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Vocational teacher education in TAMK with emphasis on methodology and learning philosophy

Vocational and vocational higher education in Finland is undergoing significant changes which for higher education concern digitalization of learning environments, methods and ways of working in a more integrated way as well as promoting direct contacts with the working world. In vocational upper secondary level the reforms involve e.g. promoting on-the-job learning and personalized learning paths.

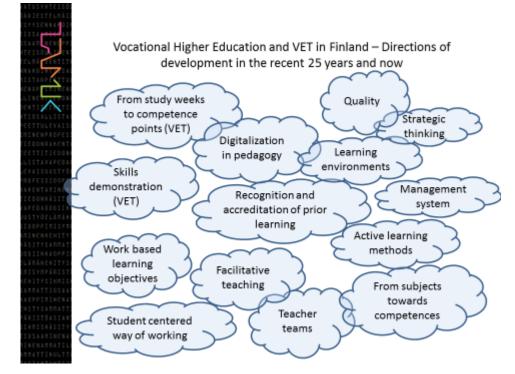


Figure 1. Word clouds describing changes and elements of the paradigm shift in education

Finland has a long tradition of seriously developing vocational education also historically. In addition to recent changes and concerns in education illustrated in figure 1 it is good to look back a little. The first vocational school was founded in Helsinki in 1899 and the pioneer and inspector of VET in crafts and industry, Jalmari Kekkonen, developed a curriculum of vocational education emphasizing student-centered learning and workshops. It was thought that planning and making practical products motivated students more than bare school training. Folk school reform and the reform of a system of school-based VET were integrated in the project of developing Finland towards a welfare state, Welfare Finland in the first half of the 20th Century. Industry saw the relevance of closeness to vocational education and several industries founded their own vocational schools. So, developing education to meet the needs of the surrounding society is nothing very new in Finland. Teacher's profession is regarded highly valued and carries a long tradition of appreciation from the early years of the Finnish educational history. The high status of the profession makes teacher's work very popular and a desired career. Teachers are trusted experts and work autonomously with a lot of freedom in how they carry out their work. Teachers decide to a large extent upon methods, materials, assessment of learning and teaching etc. In higher

education the curricula are locally planned by the university of applied sciences staff typically in cooperation with the working world and other relevant stake holders in an organized way. In vocational upper secondary level, the curricula are national but localized by the educational institutions.



Source: The Ministry of Education and Culture http://www.minedu.fi/OPM/Koulutus/koulutuspolitiikka/?lang-en

Figure 2. Education policy in Finland

The national education policy crystallizes some of the key elements behind the success of the Finnish education system. Although there is a lot of freedom and localized decision making at institutional level the Ministry of Education sets the framework for the operations as well as points out the directions of development in the Education and Research Development Plan negotiated every four years with each institution in order to carry out the implementation of the education and research policy goals stated in the Government Programme. Within this framework the universities and other educational institutions can make their own individual decision on how they will contribute to the education and research goals of the government.

Development of vocational higher education and vocational upper secondary education naturally challenges teacher education in many respects. Tampere University of Applied Sciences as one of five UAS that give vocational teacher education responds to the challenges by updating the curriculum and working proactively as far as possible to ensure capabilities for vocational higher education and vocational education teachers in teaching and facilitating students and in developing their own work as well as contributing to the development of their organizations. TAMK gives the 60 cr pedagogical training that ensures the statutory pedagogical qualification for vocational teachers in higher education and in upper secondary vocational institutions. There is also an international teacher student group that are taught in the English language The group consists of students from Finland and several other nationalities. TAMK also gives further pedagogical training in special needs teacher education (60 cr) as well as guidance counsellor education (60 cr) and in education for specialists for competence based qualification. In addition to these School of vocational teacher education runs a number of further education courses and works in various different pedagogical projects and research initiatives.

Methodology and learning philosophy in teacher education in TAMK

Studying in TAMK vocational teacher education is a learning process where the students build their professional identities as teachers. Participatory pedagogy gives the teacher students the opportunity to monitor teacherhood as a multilevel phenomenon. The teacher students evaluate and reflect their own competence as teachers and facilitators together other teacher students, colleagues and various communities. The relationship of the teacher to the social and global phenomena is also an important part of the education and something that the students include in their practical authentic part of the studies in the networking practice.

Teaching and learning at TAMK vocational teacher education is based on the paradigm shift idea that emphasizes the changed role of the teacher from giving out information to facilitator, enabler of education and designer of learning environments. It is recognized that learning happens everywhere and at all times and is not restricted into classroom environments. Participatory pedagogy encourages large issues that enable the teacher students to combine relevant phenomena arising from the teachers' work in their learning process instead of doing individual and disconnected tasks and learning contents by heart. The focus is on actions, building common knowledge and skills and finding alternative perspectives by working collaboratively in peer groups. Different activating, exploratory and problem and phenomena based pedagogical strategies are applied in participatory approach to education. The learning process is carried out through methods of blended learning utilizing digital platforms and tools as well as contact learning with f2f meetings or synchronous video conferencing. TAMK has an extensive digitalization strategy covering all functions and teacher education has an important role in implementing digitalization in teaching and learning (1). A means of improving the quality of teaching and learning and other functions in teacher education in TAMK is through design based action research. (2, 3).

The approach focuses on students' participation in their learning process, participation of their background organizations in implementing the new understanding of teaching, learning and facilitation of learning processes in the various functions of the organizations. So, the learning process is as authentic as practically possible utilizing real educational situations in practicing and development functions. Evaluation and reflection of one's own learning process is an important part of the model and gets excessive attention. Evaluation is seen as learning.

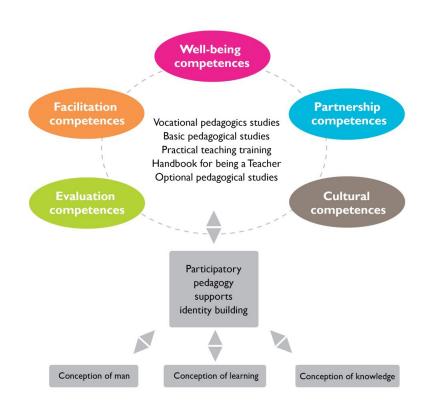


Figure 3. Description of teachers' competences in vocational teacher education at TAMK

During teacher education the teacher students concentrate on competences in evaluation, facilitation, partnership, cultural aspects and well-being. They represent the multidimensional character of the work that teachers do. Ethical responsibility which is inevitably included in teachers' work is built in the competences. The structure of teacher education in TAMK is modular with three modules described in figure 4.

Module Towards multifaceted learn- ing environments (14 cr)		Module Towards facilitative teaching (20 cr)			Module Towards diversified communities (20 cr)		
Learning environments (3 cr) Working cultures of educational institutes (4 cr) Education and learning in different work environments (3 cr) Learning environment practice (3 cr)		Pedagogical approaches (4 cr) Individual worlds of experiences a flexible study paths (4 cr) Human's development and profes sional identity in learning and facili tion (4 cr) Teaching and facilitation practica training (7 cr)		fes- cilita-	Teacher's role in society (3 cr) Changing work and learning (4 cr) Schools and education in society (3 cr) Networking practice (4 cr)		
Elective	Seminar		pedagogical	Sen	ninar	studies (6 cr)	Seminar
Handbook for being	l l cr		a teacher	2 I cr		(5 cr)	3 I cr
Participatory pedagogy supports identity building							

Figure 4. The modular structure of vocational teacher education at TAMK

The topics of the modules indicate a futuristic orientation of the contents: Towards multifaceted learning environments, towards facilitative teaching and towards diversified communities. The structure also includes elective pedagogical studies, teacher practice and creating a handbook of being a teacher (or portfolio). All students also prepare a development project.

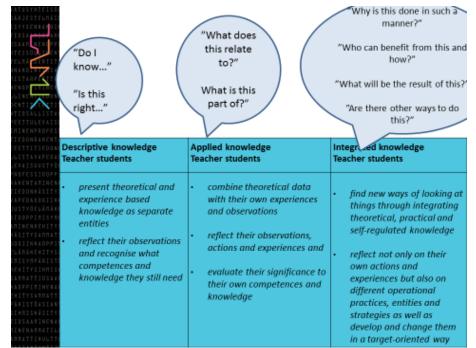


Figure 5. 3-step evaluation criteria for self-evaluation, peer evaluation and evaluation by teacher trainers.

Teacher education applies no exams in the programme. Evaluation is built in the system as part of the learning process. Figure 5 shows the 3-step criteria the students can use to position themselves as novice teachers or more advanced. The criteria are separately described for all the core competence areas but only the head lines are shown in figure 5. This evaluation method enables the evaluation of learners that are at different levels of skills. The evaluation system emphasizes evaluation of the learning process and recognition of progress in competences rather that evaluation of end products of separate tasks.

This presentation is a short overview of some main features of vocational teacher education at TAMK (4) as presented in the *Co-creative problem solving, Finn – Magyar Szimpózium – Workshop* in May 2016 in Budapest organized by Budapest University of Technology and Economics (BME). It is not a comprehensive description of the whole vocational teacher education programme. A very interesting aspect to teacher education as a career-long or life-long learning process was introduced be Anikó Kálmán while she was working at TAMK Vocational teacher education in 2015 (5).

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