Foundation VET reform in Estonia / Estonian National Observatory

Information Collection on the Situation of VET Teachers and Trainers in Candidate Countries

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1. Characteristics of the Teaching and Training Staff

Currently there are two main categories of teachers in VET schools – VET teachers and teachers of general education subjects. The former status of two different kinds of VET teachers – the professional subject teacher, and the training master has been replaced by one VET teacher category by the Regulation No 18 of the Minister of Culture and Education *the Statute of a VET Teacher/Trainer* of 26 May 1995.VET teachers have to carry out workshop training and teach professional subjects as well.

In 2000/01 academic year, there were 84 VET schools in Estonia – 62 in public (of which 59 administered by the Ministry of Education), 2 in the municipal and 17 in private ownership. The following statistical data covers only the public schools under the administration of the Ministry of Education. Information on the teachers of the remaining VET schools is not available.

Table 1. Number of teachers by category and roles in VET schools, 2000/01

		Category	Total
1.		VET teachers	1987
	1.1	*Part-time VET teachers*	*675*
2.		Teachers	1779
	2.1	*General subject teachers*	*735*
	2.2	*Special subject teachers*	*544*
	2.3	*Part-time teachers*	*500*
3.		Other pedagogical staff	528
	3.1	*Directors (Headmaster)*	*67*
	3.2	*Deputy Directors*	*107*
	3.3	*Heads of Department*	*177*
	3.4	*Psychologists (counsellors)*	*5*
	3.5	*Mentors (methodologist)*	*16*
	3.6	*Librarians*	*69*
	3.7	*Others*	*87*
		Total all	**4294**

In all other types of schools (nursery, primary, basic and gymnasium,) there are 18278 teachers plus other pedagogical staff of 4414. The total sum of all pedagogues in all types of schools (nursery, primary, basic, gymnasium and VET) is 26986, out of which ~7, 4% are VET teachers.

Monitoring of VET schools (as well as other type of schools) is the responsibility of the Monitoring Department of the Ministry of Education and local county authorities. At the moment there is one head inspector in the Ministry of Education and two in local

authorities (one in Ida-Viru County and one in Tartu County) directly responsible for VET monitoring.

- Characteristics of the current teaching / training / school management staff -

During recent years, VET schools have not been able to attract younger personnel. This has resulted in a misbalance in the age distribution of teachers. About 40% of VET teachers are over 49 years of age and 21% (420) are already at the age of retirement.

Table 2. Age and gender distribution of the VET school teachers, 2000/01

Category	Total	Women	Men	Under 30	Over 49
1. VET teachers	1987	1183	804	149	921
		59,5%	40,5%	7,5%	46,4%
2. Teachers	1779	1280	499	231	738
		72%	28%	13%	41,5%
3. Other pedagogical staff	528	328	200	30	339
		62%	37,9%	5,7%	64,2%
Total	**4294**	**2791**	**1503**	**410**	**1998**
		65%	**35%**	**9,5%**	**47%**
3.1 Directors	67	15	52	0	31
		22,4%	77,6%	0%	46,3%
3.2 Deputy Directors	107	49	58	5	51
		46%	54%	4,7%	47,7%
3.3 Heads of Departments	177	105	72	13	75
		59%	40,7%	7,3%	42,4%

The educational level of VET teachers has been a topic of several debates over the recent years. About 30 % of VET teachers did not have a higher education in academic year 2000/01 and about 40 % did not have pedagogical education. This has set the training needs for VET teachers. At the same time, teachers with post-secondary technical education have a good speciality related background and practical skills. About 95% of teachers on post-secondary technical education level had speciality related education while 21% of teachers with higher education did not.

Table 3. Education of the VET school teachers, 2000/01

Category	Total	Higher education				Post secondary technical education	Secondary education
		Total	Speciality related		Other		
			Pedago-gical	Other			
1. VET teachers	**1987**	1386	930	420	36	550	51
		69,8%	46,8%	21%	1,8%	27,7%	2,6%
2. Teachers	**1779**	1533	1066	343	124	194	52
		86,2%	60%	19,3%	7%	11%	3%
3. Other peda-gogical staff	**528**	374	116	54	204	122	32
		70,8%	22%	10,2%	38,6%	23,1%	6%

3.1 Directors	**67**	66	41	21	4	1	0
		98,5%	61,2%	31,3%	6%	1,5%	0
3.2 Deputy Directors	**107**	84	55	28	1	19	4
		78,5%	51,4%	26,2%	0,9%	17,8%	3,7%
3.3 Heads of Departments	**177**	134	8	2	124	38	5
		75,7%	4,5%	1,1%	70%	21,5%	2,8%

Table 4. Work tenure as a pedagogue of the teachers in VET schools, 2000/01

Work tenure in years	0 – 2	2 – 5	5 – 8	8 – 11	11 – 15	More than 15	Total
Number of teachers	217	249	163	143	159	848	1779
% of all teachers	12,2%	14,0%	9,2%	8,0%	8,9%	47,7%	100%

Table 5. Distribution of teachers in VET schools between different ranks, 2000/01

	Teacher candidate	Junior teacher	Teacher	Senior teacher	Teacher-methodologist
Number of teachers	97	617	2146	730	176

- Qualification requirements -

The former qualification requirements (Regulation No 29 of the Minister of Education *TheQqualification Requirements* of 21. November 1996) allowed VET teachers (training masters) to work as teachers also with post-secondary technical education. As the role of VET teachers has been changing, the qualification requirements have been changed also. The regulation No 35 of the Minister of Education *The Qualification Requirements of the Pedagogues* of 21. December 1998, stipulated the qualification requirements of teachers in primary, basic, VET schools and gymnasiums. It stipulated that all the VET schools' teachers and directors had to have higher education by 01. September 2003. In academic year 2000/2001 about 30% of VET teachers did not meet those requirements. Retraining or replacing these teachers by 2003 was quite unrealistic. Coping with the qualification requirements was the responsibility of the teachers and school directors. No other immediate measures have been taken besides redistribution of state ordered study places in universities providing VET teacher training. For example – no admission to full time programme in the last two years and increase of study places in 40 and 120 credit point programmes.

The regulation No 65 of the Minister of Education *The Qualification Requirements of Pedagogues* of 26. August 2002 changed the qualification requirements of pedagogues again. The main changes in relation to the VET schools' personnel are:
- requirement of professional work experience on the speciality taught has been increased from two to three years;
- higher education exclusivity clause was lost – post-secondary technical education is allowed again for VET teachers;

- complementary training on vocational-pedagogy has been increased from 160 hours to 320 hours; and
- VET school directors are required to have pedagogical work experience of five years (earlier there was no pedagogical/teaching experience requirement for directors).

The comparison of the qualification requirements of VET school's pedagogical personnel in the two most recent regulations is presented in the following table.

	Regulation No 35 of 21. December 1998	Regulation No 65 of 26. August 2002
deadline for meeting the qualification requirements	01. September 2003	01.September 2007
VET school director	1) higher education and at least 3-year leadership experience and covered or started at least 240-hour complementary management training	1) pedagogical higher education and at least 5-year pedagogical work experience and covered 240-hour complementary management training; or 2) any other higher education and at least 5-year pedagogical work experience having at least the rank of a teacher, and covered 240-hour complementary management training
VET school deputy director on the teaching and pedagogical affairs	1) pedagogical higher education and at least 3-year pedagogical work experience in a VET school; or 2) any other higher education and at least 3-year professional or pedagogical work experience and covered at least 240-hour complementary training on vocational-pedagogy[1]	1) vocational-pedagogical or pedagogical higher education and at least 3-year pedagogical work experience and covered 160-hour complementary management training; or 2) any other higher education and at least 3-year professional work experience in the current institution on the profession, specialty or occupation taught and at least 3-year pedagogical work experience, having at least the rank of a teacher and covered 240-hour complementary training on vocational-pedagogy and 160-hour complementary management training
VET school head of department except the head of the economics department	1) pedagogical or professional higher education and at least 3-year pedagogical work experience in a VET school and covered at least 240-hour complementary training on vocational-pedagogy.	

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[1] Vocational-pedagogy is a system of the pedagogical and didactical skills and knowledge necessary for organising and carrying out professional, specialty and/or occupational training

Vocational teacher carrying out professional, specialty or occupational training	1) pedagogical higher education and at least 2-year professional work experience on the profession, specialty or occupation taught; or 2) higher education in the field taught, at least 2-year professional work experience on the profession, specialty or occupation taught and covered 160-hour complementary training on vocational-pedagogy or has started this complementary training programme within a year since taking up the vocational teacher position.	1) vocational-pedagogical or pedagogical higher education and at least 3-year professional work experience on the profession, specialty or occupation taught; or 2) higher education or post secondary technical education in the field taught, at least 3-year professional work experience on the profession, specialty or occupation taught and covered 320-hour complementary training on vocational-pedagogy
	obligation to attend regular (2 months every 3 years) enterprise practice in the professions taught	-
VET school teachers of general education subjects	1) pedagogical higher education in the subject category taught and covered 40-hour complementary training on vocational-pedagogy; or 2) any other higher education respective to the profile of the subjects taught and covered 160-hour complementary training on vocational-pedagogy	1) pedagogical higher education in the subject category taught and covered 40-hour complementary training on vocational-pedagogy; or 2) any other higher education in the subject category taught and covered 160-hour complementary training on vocational-pedagogy.

- Is there any possibility for professionals coming from companies to teach for some years and to return to industry afterwards or for teachers to work for some time in companies before going back to school? -

It is not very common for professionals to teach full time at VET schools for some years and then return to the industry. In case there is not a possibility to ensure full-time position for a teacher, who is highly qualified in the subject category, sometimes the specialists are hired from enterprises. Hiring specialists / practical workers in VET schools provides students with the chance to obtain qualifications that would meet the expectations of the employer. It is more often the case of part-time teaching, especially in private sector VET schools.

The former teachers' qualification requirements[2] set that the vocational teachers are required to undertake work practice in enterprises, in the field they are teaching, for a period of two months every three years. Since this requirement became effective only in 1999, the system is still rather underdeveloped and largely depending on personal contacts. Making this practice system work is one of the points in the Action Plan for Developing Estonian VET system in 2001 – 2004. The new qualification requirements have abandoned the clause. Practicing in enterprises is still highly encouraged for teachers, but it is not obligatory any more.

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[2] Replaced in august 2002

For many years there were no special training programmes for VET school teachers, all
teachers went trough similar kind of training programme on the university level. Only in
1992, Tallinn Pedagogical University started a full-time vocational teacher training
programme for VET school graduates. Since 1995, the VET teachers are educated
according to the current 160-credit point programme.

Table 6. Number of graduates from teacher training programmes

Year	Number of graduates	Working at schools	Working on their speciality	Continuing their studies on next level
1996	5	1	2	1
1997	4	1	1	1
1998	n.a.			
1999	4	1	3	1
2000	16	6	2	-
2001	11	3	1	5

Tallinn Pedagogical University is also providing a 40 credit-point (1 credit point = 1 week
of studies) vocational-pedagogy training programme for the practicing VET school
teachers who have higher education but do not have pedagogical education. In 2001 there
were 25 graduates from this programme. 40 credit point programmes are also offered
jointly by Tartu University and Tallinn Technical University. Looking at the total output
of VET teachers over the recent years and the need of newly trained staff at VET schools
(21 % of VET teachers working are at the age of retirement), the situation is quite
unsatisfactory.

Teaching is generally not considered an attractive profession – one of the reasons of an
aging population of teachers. Not many young specialists want to pursue a career of a
VET teacher whose salary level and social status is lower than that of a specialist whilst
education requirements are much higher (higher or post-secondary education plus
pedagogical training). At the same time teaching is one of the most stable positions
guaranteeing stable income, thus in rural areas and areas with higher unemployment rate,
teaching job is more attractive; and teachers who have arrived at retirement age are not so
eager to leave. Directors of VET schools have mostly been focusing on economic affairs
of the schools (which clearly needed attention) and less attention was paid on the
pedagogical matters and qualification of teachers. Creating a motivating work
environment is largely depending on the abilities and interests of management (there are
some good examples) and overall this is an area that needs some development.

Promotion of teachers depends on attestation results. A director may appoint a person,
who has not undergone attestation, to a teaching position for up to four months, if he/she
corresponds to the requirements established for that teaching position. Positions of junior

teacher and teacher have no validity periods, and promotions occur through attestation. Positions of senior teacher and teacher-methodologist are valid for five years from the time of the attestation decision. If a teacher does not apply for attestation to the same or higher position before the deadline, the attestation commission will appoint him or her to a lower position. A teacher has the right to apply for attestation to obtain a higher position after a period of three years since the last attestation.

- Policy at national level with regard to teachers and trainers -

Changes in the society and technology are placing new demands on VET system and hence also on VET teachers. According to the labour market needs the main objectives of VET schools are considered to be training of practical skills and development of work attitudes. VET teachers are expected to be able to work with different target groups – initial training for young students; practical training for adult learners and training for students with special needs. To live up to these demands, the qualification requirements have been changed.

Proceeding from the analysis of the educational sector and supporting the development of the entire education sector, and taking into account the fact that the changes carried out in educational life have a long-term effect, it will be necessary in the short-term to focus on activities that will change the system. Therefore the Ministry of Education has the following priorities for raising the quality of instruction in 2000 – 2004:
   – improvement of the further training of teachers and the quality of teacher training;
   – development of curricula on all educational levels for the purpose of securing high-quality and up-to-date instruction to all students;
   – modernisation of the study environment, including development of the school network of vocational and higher education that provide instruction on a superior level and support balanced regional development.

In the VET schools where national programmes were developed in 2000, courses for raising the vocational, professional and occupational qualification of teachers of other schools with the same speciality will be held. Most instructors working in VET schools (depending on the speciality) have to have higher education, as well as practical experience in their speciality.

As training of practical skills have been placed as priority number one, the amount of general education subjects will decrease. General education has to support vocational training and VET teachers will have to integrate these subjects into their teaching. This will also diminish the number of general subject teachers.

Specialists/practical workers are hired in VET schools, thus helping to provide students with the chance to obtain qualifications that would meet the expectations of the employer. The teacher training required for practical specialists will be arranged through short-term courses, or in the form of Open University. The Ministry of Education plans to improve the education-level of heads of schools, and give the right of awarding the qualification to the Association of Heads of Schools. Participation of the heads of educational institutions of the higher level will be supported through different international exchange programmes

It is up to school management to decide upon recruitment of teachers. The school staff – personnel – is formed of the pedagogues, teachers and other employees. The teachers are the persons involved in the teaching and pedagogical affairs and the director. An open competition is organised to fill a vacant teacher position. It is also possible to draw up a fixed term contract with a teacher which is often used when the open competition does not provide candidates that meet the requirements and yet teaching has to be carried out.

In order to evaluate if the candidate meets the requirements of the position, attestation is organised. The attestation procedures are stipulated with the regulation No 36 of the Minister of Education of 28. December 1998 *The conditions and procedures of attestation of pedagogues.*

The purpose of attestation (teacher evaluation) is to evaluate the teacher's work. The evaluation is formulated by assigning a rank (occupation status) to a teacher according to his/her qualification, progress in work and tenure of working on the position. The ranks are: junior teacher, teacher, senior teacher and teacher-methodologist (mentor). Teachers who have just graduated from a teacher training institution are appointed to the position of teacher candidate for one year. The head of the school assigns the rank of junior teacher. The higher ranks are assigned by an attestation committee formed by education institution(s) or the Minister of Education.

The pedagogues are responsible for organising and carrying out the teaching and pedagogical affairs to fulfil the objectives of the school. The specific tasks, rights and responsibilities are set in their employment contract, job description and other legal acts regulating the employment relationship. The employment contract is signed by the head of the school/director and the teacher.

The non-pedagogic personnel is responsible for ensuring a functioning work environment, administration of assets and economic services.

Practical skills and experience is gaining more importance both in the programmes for students as well as for teachers. In order to ensure the in-service training places in enterprises for the teachers, much better cooperation would be needed between VET schools, local enterprises and teacher training institutions. The head of the school is responsible for organising that the teachers are meeting the qualification requirements and are increasing the level of professionalism. The state has foreseen 3% of the teachers salary fund for complementary training every year.

- Teacher and trainer remuneration (public VET schools) -

The regulation No 54 of the Government of the Republic *Basic school, gymnasium and VET school pedagogues' remuneration* of 15.February, 2000, stipulates the principles for remuneration, salary levels and salary rates of the pedagogues working on the positions financed from the state budget. It stipulates the minimum, it is not allowed to pay less. The head of the school has the right to increase the salary of the teachers, i.e. to pay

according to the results of the work. The head of the school is responsible for fixing the school's salary fund in the scope of the school's annual budget.

The VET school director's salary level depends on the number of students in the school and is between 24 and 34. The salary levels of the VET school teachers depend on education and rank. The salary levels – junior teacher 20; teacher 21; senior teacher 23; teacher-methodologist 25 – are established for the teachers with higher education. The salary level of the teachers with post-secondary technical education is two levels lower than the salary level of the teacher who have the same rank and higher education. The salary level of teachers with secondary education is 14.

Table 7. The Salary levels and salary rates (EEK) of basic school, gymnasium and VET school teachers

Level	Rate	Level	Rate	Level	Rate	Level	Rate	Level	Rate	Level	Rate
14	2654	18	3490	22	4549	26	5830	30	7425	34	13268
15	2850	19	3739	23	4850	27	6183	31	7960		
16	3060	20	4000	24	5163	28	6535	32	9294		
17	3268	21	4274	25	5516	29	6980	33	11137		

The head of the school may assign additional benefits for good performance and additional tasks within the annual salary fund.

Table 8. The average salary (EEK) of the VET school teachers in 2001.

Category	Average salary (EEK)
Teachers	4585
VET teachers	*4655*
Teachers	*4445*
Management	7676
Directors	*10963*
Deputy Directors	*7132*
Heads of Departments	*6627*
All pedagogical staff	4772

Overall average salary in Estonia in 2001 was 5510 EEK.

- Human resource management in schools: HR needs assessment and planning,
in-service teacher and trainer training/professional development of staff,
performance appraisal, career development -

Human resource management in schools needs some development. It has currently been mostly concerned with upgrading the teachers' education level, so that they would correspond to the legal requirements (which have been changing a lot) and not so much with development issues. In most schools there is no long-term planning of professional development of staff. In-service training often takes place according to offers of the service providers, not by the initiative of the schools. Performance appraisals and

development talks are not common tools for career development of teachers. Personnel department (if it exists) is often fulfilling administrative role rather than development agent role. The situation is somewhat better in Regional Training Centres, where overall development plans include human resource issues. Many heads of the schools are still not aware of the crucial importance of the teachers' qualifications. They are often too busy with managing the economic affairs and have therefore less time to concentrate on the development of teaching quality.

The teachers' salary is set in the beginning of the academic year, upon completion of the tarification list, on the basis of the national programme and the salary fund of the school's annual budget. The tarification lists can be used for general staff analysis (gender and age composition, tenure of service, education and speciality related preparation, respectiveness to the qualification requirements). This analysis can point attention to the attestation rights and the need for work-related training, but also control the efficiency of implementation of the school programme timetable.

- Appropriateness of the current teaching/training staff in terms of numbers in different categories; is there any monitoring system? -

There is no special system for monitoring the pedagogic personnel in VET schools. The appropriateness of the current teaching/training staff is determined in the bounds of other monitoring activities. The VET schools are subject to different monitoring mechanisms:
- state supervision – the objective is to support provision of quality education at schools and to ensure effectiveness and legality of the teaching and pedagogical affairs;
- supervisory control over government agencies – control, carried out by the higher standing government agencies and officers over legality and rationality of the activities of the government agencies and officers administered by them. E.g. the Ministry of Education over schools and the director over teachers;
- internal audit – an activity to assess and analyse the institution's internal control system, its effectiveness and respectiveness to the requirements stipulated in the legal acts

- Development of teaching/ training staff numbers, current employment situation and forecasts -

Table 9. Number of teaching/training staff and directors in 1995/96 – 2000/01

	1995/96	**1996/97**	**1997/98**	**1998/99**	**1999/2000**	**2000/01**
Teaching staff in VET schools	3141	3290	3232	3545	3716	3766
Directors	70	65	72	73	44	67

In 2001 teacher position/ student ratio was 1:12. It is expected to change to 1:16 by year
2004.
Number of students enrolled in VET schools in 2000/01 was 36495. Number of full-time
teaching positions in 2000/01 was 2974.

The number of students will increase in average 8% per year (i.e. by 35 % by 2004/05
academic year), while the number of teachers positions will be kept at the current level.
(Action Plan for Developing Estonian VET System in 2001 – 2004)

The students' auditory work (35 hours per week in 2000) will decrease and the
independent work will increase. The objective for 2004 is to decrease it to 30 hours in
VET after basic education and to 25 hours per week in VET after secondary education.

2. Quality of teaching and training

*- Appropriateness of the current teaching/training staff in terms of qualifications
in the different categories -*

Most of the teachers in VET schools have been trained in higher education institutions or
post secondary technical schools during soviet period. Many of these teachers are usually
subject specialists, with little training in pedagogy. Many teachers are unfamiliar with
contemporary technology and they are neither prepared nor motivated to apply modern
types of teaching methods. This has called for the need of extensive in-service training.
During recent years more than 800 teachers have taken the 40 credit point in-service
vocational teacher training course, but the new teaching methods are difficult to
implement, as most of these teachers have been used to doing things the "old" way and
these habits are not broken easily. The in-service programmes have also been too
academic and have not utilised more practical and interactive approaches.

*- Are teachers and trainers sufficiently prepared to implement curricula, to cope
with curricular changes, and to prepare for the knowledge society and lifelong
learning? -*

Teachers are not sufficiently prepared to cope with curricular changes and they are not
used to participate in overall curriculum development and long-term planning of teaching
and learning sequences.

*- Do teaching and training content and processes meet the changing labour
market needs and are they easily adaptable to new requirements? -*

Since 1999 it is compulsory for the VET teachers to work for a practice period of two
months in an enterprise to become familiar with the new technology and labour market

needs, but the effects of this new development are yet to be seen. At the moment the content and the processes of teaching and learning are not easily adapted to new requirements.

-How is teaching/training and learning organised (teacher centred, student centred, proportion of general education, VET theory and practice, team work) -

Development in organisation of teaching and learning is clearly seen, but it is still not enough. In many schools instruction is still too much teacher centred and teachers have often a traditional role of control rather than facilitator of learning. The direction is to reduce traditional lecture type (auditory) studying and to replace it by more independent, creative work, which puts high requirements on the teachers.

-How does teaching/training provide for acquisition of basic skills (literacy, numeracy, ...)? -

There are two types of VET programmes on the secondary level. The VET programme after basic school (9 grades – compulsory education) is minimum 3 years, i.e.120 study weeks (ISCED3 /3B), of which the VET-related dimension (incl. practical training) must account for at least 50%. At least 50 study weeks must be devoted to the general education subjects, of which 32 weeks are compulsory and common to all VET and gymnasium programmes on secondary level. The remaining 18 weeks are devoted to general education subjects most relevant to the speciality and teaching must be integrated with the vocational subjects

The VET programme after secondary education (gymnasium) is 40 – 120 weeks, with 85% of VET-related training and 6 weeks of general education subjects of the total volume of programme.

Vocational higher education programme is 120 – 160 weeks with 75% of VET-related training (incl. 35% for practical training);

Practical training is an integral part of a VET programme. The organisation of practical training is regulated by a contract signed between the VET school student or his/her legal representative and the public or local institution, public or private legal juridical person or a physical person entrepreneur. The contract must be signed at least ten days before commencement of practice. Positions created for conducting practical training, including positions in the school workshop and the school farm, must be in compliance with the requirements established by the programme. Legislation related to occupational health and safety applies to students during practical training

The new modular study programmes present further challenges to teachers while provide for more flexible learning. In 1996, in the frames of the Phare VET reform project, 13 pilot schools started to develop modular programmes, which allow the students more choices in both specialisation and organisation of studies; the principle of the modular programmes is that broad general knowledge and skills in the vocational field are acquired, so that after graduation, it is possible to quickly specialise and to adapt to the changes on the labour market (continuous/complementary or retraining)

The new programmes and policy implications foresee that teaching of the 'new' core skills would be integrated with the other subjects. According to the Action plan for Developing Estonian VET System in 2001 – 2004, all VET programmes shall be upgraded with special supportive parts, which aim at developing a more independent person, able to adapt to and manage different situations. Currently is being elaborated the module on the Basics of entrepreneurship, work relations, community work. The national language and speciality-related foreign language volume is being increased in the programmes and computer-based working/teaching methods are encouraged.

- Teachers as facilitators of learning processes -

The Danish-Estonian cooperation project "Vocational Teacher Training in Estonia" (VOC-TTE) in January 2001 – February 2002 was the latest initiative in upgrading VET teachers' competence. It is of increasing importance that the VET students learn how to solve problems, adapt themselves to new conditions, communicate and co-operate with customers and colleagues, take an independent initiative and responsibility, and develop themselves in a lifelong learning process (professionally and personally).

The development of these competencies puts high demands on teachers. The teachers must not only possess these competencies themselves, but must also know how to develop them in students. In order to do this the curriculum must be organised in a holistic way; the teacher must be a supervisor rather than a specialist; the teacher must have focus on the student's learning process as well as on the contents of the curriculum; the teacher must consider how best to promote the development of students' personal, social and professional competencies; the teacher must consider how to organise a stimulating learning environment.

The curriculum of the VOC-TTE aimed at developing the following competencies of teachers:
– examination of qualification needs, ministerial guidelines and intentions;
– choice of pedagogical strategy;
– formulation of objectives for the teaching sequences;
– planning of the teaching sequences;
– carrying out a holistic, differentiated teaching;
– evaluation of his/her own and the teaching styles and practices of colleagues.

The immediate <u>objectives</u> of the VOC-TTE project are: 1) assessment of existing VET TT models, curricula and practices in Estonia; 2) formulation of a model for future vocational teacher training; 3) systematic training of qualified teacher educators; and 4) creation of promotion materials to effectively launch the new national program.

Main results of the VOC-TTE project:
Several framework documents were worked out, forming a basis for developing a modern, competence based vocational teacher training.

A new curriculum, based on a dual model of VET teacher training was worked out in Tallinn Pedagogical University that fits into the 40 credit point system.

New staff was trained for carrying out the new dual model which enhances individual capacity to move between a theoretical-analytical and more experience-based, intuitive competence. The curriculum is to be carried out in alternation between theory in the university and practice in VET schools under the supervision of local mentors.

Even though most of the work was done in connection to Tallinn Pedagogical University, a steering committee was formed, incorporating professionals from other institutions which are involved in vocational teacher training. This enabled to disseminate the findings of the work already in the process and not only at the end of the project when a conference was organised. A network was formed between VET school teachers and university staff, as experienced teachers from VET schools were also participating in the training seminars. This network helps to start the process of using regional VET centres as partners in teacher training, and first mentors (practice supervisors) from among these teachers are available for carrying out the new curriculum. This way teacher training will be better linked to the everyday school environment.

- Teaching and learning material -

Teaching and learning material is a big problem. The number of specialities, for which teaching material should be developed, is big (145 different specialities in 2001), but the number of students using them is relatively small. As there is no special institution in Estonia which would be responsible for VET methodology development, each school and teacher must develop their own teaching and learning material. This often results in more lecture based teaching than using interactive methods of teaching, which in turn doesn't facilitate learning of communication and teamwork. There have been some attempts to use translation books and materials have been developed through international projects, but there is still a lot of work to be done.

- Training in enterprises and/or in school-based practice periods -

Estonia's VET system is a school-based system. Existing programmes are oriented at providing theoretical knowledge followed by primary practice in school workshops and later practice in companies.

3. ICT and e-learning

- Policy at national level -

Overall background for ICT and e-learning in Estonia is quite favourable. Estonia has made considerable development in telecommunications area in the last 10 years. The biggest development agent in the educational field has been the Tiger Leap Programme, activities of which were launched in 1997.

Tiger Leap is a national target program with the overall objective to promote the educational system in Estonia in the rapidly changing world with introduction of modern information and communication technology. The program is first and foremost aimed at general education but it involves also basic and vocational education.

Even though Tiger Leap programme focuses mainly on general education, it has had its influence also on vocational education, since the students coming to VET system tend to be already rather well developed in computer literacy.

It is planned in Action Plan for Developing Estonian VET system in 2001 – 2004 that all VET school teachers have acquired the International Computer Driving Licence by 2004. At the moment there is no data available on how many VET teachers have obtained the licence. Overall, 3562 licences have been issued in Estonia (450 of them teachers in general).

- Number of computers in VET schools per student -

Table 10. Computers in academic year 2000/2001

Total number of computers	Used by teachers	Used by students	Computers per student ratio	Online internet connections
3858	564	2512	1:15	85

- Internet connections in VET schools -

Practically all VET schools (83, incl. both public and private sector schools) have online internet connections (a few schools have more than one, and 11 smaller schools have a dial-up option).

Computers are more and more used for information search through internet and not only as a means of producing written material. Using computers in actual teaching and learning processes is the next step of development. Tiger Leap project has focused mainly on software purchases and development for general education purposes, there are not yet that many software solutions available in vocational education and training.

4. Training policy/ strategy for teachers and trainers

- The agreed policies/strategies on pre- and in-service teacher and trainer training in Estonia -

In Estonia there is no separate VET TTT system. All teacher training is part of a university organisation. Regulations on teacher training are issued by the Ministry of Education. The universities, where VET teachers are educated, are autonomous, they design the curricula of teacher training programmes, which have to be approved by the Ministry of Education.

Attention has been drawn to the need to enhance both initial and in-service training of VET teachers, and at the moment those programmes are carried out in Tallinn Pedagogical University and in a joint effort of Tartu University and Tallinn Technical University.

According to the framework Requirements of Teacher Training, the duration of teacher training programme has to be 40 credit points and it must consist of educational studies, psychology and subject didactics, including 10 weeks of practice period.

- Legal framework -

The Vocational Education Institutions Act, 1998

The regulation No 36 of the Minister of Education *The Conditions and Procedures of Attestation of Pedagogues*, of 28. December 1998

The regulation No 35 of the Minister of Education *The Qualification Requirements of the Pedagogues,* of 21. December 1998

The Regulation No 65 of the Minister of Education on *The Qualification Requirements of Pedagogues* of 26. August 2002

The regulation No 54 of the Government of the Republic *Basic School, Gymnasium and VET School Pedagogues' Remuneration,* of 15.February, 2000

The regulation No 381 of the Government of the Republic *The Framework Requirements for Teacher Training* of 22. November 2000

- Assessment mechanisms of needs for teacher and trainer training -

Systematic mechanisms for assessing the quality and relevance of teaching within teacher training programmes are still not in place.

5. Resources

- Funding: Which bodies are responsible for funding of teacher and trainer training? How much is spent on teacher and trainer training? -

Initial teacher training, taking place at universities, is financed from the state budget. The number of state order student places allocated to the universities carrying out teacher training is decided by the Ministry of Education. Continuous and complementary training can be financed by whoever requests it. This might be the state, the educational institution, the local authority, employer or the teachers themselves. According to Law on the Public Service, 3% of the salary fund in the public sector, which includes teachers, is allocated to the provision of continuous and complementary training.

There is a lack of VET teacher trainer educators on necessary Master or PhD levels. Formal requirements of teacher trainer educators are set by the framework Requirements of Teacher Training, enforced on 22 November 2000. It states that 40% of educators carrying out teacher training courses have to have a PhD. Although in 2001, 5 graduates from Tallinn Pedagogical University continued their studies in VET master programme, and another five teacher educators got training through Danish-Estonian project VOC-TTE, it is still not enough. Many educators carrying out the programmes are part-time teachers of other educational establishments.

6. Provision/implementation of teacher and trainer training

- Structure and organisation of pre-service and in-service teacher and trainer training provision (public and private universities, special pedagogical institutions, teacher and trainer training academies, etc.) -

Pre-service and in-service programmes for vocational teacher training are offered by Tallinn Pedagogical University and jointly by Tartu University and Tallinn Technical University. In the beginning of 2002 new curricula were submitted to the Ministry of Education from both universities. In-service training is also provided by private training companies in a form of short courses. Competition in the field of continuous training has grown over the recent years and the level of in-service training also for teachers has become better.

Initial teacher and trainer training

There are three types of initial teacher training programmes available:

40-credit point vocational teacher training programme (one credit point – one week of studies). Both Tallinn Pedagogical University and Tartu University, the latter in cooperation with Tallinn technical University, have submitted curricula for these programmes. This programme is organised for those specialists who already have a higher education and professional skills and need pedagogical training. Studies are organised in several short-term sessions (part-time format). The new 40 credit point programme of Tallinn Pedagogical University has been designed with the help of an international project VOC-TTE.

1. 120-credit programme of vocational-pedagogy on the bachelor level. Both Tallinn Pedagogical University and Tartu University have submitted curricula for these programmes. This programme is organised for those professionals who have no possibility to acquire higher education in their speciality and need pedagogical training. Students will graduate with pedagogical higher education. Studies are organised in several short-term sessions (part-time format). This curriculum includes the framework of 40 credit point programme of vocational teacher training.

2. 160-credit point programme on bachelor level for VET school graduates. The admission rate has been 15 students per year, but in last two years there has been no admission to this programme. This programme is organised for VET school graduates as full time studies. It is done in cooperation with other higher educational institutions, incl. Tallinn Technical University, where university level speciality subjects are taught. Many graduates have continued their studies on the master's level programmes (5 in year 2001).

Universities are responsible for designing these curricula, but they have to be accepted by the Ministry of Education. So far none of the programmes has been formally accredited.

Teaching practice period in both the 40 and 120-credit point teacher training programmes is 10 weeks. In 160-credit point programme the practice period is 12 weeks. In the new 40-credit point curriculum of Tallinn Pedagogical University, practice and theory parts are designed in an alternating model, which is a direct influence of VOC-TTE project.

Cooperation between the universities training the teachers, VET schools and the enterprises could be better, but as there are more new teacher educators joining the universities who have immediate contacts with both industry and schools, the signs of better cooperation are visible.

For admission into the 40-credit point programme, a higher education in the speciality, employment contract as a teacher or teacher candidate in a VET school and professional work experience of at least three years is required. Ministerial order has been 30 places per year.

For admission into the 120-credit point programme a secondary vocational education certificate is required. Applicants must pass a vocational aptitude test. Ministerial order has been 30 places per year.

For admission into the 160-credit point programme, a secondary vocational education certificate is required. Applicants must pass an examination and aptitude test. During last two years there has been no state order for this programme; in earlier years the admission has been 15 places per year.

Continuing teacher and trainer training

The courses offered as continuing teacher training courses vary in great deal. One can find courses in vocational-pedagogy and didactics, e.g. for general subject teachers; in

metal work; construction, or in general education tools and methods etc. Courses are offered by the Open University in Tartu University or Centre for In-Service Training or Vocational Education Centre in Tallinn Pedagogical University.

As 3% of the salary fund of schools can be spent on continuing education, and teachers are required to participate in at least 160-hour continuing training in-between attestation period of 5 years, there is some competition between the institutions providing those training opportunities. Money available for in-service training of all pedagogical staff of VET schools in 2001 was 4,587,637 EEK (the 3% of salary fund). For VET teachers the respective number was 2,387,620 EEK. How much was actually spent on teacher training is not available.

Design of the programmes is totally up to the institution and they also carry the responsibility for quality of the programmes. In most cases the continuing training takes place in classroom setting and is not often linked to school based activities.

Since 1999 it is compulsory for the VET teachers to work for a practice period of two months in an enterprise to become familiar with the new technology and labour market needs. This enterprise practice system is not functioning well yet, some schools take this obligation more seriously than others, but specific data on how many teachers have already been on this practice is not available.

Some enterprises who want to popularise their products, participate in continuous training programmes, e.g. use of construction materials or tools etc.

In 1996 – 2000 25% of school leadership has been replaced and 92 school leaders have gone trough a leadership training of 240 hours. Estonian Business School from private sector is participating in carrying out this training programme.

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