real interaction with our students. That is why the networked environment is very important both to the student teachers and to the educator. Earlier, it has not investigated so much in the reflection process in the networked environment. Now the objective views is such that it is necessary to act in networked environment. The reason of this is that the distances in North Karelia are huge. Student teachers' teaching practices are in the different towns and places. We can ask: Is the reflection process possible to do visible in the networked environment? We know that it is not easy because students have so different readiness to use the technology and evaluate their own knowledge. How we can improve this reflection process?

The empirical data is based on two cases. A case of a student teacher from the wholeness of the teacher education is in this paper during 2003-2004. Other cases are based on the teaching practice of one group during 2004-2005. Twelve of this group performed her/his teaching practice last year. One of them refused the participation for video and one performed his teaching practices before this project. Student teachers have two teaching practices during the education. We had feedback conversation after each teaching situation. Upon reflection student teacher assessed their own action and both the peer colleague and educator immediately gave feedback after the teaching. The educator took video clips about teaching situations. All video clips were put into computer's networked learning environment (R 5 Generation). In this way students had the possibility to look at their teaching and evaluate it later again.

The students had an assignment in the networked environment. The aim of the exercise was to develop self-reflection skills of student teachers and to learn to give constructive feedback and to receive feedback for developing their own action. The assignment was: "Reflect on your own teaching practice experiences and give feedback about the teaching situation to your colleagues of your learning circle." In the networked environment the students evaluated the action of their learning circle members. In the analysis of the video clips the focus was on students' self and peer assessment. Five of this group performed both of the teaching practices.

Their answers were analyzed so, that the code of woman was W1 - W6 and the code of man M1 - M4. The aim is to state the individual growth of self conscious (see Freire 2005). In that way, we have connected together theory, practice and action. Now, we turn to look at empirical findings.

## Student teachers' experiences of self-reflection and peer evaluation

Vocational Teacher Education College of Jyväskylä Polytechnic has regional student teacher groups in the east part of Finland, in the city of Joensuu. The empirical findings of this paper consists of the findings of a student and a regional group. Joensuu is a countryside town in North Karelia. The county of North Karelia is between the cultures of West and East. It lies on the border area of Russia. The problems of this area are high unemployment and long distances between big cities. All of this influences the opportunities to study. All student teachers look at the wholeness of their teacher education after studying. In this paper there is an example of a student's self evaluation. In addition, there are examples of self and group evaluation during the teacher education.

### Self-reflection of the teacher education by a student:

*After the good orientation, students started to study educational sciences by reading and evaluating a lot of books. The aim is to study 35 student weeks (60 ECTS). For me, it was the best part of the teacher education. Having the opportunity to read and discuss with peer colleagues as well as with teachers gave a lot of new thinking. Planning my own study plan was a simple work as well as keeping a diary during the studying. So, this part of the course did not give a lot for an adult teacher having a long working history in public organizations. However, the structure of the teacher education is practical and useful. The meaning and importance of the educational structure/curriculum for the teacher education opened totally at the end of the process: how the parts fit to each other.*

*My own teaching practices are based on two courses "Lead Yourself" (3 ETCS) and Developing Working Life (6 ETCS). Those courses have been planned carefully. At first, I could not combine my long working life background to the present class room situation. Then, I noticed via myself reflection that I have a lot of information and knowledge which I have got from the working life and which I can use in the contexts of everyday lessons. I developed the learning/teaching material in the net. I made too much material for the short courses at the beginning. My idea from the backgrounds of the students was written beforehand. However, it did not work very well. Knowing and really understanding people's knowledge is a demanding job. However, working with students was rather easy for me from the beginning of the first teaching period. Perhaps this due to my own emancipated way of thinking. For me, it was more easy to work with the adult students than the young ones. This is perhaps due to my own age and long working experience. Later, I noticed that I can manage even with the younger ones. What was missing in the teacher education? At least, understanding gender as the basic principle for learning and teaching. Also, understanding education as a phenomenon of local and global politics in the changing worlds needs more time, discussion and reflection. Teaching and learning cannot live in the vacuum. (see Brooker et al. 1998)*

### Critical evaluation of my own work during teacher education

*One problem was how to evaluate students' development and how much I can give information via the net. In addition, it was difficult to evaluate how much I can demand from my students. For me one of the most interesting issues in the teacher education*

*was to learn the new methods to teach: participatory action way and studying teaching. At the same time I had to forget a lot of earlier learned knowledge! It was a very painful process for me. However, during the teacher education I found my own personal way to work as a professional teacher. I am brave enough to use my personality, values and working background as a source of teaching. Respecting life and human beings is my starting point. My own evaluation was easy to do, but having feedback from the supervisor was not so easy. The reasons of this are that we are the same age. Both of us are well educated and we have long work experience at management level. In any case, I felt that my strength is an ability to be just what am I. I am eager to study more and more. Critical evaluation as a professional discussion is not a same in the working life when you are working as a chief executive or manager. In that way I had to leave some knowledge learned earlier and learn new ways of critical self reflection and evaluation. My strength is an ability to combine theoretical knowledge and practical issues. At least, I suppose so.*

As we read from the earlier example of a student teacher, life experiences as well as prejudices and practices of life are strong influences on learning. For a student, the self reflection is a way to change ways of thinking. Teaching practice is always built in the contexts of local educational administrative structures and social culture. Theoretical knowledge of education as well as practical information and behaviour create together the understanding of the teacher profession. (Hakkarainen et al. 2001, 21, 73). In this process the terminological changes of the student teacher speeches and practices is an individual development process as the example shown. As Hakkarainen et al. (2001, 109-110) state the meaning of terms will develop in the processes of participating, co-operation with student peer assessment and with the discussions of the students and teachers. The meaning of terms and theory is determining in the relationships of earlier and new learned terms and theories. By reading, criticizing, evaluating, the students build up their own practical theory for the purposes of their everyday classroom situations. Tacit knowledge of the student teachers rise up during teacher education process as visible for the critical evaluation, creating practical knowledge. In this way, student teachers become aware of their abilities to use both theoretical and practical knowledge as "professional knowledge." (Lauriala 1997, 36.) Having an understanding of this we turn now to look at some other cases of student teachers.

### **Experience to see myself as the teacher**

The majority of the students were looking at their practices 2-4 months after the teaching situation. In the analysis of the video clips the focus was on students' self and peer assessment. Most of student teachers wrote their literal self evaluation from their video clips some time after the teaching practice. It was interesting that most of them assessed their own action more critically than after the evaluation situation of the teaching. In these self-reflections it can be seen descriptions of feelings for example tense, stiff, relaxed, quiet, ashamed. Student teachers reminded their action on ground of atmosphere and feelings. It was clear because student teachers did not see the video clips before their self-reflection in the networked environment. Student teachers' self-reflections of video clips focused on the importance of seeing yourself in action and their feelings as follows:

*It was an experience to see myself as the teacher...I did not feel tense about teaching, but the presentation was stiff... The first clip was not so good and I was ashamed. In the second clip I was quieter... (W2)  
It is same time useful and terrible to see yourself at work. I had not*

*earlier possibility to it...(W3)*

*The atmosphere on the video seems relaxed...the quiet grip was seen on the video clip and I say that too quiet.... (M4)*

Many of the student teachers focused their attention on learning and teaching. Here they evaluated the effectiveness of their action. These students considered pedagogical points on their teaching in the following:

*The interactive acting can be seen in the fourth video clip. I repeated some words though the topic was very familiar. This was not traditional lecture and therefore I tried to move during my speech. The best of the video was the orientation phase.... (W5)  
It can be heard in the video clip, that students were active in the course and the interaction between the teacher and students acted... The lecture was logical and fluently. In the video clip left ringing in my hears when one student said that it is dangerous that here learn something. (W1)*

They described here their evaluative and critical reflection about teaching situation. They took out many important views on learning and teaching, for example the role of student, the interaction between teacher and students and learning process as follows:

*...If I had not been in the teacher education and did not get feedback after the teaching situation I would find my teaching situations moderate. At the university it could be ordinary to teach in a matter-of-fact-way. Now I can see it more critically... (M3)  
... My purpose was to increase interaction between teacher and students and in my opinion I was successful. This demands surprisingly a lot of devolving and it was rewarding to myself. The most fundamental changes to the previous teaching was that I assumed really a position to notice how my thoughts got through to learners... (W3)*

Some of the student teachers thought how they could develop their action in future. In the following is described their development challenges of teaching and interaction:

*My starting points already will be of teaching differently in the planning phase in the future... (W3)  
...I try to use in my teaching illustrative means, which hopefully liven up my teaching. (W4)  
... ..I try to give space for the insights of my students and so I choose functional and group based teaching methods. (W6)  
My presentation should be more relaxed and interaction must increase. (M1)  
I must develop getting the grip of the group...I will develop my teaching so that I give time for my students to answer the questions. Now I did not wait for their answers enough.... (M2)  
I must clear up my speech expressions .. (W6)  
Now I try to be more learner orientated ... (M3)*

Most of student teachers were able to do analytic, evaluative and critical reflection of their teaching. The atmosphere and feelings were the things, which came first. After that they described, what was the content of the situation. In the end they considered their teaching and its effects.

### **Peer assessment**

Most of students insisted on the outward appearance, for example, quiet performance, the use of voice and the clarity of the speech. They all are important in teaching. It is understandable, that in the first teaching practice the most of students focus is on outward behaviour. Student teachers' (the first code is of the teacher and the second one of the evaluator in all of the cases) comments:

...he (M1) is teaching so as an engineer teaches... The voice was heard well and the speech came clearly, quietly. The strength is on second thought the weakness. (M4)

The performance of the teacher (M2) was quiet and clear, easy and pleasing to follow. (W1)

The teacher (M2) has very quiet being. (W 2)

... he (M2) does not get nervous easily. The quiet being also inspires confidence... (W2)

She (W1) has quiet and expert style to advance the subjects and sure she provoked the confidence, which is in my opinion very important! (W3)

The teacher (M4) spoke clearly and loudly. The pausing of the speech created excellent quiet learning situation... (M1)

The voice of the teacher (W4) was ok... (W5)

The voice of the teacher (W5) was heard well. The style of speech was clear. (W 4)

The speech of teacher (W5) was especially loud in the teaching conversation otherwise fairly quiet. (W6)

Student teachers' evaluations were stressed on teaching situation and learning as follows:

... when the same topic continues long about sixth hour, it could be good to think about methods, how it would be possible to liven up your lecture (M1) and get quick grip to go through things. (M4)

... I have no doubt that she (W1) manages the content... (W3)

The interaction between the teacher (M2) and the students looks like it is acting and he gave to the students feedback, what is important in the learning process... (W1)

He (M2) takes a look at the students... He sure creates the pleasant study environment... The students participate well... (W2)

The teacher (M4) illustrates the subjects with overhead projector and different pieces of sheet clarified the teaching situation. (M1)

... the teacher (W4) showed well, for the material of the illustration always cheer to refresh listening... (W5)

The style of the teacher lecture (W4) was natural, clear and illustrative. In the same way the conversation with the students was natural. It is difficult to conclude on ground of the short video clips, how you takes account your listeners for example with questions, with which you put students to think the answers themselves, before you give them. (W6)

The teacher (W5) took to the students into consideration... (W4)

... She (W5) has quiet way to listen and discuss, it is space and time in the interaction enough, so that the student is became to hear. The giving of the assignment was clear. In spite of the cheerless of the classroom it was been constructed the conversation and the contact. (W6)

The evaluation level of the peer assessment was in the level of reactions and changes. The student teachers described their feelings and impressions of their colleagues' video clips but some of them (W6, M4) gave tips and instructions so as in the real situation. The shortness of the video clips can be the cause why they did not stress development challenges to their colleague. Most of them had evaluated their colleague in a real teaching situation. Many of this student group will perform their teaching practice this autumn. According to Schön (1987) reflective and inquiring approach to work is one part of professional skills. He brings up reflection-in-action and reflection-on-action. The former means reflection during the action and the latter means reflection after the action. Cowan (1998) has noticed the reflection for action. He means that it is the future action's realization of aims and needs. So it can be seen more in their reflection of own action than in peer assessment. It is essential that students have a learning environment, which facilitates the development of critical

thinking and group work skills. According to Magin and Helmore's (2001, 287-298) research, peer assessment is useful. It improves critical thinking, metacognitive skills and students' self evaluation skills.

### The development challenges

Our student teachers have feedback conversation after their teaching. They write their practice report later. It is possible that they are not so critical than later. But I suppose that it would be good when they can see their actions concretely and they have the possibility to reflect on it. Our students should write a learning diary but many of them do not write it. It is difficult for some students to reflect by writing, if they are not used to doing so. On the video clips they reminded the real situation and it was easier to reflect on the experiences. These findings have been discussed with student teachers. The student group will continue this reflection process in networked environment this year. I can improve my own action too. It is important that the timings are systematic and logical. So I can see better the differences of the teaching education process. When you know the individual differences of the process better you can support the growth of student teachers. I argue that it is impossible to reflect and evaluate your action extensively after the situation. It takes time to see more than reactions. You need time to process your experiences and so it is good to see the evaluation as a continuing process. It was noteworthy that they reflect their own action by consideration how they could develop it.

On the basis of the short video clips it was difficult to evaluate colleagues' teaching practice. I see that it would be easier to assess if the student teacher followed and looked at the same colleague's teaching during the teaching situation and in the networked environment. The teaching practice continues this year and most of the students perform it now. The student teachers gave constructive feedback on the basis of the video clips to their colleagues. Peer assessment is students' bilateral action. It can be a free form of giving feedback or the action what is based on prearranged criteria of assessment. Therein it includes shared feedback conversation, in which the evaluation process and findings will be discussed together. In this case the evaluation was free form.

Levander (2003, 452) looked at different levels of reflection adopting Habermas (1987). The reflection can be analytic, evaluating and critical. In analytic reflection the person describes and reminds action. In this case technical knowledge increases. In the evaluative reflection the person evaluates her/his experiences and the meaning of learning. The knowledge develops practical action and it is justified. In the critical reflection the student assesses the meaning of action in respect to his/her own basic principles. S/he becomes aware of her/his own basic principles and possible changes. According to these findings analytic, evaluative and critical reflection is not easy to see separately. They are integrated in the reflection process.

Keurulainen analyzed the levels of evaluation by adapting the thoughts in the evaluation of Kirkpatrick (1994). The nearer the self evaluating situation is to the assessment the more probable the reactions are primary consequences of evaluation. The learning occurs some time after the self situation and changes and effects follow later. Here the levels of evaluation in the reflection process can be seen in Figure 2.

## REFLECTION - IN - ACTION REFLECTION - ON - ACTION REFLECTION - FOR - ACTION

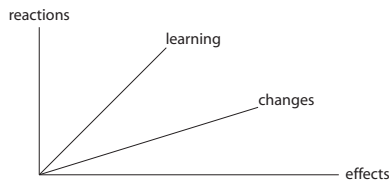


Figure 2 The levels of evaluation in the reflection process

All of the levels can be seen in the self evaluation. When the students looked at the video clips a long time after the self situation, they saw their teaching practice more extensively. They began their description by reporting of feelings. They continued by describing the content of teaching situation and learning process. Many of them see the development challenges more than in the real evaluation situation. They did not see only their developing challenges but their possibility to transform their action too. There were problems taking the video clips. The quality of some of the clips was not good. The video clips were short and the timings were random. It would be better if the video clips were from the beginning, middle and end, so it is systematic and logical. It would be good to do literal self evaluation after the teaching situation. Students do literal feedback to their colleague after the teaching situation. Students will write their teaching report later when all of the study entity is performed. The oral assessment situation is immediately after the teaching. I can see it as problematic that the student teachers did not remember their self evaluation and they did not see their professional growth. In the sequel it is important that students evaluate the same colleagues in real action and in video.

When you are working in networked environment the visual points arise easily, especially the most important ones. We can see this too in these findings. Korhonen (2005, 166) studied students' cooperative learning of open university in the networked environment. He noticed that the implementation of cooperative learning demands notable time in networked environment and objective consideration as the creating of corresponding situation in the contact teaching and guidance. In the learning and teaching it is very important that students and educator can use new technology. We must develop the means so that it is possible to be in interaction so that it is as real as a real situation. Our communication is in most part of speechless interaction. The nonverbal communication is one notable point. In the real conversation we can interpret the nonverbal communication too. But we must remember that our interpretations can be incorrect. It is not easy to make conclusions on the ground of nonverbal communication. When we communicate by writing we can read again and again what we have written. We have more time to think what kind of feedback we give and how?

The networked environment had a bigger role here than we thought at start and it has the important role in learning and teaching in the future. The regional differences to offer education are large. It is decentralized education services in Finland. Nowadays we can see that the small institutes have difficulties to get students to study. It is dangerous that the peripheral areas cannot compete with big ones in the offering of education services. The big cities have more choice possibilities for students. It is natural that they seek to use centralized education services. In the following it would be good to look at the role of the educator in this process. From a critical view it is important that the educator is able to act reflectively and can consider the preconceptions of the action so that s/he can understand how preconceptions can be socially restricted and so through it can be found new, more emancipatory ways of thinking and practices. When the

focus is on the levels of power it can also change in these social situations, where the educator and students work. The proposal is to make the action and its preconceptions and limitations visible so that students can take responsibility of this process. Otherwise they are against their will as an object of the guidance.

Creative critical interaction with participatory action methods seems to be, according to this paper, one main and good element for the teacher training. We state that the professional growth of reflective teachers can be supported by the emancipative way in the processes of critical self-evaluation with peer students and teacher trainers. One problem in this work has been our own working method: how to write a paper with two of us. Our own discussions and reflections before writing need more critical self-evaluation. However, this process of writing has been very educated life-experience. We had to leave a lot of the information out. We had to make critical limitations to the literature. We had to combine the different knowledge and educational backgrounds together. In this way, the paper is a compromise of many thoughts and critical reflections. Have we lost "the sharpness of the paper" in this process will be evaluated by the readers. In any case, our own consciousness of working methods have developed a lot as Freire demands (2005, 26). Without doubt, we need more studies concerning the meaning of critical reflection to the learning of the student teachers with participative way. Deeper understanding of the educational environment and questions of gender in the later studies of the teachers education is also needed.

## References

- Argyris, C. and Schön, D. (1976), *Theory in Practice: Increasing Professional Effectiveness*, San Fransisco, Jossey-Bass.
- Aronwitz, S. and Giroux, H. A. (1991), *Postmodern Education. Politics, Culture and Social Criticism*, Oxford, MN, University of Minnesota Press.
- Atjonen, P. (1996), *Opettajatapahtuman kuvaaminen didaktisessa prosessilaboratoriossa. Osa 3. Opetustapahtumaa koskevan didaktisen tietoisuuden ja omaehtoisen analysoinnin edistäminen opetusharjoittelussa.* Sarja A. Tutkimuksia. Oulun yliopiston Kajaanin opettajankoulutuslaitos, Oulu, Oulun yliopiston monistus- ja kuvakeskus.
- Brookfield, S. D. (2005), *The Power of Critical Theory for Adult Learning and Teaching*, San Fransisco, Jossey-Bass.
- Brooker, R., Smeal, G., Ehrich, L., Daws, L. and Brannock, J. (1998), 'Action Research for Professional Development on Gender Issues' in: Atweh, B., Kemmis, S. and Weeks, P. (eds), *Action Research in Practice. Partnerships for Social Justice in Education*, New York, Routledge.
- Carr, W. and Kemmis, S. (1986), *Becoming Critical. Education, Knowledge and Action Research*, London, Falmer.
- Cowan, J. (1998), *On Becoming an Innovative University Teacher. Reflection in Action*, Buckingham, The Society for Research into Higher Education & Open University Press.
- Dewey, J. (1910), *How We Think*, Boston, Heath.
- Freire, P. (2005), *Sorrettujen pedagogiikka*, Jyväskylä, Gummerus.

- Habermas, J. (1987), *Knowledge and Human Interests*, Cambridge, Polity Press.
- Hakkarainen, K., Lonka, K. and Lipponen, L. (2001), *Tutkiva oppiminen. Älykkään toiminnan rajat ja niiden ylittäminen*, Porvoo, WS Bookwell.
- Heikkilä, J. (1999), 'Opettajan portfolion avulla kohti omaa opettajaprofilia' in: *Journal of Teacher Research*, 1, 122, Jyväskylä.
- Heikkinen, H. L. T., Huttunen, R. and Moilanen, P. (eds), *Siinä tutkija missä tekijä. Toimintatutkimuksen perusteita ja näköaloja*, Jyväskylä, PS-viestintä.
- Kemmis, S. and Wilkinson, M. (1998), 'Participatory Action Research and the Study of Practice' in: Atweh, B., Kemmis, S. and Weeks, P. (eds), *Action Research in Practice. Partnerships for Social Justice in Education*, New York, Routledge.
- Keurulainen, H. (2005), *The Conversation in the Vocational Teacher Education College*, 2.9.2005.
- Kirkpatrick, D. L. (1994), *Evaluating Training Programs: the four Levels*, San Francisco, Berrett-Koehler.
- Korhonen, V. (2005), 'Yhteisöllisyyden rakentuminen verkko-opetuksessa', in: Heikkinen, A. (toim.), *Aikuiskasvatuksen tutkimuspolut. Aikuiskasvatuksen tutkimusseura*, Helsinki, Kansanvalistusseura.
- Lauriala, A. (1997), 'Development and change of professional cognitions and action orientations of Finnish Teachers' in: *Acta Universitatis Ouluensis*, E 27, Oulu, Oulu University Press.
- Levander, L. (2003), 'Reflektio yliopisto-opettajan työssä', in: Lindblom-Ylänne, S. and Nevgi, A. (eds), *Yliopisto- ja korkeakouluopettajan käsikirja*, Helsinki, WSOY.
- Magin, D. and Helmore, P. (2001), 'Peer and Teacher Assessment of Oral Presentation Skills: How Reliable are they?' in: *Studies in Higher Education*, 26.
- Mezirow, J. (ed.) (1995), *Uudistava oppiminen. Kriittinen reflektio aikuiskoulutuksessa*, Helsinki, Helsingin yliopiston Lahden tutkimus- ja koulutuskeskus.
- Mollenhauer, K. (1972), *Theorien zum Erziehungsprozess*, Munich, Juventa.
- Peltomäki, E. (1996), 'Sosiaalialan ammattikorkeakoulun opiskelijoiden oppimiskokemusten kehittyminen henkilökohtaisissa ohjausprosesseissa' in: *Joensuun yliopiston kasvatustieteellisiä julkaisuja*, 26, Joensuu, Joensuun yliopiston monistuskeskus.
- Saarenheimo, M. (2001), *Oppimista edistävä reflektio. Tampereen yliopisto. Psykologian laitos. Psykologisten palveluiden kehittämissyksikön julkaisuja*, Tampere, Tampere yliopistopaino.
- Schön, D. (1983), *The Reflective Practitioner: How Professionals Think in Action*, New York, Basic Books.
- Schön, D. (1987), *Educating the Reflective Practitioner*, New York, Basic Books.
- Swantz, M.L., Ndedya, E. and Masaiganha, M. S. (2001), *Participatory Action Research in Southern Tanzania, with Special Reference to Women* in: Reason, P. and Bradbyry, H. (eds), *The Handbook of Action Research*, London, Sage Publications.
- Väisänen, P. and Atjonen, P. (2005), *Kohtaamisia ja kasvun paikkoja opetusharjoittelussa, Vuoropuhelua ohjauksen kehittämisestä*, Joensuu, Joensuun yliopistopaino.

