

Using modern information technology during preservice teacher education practicum period to make training possible in authentic environment

Merja Meriläinen
Kokkola University Consortium Chydenius

Peter Johnson
Kokkola Education Department

Raine Valli
Kokkola University Consortium Chydenius

Abstract:

The Finnish education system has achieved very favorable results in international comparisons. For instance, the reading skills of Finnish school pupils are among the best in the world. Some explanations are found in the main principles for comprehensive education in Finland and among those principles stand highly qualified, autonomous teachers. For the first six years of comprehensive school, the children are taught by a class teacher, who generally teaches all or at least most subjects. Then, during the last three years of comprehensive school, the different subjects are taught by specialized subject teachers. Teacher education for primary and secondary schools was transferred to Universities in 1971. All the teachers for the comprehensive school take a master's degree of 300 ECTS cr (4-5 years).

Kokkola University Consortium Chydenius, in co-operation with the Faculty of Education at the University of Jyväskylä, arranges continuation courses leading to the degree of Master of Education and qualification as a primary school teacher. In the field of modern Teacher Education, the idea is to support the teacher's own professional development. Teaching practice for future teachers follows an experimental approach, in which teachers research their own work. Teaching sessions which follow the experimental approach provide a way for the students to form their own educational philosophy based on theory and practice.

This proposal will focus on How to Use Modern Information Technology in Preservice Teacher Education and Training to combine detailed theoretical studies to the final practicum period. In this proposal we will identify the key success features, which have made Kokkola University Consortium Teacher Education highly respected and well-known modern adult education centre in Finland. The main principles lying behind the teaching are the use of multiple study media and the development of student-centered, open learning environments on a networking basis.

Keywords: Finnish Education System, Adult Teacher Education, professional development, practicum period, Information Technology,

The main features of the Finnish Education system

All children living permanently in Finland are legally obligated to complete the compulsory education syllabus. The syllabus can be completed by either participating in basic education or by acquiring a corresponding education through some other means. Therefore, there is no compulsory school attendance in Finland. (<http://www.oph.fi/english/>)

Compulsory education, as we call it in Finland, basic education starts during the year when the child turns seven years old, and ends when the basic education syllabus is completed or when ten years have elapsed from the start of compulsory education. The guardian of a child of compulsory education age is responsible for ensuring that the pupil's compulsory education is completed. Almost all children (99.7%) complete the basic education syllabus. (<http://www.oph.fi/english/>)

Pre-School and Basic School Education in Finland

Pre-school education is intended for six-year-olds, who will start their compulsory education in the following year (6-7 years). Participation in pre-school education is voluntary, and it is provided in day care centres and in pre-school classes operating in connection with comprehensive schools. In the autumn of 2000, there were 11,000 pre-school pupils in comprehensive schools and 48,000 six-year-olds in day care centres. This accounts for 90 % of the entire age group. Pre-school teachers get a bachelor's degree in educational science, the extent of which is 180 credits (In ECTS, 60 credits represent the workload of an academic year of study. See Jakku-Sihvonen & Niemi, 2006a, 2006b). This degree qualifies to serve as a kindergarten teacher and as a pre-school teacher.

For the first six years of basic school, the children are taught by a class teacher, who generally teaches all or at least most subjects. Then, during the last three years of comprehensive school, the different subjects are taught by specialized subject teachers. Teacher education for primary and secondary schools was transferred to Universities in 1971. All the teachers for the comprehensive school take a master's degree of 300 ECTS cr (4-5 years). Figure 1 describes the Finnish Education System from Preschool to university level.

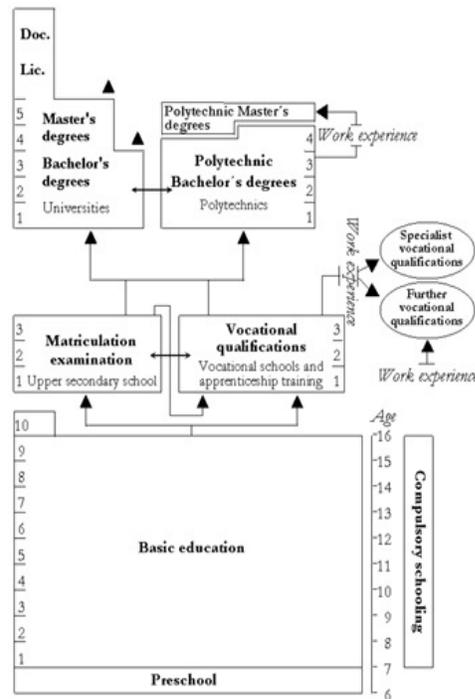


Figure1. The Education System of Finland (<http://www.oph.fi/english/>)

Key areas for development of the Finnish Education System

The proposed development of the Finnish education system is described in the government programme and is confirmed by the Government every four years in the Development Plan for Education and University Research. The objective of the development plan is to improve equitable and high-quality basic education. Schools and other educational institutions should feel secure in terms of the basic operational requirements and resources, and these should be targeted towards instruction and counselling. Special attention should be given to preventing the exclusion of children and young people with problems and providing them with adequate support.

Current key areas for development are: (<http://www.oph.fi/english/>)The Information society

- Teaching mathematics and natural sciences
- Language teaching and internationalization
- Raising the quality and the education level
- Cooperation between education institutions and working life
- Basic and in-service training of teachers
- Lifelong learning

The Government is implementing an extensive Information Society Programme in all fields of administration. Finnish schools and educational institutions were equipped with computers and connected to information networks with the aid of increased state support in the 1990s. By and large, the technological objectives set earlier have already been achieved and the focus of development has shifted to content production, teacher training, and utilisation of information networks (Finnish National Board of Education, 2006).

Primary School Teacher education in Finland

The Finnish education system has achieved very favourable results in international comparisons. For instance, the reading skills of Finnish school pupils are among the best in the world. Table 1 describes the Finnish Comprehensive School Teacher Education system and teacher's qualification levels in different working areas.

Table 1. Basic School Teacher Education in Finland (See Jakku-Sihvonen & Niemi, 2006, 11-12)

Qualification	Degree	ECTS credits	Working area
Pre-school teachers	Bachelor of Arts	180	Pre-school
Classroom teachers	Master of Education	300	A classroom teacher and as a pre-school teacher. Qualified to teach grades 1-6, possible also in some cases to teach grades 7-9)
Subject teachers	Master of Arts, Master of Science (Master of Education) and teachers' pedagogical studies	300	Qualified to teach the subject in question in comprehensive school (usually grades 7-9/ or 1-9)
Special education teachers	Master's degree in education or special education	300	A special education teacher in comprehensive school

Studies and degrees

Since 2005 studies and degrees in the university teaching in Finland has changed to the two-cycle degree system. In that system students first complete the Bachelor's degree, after which they may go for the higher, Master's degree. As a rule, students are admitted to study for the higher degree. Universities also arrange separate Master's programmes with separate student selection, to which the entry requirement is a Bachelor's level degree or corresponding studies (The Ministry of Education, 2006). Kokkola University Consortium has changed to the two-cycle degree system in 2006.

Kokkola University Consortium Chydenius and Teacher Education

Kokkola University Consortium is an independent university-level teaching and research unit located in the region of Central Ostrobothnia that is affiliated to the University of Jyväskylä that operates under the auspices of the universities of Jyväskylä, Oulu and Vaasa. It is devoted in particular to supporting the material and intellectual growth of its own region by means of education and research and to improving the inhabitants' access to university-level teaching, partly on a networking principle.

Kokkola University Consortium in co-operation with the Faculty of Education at the University of Jyväskylä, arranges continuation courses leading to the degree of Master of Education and qualification as a primary school teacher. These courses are particularly aimed at

persons studying through the Open University, those contemplating a change of career and those changing the emphasis of their studies in education. Following the principles of life-long learning, the courses are constantly being developed to match the needs of individual students and the changing demands of society at large. The main principles lying behind the teaching are the use of multiple study media and the development of student-centered, open learning environments on a networking basis.

The Department of Education in Kokkola is the only permanent department in Finland which offers adult education for basic school class teachers. The students come from a large area, nowadays increasingly from West and South Finland. The education started as additional training in 1988, when its principal task was to reduce the national shortage of teachers. In addition to this, developing the teacher education curriculum and adult pedagogy became a central challenge. The educational programme became permanent in 1994, which was a significant acknowledgement from the University of Jyväskylä towards the development work done at Kokkola University Consortium (Valli & Meriläinen 2008).

The annual intake of adult students for training as primary school teachers is 35 persons. All the students are required to have prior university studies and teaching experience. That is why the average age of the students is about 30-33 years. The studies last for 2 to 2.5 years, depending on the agreed individual study plan. (ATE Curriculum 2009-2011) Figure 2 describes the Primary school Teacher Education study plan in Kokkola Teacher Education programme curriculum to years 2009-2012.

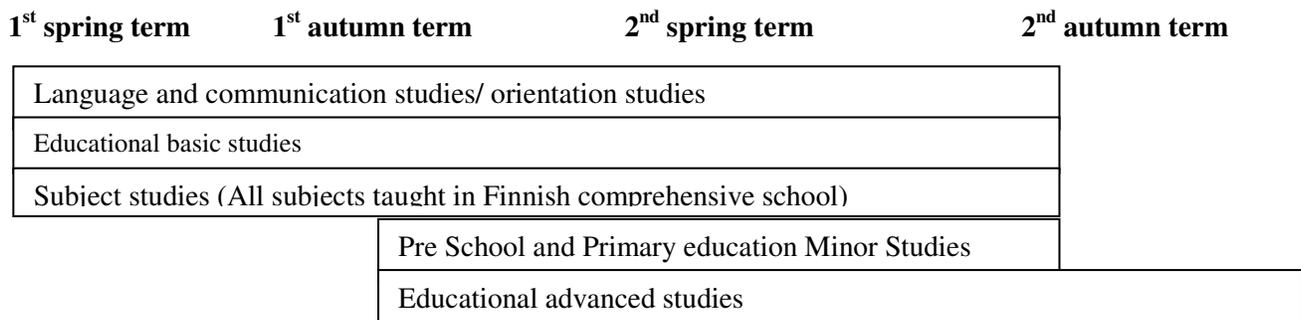


Figure 2. The Chydenius-Institute – Kokkola University Consortium Teacher Education Study Plan

Paths towards freedom of choice and authenticity in teaching practice

The Primary School Teacher Education programme has developed new implementations for teaching practice periods which are suitable for adult education. The student has a chance to practice in different environments. It is seen important that graduating teachers have, in addition to giving lessons and mastery of subjects, also other professional abilities which help in different interaction situations and in facing problems which come up in school's everyday life. The student gets experiences of a teacher's work reality and of functioning in a work community already during the education. In case of a practice period done in one's own work and the developing of tutoring in such a practice period, it is a question of supporting the shift to work life, induction education.

The system of teaching practices enables the student to make individual choices, based on his or her own learning needs, concerning the practice environment and the content of the practice period. The subject studies and advanced studies of Educational Sciences include altogether 28 ECTS cr of teaching practice, out of which in more than half three is freedom of choice (Aaltola etc., 2004).

This proposal will focus on how to use modern information technology in primary school teacher education and training to combine detailed theoretical studies to the final practice period in class teacher studies. At the same time it will focus on one of the key success features, which have made Kokkola Teacher Education highly respected and well-known modern adult education centre in Finland. Educational strategic policy lines for the information society have consistently emphasised the importance of developing its citizen's information society skills in the spirit of "a learning citizenship society". Special attention has been paid to ensuring that all pupils and students have opportunities to gain the knowledge and skills they need to operate in the information society. This, in turn, presents great challenges for the education and training of educational staff (Jakku-Sihvonen & Niemi, 2006a).

In Kokkola University Consortium Teacher Training programme modern information technology is used without separating ICT use from training and studies. The purpose is to give the teacher students a variety of experiences and working tools to develop the use of modern information technology versatile way in their activities and daily school routines.

Practical training in authentic teacher's working environment - a reflecting return to real life

According to Valli and Meriläinen (2006), the final practising session in Teacher education model is called My Own Class Practice-period. This practicing period is unique in Finnish teacher education, where practicing is mainly organized in special training schools, owned by the universities. As mentioned in article (2006), the My Own Class Practise-period is a modern way to combine detailed theoretical studies to the practice period.

Practice with one's own class was more like working – real working. From the point of view of my own growth as a teacher it was most essential that I could do the practice period in a natural environment.

Beside the intensively tutored and in another teacher's class done practice periods, another unique way of practicing was developed inspired by a student's idea. In this way of practising, the student will deepen his or her skills by working as a full-time class teacher during at least one school term. The students do not need to "play" teacher, but they can be the one who best knew the pupils and are responsible for everything happening in the classroom. When learning on the job, the students are supported by teacher educators as well as by local trained tutors. Advanced teaching practice done in one's own class is a distance practice, in which the network environment is used as a tool both for tutoring and for co-operation between the students. In the network, students discuss and analyse the educational as well as the theoretical teaching and learning problems they meet in the teacher's work together with their tutors and with other students following the principles of case learning (Aaltola etc., 2004).

In my case, there was a certain teacher whose mental support became emphasised. I was always allowed to turn to her in any situation and she was as a link between me and other staff.” “We both work on the same grade level, so co-operation was naturally necessary.” “Discussions with one’s equals in the network environment have been useful, because in them one was able to share experiences.(Female student4)

How to make students to interact with each other and with us, instructors, during the practising period, while they all work around Finland in their own schools and own classes? According to Valli and Meriläinen (2006) the answer lies behind the way the guidance system has been revised. Krokfors (1997) and Keiny (1994) has mentioned that the central principle in guidance is to support the process of the growth of teaching profession and own growth as professionals, which will begin during the teacher training. That is why the all time support and tutoring must be easily available to teacher students during the practising period (Figure 3).

Even though the schools, where the students are working during My Own Class Training period, are situated around Finland, the teachers, peer students and all the guidance is behind one button or Skype-video call. Finnish schools and educational institutions were equipped with computers and connected to information networks with the aid of increased state support in the 1990s. By and large, the technological objectives set earlier have already been achieved and the focus of development has shifted to content production, teacher training, and utilisation of information networks (The Ministry of Education, 2006). So may the schools be small and distances long, but the modern information technology has reached the schools in Finland. And not only the schools, but all the new teachers from what ever teaching area, are skilled in working with modern information technology.

The structure of My Own Class Practise -period

My Own Class Practise -period (8 ECTS cr) begins with contact teaching where teacher students and their tutors together with the teacher educators get to know the aims and contents of becoming practising period. The tutors, who are qualified class teachers and will be working side by side with the teacher students, will be trained to their mission to help the teacher students to grow in their profession during that practising session (Valli & Meriläinen, 2006).

At the time, when the practising period begins, the students have already moved back to their home areas, where they have at least one term long contract with a local school. From year 2006 the tutors as well as those students who lived in Lapland, a long way from the university consortium, has been trained to use video conference-system, to make training easier and more comfortable to adult students and their tutors. The first experiences from this kind of video training have been very positive and all those university teachers, students and their tutors who has been involved the new kind of training session has been satisfied to the organization.

The whole term plan

After the first contact period, students, supported by their tutors, start to build the whole term plan, which consist the foundations of their teaching and education, aims and goals to their profession, the main curricula contents, working methods and evaluation. In the Own class training period this session is called *Individual working period with the tutor-teacher*. After finishing the whole term plan, students bring their output to the net based environment, where the university teacher will easily go deep into that plan. At the same time the students will

describe their working environment, the pupils, other teachers, their first experiences etc. on the net based conversation area, where all the students are members and join actively conversation sharing their experiences. Describing the dialogue in the internet is called *Net based working with the university teacher and peer students*.

The short term plan

The teacher-student interaction and dialogue continues first in the net environment by commenting the plan, maybe asking for more details or explanations and after that either in mobile phone or using the net based Skype video Calls. After the long term plan is ready, the teacher student starts to work with the short term plan. The short term period will last three weeks and the plan will be more detailed than the long term plan described above. This three weeks period will be the final evaluated practising period during his/her teacher studies. The tutor teacher will be supporting and helping the student to cope with that work. The interaction and dialogue continues just the same way as described earlier. The students will bring their three weeks plan to the net based environment, where the university teacher will read and get to know it. At the same time the students will describe and share with the others one case or problem, which has been on their minds during these first weeks in their own class, on the net based conversation area. This case might concern about some difficult pupil, contacts with the parent, problems in differentiating the teaching, etc. The conversation in the conversation area is usually very active and the experiences have been very supportive.

It helped me to get oriented to the training after a long summer holiday. It was important to me to have a possibility to discuss with peer student about the school, the feelings and my pupils.(Female student1)

A Day plan

The teacher-student interaction and dialogue continues again, first in the net environment and after that either in mobile phone or using the net based Skype video Calls. The daily work at the school continues and it's going to be time to invite the university teacher to visit the student and his/her class on place. The next plan the students will work with is called a Day plan, which is a detailed plan for one day placed somewhere in their three weeks plan. This day will be the one where the university teacher will be physically present.

When the Day plan is ready, the student will bring it to the net. Again the university teacher may ask for some details or give some comments online or the student may want to add something to the plan after their dialogue. After net based working the student will call the university teacher either using the phone or Skype video call and have a short conversation of the day where the university teacher will be present. The university teacher will stay one day in her/his student's class observing, helping and guiding him/her during that day. After the school day they will have a conversation face to face first with the tutor teacher with them and then later the student teacher and the university teacher together.

When the three weeks final practicing period is beyond, the teacher student will write a short summary of the practicing period and bring it to the web, where the university teacher is able to read it. The final contact with the university teacher will happen on the phone or with

Skype video call. The last interaction, discussion, is an over all dialogue about the process during the practising period. In the Figure 3 you can see the structure of My Own Class-practice.

**The Structure of My Own Class Practice in
Kokkola University Consortium Teacher Education**

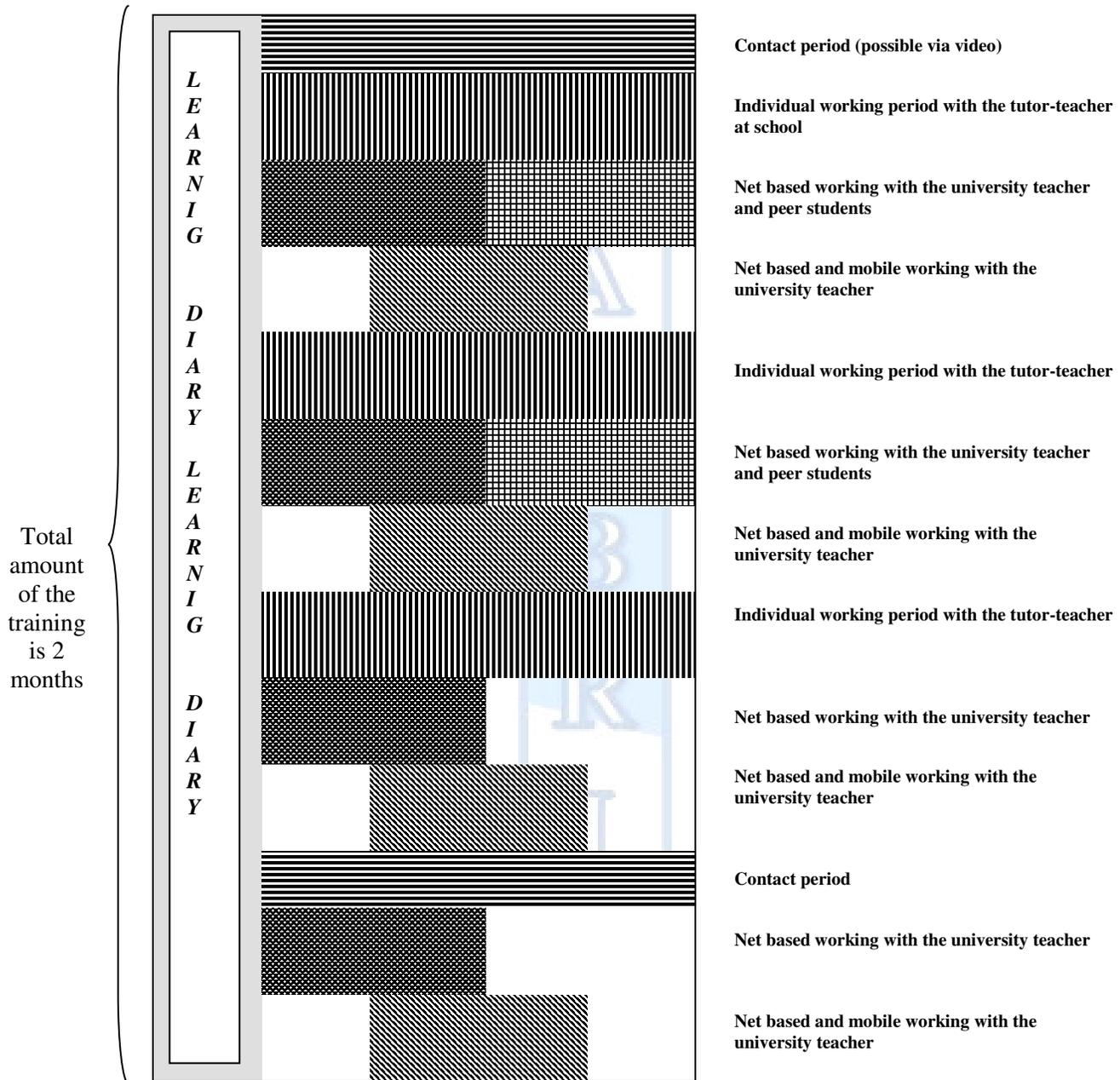


Figure 3. The structure of My Own Class Practicing –period in Teacher Education Programme (Valli & Meriläinen, 2006)

According to Valli and Meriläinen (2006) My Own Class Practise - period can be seen as a training session which really resembles the work teacher students will do as qualified teachers in

their own classes after finishing their studies. The support they will get during this practising period is directed to those questions and issues that teachers meet in their daily work during the school year. Using modern information technology in both making the training possible for all the participants and making support easy to reach, this practising period can offer our students the unique practice period in a very natural environment; an ordinary Finnish school with its daily routines.

I find I have become more aware of my strengths as a teacher. I have tried to transfer my theory knowledge to my teaching and I believe quite successfully...(Female student2)

Teaching in the knowledge society (Hargraeves, 2003) requires teachers to have excellent skills in using ITC in teachers work. Having as a student good ITC experiences in teacher education and practical training periods will be key driver to teachers life long learning in knowledge society.

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