



European Training Foundation

**Teachers and Trainers in Vocational Education and Training
in the Future Member States**

An Overview

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Introduction

This overview of the condition and education & training of teachers and trainers in the Future Member States (FMS) is based on a series of reports prepared by the National Observatories¹ during the course of 2002.² The purpose of the overview is to provide a common understanding of the situation of VET teachers and trainers as a basis for the discussions in the four thematic workshops at the ETF/CEDEFOP conference on 'Teachers and Trainers in Vocational Education and Training in the Future Member States'.

The nature of the individual country reports does not allow for statistical comparisons between the countries. Therefore the overview should primarily be seen as an indication of the differences and similarities amongst the countries. The overview concentrates on secondary vocational education and on teachers and trainers of vocational subjects primarily. Management staff and others are addressed in some of the country reports but not included in the overview.

Short case descriptions on national vocational teacher training system are annexed to this overview for the nine countries covered.

The individual country reports will be published on the Foundation's web-site: www.etf.eu.int. In 1999, the Foundation published a cross-country analysis on 'Reshaping the focus of vocational teacher and trainer training' in Central and Eastern Europe. This report can be accessed at: <http://www.etf.eu.int/etfweb.nsf/pages/downloadteachertraining>.

Teaching and training staff

In vocational education most countries distinguish between vocational subject (theory) teachers and practical trainers. The basic **requirements** to work as a vocational subject teacher or trainer differ amongst the countries. For **vocational subject teachers** the typical requirement is a university degree in a relevant field with a complementary pedagogical course, which is the case in the Czech Republic, Poland, Romania and Slovakia. Slovenia requires a university degree followed by a 6-10 months school based traineeship whilst Bulgaria only requires a university degree without complementary pedagogical training.

Turkey stands out as the only country, which requires that vocational teachers graduate from a four year university vocational teacher degree programme at a technical & vocational education faculty. Lithuania on the other hand only requires that a teacher has acquired an education one level higher than the students he or she will teach plus a pedagogical course.

For **practical trainers** most countries such as Poland, Romania, Slovakia and Slovenia require a combination of upper secondary vocational education, two to three years of work experience and a pedagogical course. Bulgaria does not require any pedagogical preparation.

Estonia has decided to abolish the difference between theoretical and practical teachers and from September 2003 all teachers must have higher education, a pedagogical background and at least two years work experience in industry. In fields where no relevant higher education is available this requirement must be fulfilled through a pedagogical course at bachelor's level.

The **student/teacher ratio** has been falling in most countries during the last decade. In Lithuania the ratio is 10, in Bulgaria 11, in Slovenia 12 and Romania 17 and falling in all

¹ The Foundation has assisted in establishing National Observatories in all FMS apart from Cyprus and Malta. The main aim of the Observatories is to collect, analyse and disseminate information on vocational education and training and labour market issues in the countries.

² The overview is based on reports from Bulgaria, Czech Republic, Estonia, Lithuania, Poland, Romania, Slovakia, Slovenia and Turkey. The reports from Cyprus, Hungary, Latvia and Malta were not finalised at the time of writing.

countries. In Estonia the ratio is 12 but expected to increase to 16 in 2004 due to an expected increase in intake into vocational education. In the Czech Republic and Slovakia the ratio is 11 and 8, respectively, in technical education and 18 and 16, respectively, in vocational education.³

The **future demand** for vocational teachers and trainers is expected to decrease in most countries due to a lack of interest in vocational education and training and smaller age groups entering into vocational schools. As a consequence there is **no overall lack** of vocational teachers and trainers apart from in some isolated cases and in general subjects such as ICT and foreign languages. There is a countertrend in Romania and Turkey. In Romania, a policy to reduce class size and teaching load is expected to lead to an increase in the number of teachers and in Turkey an expected increase in intake into vocational education should also lead to a need for more teachers.

Almost all country reports mention **a fall in the attractiveness and prestige** of the vocational teacher's profession particularly due to low salary levels. This has led to a situation where teaching becomes an alternative to unemployment rather than a first choice and has made it difficult to attract young people to the profession. This is further aggravated by the few vacancies due to falling intake into vocational education in many countries. Turkey is the exception to the rule, but primarily due to the fact that access to university programmes is highly competitive and the vocational teacher education provides an access to obtaining a degree.⁴

The **salary level** is in most cases lower than the general salary level in the economy at large. This is the situation in Bulgaria, Estonia, Romania and Slovakia ranging from 79% in Slovakia in 2000 (falling from 94% in 1991) to 94% in Bulgaria. In Poland the salary level is 85% of the average salary level in the state sector and in Lithuania it is 91%. In Slovenia it is higher than the general salary level in the economy but lower than the state salary level.

The fall in prestige has also led to an **ageing teacher's population**. 73% of the teachers have over 10 years of work experience in Lithuania and the average age in Slovakia is 50. In Estonia 20% of vocational teachers have reached retirement age.

The teaching profession is **dominated by women**. In Bulgaria 70% of all vocational teachers and trainers are female, in Slovakia 68% and in the Czech Republic and Estonia 60%. The proportion of women amongst practical trainers is often lower.

Countries have taken different routes in **recruitment** of new teachers. In Estonia, Lithuania and Slovakia recruitment is **fully decentralised** to the school level. In Slovenia the school director must consult a register of redundant teachers before recruiting a new teacher. On the contrary, recruitment is **organised centrally** by the ministries of Education in both Romania and Turkey.⁵ The country reports show that **staff development plans** hardly exist in the schools and at best as a minor part of a general annual school development plan.

There is in general **no system to encourage people from industry** to take up a teacher's position in a vocational school apart from Poland where an employer is obliged to release an employee for 6 hours per week or 24 hours per month to take up part time teaching.

³ Where a difference is made between technical and vocational education the former means vocational education leading to matura and the latter means vocational education leading to a skilled workers qualification only. Where no distinction is made vocational education covers both.

⁴ Cyprus which is not covered by this report is another exception due to the high esteem of all civil servant positions in Cypriot society.

⁵ Recruitment is also centrally organised in Cyprus.

Quality of teaching and learning

The **teaching and learning processes** in the FMS remain **traditional and teacher oriented**. In a number of countries attempts have been made – especially within the framework of internationally assisted reform programmes - to introduce more student oriented teaching and learning approaches including emphasis on team work, communication skills, critical thinking etc and to reform curricula in line with new labour market needs. However, in most cases the continuing teacher training system has not been able to ensure the relevant preparation of teachers in the mainstream system for the new teaching and learning approaches.

There is a trend in most countries to put increased emphasis on **new core skills**. Lithuania and Romania have introduced obligatory courses in both entrepreneurship and IT. Romania has also introduced obligatory guidance & counselling. In Slovenia IT is an obligatory course in technical education but elective only in vocational education. Estonia has decided that all curricula must focus on new core skills by 2004. The extent to which focus is put on other core skills as mentioned above depends to a large extent on the **individual capacity and initiative of the teacher and trainer**.

Aligning the teaching and learning processes to the needs of the labour market is further hampered by the **limited real life practical experience** and outdated teaching and learning material and school workshops. Though it is often foreseen that part of the practical training could take place in industry, most schools find it difficult to establish agreements with employers to grant students real life experience.

ICT

As part of the national strategies and programmes for the development of the information society, most countries also have strategies for the introduction of IT into education. Initially these strategies have focused on the delivery of computers and connecting schools to the internet. As a consequence emphasis in vocational education has been on **IT as a subject** to ensure computer literacy, to some extent on using IT as a tool e.g. for computer aided design and hardly on integrating IT into teaching and learning in general.

There is a **lack of teachers** who can teach IT as well as of teachers who are computer literate. Teaching is not attractive for IT specialists and continuing training of teachers in IT has not been able to close the gap. Attention is now moving towards a more integrated approach. In Slovenia, the second phase of the computer literacy education programme focuses on three main aspects. These are: (i) training of teachers and students in IT; (ii) integration of IT into all teaching and learning and the delivery of hardware and software, and (iii) research and development of IT in education.

Based on the European Computer Drivers License, Lithuania has developed a **standard for computer literacy of teachers and students**. In 2001, about 10% of teachers participated in a course to fulfil the requirements of the standard and another 10% took part in upgrading courses.

The **availability of computers and internet connections** differs amongst the countries. In 2001/02 in the Czech Republic there were 6.5 students/computer in technical education and 13 students/computer in vocational education and 39% and 68%, respectively, were connected to the internet. In Estonia there were 15 students/computer, in Lithuania 18 students/computer and all vocational schools had internet connections. In some countries there are no separate data for vocational education. In Slovenia there were 27 students/computer in upper secondary education and in Romania 40 students/computer.

Training policy and strategy for VET teachers and trainers

A number of countries such as Bulgaria, the Czech Republic and Romania have made overall **policy declarations** on the need to enhance the status, improve and simplify the remuneration systems and improve the qualifications of teachers and trainers. In the National Programme for Educational Development, the Czech Republic also stresses the importance of improving co-operation with schools for teaching practice and of developing human resource management in schools. Furthermore, it is foreseen to create bachelor level pedagogical programmes for masters (Meister) of practical training. Some countries such as the Czech Republic, Slovakia and also Hungary put emphasis on the qualification of practical trainers. Poland on the contrary has closed down the institutions providing training for practical trainers without proposing an alternative.

In Lithuania a new concept for vocational teacher education and training has been prepared. The concept proposes that basic educational requirement (higher education, post-secondary or secondary vocational education) should be complemented by three years of relevant work experience and pedagogical training to be attended during the first two years of employment as a teacher.⁶ Lithuania, Romania and Turkey stress the need for a **national standard** for a vocational teacher, however, only Lithuania has so far developed a draft standard. On the contrary countries like Poland and Slovakia hardly mentions the further development of policy and strategy for VET teachers and trainers in their education sector policy and strategies.

In a number of countries (Bulgaria, Czech Republic, Poland, Slovakia and Turkey) it is **voluntary** for teachers and trainers whether to participate in continuing teacher and trainer training. However, in some cases promotion to a higher qualification category is often linked to the participation in upgrading courses. In Lithuania it is **obligatory** to participate in 15 days of continuing training every five years and in Slovenia it is obligatory to participate in continuing training five days per year or a total of 15 days every three years.

Estonia has taken a different route compared to most countries. In 1999 it was made **compulsory** for all vocational teachers to do a **traineeship in industry** at least for a two-month period every three years in order to ensure that teachers are up to date on the latest developments in their sector. Furthermore vocational teachers must participate in 160 hours of training every five years.

Resources (financial and human)

The country reports provide only very general information on financial and human resources available in vocational teacher training.

Initial teacher training offered by universities is in general **free of charge** for students and funded via the state budget allocation to the universities. In some countries such as the Czech Republic, Poland and Slovakia, students must pay **tuition fee** if the supplementary pedagogical course is taken after graduation from the main speciality. In Turkey, the increase in intake into the vocational teacher education programmes has been financed through tuition fees.

The ministries of education make very **limited funding** available **for continuing teacher training**. Often participation in continuing training is paid by the schools via funds raised through commercial activities or directly by teachers themselves.

In most countries the **universities do not specialise in vocational teacher training**. Often those who teach pedagogical courses for general education also cover vocational teachers and there is limited concern for the specific aspects of teaching vocation related subjects. Also

⁶ Also Latvia which is not covered by this report a policy paper on vocational teacher training has been formulated in 2001.

universities to a large extent do not maintain close contacts to vocational schools or industry. Turkey of course is an exception with the existence of technical and vocational education faculties at 14 universities. However, also they do not maintain close contacts to the world of work. In Lithuania, a group of **expert practitioners** was formed to overcome the lack of relevance of continuing training and they have played an important role in disseminating new teaching and learning methodologies in the vocational education system in the country.

Initial teacher training

Initial vocational teacher training is offered to vocational subject teachers in the form of a pedagogical course at universities, which may be taken either concurrently to the main degree or subsequently after graduation at the same time as taking up a teaching position. The pedagogical courses vary from country to country but are usually part time for two to four semesters. In the Czech Republic the courses are 300-400 hours of which 20-80 are teaching practice. In Poland the course lasts 330 hours plus 150 hours teaching practice whilst the complementary pedagogical course for university graduates in Estonia lasts 40 weeks whereof 10 are teaching practice. In a number of countries such as Estonia, Slovakia and Slovenia (and suggested in Lithuania and Romania), new teachers are followed by a mentor during the first period as a teacher.

In Turkey, there are 40 different four-year VET teacher education programmes at universities, which are made up of general education (15 credits), speciality theory and practice (100-170 credits) and pedagogics (36 credits).

Initial teacher training is often criticised as being too theoretical and without much relation to the future teaching situation in the vocational schools. Furthermore, universities most often do not maintain close relations to neither schools nor employers.

Continuing teacher training

The delivery of continuing teacher training varies widely from country to country. In Bulgaria continuing vocational teacher training is only offered in Sofia whereas Poland has 4 centrally managed continuing teacher training centres and 63 regional ones. Continuing training is often in the area of pedagogics or on new areas such as IT. On the contrary it is as in Lithuania often left to the individual teacher to keep up to date on new developments in vocational subjects – both theoretical and practical. In Turkey, continuing training in practical skills is frequently foreseen in tender specifications when procuring new equipment. The traineeships for vocational teachers in industry introduced in Estonia have proven difficult to implement.

The predominant model for skills analysis is a centralised system, where needs are defined by subject experts at central level and often offered to schools and teachers through a catalogue. Continuing training of teachers is not based on concrete skill gap analysis in schools. Continuing training is not focused at all on the development of teams of teachers but on individual teachers.

Commonly, teachers participate primarily in continuing teacher training in order to fulfil the basic requirements to pass from one qualification category to another. Continuing teacher training is criticised for not being able to prepare teachers sufficiently for adapting new teaching methodologies, for ensuring that teachers are IT literate and for having sufficient relation to developments in the labour market.

In Slovakia, a survey showed that 86% of vocational teachers was not interested in participating in continuing training. Continuing training and school based staff development through peers is hardly used in any of the countries.⁷

⁷ Cyprus has introduced a system of change agent teams in all vocational schools as an integral part of staff development in new teaching and learning methods.

Challenges and issues for the future

The above description of the situation in vocational teacher and trainer training in the FMS leads to a number of issues and challenges which the countries will face in the coming years and which will be discussed during the four workshops:

Skills and qualifications for teachers and trainers

- How can we guarantee that teachers and trainers have the relevant skills to meet the challenges in a reformed vocational education and training system?
- How do we ensure that vocational teachers have relevant understanding of the labour market?
- How do we ensure that teachers and trainers are able to implement VET reform in practice and diversify their teaching style away from a teacher oriented approach?
- What role can a national vocational teacher standard play?

Teacher and trainer training systems and quality

- Which approaches to initial and continuing teacher training are most suitable and affordable?
- How do we ensure that the initial and continuing teacher training system is able to prepare teachers and trainers for their new roles in a reformed VET system?
- How do we ensure better links between training providers, schools and the labour market?

Developing skills for the knowledge society including ICT: the role of teachers and trainers

- How do we ensure that all teachers are IT literate and that IT can be integrated in all subjects?
- How do we create a VET pedagogical based Computer Driver's Licence?

Teacher career opportunities

- How do we make teaching careers more attractive?
- How do we relate promotion and salary level to competencies?
- How do we react facing an ageing teacher population and falling intake into vocational education?
- Which role should schools play in recruitment of teachers?
- How do we encourage people from industry to take up vocational teachers' positions?
- How do we attract young people to the vocational teacher profession? Is requiring higher education the way forward?

BULGARIA

Teaching and training staff

In Bulgaria, there are **three types** of teachers in vocational schools: general education teachers, vocational subject teachers and practical trainers, respectively. Whereas a teacher of general subjects must have a bachelor or masters degree and a teaching certificate, a **vocational subject teacher must have** a diploma from an institution of higher education only and does not need a pedagogical qualification. A practical trainer should be qualified in the relevant field and does not need a pedagogical qualification.

There were a total 18,129 teachers including all three types in vocational schools in 2001/02. The **student/teacher ratio** in vocational schools was 11. The entire school system in Bulgaria is undergoing a rationalisation process and the number of schools is falling. The total number of teachers has also been falling during recent years. In the total school system 11,000 staff will be laid off in 2002/03 out of 206,000 staff in total. There is no specific information for vocational education. Combined with the general employment situation at present with staff being laid off, there is no lack of teachers.

The **educational background** of vocational teachers was:

- 86% higher education (bachelor or masters degree);
- 13% post-secondary education (vocational colleges);
- 1% secondary education.

Over 63% of the teachers (all three types) are above 40 years of **age** and 70% are **women**.

The status of teachers has suffered during the last decade. The average **salary level** of a teacher is 94% of the salary level for all the employed in the economy in general. Though the system for promoting teachers was improved in 1996 with the introduction of five qualification levels, there is hardly any link between acquiring a higher professional qualification and the remuneration level.

Each vocational school must prepare an annual work plan including a **staff development plan**. Some people with extensive experience in industry opt to teach in vocational schools. However, under the present situation with high unemployment and a decreasing number of VET students, it is not easy to say to what extent the VET schools would be in a position to attract and retain young people to the teaching profession under more favourable economic conditions. There is no system to encourage mobility between industry and schools.

Quality of teaching and learning

Initial VET consists of both general and vocational education. In five-year programmes 40% is general and 60% vocational education. In four-year programmes the division is 45% to 55%. The vocational education part is divided into 50% theoretical and 50% practical training. The latter takes place primarily in school workshops, though training in enterprises is compulsory for a period of four or six weeks prior to sitting the state exams for acquiring the professional qualification.

The teaching process in the theoretical vocational subjects is still teacher oriented whereas the introduction of interactive teaching methods, team work, independent work etc. is more common in the practical training. New basic skills including entrepreneurship is still at the beginning and only part of the teaching process in some pilot schools. Curriculum development is organised centrally and now involves social partners and thus attempts are made to make curricula correspond to labour market needs.

Teaching material is outdated and very limited resources are allocated to this area.

ICT and eLearning.

In 1998, the MES ratified a National Strategy on ICT in secondary schools. One of the main strands of the programme is “Modern Training in ICT – An Opportunity for All”. The objectives of the education in ICT and their application in other subjects are personal, professional and pedagogical. As part of the programme it was the aim that all schools should have internet connection and special IT classes by the end of 2002. This has not been reached yet.

Though a computerisation programme is under implementation, there are no specific data on number of pupils per computer nor on internet access. Lack of funding and insufficient staff training continue to prevent full implementation. In all secondary schools only 440 out of a planned 3500 IT classrooms have been equipped. This leads to concluding that ICT and eLearning still is not fully integrated into vocational schools and still focuses on ICT as a subject and less on integrating ICT into all subjects.

Training policy and strategy for VET teachers and trainers

The Public Education Act explicitly states that a teacher of vocational training subjects need only have higher education in a relevant field. Teachers have the right to participate in **voluntary** continuing teacher training. The school director, the Inspectorate and the MES are jointly responsible for the organisation of training.

In the **Government’s Governance Programme 2001-2005** priority is given to **the enhancement of the status and qualification of teachers** including vocational teachers. The aim is to improve the economic and social status of teachers, set stricter requirements for teachers and change the remuneration system. By the end of 2002, an incentive system is supposed to be in place.

The inspectors assess the training needs of teachers as part of their monitoring tasks.

Resources (financial and human)

Initial teacher training in universities is funded through **state budget, participant fees**, etc.

Continuing teacher training is mostly on a fee basis. Either paid by the Regional Inspectorates, the schools or participants themselves. Even in the cases where the fee is paid for most teachers will still have to cover board and lodging, transport and lost income by themselves. Continuing training for vocational teachers is only organised in Sofia.

There are no data on overall costs of vocational teacher training.

There is a total of 55 lecturers at St. Kliment Ohridsky university’s department for Information and Teacher Qualification. It is the only institution involved in vocational teacher training in the country. All lecturers have experience as teachers in secondary schools, but limited experience in industry.

Initial teacher training

Initial teacher training leading to a teaching certificate can be attended at a number of higher education institutions in parallel with the normal degree programme. The teaching certificate (which is not a requirement to become a vocational subject teacher) can also be obtained after graduation from the main degree. Initial teacher training for practical trainers is available in a number of colleges.

The training to get the teaching certificate includes compulsory academic subjects in pedagogy, psychology, IT, teaching learning methodologies of a total of 180 study hours and 150 study hours of practical training including lesson observation and pedagogical practice.

All institutions of higher education must go through programme or institutional accreditation which also covers initial teacher training programmes.

Relations between the universities and the schools and industry are limited.

Continuing teacher training

St. Kliment Ohridsky university's department for Information and Teacher Qualification offer a broad range of courses in 2002/03 including such issues as IT in school subjects, development of skills and competencies, training in school networking and partnership building etc. Courses last between 36 and 108 study hours and most are offered to qualify for a higher qualification category. Participation in continuing training is limited due to the fact that courses are only offered in Sofia, teachers have to cover part of the costs themselves and a gaining a higher qualification category is hardly reflected in the salary level.

CZECH REPUBLIC

Teaching and training staff

In the Czech Republic there are **three types** of teachers in secondary technical and vocational education for general subjects, vocational subjects and masters of practical training.

A **vocational subject teacher must have** (i) a masters degree in a given subject and (ii) a pedagogical course. A **master of practical training must have** either a masters degree, a bachelors degree, post-secondary technical education or complete secondary education combined with an apprenticeship certificate in the field they will teach. In all cases the practical trainers must also complete a pedagogical course. The most common is complete secondary education combined with an apprenticeship certificate.

There were 17,500 vocational subject teachers and 1,170 workshop teachers of a total of 35,000 teachers in secondary technical and vocational schools in 2001/02. In addition, there were 8,200 masters of practical training and 5,950 instructors. In the same year, the **student/teacher ratio** in vocational schools was 17.6 and in technical schools 10.7. The former went down from 19.6 in 1998/99 and the latter has remained unchanged.

Intake into secondary technical and vocational education is very high in the Czech Republic at 82% of those leaving basic school.

More than 60% of teachers are over 40 years of **age** and 60% are **women**.

The **attractiveness** of the teaching profession in the public opinion is not high due to a salary level equal to the national average **salary level** only and general lack of esteem. Salary increases are primarily decided on the basis of seniority rather than competence. Teachers are **not civil servants**.

Quality of teaching and learning

Secondary technical and vocational education consists of both general and vocational education. In the cases when the technical and vocational education leads to the matura as well, general education makes up 45% of the curricula. The rest is vocation-oriented theory or practical training. In the technical schools practical training is limited to a few lessons a week primarily in school workshops and a two-week stage in companies together with possible simulated practical training. Practical training in the vocational schools takes up close to half of the total number of lessons in school workshops or companies. However, the interest of companies to offer practical training is decreasing.

Curriculum development can be done either centrally or prepared by the schools and new curricula are generally prepared according to the **new requirements of the changing labour market**, promote the development of **new core skills**, and are continuously updated. However, deciding on labour market needs remains a problem.

Teaching in the Czech Republic remains teacher centred and encyclopaedic. It only makes use of active methods such as group work and project work to a limited extent. Teaching in a team is also not common.

There is a lack of **teaching material** in vocational subjects. Teaching material and textbooks are published on a commercial basis and the low number of students in a large number of different subjects makes publication unattractive.

ICT and eLearning

The basic strategic document is the “State Information Policy – the path towards the information society”. On this basis a draft concept on “State Information Policy in Education” has been prepared. The concept stresses partly the importance of ensuring the information infrastructure in education and partly integrating IT into education programmes at all levels.

A programme called “Internet into Schools” emphasises teacher training in IT.

The **student per computer ratio** and **internet access** differ according to the type of schools. In the 2001/02 school year there were 6.5 students per computer in secondary technical schools, 11.7 students per computer in secondary integrated schools and 12.9 students per computer in secondary vocational schools. Internet access ranges from 39% of students at secondary vocational schools, 68% at secondary technical schools and 74% at secondary integrated schools.

Training policy and strategy for VET teachers and trainers

The main strategy so far has been the requirement laid down for all teachers and trainers to have completed both a professional education and initial teacher training in the form of a pedagogical course offered by the universities.

Participation in **continuing training is voluntary**.

In 2001 the Government approved the “National Programme of Education Development in the Czech Republic”. In terms of the teacher profession the main aims of the programme are:

- to improve the position of teachers including salary increase;
- to increase the quality of teachers’ education and training including the development of a teacher standard, improving the attractiveness of the profession, improving co-operation with schools to ensure practical experience;
- to create a link between career and wage progression;
- to create a system of human resources management in the school sector.

Resources (financial and human)

As mentioned above there are two basic requirements to become a vocational subject teacher or a master of practical training. One is to have a professional competence the other a pedagogical competence. In the public Czech educational system it is **free of charge to acquire the professional competence**. However, since 1998 the **pedagogical courses** required have been considered ‘**lifelong learning**’ if taken after graduating, which means that **students must pay a fee**. In the cases where students follow pedagogical courses in parallel to their professional degree the courses are still free of charge.

Continuing teacher training is offered only at a fee. Each school received a budget allocation earmarked for continuing training of its staff.

The majority of university lecturers who teach the pedagogical course for future VET teachers and trainers have limited contact to both technical and vocational schools and to the labour market. They mostly do not specialise in didactics of vocational subjects and of practical training.

Initial teacher training

Most future vocational subject teachers complete initial teacher training (pedagogical course) after graduating in their professional field. The duration of the courses is three to four terms ranging from 300 to 400 hours whereof 20-80 hours are practical training.

Initial teacher training for masters of practical training must be organised by institutions of higher education, regardless of the prior level of education of the future trainer. The “National Programme of Education Development” foresees the development of accredited bachelor level pedagogical courses for masters of practical training, but at the moment this does not exist.

The institutions of higher education who offer pedagogical courses for teachers and trainers in VET maintain very **marginal contacts with the schools** and mostly do not seek feedback from schools to improve the courses delivered. Equally, they **do not maintain contacts with companies** to follow new requirements of the labour market for the future VET graduates.

Continuing teacher training

There are no requirements for individual vocational teachers and trainers to participate in continuing training. Continuing teacher training is provided by institutions of higher education, regional pedagogical centres and others.

Continuing training of teachers in general aim at updating knowledge and broadening the professional competence. There are however a limited number of continuing training programmes for VET teachers and trainers. There is no link between the world of work and continuing training. School based staff development as a means of continuing teacher training is limited.

ESTONIA

Teaching and training staff

In Estonia, there are **two types** of teachers in vocational schools: general education teachers and vocational teachers, respectively. The previous division between theoretical and practical vocational teachers was abolished in 1995. Starting 1 September 2003, **all vocational teachers must have higher education, a pedagogical background and professional work experience**. This requirement may be fulfilled through either (i) a pedagogical higher education and two years of professional experience in the field taught or (ii) a higher education in the field taught and two years of professional experience as well as a course of 160 hours of vocational-pedagogy which must be started at the latest during the first year of employment as a teacher.

A teacher must go through **attestation** to get or maintain one of five qualification categories. Promotion is linked to attestation, which is valid for five years.

There were 1,987 vocational teachers of a total of 4,294 staff in vocational schools in 2000/01.

The **student/teacher ratio** in vocational schools was 12 in 2001 and is expected to increase to 16 by 2004. Intake into vocational education is expected to increase by 8% per year in that period while the number of teachers will be maintained at the current level.

In 2000/01, the **educational background** of vocational teachers was:

- 70% higher education;
- 28% post-secondary technical education;
- 3% secondary education.

Over 56% of vocational teachers had more than 11 years of **teaching experience**.

Over 46% of vocational teachers are over 49 years of age and **20% have reached retirement age** already. Almost 60% of vocational teachers are **women**.

Teaching is generally **not considered an attractive profession** and it is difficult to attract young people into the profession. The **social status** of a teacher is lower than that of e.g. an engineer and the **salary level** was 85% of the average salary level in Estonia. However, in rural areas and other areas with high unemployment, teaching is more attractive as it provides a stable income. **Recruitment** of vocational teachers is decentralised to the school level and takes place following an announcement of the vacancy. Most schools do not have a **staff development plan**. Only few people with extensive experience in industry opt to teach in vocational schools on a full-time basis.

Quality of teaching and learning

Initial secondary vocational education must contain at least 50% vocational related training (both theoretical and practical). Initial post-secondary vocational education must have 85% vocational related training. The practical training takes place both in school workshops and in industry.

Schools are responsible for curriculum development and teachers take part in this process. Attempts are made to make curricula more relevant to labour market needs. According to the action plan for Developing the Estonian VET System 2001-2004, all VET programmes shall focus on **new core skills**. A shift from auditory work towards more independent work is also ongoing.

A large number of the vocational teachers do not fulfil the requirements, which will be made obligatory as of September 2003. A large number of the teachers trained during the Soviet period had **limited pedagogical training** and are unfamiliar with modern technological developments. During recent years about many vocational teachers have followed a 40 credit point in-service training course, but still the content of and the processes of new teaching and learning methods remain difficult to implement in the school environment. Teaching remains **teacher oriented**. Teachers have problems implementing new curricula which have been developed with external assistance.

Teaching material remains a difficult area. Material should be developed for 145 different specialities for a limited number of students. Each school and teacher must develop their own teaching and learning material. There is no institution responsible for the development of VET methodologies.

ICT and eLearning.

Estonia has made considerable development in the field of telecommunications during the last decade. In general education the Tiger Leap programme was launched in 1997. The main target of the programme is to ensure that all students are equipped with modern ICT skills. When entering vocational schools, students are now already computer literate.

In the 2000/01 school year there were **15 pupils per computer and almost all vocational schools have online internet** access. ICT is taught both as a subject and is used in different subjects as a tool e.g. computer aided design. Using ICT in the teaching learning process is the next step in the development.

Training policy and strategy for VET teachers and trainers

In addition to the Vocational Education Institutions Act from 1998, three regulations on attestation (1998), qualification requirements (1998) and requirements for teacher training (2000), respectively, are the core of the **legal framework** for teachers and trainers.

The **priorities for 2000-04 for the Ministry of Education** to raise the quality of teaching are to:

- improve further training of teachers and the quality of teacher training;
- develop new curricula at all levels;
- modernise the study environment including a review of the VET school network.

As a consequence of putting increased emphasis on practical skills in vocational education, in 1999 it was made **compulsory for vocational teachers to undergo enterprise based training** every three years for a two-month period. Teachers must also participate in **at least 160 hours of continuing training every five years**.

Resources (financial and human)

Initial teacher training provided by Tallinn Pedagogical University and Tartu University is funded via the **state budget**. Continuing training of teachers is funded through a variety of ways by the ministry, the vocational school or the teacher.

There is a lack of vocational teacher educators on the Masters and PhD level. The official requirements state that 40% of the educators should have a PhD. This is, however, not the situation.

Initial teacher training

There are **three types of initial teacher training programmes**:

- a 40 credit-point (40 weeks) course for university graduates who need to obtain the pedagogical qualification. It includes 10 weeks of practice. Such a course is taught at two universities. The programme offered by Tallinn Pedagogical University has just been designed within the framework of a project supported by Denmark. It involves a combination of theory and practice in schools under the supervision of mentors.
- A 120 credit-point programme on bachelor level at two universities. This is done for professionals in fields where it is not possible to acquire higher education. The programmes are organised on a part-time basis and includes the above 40 credit-point course.
- A 160 credit-point programme on bachelor level for VET school graduates as a full time programme. No new intake during the last two years.

None of the programmes have been formally accredited. Admission to the programmes is limited.

Co-operation between universities and vocational schools is improving and links to industry are also developing.

Continuing teacher training

The two universities also offer continuing teacher training. Courses vary in nature and address both pedagogy and practical vocational skills. The universities are fully responsible for the content and quality of the courses on offer. The compulsory industry based training for vocational teachers introduced in 1999 still has to be implemented.

LITHUANIA

Teaching and training staff

In Lithuania, there are **two types** of teachers in vocational schools: general education teachers and vocational teachers, respectively. A **vocational teacher must have** (i) an education one level higher than the students, (ii) preferably one year of practical experience, and (iii) a minimum pedagogical background. A teacher must go through **certification** to get one of four qualification categories. Approximately, 55% had gone through **certification**. The main incentive for teachers to attend pedagogical training is to obtain a (or a higher) qualification category which decides the salary level.

There were 2,345 vocational teachers of a total of 4,696 teachers in vocational schools in 2001/02. The **student/teacher ratio** in vocational schools was 9.6. Presently, forecasting of future needs for VET teachers is not carried out. However, the intake into secondary vocational education has been falling (from around 30% in 1995 to 19.5% in 2001) which will eventually have an impact on the need for teachers together with the overall rationalisation of the vocational school network. The availability of teachers varies with the subject matter and the geographical place of the school.

The **educational background** of vocational teachers was:

- 49% higher education;
- 42% professional college education;
- 7% vocational education.

73% of teachers had more than 10 years of **teaching experience**.

The **average age** of vocational teachers is 46 years and 57% are **women**.

The **prestige** of teachers in general in the public opinion is high. The average monthly gross **salary level** of a teacher is 280 euro which is 91% of the salary level for all state employees. **Recruitment** is decentralised to the school director. Most schools do not have a **staff development plan**. Only few people with extensive experience in industry opt to teach in vocational schools. Under the present situation with high unemployment and a decreasing number of VET students, it is not easy to say to what extent the VET schools would be in a position to attract and retain young people to the teaching profession under more favourable economic conditions.

Quality of teaching and learning

Initial VET consists of both general and vocational education. The vocational education is divided into 60-70% of practical training and 30-40% of vocational theory. Practical training takes place primarily in school workshops.

Curriculum development is the responsibility of the schools and progress has been made to make curricula: competency based; broad based; emphasise new core skills including foreign languages, teamwork and communication skills. There is now **an obligatory entrepreneurship module** for all secondary VET students. **ICT is obligatory** for VET students who also take the matura and optional for other VET students. In general, attempts are made to make curricula correspond to labour market needs and usually employers are involved in the development of new curricula and the final draft curriculum must be approved by the competent employers' organisation.

75% of all vocational teachers have **no pedagogical training**. Research from 1999 indicates that approximately, half of the teachers lacked the capacity to:

- plan, teach and improve curricula;
- set teaching goals, methods and assessment criteria;

- define learning objectives;
- define information sources about vocational and qualification changes.

Close to 80% of the teachers did not maintain contacts to employers, show interest in labour market change nor use literature to upgrade skills.

The introduction of modern student oriented teaching learning methods has been supported through a number of international projects and though training of teachers has started, it is to be expected that the majority of teachers continue to teach in the traditional teacher centred style. In 2001, 220 teachers participated in a course on Preparation of training programmes and 160 teachers on Individualisation of training curricula. This corresponds to 8% of all teachers in vocational schools.

Teaching material is outdated and very limited resources are allocated to this area. The main initiative has been the Resources Development Unit at the Methodological Centre for VET which was set up with the support of the Phare programme to disseminate the new teaching material developed.

ICT and eLearning.

The 2001-2004 Government Programme foresees increased emphasis on the school computerisation programme and aims at achieving a level of one computer per 10 pupils in all schools by 2004. In 2002, the MES approved a “Programme for Introduction of Information and Computer Technologies into the Educational System”. In November 2001 a “Standard for the Computer Literacy of Teachers” (80 hours course) and in January 2002 a “Standard for the Universal Computer Literacy of Pupils” were approved. The standards were developed on the **basis of the European Computer Driving License** programme. As part of the national strategic plan for the development of the information society emphasis is also given to the development of distance education.

380 (or 9% of all) teachers in vocational schools took the computer literacy course in 2001 and 460 (or 11% of) teachers in vocational schools took part in upgrading courses.

In the 2001/02 school year there were 32 pupils per computer in secondary schools in general and 38% of schools had internet access. In vocational education there were **18 pupils per computer and all schools had internet** access. Though there are no specific data, it is understood that IT is mostly taught as a separate subject or used e.g. for training in computer aided design. IT is not as such integrated into the standard class room situation. Distance education is not developed in vocational education.

Training policy and strategy for VET teachers and trainers

The detailed requirements for VET teachers training and their certification are laid down in the “Regulations on Teachers Training” (1995) and “Regulations of Vocational Teachers Certification” (1998). The “White Paper on VET” (1998) further outlines different ways to acquire the required qualification. A certified vocational teacher must participate in continuing training **at least 15 days every five years**.

The draft “Concept for vocational teacher education and training in Lithuania” (2001) proposes a **reform of initial teacher training** according to a **consecutive model** where the future teacher:

- firstly acquires the higher, professional college or vocational education;
- secondly obtains three years of work experience in the relevant field;
- thirdly begins to work in a VET school and acquires a pedagogical qualification during the first two years of work.

A draft professional standard for a vocational teacher has also been prepared. Both the concept and the standard have not been approved yet.

The needs for initial teacher training have been assessed within the framework of several internationally supported projects. As a result a modular initial teacher training programme has been developed.

Resources (financial and human)

The universities are funded via the **state budget** and can provide the initial pedagogical courses free of charge. The MES has decided to provide additional financing to implement the newly developed modular initial teacher training programme at Vytautas Magnus University as of school year 2002/03.

The annual budget for continuing training organised at the Teacher Professional Development Centre is minimal.

The majority of university lecturers who teach the pedagogical course for future VET teachers have limited contact to VET and are not specialised in VET. Partly therefore a group of expert practitioners was developed in order to ensure the dissemination of the results of the Phare programme to the school system in general. The MES provides financial assistance for this dissemination, however, it is not sufficient to ensure that innovations have been adopted by the main stream system.

Initial teacher training

Presently the required pedagogical qualification can be acquired through special pedagogical studies of up to 1.5 year's duration or through a masters programme in education science (duration up to 2.5 years). The universities decide themselves on the content and quality control of the courses and whether to offer a course. There are now five universities who offer the pedagogical course, however, non of them are specialised VET teacher training institutions. In the 2000/01 the Lithuanian Centre for Quality Assessment in Higher Education assessed five programmes for training of vocational teachers and only one was accepted for full accreditation.

The new modular initial teacher training programme which has started implementation in September 2002 at Vytautas Magnus University fully embraces the ideas of the new VET curricula. The draft concept for initial teacher training proposes that a new teacher will be followed by a mentor during the first two years of teaching while following the initial teacher training course at the same time.

Relations between teacher training institutions and schools are primarily through the teachers who attend the teacher training courses. Other contacts with schools and employers are more on an ad-hoc basis.

Continuing teacher training

Available continuing teacher training is primarily to upgrade pedagogical qualifications. Upgrading of vocational subject related knowledge (theoretical and practical) is primarily left to the individual's own initiative.

The Teacher Professional Development Centre is the main provider of continuing teacher training. Vytautas Magnus University, other universities and the National Association of VET Disseminators also provide continuing training. Courses include: project management, development of learning environment, labour market research, defining vocational training needs, teaching/learning methodologies etc. The Methodological Centre for VET also provide training in e.g. curriculum development and quality assurance.

POLAND

Teaching and training staff

In Poland, there are **three types** of teachers in vocational schools: general education teachers, vocational education teachers and tutors, respectively. The vocational education teachers teach either theoretical vocational subjects or practical vocational training. A **teacher of theoretical vocational subjects must have** (i) a higher education and (ii) completed a course in pedagogy. A **teacher of practical vocational subjects must have** (i) at least upper secondary education from a technical school or similar, (ii) completed a course in pedagogy and a course in health and safety at work, and (iii) obtained at least two years practical experience in the relevant profession or the title of a 'qualified worker'.

A new teacher starts as an apprentice teacher for nine months and is assigned to a tutor from the school. Upon completion of the apprentice period the category of a contracted teacher may be awarded. There are five different categories which is the main system of promotion.

In October 2000, there were 40,000 teachers of theoretical subjects and 29,000 teachers of practical training which make up 54% of the total number of teachers in vocational schools. About 63% of the teachers were employed full-time.

The **student/teacher ratio** in vocational schools was 14 in urban areas and 12 in rural areas. Forecasts of the future need for vocational teachers were prepared in 2000 and 2001. However, after restructuring of the school system in 2002, these forecasts have less validity. Nevertheless, the trends in intake into vocational education has been decreasing during the nineties.

The **educational background** of vocational teachers in basic vocational schools is:

- 72% higher education;
- 12% teacher's college;
- 16% secondary education.

The **educational background** of vocational teachers in secondary vocational schools is:

- 93% higher education;
- 3% teacher's college;
- 4% secondary education.

The profession of teachers is not considered to be **prestigious** due to the low salary level. The monthly average gross **salary level** of a teacher is 85% of the salary level for all state employees. No teacher **recruitment** procedure has been defined. In practice, a headmaster mostly informs the supervisory body of a vacancy or less often recruits through advertisements in the press. Most schools do not have a **staff development plan**.

Employers are obliged to release staff temporarily to teach in a vocational school for up to 6 hours a week or 24 hours a month, which ensures some link between industry and vocational education. However, it remains difficult to attract specialists due to the salary level and many part-time specialist positions are filled by retired people.

Quality of teaching and learning

In basic vocational schools 50% of the time is spent on vocational subjects and hereof half is on practical training. In secondary vocational schools the time spend on vocational subjects is 36% with practical training ranging from 10-38% of this time. Recently the time spend on general education has been increased. Practical training is organised either in school workshops or in enterprises including on farms. Most practical training however takes place in school workshops.

The introduction of new core skills such as ability to work in a group, problem-solving skills, communication skills etc. depends to a large extent on the individual teacher's approach to teaching. It is not regulated, nevertheless, continuing training has put emphasis on such issues. There is now **an obligatory class called 'an introduction to the market economy'** and a new class on 'elements of computer science education' has also been introduced.

No research has been conducted to assess whether vocational teachers are well prepared to implement changes in curricula and whether they are ready to teach according to modern teaching and learning methodologies.

ICT and eLearning.

Major efforts have been undertaken to equip general education schools with computers and internet connections through several national programmes. However, **no financial means have been assigned to equipping vocational schools.** There are no specific data on the number of computers or internet access in vocational schools. In 2001, there were 40 students on the average per computer in all schools in Poland.

Training policy and strategy for VET teachers and trainers

There is no specific policy and strategy on initial training VET teachers and trainers other than the requirements to become a vocational teacher. The issue has not been included in any Ministry document concerning the concept of the reform of VET. Continuing training policy for VET teachers is the same as for all other teachers. Continuing training is not obligatory, however, promotion is linked to participation in continuing training.

In 1998, a survey was carried out amongst 500 teachers to assess the interest in continuing training. Teachers expressed an interest in both updating their professional knowledge, in new teaching and learning methodologies and in training in core skills.

Resources (financial and human)

There is no set rule for financing the pedagogical courses offered by institutions of higher education. Pedagogical courses integrated into a degree programme are free of charge, however, mostly pedagogical courses are not part of a degree programme and in that case prospective teachers must **pay a fee** for the course. Continuing training is normally paid by public funds, however, increasingly so teachers opt to participate in training where a fee must be paid.

There is no university specialised in education of vocational teachers. However, a large number of institutions offer the initial pedagogical course.

Initial teacher training

The required pedagogical course for vocational teachers lasts two to four semesters (330 hours of lectures, practical classes, pedagogy, didactics, ICT etc. and 150 hours of vocational traineeship). The universities decide themselves on the content and quality control of the courses and whether to offer a course.

There is no formal system educating teachers of practical training. The previously existing post-secondary institutions of technical studies have been closed and no replacement created.

Institutions of higher education in general do not co-operate with schools or industry. Also there are limited links to institutions offering continuing teacher training.

Continuing teacher training

Continuing teacher training can be organised at different levels, that is central, regional, local, school-based and self-education. There are four central continuing teacher training establishments. There are 63 regional training centres. Training usually are in the form of

courses, seminars, conferences, consulting activities or workshops. Maximum duration is usually 40 hours.

Accreditation of continuing training programmes does not take place. There is no involvement of industry in continuing training of vocational teachers.

ROMANIA

Teaching and training staff

In Romania, there are **three main types** of teachers in technical and vocational schools: general education teachers, vocational subject teachers and practical trainers, respectively. A **vocational subject teacher in a technical school must have** a university education (4-6 year programmes) and a psychology-pedagogy course. A **vocational subject teacher in a vocational school must have** a three year degree from an institution of higher education. A **practical trainer** must complete a two year training programme comprising both speciality training (theory and practice) and psychology-pedagogy training in addition to three years of work experience after having completed their vocational education.

There were almost 44,000 teachers and trainers in technical and vocational education in 2001/02. There were over 34,000 vocational subject teachers and about 9,500 practical trainers. The **student/teacher ratio** in technical and vocational education was 16.5. The student/teacher ratio has been falling in Romania in the last decade as a result of an effort to reduce the teaching load and the number of students per class. This has led to an increasing demand for teachers and trainers. The regional school inspectorates calculate estimations of the need for technical and vocational teachers and trainers in the coming years. There is a **lack of teachers** in such areas as IT, foreign languages, entrepreneurial skills and guidance & counselling.

In vocational schools, **20%** of the teachers and trainers **do not fulfil the basic educational requirements** for a teacher and **8%** in technical schools who do not.

56% of teachers and trainers in vocational education are over 40 years of age while 52% were over 40 years of age in technical education. In technical and vocational education 60% of the teachers and trainers are **women**, ranging from over 51% in vocational education to 66% in post-secondary technical and vocational education.

The salary level of teachers and trainers is low. A teacher with a seniority of 40 years earns **82% of the average salary level** for all employees in Romania. Salaries are a combination of a fixed salary and bonuses, which depend partly on specific working conditions, quality of teaching, seniority, etc. The low salary level has led to a **fall in the status** of teachers especially in the urban areas where there are more alternative employment possibilities.

Recruitment is done **centrally** following a competition under the authority of the Ministry of Education and Research and implemented by the regional inspectorates. Schools are not involved in the recruitment process. School directors are in charge of preparing a **school development plan**, which also sets priorities for human resources development. The plan identifies training needs of its staff and the costs of such training may be covered by any extra-budgetary means the school may have. **Evaluation of teaching staff** is done annually by the school director based on an evaluation form provided by the Ministry. The result of the evaluation impacts on the salary level.

There is **no system as such to encourage mobility** of human resources between VET schools and companies. However, faced by unemployment due to industrial decline a number of e.g. engineers from industry opted for teaching careers.

Quality of teaching and learning

In general approximately one third of the time spent in vocational education is practical training either in technological laboratories, school workshops or at companies. Primarily those schools, which have taken part in international projects, have managed to sign agreements with companies to allow its students to have part of the practical training in a company.

A major objective of the reform of VET in Romania was and is to align initial technical and vocational education with the **needs of the labour market**. This is done by introducing new profiles, set standards for vocational training, design new curricula, reshape the relationship between theory and practice, involve schools in designing part of the curriculum to focus on local labour market needs and to involve the social partners. Nevertheless, the nature of the labour market makes it difficult to continuously adjust the content of education and training and the **new approach has also proven difficult to introduce in the mainstream system**.

The new VET curriculum focus on **new basic skills** and has introduced foreign languages, IT, entrepreneurial education, civic culture, and career guidance & counselling.

Teaching/learning methodologies are changing with the VET reform and emphasis is now on the students, on creating entrepreneurship spirit, critical thinking, communication skills, team work etc. with the teacher as a facilitator of the learning process. However, there are still major difficulties in implementing the reform due to teachers' **resistance to reform**, lack of training in new methods, poorly developed partnerships with employers etc.

Equipment and teaching aids remain outdated in the majority of schools and major improvements have only been achieved in schools, which participated in international projects.

ICT and eLearning.

There are still large differences in the availability of IT equipment amongst the regions and individual schools. The "Development Strategy for Pre-university education between 2001-04" gives priority to equipping schools with computers and internet access. The delivery of 500,000 computers is foreseen within 2004. Teacher training programmes are also envisaged to help teachers acquire computer literacy and enable the usage of IT in schools.

There is no information available on the number of pupils per computer nor on internet access. The new VET curriculum includes IT classes for all students in all years. The computer is used in various subjects as a means of learning e.g. to search for information and do simulations.

Training policy and strategy for VET teachers and trainers

Recent changes in training policy and strategy for VET teachers and trainers aims at addressing a situation, which was characterised by a rigid teaching career path, focus on theoretical knowledge rather than teaching skills, training offers which were not adjusted to the new trends in education, the lack of training standards for the curriculum of initial and continuing training, and the lack of occupational standards for teachers and trainers.

In 2001, the Ministry prepared the "Development strategy for the system of initial and continuing training of the teaching staff and managers in pre-university education". The main goals of the strategy were to:

- give the teaching career a new professional status by creating occupational standards based on teaching skills;
- re-shape the theory – practice ratio in teacher training;
- develop “an educational market for continuing training programmes”;
- implement a system of transferable credits in teacher training;
- develop relevant institutional structures.

In June 2002, it was decided to set up the National Training Centre for Teaching Staff in pre-Tertiary Education.

In order to continue reform of VET special emphasis is put on (i) the use of new teaching methodologies in accordance with the new curriculum, (ii) establishing school based curricula, and (iii) developing school-enterprise relationships for teacher training.

Training needs of teachers and trainers are assessed both a central level, by school inspectorates and at the school level.

Resources (financial and human)

Both obtaining a higher education degree (masters or bachelor) and the required additional **initial teacher training** in the form of a pedagogical course are **free of charge**.

Continuing teacher training is funded from public and other sources. In reality, state budget funds are extremely low and schools have to rely primarily on own income, teachers willingness to pay and participation in international projects to fund continuing training of its staff. The above mentioned development strategy also proposes changing the method for financing continuing training and supporting regular continuing teacher training activities through the Ministry budget.

Initial teacher training

The duration of the pedagogical course is 378 classes. Each higher education institution sets the curriculum itself. The pedagogical course includes a practical training module of 126 classes of which 112 classes are pedagogical practice and 14 classes of practical work on the speciality chosen.

Co-operation between the institutions of higher education and the schools is primarily in relation to the practice period of their students in the schools.

With an increased emphasis on seeing initial and continuing teacher training as a continuum, it has been **suggested to prolong the initial teacher training by a full year of practice in a schools supported by a mentor**.

Continuing teacher training

The main forms of continuing teacher training are:

- participation in symposia, report sessions, regular training courses, distance learning;
- continuing training to prepare the tenure examination compulsory two years after taking up employment, to prepare for the optional examinations to pass to teaching grade II and teaching grade I,
- participation in mandatory continuing training once every five years to pass to the next salary step which includes speciality training, teaching methodology, and computer-aided instruction.

The Ministry sets the curriculum for tenure. Otherwise the providers propose training programmes which are approved by the National Training Centre for Pre-university training.

SLOVAKIA

Teaching and training staff

In Slovakia, there are **three main types** of teachers and trainers in vocational schools: general education teachers, vocational teachers and trainers, respectively. A **vocational teacher must have** a university degree and a complementary pedagogical course. A **trainer must** have completed secondary vocational education, three years of practical experience and a complementary pedagogical course.

After five years a new teachers goes through certification, which is related to promotion to a higher salary level (first qualification exam).

There were a total of over 26,000 teachers in technical and vocational schools in 2001/02. The **student/teacher ratio** in technical schools was 8 and in vocational schools 16 and decreasing in both. The intake into technical and vocational education is falling and it can be expected that there will be a decrease in demand for VET teachers in the years to come. The availability of qualified teachers varies with the subject matter.

The **educational background** of vocational teachers was:

- General subject teachers - teacher training graduates from university;
- Vocational teachers - university graduates;
- Trainers - at least upper secondary vocational education.

About 11% of the VET teachers and 20% of the trainers do not fulfil the basic requirements.

57% of teachers had more than 10 years of **teaching experience**.

The **average age** of vocational teachers is about 50 years and 68% are **women**.

The **prestige** of teachers is low. The average **salary level** in education was 94% of the national average salary level in 1991 and only 79% in 2000. **Recruitment** is decentralised to the school director. Most schools do not have a **staff development plan** and continuing training is not seen as an integral part of school development. Only few people with extensive experience in industry opt to teach in vocational schools for other reasons than unemployment. Under the present situation with high unemployment and a decreasing number of VET students, only few young graduates are taken on as teachers in VET schools.

Quality of teaching and learning

In technical education about 45% is general education and 55% vocational. Less than 1/3 of the latter is practical. In vocational education 25-50% is general education and 50-75% is vocational of which 35-40% is practical. Practical training takes place primarily in school workshops.

VET curriculum development is the responsibility of the State Institute for VET and its 14 expert commissions. They try to design curricula in line with labour market requirements. There is also an increased emphasis on new core skills.

Though the introduction of modern student oriented teaching and learning methods has started, it is to be expected that the majority of teachers continue to teach in the traditional teacher centred style. There is no follow up on VET graduates transfer to the world of work.

Teaching material is outdated and very limited resources are allocated to this area. Equipment is outdated.

ICT and eLearning.

In 2001, an Information Society Policy was adapted followed by a Strategy of Introducing IT in Slovakia. A so-called INFOVEK project has started aiming at technical infrastructure, ICT training of teachers and development of digital/computer assisted resources. Slovakia has declared to follow EU ICT policy and to connect all schools to the internet and train teachers by 2003.

In 1998, there were **16 pupils per computer** in secondary schools in general. There are no data for technical and vocational schools on the availability of computers and internet connections. A survey was done in Presov region and there were 17 pupils per computer in technical schools, 19 in vocational schools and about 90% of all schools were linked to the internet.

Training policy and strategy for VET teachers and trainers

There is no overall initial VET teacher training strategy. The National Programme for Upbringing & Education in the Next 15-20 Years from 2001, states that the low esteem of teachers is a serious problem. However, the issue has still not been addressed.

It is **not obligatory to participate in continuing training**. The needs for teacher training have been assessed with regard to the number of teachers who teach without having fulfilled the basic requirements and who have reached retirement age. There has not been any needs assessment based on future labour market needs.

Resources (financial and human)

The universities are funded via the **state budget** and can provide the complementary pedagogical course free of charge if it is followed concurrently with the main field of study. If the course is taken after graduation a fee can be charged.

Continuing training is free of charge but limited funding is made available to the four regional methodological centres through the Ministry of Education. Board and travel costs are no longer reimbursed.

Initial teacher training

Initial teacher training for VET teachers is offered by universities and for trainers by either universities or the four regional methodological centres. Universities are fully autonomous in designing teacher training courses. Initial teacher training is criticised for being too abstract and for not being linked to the practice in schools. Each new teacher is supported by an experienced teacher when taking up the first assignment. This system suffers from a lack of interest from the side of the experienced teachers. There is little link between the general didactics taught and the future teaching situation in VET.

Continuing teacher training

Continuing teacher training is offered by universities, methodological centres, the National Institute for Education and the State Institute of VET.

Continuing teacher training is usually in the form of induction of new teachers into practice and upgrading of teachers. A survey has shown that 86% of teachers are not interested in continuing training.

Continuing training is very rarely school based through peers. The best chance for this is through participation in international projects.

SLOVENIA

Teaching and training staff

In Slovenia, there are **several types** of teaching and training staff in the VET system including: (i) general education teachers, (ii) vocational theoretical teachers, (iii) vocational practical teachers, (iv) laboratory assistants, instructors, practical training managers, and (v) mentors, master craftsmen, foremen, shop managers and instructors who all are responsible for training in companies providing apprenticeships.

A **vocational theoretical teacher must** (i) have a university-level degree in the appropriate field, (ii) complete a 6-10 months 'on-the-job' traineeship and pass a Teaching Certification Examination. A **vocational practical teacher must** (i) have at least the qualification of a technician, (ii) pedagogical training and (iii) three years of work experience. A **trainer in a company must** (i) be a master craftsman (or foreman or shop manager), (ii) have pedagogical training, and (iii) have three years of work experience.

In Slovenia, upper secondary schools mostly have several departments offering both general, technical and vocational education programmes. Therefore, data on teachers in upper secondary general education are not divided between general and vocational education teachers. There were 9,350 teachers in upper secondary schools in 1999/2000. The **student/teacher ratio** in upper secondary schools was 12.1 compared to 14.2 in the early 1990s. Forecasts on future needs of teachers are not carried out. There appears to be a **surplus** of teachers in the vocational subject fields of commerce, sales and textile. There is **no shortage** of vocational teachers and trainers. There appears to be a **shortage of IT and foreign language** teachers.

Data on the educational background of vocational teachers is not available.

There are no data available on the **average age** of vocational teachers. 54% of all upper secondary teachers are **women**.

The salary structure for teachers is very complicated with over 20 different supplements, which often sum up to more than the basic salary and creating unjustifiable differences between different teachers. The government has proposed a complete revision of the salary system in the public sector. In 2001, the average yearly **salaries in education were lower** than in the public sector in general (index 119 compared to 130), the salary level was higher than the average salary in Slovenia (index 100). Job-security (status of civil servant), professional autonomy and perceived workload are attractive aspects of a teaching career. Furthermore, the **traineeship arrangement**, which provides an easy access to the labour market for all graduates whose right it is to do a traineeship **attracts young people** to the teaching profession.

Recruitment is partly decentralised to the school director. If the centrally kept register of redundant teachers contains a person who meets the required profile, the director must recruit this person. Otherwise the director is free to recruit from the market. The director is in charge of the school's **staff development plan**. There are **not any systematic arrangements to exchange professionals between industry and schools**.

Quality of teaching and learning

Social partners are involved in curriculum development and new curricula should reflect the needs of the labour market better than hitherto. Links between schools and enterprises are not well developed and little 'real life' experience influences the teaching process.

ICT and eLearning.

The policy is shifting from computer literacy to information literacy in the draft “Phase II of the Computer Literacy Education Programme and Information Literacy Education”. The three main goals are to (i) train teachers and pupils in the use of modern IT, (ii) make IT an integral part of teaching contents and provide hard and software to schools, and (iii) foster research and development work for the introduction of IT in education. Initiatives are co-ordinated with the e-Europe initiative.

In the 2000/01 school year there were **27 pupils per computer** in upper secondary schools. There are no specific data for technical and vocational education but the ratio is expected to be lower. All schools have at least one IT room and **all have access to the internet**.

Presently, ‘computer science and informatics’ is a compulsory subject in technical education and an elective subject in vocational education. It is also incorporated into other subjects as a tool. IT teachers are university graduates. The National ICT programme Council defines the policy on in-service training of teachers in IT.

Training policy and strategy for VET teachers and trainers

The ‘White Paper on Education’ from 1996 established the policy framework for teacher training. Teachers should be properly trained for the new challenges of pedagogical practice such as:

- increasing participation of youth in education;
- integrating students with special needs;
- following technological development;
- using IT;
- opening up schools to the environment.

Continuing training of teachers is both a right and an obligation. Teachers are guaranteed at least five days per year or 15 days over a three year period of paid leave to participate in continuing training.

All academic matters in initial teacher training are decided by the **universities**.

Resources

Data on spending on initial vocational teacher and trainer training are not available. The spending is part of the overall budgets of the universities, which are funded primarily from the state budget.

The Ministry of Education provides funding for schools to cover costs and salaries for participants of continuing training.

There is no university, which has specialised in vocational teacher training.

Initial teacher training

Most vocational teachers will first complete a university degree in a given subject. Upon graduation – possibly with some years of work experience – they will start as a trainee in a school for 6-10 months. During this period of time the theoretical teacher training can be followed at a faculty of education whilst the practical teacher training is received ‘on-the-job’ in the school under the supervision of a tutor. At the end of the traineeship the prospective teacher must pass a Teaching Certification Examination.

Teacher training for future teachers of practical instruction is provided by specialised upper secondary schools. The preparation for a master craftsman’s examination includes professional training.

Continuing teacher training

The main responsibilities in the system of in-service training lie with the In-service Training Programme Council. There is a close link between promotion and participation in in-service training.

TURKEY

Teaching and training staff

In Turkey, a **vocational teacher must have** graduated from a four-year programme at a vocational & technical education faculty at university. Some graduates from other faculties, especially engineering, are recruited as vocational teachers in areas where there is a lack of qualified teachers.

The Ministry of National Education aims at increasing intake into vocational education. If the targets are met, there will be a need for 29,000 teachers in the period 2002-2005. Nevertheless, there are only about 5,000 graduates annually from the vocational & technical education faculties, which would lead to a lack in teachers. However, the targets for increasing intake into technical and vocational education have not been met yet, and during the last three years there were more graduates than newly employed. Faculties furthermore continue to produce teachers in areas with a limited number of vacancies. At the same time there is a lack of teachers in IT and electronics. Intake into the faculties increased from 5,700 in 2000 to 7,055 in 2001. Almost the entire increase was in technical faculties.

Due to the fact that access to university is highly competitive and restricted, it is **attractive to be enrolled** in any faculty including the vocational & technical education faculties. There are about three times more applicants than study places. **Recruitment** is organised centrally by the Ministry of National Education. The number of new teachers to be recruited annually is decided according to a "Norm Cadre Application". A teacher may teach a total of 40 hours a week, 20 hours for the basic salary and up to 20 hours more paid by the hour. Graduates must sit for the Public Personnel Selection Examination before they can be placed on a register.

Quality of teaching and learning

The faculties train teacher students through traditional lectures and new teaching and learning methodologies are hardly demonstrated to students. No studies have been carried out to assess whether teachers are well prepared to teach at school, however, given the limitations in the faculties it would be surprising if they were up-to-date on new teaching and learning methodologies.

ICT and eLearning.

The 8th Five Year Development Plan 2001-2005 states that "Maximum use will be made of the opportunities technology provides – especially computer technology – at all levels of education...".

In the 2000/01 school year there **were 25.6 pupils per computer in vocational & technical education** ranging from 19 in Commerce & Tourism to 31 in apprenticeship training.

Training policy and strategy for VET teachers and trainers

Vocational & technical education teachers should be graduates from the vocational & technical education faculties in the universities' four-year programmes. There is no requirement for a teacher to have acquired practical work experience.

The 8th Five Year Development Plan states that participation in in-service training should be a teacher's right. Presently, it is **not obligatory to participate in in-service training**. No strategy exists for teachers to gain work experience at enterprises.

The Ministry of National Education is obliged to determine the required competencies related to general culture, speciality field and pedagogical training. However, **this national standard was not developed yet**.

Resources (financial and human)

The universities are funded via the **state budget** and provide university education free of charge or with symbolic fees. However, the increase in intake shown above was a result of expanding tuition based programmes rather than creating more public study places.

The annual budget for continuing training organised by the Department of In-service Training of Teachers is limited.

In the 1980's a large number of VET teachers were sent abroad for training and entered the faculties as teaching staff upon return. Most faculty staff have had pedagogical training, but most do **not maintain contact to the world of work**. The workshops of faculties are not sufficiently up to date.

Initial teacher training

Vocational & technical teachers are educated at 18 different vocational & technical education faculties connected to universities. Access is restricted to university and students who continue the same strand at university as at upper secondary technical education stand the best chances to be admitted. Since 1999 preferential access to the faculties has been given to graduates of post-secondary vocational education. There are special scholarships to computer teachers though limited in numbers.

In 2001-02 there were 40 different four-year VET teacher programmes. These are made up of general knowledge (15 credits), speciality field (100-170 credits) and pedagogic training (36 credits) of which half is teaching practice in schools. The general knowledge and pedagogical courses are prepared by the Higher Education Council. The content of the vocational & technical speciality is developed by faculty staff.

Continuing teacher training

Available continuing teacher training covers all areas of teaching whether technical, pedagogical, etc. Upgrading of teachers' practical skills is often done in relation to delivery of new equipment and provided by the supplier of the equipment. In 2002, a total of 3,550 VET teachers are to be trained on the average for 10 days. Continuing training is not accredited. The Department of In-service Training of the Ministry of National Education plans in-service training for all teachers.
