



Widening participation in technical and vocational education and training: experiences from Romania

Among the numerous challenges that education in Romania has faced in recent, so-called transition, years is the effort to turn from a centralised, command-driven system, to a flexible and demand driven one, having as its main principle the attempt to widen the participation of different actors in all stages of vocational education and training. This paper investigates some successful examples of practice which contributed to bridging the gap between TVET schools and the beneficiaries of its services. Diversification of functions, involvement of stakeholders and creation of institutional capacities and structures in TVET institutions are realised to different levels at the moment, with a significant contribution from the EU funded Phare programmes.

General context of educational reform

There are already different approaches and perspectives in literature on the key moments or milestones of educational reform in Romania. In order to depict the evolutions and transformations in recent years, we will offer a perspective which could help in understanding the general context of reform and transformation of governance in education. Birzea and Badescu (1998) tried to depict different stages of reform, but these should be also updated. The three main steps they identified are:

□ destructuring (1990); the main instruments of communist education (e.g. political indoctrination, over-centralisation and abusive control of individuals and institutions) were removed. General objectives of education and the structure of the education system were reconsidered;

□ stabilisation (1991-92); priority was given to defining a legal framework that would re-establish a coherent educational system, according to the new social, political and cultural values. The new Constitution stipulates the right to education for all, free access, diversification of education supply, equality of opportunities, additional private education provision and emergence of alternative schools;

□ restructuring (1993-95); in this period important reform programmes are launched in different sectors of education, with the financial and technical support of international organisations (World Bank, European Commission). In 1995 the Law on Education was adopted.

At least two stages could be added, according to the evolutions after 1995:

□ comprehensive reform (1996-2000); major changes are planned, coherent at component level (curriculum, management, evaluation, teacher training, etc.); the main intention was to pass from sector/domain oriented reform to systemic reform;

□ 'reform of the reform' (2001- ...); there are two components or directions of educational policy after the government change in 2000. One is to strengthen the achievements of the previous team and to build on their experience. The second trend is to rethink some of the important measures already under implementation. Some of these changes could be considered logical, even normal, but others are just changes of changes, predominantly justified by political reasons and not by evaluations of the policies in force.



Madlen Şerban
Director, National Centre for Development of Vocational and Technical Education (Ministry of Education and Research), Romania.



Lucian Ciolan
Lecturer, Faculty of Educational Sciences (Bucharest University) and Training programmes coordinator, National Centre for Development of Vocational and Technical Education, Romania

The discussion about participation and partnership to ensure the quality of TVET is not new, but the capacity of the educational actors to establish effective and sustainable cooperation with the stakeholders, especially in transition economies characterised by instability and unpredictability, is still a challenge. We have tried to present here a participatory planning model for TVET which started to be used in Romania, and which, accompanied by appropriate support measures, should lead to bridging the TVET schools, the community and the social partners. The model is based on a regional approach and is supported by measures focused on cultural changes in TVET school management (a new vision on partnership, quality assurance, social accountability, etc.), changes at the level of teaching and learning practices (integration of work and learning, student-centred methodologies, inclusion of students with special needs, etc.) and creation of an institutional network to pilot this integrated approach (the so-called resource centres).



Fortunately, this last situation is not so characteristic of vocational education and training, where the significant transformations after year 2000 have augmented, and are consistent with, previous reforms. A systemic approach to TVET reform is envisaged lately, trying to harmonise initial and continuous vocational training, to rationalise the system and to make it more flexible and responsive to the demands of the labour market.

One of the most important changes of this last period, impacting also on vocational education, was the extension of compulsory education from 8 to 10 years. This begins at the age of 6/7 years and comprises primary education (grades 1-4, according to ISCED 1) and lower secondary education (grades 5-10 according to ISCED 2) organised in two successive cycles: gymnasium (grades 5-8) and the 9th and 10th grades. The last two grades are organised in educational paths: a vocational path, the School of arts and trades, leading to level I of qualification and the lower cycle of high school (see also Annex 1).

From command/supply-driven to demand-driven TVET.

The command-driven TVET system in place before 1990 is a fact and needs no further argumentation and description. The reality is that the governing principles of organisation and functioning of vocational education did not change as quickly as expected and suggested by the new developments toward a free, market economy. Even the centralised command system progressively dissolved after the collapse of communism, vocational education remained - and this is still partly the case - a supply-driven (sub-)system, from the point of view of educational offer. This problem exists across the whole educational system, but the consequences are more direct and visible in the case of TVET because of expected immediate integration of its graduates into the labour market.

The change of perspective from mass to flexible production requires broader skills and knowledge than those offered by previous specialisation. Some countries from ECA ⁽¹⁾ eliminated early specialisation after basic education, others did not, while others introduced it even earlier. (Hidden challenges to education systems in transition economies, 2001).

The characteristics of the TVET system in Romania at the beginning of the 1990s are mainly:

- early specialisation and fragmentation of qualification structure in a very large and narrow number of specialisations, which created a rigid and inadapted TVET educational offer;
- a centralised decision-making system of policy development and, as a consequence, low participation of stakeholders;
- a prescriptive and outdated curriculum, based on the frequent direct relations between TVET schools and a major employer in the area;
- a poor partnership structure with employers and low capacity in schools to diversify the educational offer and to respond to the new challenges of the labour market.

A first Phare project to reform vocational education and training was initiated in Romania in 1995. Like all Phare funded projects, this one was meant to support national reform and offer two important contributions:

- finance for modern equipment and training materials for schools, plus their rehabilitation;
- technical assistance from the EU to contribute to the conceptual and methodological developments needed for a modern TVET system.

The transfer of TVET development know-how was, and still is, important for transition countries like Romania. The commitment to a market economy, and a new type of relationship between vocational school 'products' and employment, needs the lengthy experience of western countries to ensure consistency and sustainability. The quick passage from post-communism to post-modernism, from centralised economies to an information/knowledge based economy would be even more difficult if not assisted and advised by the more advanced.

A comprehensive TVET reform project started in 1995 (through the project Phare RO 9405), including the main aims of:

(1) ECA = Europe and Central Asia.



- adapting the structure of TVET delivery to the needs of the emerging market economy;
- switching from command to demand-driven educational planning;
- designing a new curriculum, in accordance with the needs of new qualifications required in the labour market;
- strengthening social partnership in VET, especially through setting up tripartite consultative bodies at county level (Local Development Committees).

This first reform project was implemented in 75 pilot schools across the country, representing all main vocational domains. The new institutional and qualification structure, and the curriculum produced in the framework of the project, were considered successful and extended from the pilot schools to the whole vocational education system.

Plotting the transition path from command-driven to demand-driven TVET was not an easy process; the work still continues in this respect, having in mind directing principles such as:

- preference to functional policies (development and improvement) and to systemic approach;
- learning as the centre of pedagogy, learners at the centre of educational policies;
- policy development and change process are driven by analysis and consultation;
- priority to individual and community demands, articulated at regional level (see also Rado, 2000).

The visible steps forward made through this programme, which was completed in 1998, are continued now under the new multi-annual Phare project. In order to reach social and economic cohesion, a new Phare project was launched in Romania, with multiple components; one of those (Phare RO 0108 TVET) is focused on modernisation of vocational and technical education and training and started effectively in 2003. In the same year, the structure of TVET was modified again, according to new policy developments and decisions, and particularly concerned extending compulsory education from 8 to 10 years.

Recent decisions from the Ministry of Education and Research aimed at creating facilities to improve access to initial education and training, by making vocational education and training more attractive and also offering equal opportunities to access for those from disadvantaged regions, such as rural areas. The main difficulty in organising TVET in rural areas comes from the economic gap between rural and urban areas and the restricted ability to produce prognoses regarding the economic development strategies for these areas.

The limited partnership between schools and enterprises and insufficient didactic equipment in schools (especially those in rural areas and small and medium size towns) are the main obstacles in the development of TVET.

A further issue is including students with special educational needs into mainstream education. Specific actions initiated in the Phare 2001 project aimed to strengthen the institutional capacity of vocational schools to offer the best opportunities to these students.

The Phare 2001-02 programme is due to be implemented in 100 schools, distributed over 11 areas of economic restructuring with potential for economic growth and 22 resource centres (schools involved in the previous project and with potential for assistance and networking according to regional and field/qualification structure).

The overall objectives of the new project envisage:

- consolidating the achievements of the reform acquired through the Phare VET RO 9405 programme and supporting the rationalisation and modernisation of the present TVET system;
- reviewing responsibilities, governance and accountability mechanisms in the provision of initial TVET in line with the social and economic development, in a regional perspective;
- ensuring equal opportunity for all young people to obtain a good professional qualification at a level equal to European standards by providing vocational education which responds flexibly to the needs of each individual.



After one year of implementation, very intense and rich in activities targeted toward the broad objectives mentioned before, the first results/achievements are already visible.

A new curriculum was developed for level 1 qualification. The important aspect here is that a new methodology for curriculum development is now in place, based on vocational training standards, modular approach, competences and a credit system. This new approach tries to ensure the flexibility of vocational training, mobility/transfer of competences between qualifications and coherence between initial vocational training (IVET) and continuous vocational training (CVT).

A system of TVET quality assurance was developed, based on the European Framework of Quality Assurance ⁽²⁾ and the main tools of this system were piloted in the 22 resource centres. The necessary revisions will be made after this year and the system will be extended to other TVET schools.

A comprehensive human resource development programme was launched, based on specific methodologies, according to the training needs identified in different areas: student-centred learning, inclusion of students with special needs, partnership development and working with enterprises, vocational counselling and guidance, educational planning on demand, etc. Teachers, school directors, inspectors and representatives of social partners participated in training stages during this first year.

Development and initial implementation of a new model for educational planning, with three tiers, situated at regional, local (county) and school level. If a rationalisation of the TVET offer is envisaged, this has to be based on careful evaluation of needs in the labour market, the individual needs of students, and the capacity of schools to meet all these needs.

Areas in which further intervention for improvement is strongly needed, the project as yet unable to produce satisfactory results, include:

□ the yet limited participation of social partners (especially employers and employer organisations, trade unions) in planning and developing vocational qualifications. The

difficult situation of small and medium enterprises, engaged in a 'survival economy', unstable, sometime chaotic, with high levels of taxation makes it difficult to motivate involvement in education and training. The debates about setting up a system of incentives for employers, at least for participating in organising learning at the workplace for students in TVET, have produced no results for the time being;

□ the level of coherence between initial vocational education and training (IVET) and continuing vocational training (CVT). The new curriculum, based on standards, competences and credits is expected to bring a significant contribution in this respect, but mainly the creation of an agency for qualifications, which will be in charge of a national framework of vocational qualification, to be the reference both for IVET and CVT;

□ the limited number of TVET schools assisted by the project (122) ⁽³⁾. This creates examples of good practice, but dissemination and generalisation of results across of the whole TVET system is difficult to ensure, both in terms of human resources and financing. Careful consideration of this issue is needed to avoid creation of potential gaps between assisted and non-assisted schools. The broad aim of the project is to contribute to social and economic cohesion, not to deepen the differences.

Widening the participation of different actors

Transparency, accountability and participation in TVET are governing principles of the reform efforts. The following could be mentioned in relation to participation:

Participation of social partners

This is especially for enterprises developing sound and relevant work experience for students, but also for curriculum development and validation and planning the educational offer. Improving the quality of vocational education is not a goal to be achieved by the sole efforts of schools and the education sector, even supported by the know-how and financing of Phare projects. The participation of social partners in planning and delivery of TVET was a priority from the first vocational education reform project. The main social partners considered crucial to the sustainable development of TVET are:

⁽²⁾ See the work of Technical Working Group for quality assurance in TVET, European Commission.

⁽³⁾ i. e. the 100 supplementary TVET schools integrated in the new programme Phare 2001-02, and the 22 TVET schools involved in the first Phare reform project and functioning as resource centres because of their potential for assistance and networking due to their previous experience [editor's note].



- representatives of employers and employer organisations,
- trade unions,
- governmental organisations/agencies,
- parents.

It is a high priority to break the vicious circle in which employers claim that schools are not providing high quality professionals and schools complain about the lack of interest and low participation in education by enterprises. More structured cooperation, with clear roles and responsibilities, with an effective system of incentives and disincentives in place, could prevent this mutual blame and create a platform for working towards common goals. School managers and teachers were involved in training activities in which they learned how to work with enterprises and how to develop together partnership plans. The needs of the employers, both in terms of qualifications and competences are the main tools in planning education on demand.

For the first time in Romania, vocational training standards for each domain, developed mainly by educationalists, were validated through panels by representatives of the world of work. This created a platform for debate regarding the competences required by employers and the structure of each qualification.

'The link between school and workplace is the milestone for any vocational education system. If the links are weak, there is a risk that system will produce graduates difficult to place on the labour market, the results being youth unemployment and expensive vocational conversion programmes; if the links are too much centred on individual needs of employers, the system becomes difficult to modernise and the mobility on the labour market (...) becomes difficult' (Deij and Badescu, 2003, p. 48).

Participation of support services providers

This particularly includes guidance and counselling services and in-service teacher training institutions. Career guidance is crucial for further development and improvement in Romanian TVET. The inappropriate social perception of TVET among parents, coupled sometimes with unclear policy meas-

ures, creates problems in effective distribution of students in the system and their future employability in the labour market. There is in place a national network of counselling and vocational guidance centres, one for each county delivering services to all educational customers in their area (teachers, students, parents). As well as these centres, almost every vocational school has its own counselling and guidance specialist(s) and a counselling and guidance office in school, at the service of students and teachers. The county centres network is coordinated and financed by the Ministry of Education and Research and aims to deliver services to pre-university public schools. Another important network of support service providers is represented by the so called Teacher's Houses: these are county in-service teacher training centres also financed by the Ministry of Education. In addition, in recent years, a free market of training providers, both for teachers and for CVT, has started to appear. Different types of providers, such as NGOs, private companies, universities, VET schools, etc. have become more involved in this area.

Participation of regional bodies

This refers mainly to a newly created consultative structure, as an outcome of the new Phare project: the Regional Consortia. This is established at the level of each region and comprises representatives of local public authorities in the region, representatives of regional development agencies, representatives of school inspectorates and universities, employers and trade unions. It is chaired by the Regional Development Agency and their main task is to produce the regional action plans for TVET, based on analysis of trends and evolution of the social and economic environment in their region. Analysis of the social and economic environment in the respective region should allow the Regional Consortia to produce a long-term action plan for development of vocational education and training.

A general description of the regions and their development role would clarify the above ideas. Since 1998, Romania has been split into eight development regions, with social and economic development goals and without administrative functions. In each region there is a Council for Regional Development, with a deliberative role regarding the coordination of regional development policy. This body is composed, for each region,



of county council presidents and representatives of different types of administrative structures: cities, medium/small towns and villages; it coordinates the activity of the Regional Development Agency (RDA). The RDA is in charge of elaboration and implementation of policy documents for the respective region. The projects proposed by RDAs are financed, after approval, from the National Fund for Regional Development and other sources, identified by each RDA.

One of the most evident features of economic development in Romania in recent years was the growing importance of the Bucharest Region. The trend in all transition countries is more visible in Romania because of the dimensions of the country, both in terms of territory and population. Having 5.4 % of the whole population of the country, Bucharest brings 21 % of the GDP; 20 % of the small and medium size enterprises are registered here and 51.1 % of the total foreign investments are made in the region.

In contrast, the North-East Region is highly dependent on agriculture, with a high percentage of rural population, situated in proximity with Moldova and the Ukraine.

The planning and development of vocational education and training in a regional perspective is seen as one of the tools to diminish the regional disparities and to contribute to social and economic cohesion.

Participation of students

This is envisaged in at least two directions: participation in creating their own learning and participation in building career pathways according to their competences and the needs of the local/regional labour market. In order to strengthen the feeling of ownership of students in relation to their learning experiences, teachers were trained in modern teaching/learning methodologies, based on the principle of student-centred learning. Individual learning materials are now being developed, with a special focus on adapting learning to students with special needs. Specific measures have been designed to create an inclusive learning environment in and out of school, to support the integration of students with special needs. More than 2 500 teachers and managers from vocational schools in the Phare 2001 proj-

ect were trained in the first year of the project on different topics, including those mentioned above. More than 60 training stages were organised at regional level, to facilitate networking and cooperation between schools, and delivery was ensured in teams by the experts of the technical assistance and local teacher and management trainers, trained in the programme.

Finally, new management techniques and contemporary forms of work organisation are taking the individualisation process into the workplace where, in the wake of a serious quest for value added, traditional hierarchies and the formalised work procedures which traditionally brought order to the operations are being softened or even abandoned.' (Brater, 2000, p. 46).

Participation of parents

This is largely still to be achieved, though there are domains of school activity in which parents can definitely play a greater role:

- micro-policy making at school level;
- career guidance;
- participatory school development planning;
- organisation and delivery of work experience.

General aims

Widening participation in different processes and domains of vocational education and training is seen as a key tool in bridging supply and demand, and in creating strong links and effective cooperation between all stakeholders. In addition, the actual social perception of TVET should be challenged.

TVET in Romania faces an image deficit, caused by several factors:

- memories of the old communist system, such as:
- the social experience of parents as TVET graduates: even if the communist ideology claimed that 'working people' (*oamenii muncii*) are the owners of all goods, they had quite low social status and not very rewarding financial benefits,



□ the structure of the previous system (narrow specialisation at an early age, outdated skills, etc.), which created a high risk type of qualified young people in the context of the new market economy.

□ the unstable economy of transition, where the extreme dynamic of the economic sectors and reduced long-term perspective creates fear of unemployment. (Fear of changing workplace and fear of unemployment are widespread especially among adults who qualified during the previous system, when it was quite common to have only one or two work locations during the whole active life).

□ The embedded idea that TVET is for those students not able to attend general/academic high schools. A paradoxical process happened, between two interesting evolutions. On the one side, in recent years, the formal educational expectations of parents and their ambitions for their children increased. It was taken for granted that a higher level of education means a greater chance of a better social-economic status. At the same time, a kind of elitist trend spread among parents and students and oriented their options after the end of compulsory education towards academic high schools, considered 'better' and having a superior image. Since the number of places in this type of education is limited, those remaining 'out' had to go to TVET schools, against their initial will and first option.

Even though unemployment figures show that graduates from general high schools are in the largest unemployed group, the majority of parents are still willing to orient their children towards this educational path and, in many cases, to impose it. This option may be a reaction to the negative factors but it also reflects the conviction that this type of 'elite' high school may provide more opportunity for entrance to further/higher education (*).

In fact, the existing realities of existing TVET schools sometimes contributed to this image deficit, through outdated equipment and endowments for practical training, lowly qualified staff, and inability to address the new type of qualifications required by employers in a free market.

Participatory planning TVET development: a regional approach

One of the significant achievements and innovations in educational planning is the move to an articulated approach in a regional perspective. As shown by Davey (2003, p. 151),

'In the run-up to accession to the EU the debate over reform and development in the candidate countries has had a strong but often confused regional dimension. This has been encouraged by the EU and has had three interlocking strands:

□ regional government: the possible creation or reform of an upper tier of self government, both to complete the reforms of public administration begun in 1990 and to stimulate socio-economic development;

□ regional policy: the desirability of directing public investment and encouraging private investment to reduce the growing territorial disparities in income and employment;

□ regional development planning: basing increasing proportions of public investment on regionally conceived and focused strategies and priorities rather than nation-wide sectoral programmes and targets.'

In each of the seven development regions with schools involved in the new Phare project (Phare RO 0108 TVET) for modernisation of vocational education and training, Regional Consortia were created.

The activities of these Regional Consortia are related to:

□ supporting vocational schools and vocational training providers in developing and offering qualifications relevant at national and regional level;

□ monitoring the system of TVET quality assurance in cooperation with local school inspectorates;

□ ensuring communication and interface between regions and national responsible bodies for early identification of qualifications needed in the labour market and occupational profiles emerging in the respective regions;

(* For a comparative perspective, see tables 1 to 3 in Annex 2.



□ guidance for rationalising and optimising allocation of resources for vocational education and training in the regions.

Nevertheless, one of the main roles of these bodies was to develop the regional education action plans (REAPs) for TVET that should address the key development areas for the period 2003 to 2010. REAPs should be demand-led and should be underpinned by a sound labour market and supply-side capacity analysis.

'A standard planning approach has been proposed for the REAPs. This includes a statement of the policy context, an analysis of the current and future forecast position in relation to employment, skills, and training in the region and a plan for the development and improvement in TVET to address the market and individual needs in perspective of 2010.' (Swainger, 2003).

The main contribution of REAPs is expected to be in identifying regional priorities and designing specific actions to be taken to respond to these priorities. These action plans contain objectives and priorities covering a large spectrum of issues related to vocational education and training, according to the specifics of the region, but all the plans, in all regions, are expected to provide actions related to:

- the types and levels of qualification needed in the region, to respond to envisaged changes in the labour market in the perspective of the year 2010;
- the structure and distribution of the vocational schools network in the region to ensure a more efficient and adaptable TVET system, securing equal access for everybody;
- the measures needed for strengthening the partnership between schools, students and companies.

Starting from the regional level, with the REAPs, a system of planning is in place which continues with development of local action plans for TVET (at county level) and school action plans (at TVET institution level).

The local education action plans for TVET (LEAPs) represent the second tier of educational planning.

The local committees for development of social partnership in TVET are consultative structures of the county school inspectorates created initially under the first Phare RO 9405 project. They are tripartite bodies that support TVET schools in implementing national strategies, also providing assistance to inspectorates in designing scholarship plans and structuring the educational offer according to local needs.

In the new paradigm, they are responsible for developing local education action plans for TVET on the basis of the REAPs, completed and adapted in accordance with local conditions and needs. This ensures a coherent link between regional and local educational planning in TVET.

Further on in this approach we have School Action Plans (SAPs). Each individual school is trained and then expected to develop action plans at the school level on the basis of regional and local priorities. Networking between schools is encouraged by addressing together the local and regional needs for vocational education and training; cooperation between schools and companies takes a more structured form. The local partnership in TVET aims to create effective learning communities, capable of planning and implementing self-development and continuous improvement actions.

This comprehensive planning process is based on previous training of those involved and on common guidelines, jointly developed and agreed by regions. We are now in a piloting phase, in which 122 schools will start the process, learn from it and improve the tools and conditions for implementing the system generally. The expected results of this are a significant contribution in addressing the key challenges now confronting TVET:

- building the 'real image' of TVET in social perception and derived social behaviour: not promising more than is possible, but also not accepting the role of second-hand education;
- adapting TVET to the challenges of economic transition and to global challenge;
- building a new identity for TVET schools, more open and close to enterprises, more flexible and adaptable to internal and external changes. This aims to create com-



munity resource centres, with a wide spectrum of services and activities directed to diverse beneficiaries;

- reshaping the professional identity of TVET teachers, according to the new curriculum, the new role of TVET schools and the requirements of a learning-centred educational process;
- implementing the principles of regional development in educational planning;
- creating sustainable and effective partnerships with the world of work, to the benefit of both sides;
- impacting on initial training of teachers in TVET in all the directions mentioned above.

Creation or consolidation of regional and local bodies representing the interest of stakeholders in TVET aims to help institutionalise the participation of different actors. 'Many countries have realised the advantages of local institutionalisation of stakeholder interests. (...) Local government, union and employer representatives negotiate local training arrangements and regulate interactions between publicly-financed educational institutions and company-based initial training' (Drake, 1994, p. 159).

TVET schools as community resource centres

The intended new image of TVET cannot be created out of the global trends in organisational development. The new conditions created by the evolution toward a knowledge-based economy, conducted and regulated by the flexible specialisation and post-Fordist working relationships, is based on trust, competences and added value. The inner dynamic of the global economic and social environment take particular forms in transition countries, creating mobile and flexible labour markets, characterised most of the time by instability and unpredictability.

Learning organisations and neo-institutionalism - new trends in organisational theory - still make their impact on schools. The organisational behaviour of schools has significantly changed in two directions: structurally and functionally. We are talking in transition countries about the new type of management and a new internal organisation, more flexible and responsive to the de-

mands and challenges of the environment and a broad diversification of functions and services.

A learning organisation can come into being only where the decision-making and decision-taking structures in all organisational areas - including educational theory, personnel, finance and school organisation - comply with the principle of self-organisation. It must be possible for those involved to develop forms of organisation which reflect the prevailing social and economic requirements and independently established key priorities. (*Teacher and trainer training. 3rd workshop on curriculum innovation*, 1999, p. 3).

As a first step in setting up community resource centres, the programme for modernising TVET selected 22 vocational education schools and started to consolidate their institutional capacity. Strengthening this capacity will enable them to become learning champions of the project and methodological support providers for the other schools in the system. The 22 TVET schools have the experience of the first Phare reform project and they came with a certain level of institutional and human resource development. They have been selected based on representing TVET domains and on regional distribution.

The major roles of the resource centres are to:

- transfer the conceptual and methodological knowledge as well as good practices acquired from participation in the previous project (Phare RO 9405) and in their activity as a whole;
- assist the changes and developments proposed for the participant schools in the new Phare RO 0108 TVET project;
- provide methodological support and consultancy to other schools and to become 'resource centres' for peer learning;
- become regional centres for continuous vocational education and training, in cooperation with enterprises;
- act as 'local' support for the Project Implementation Unit and to ensure a communication interface between the school in the programme and the programme management;



□ organise and deliver in-service training activities for TVET teaching staff and managers, according to their capacities and to the needs of the vocational education and training system;

□ bring together in learning networks the local community, the regional resources and stakeholders for strengthening social partnership in vocational education and training;

□ promote a collaborative, associative management, focused on participation, quality assurance and accountability.

It is obvious that the organisational development perspective envisaged for the resource centres implies changes in the whole learning environment and especially in the management and teaching/learning practices.

'This new learning context implies a different role for teachers and trainers. Teachers need to learn new skills and become lifelong learners themselves to keep up to date with new knowledge, pedagogical ideas and technology. As learning becomes more collaborative, so too must teachers' professional development, which needs to promote professional networks and learning organisations within schools and institutions.' (Lifelong learning in the global knowledge economy: challenges for developing countries, May 2003).

The way forward

We have tried to capture in this paper the main orientations and actions directed towards widening the participation of different actors in planning, development and functioning of vocational education and training.

The experience and efforts of 13 years of educational reform of different concentration and magnitude showed that at least two types of change are needed at policy level:

□ shift the focus from 'big' structural and systemic changes to targeted development programmes and to regional and local approaches, closer to beneficiaries of vocational education and training services and closer to the intimate functioning of educational process at grassroots level;

□ the expected impact and the sustainability of educational change at school level (basic, grassroots level) cannot be achieved if the school culture does not change. Even the structural-systemic measures undertaken up to now implicitly or explicitly produced some cultural changes in schools; what we are talking about here is that type of cultural change that starts from inside the organisation, as an intrinsic need for its own development. Cultural change as a decision of the school staff, assumed and accepted by the critical mass of the teachers and carried out in cooperation with local community, can ensure the sustainability of reform measures. This change should be a result of internal school development, started and conducted from inside the organisation.

Building a culture of associative management and partnership in vocational education and training could be the key for widening participation in TVET in a joint effort at ensuring high quality services in the challenging environment which characterises Romania at the moment. Such ideas are not new from a theoretical perspective (or even from the practical one, if we look to the countries with a long democratic tradition); they remain key challenges for TVET development in the future in transition countries like Romania. The distance from what we know we should do to what we actually do in practice is still considerable and, sometimes, well-known solutions to the problems lack coherence in policy approach and persistence in implementation.



Structure of education system in Romania				Annex 1		
Age	Grade	ISCED		Educational level		
		5, 6		Higher education		
		4		Post high school (technical education)		
18	XIII	3		Upper cycle of lyceum (technical education)		
17	XII					
16	XI			Upper cycle of academic high school	Upper cycle of technological high school	Vocational education completion year
15	X			Lower cycle of lyceum	Vocational education (school of arts and trades)	
14	IX					
13	VIII	COMPULSORY EDUCATION	2	Gymnasium		
12	VII					
11	VI		1	Primary		
10	V					
9	IV					
8	III		0	Pre-primary		
7	II					
6	I					
5	3					
4	2					
3	1					

Participation rate in initial education and training							Annex 2 Table 1	
School year	Technical and vocational education			High school education				
	TOTAL	Vocational education	High school education - the technological path	High schools for students with specific abilities (art, sport) - the vocational path	General/theoretical	Total high school education		
	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)		
2001/2002	565 665 (11,26 %)	252 347 (15,8 %)	313 318 (7,6 %)	51 042 (2,6 %)	346 303 (5,9 %)	710 663 (6,4 %)		
2002/2003	596 531 (11,47 %)	270 215 (15,9 %)	326 316 (7,8 %)	53 951 (2,3 %)	360 137 (6,2 %)	740 404 (6,6 %)		
2003/2004	618 951 (12,09 %)	279 124 (17,3 %)	339 827 (7,8 %)	53 756 (2,1 %)	365 334 (6,7 %)	759 917 (6,9 %)		

Source: National Institute of Statistics, 2004.

Graduate occupation distribution between 1999-2003							Table 2	
Occupational fields	Type of education -qualification level	1998-99	1999-2000	2000-01	2001-02	2002-03		
Industrial/ technical	Vocational education- level 1 and 2	53 063	49 423	52 598	44 681	55 464		
	High school - level 3	52 147	47 861	45 620	39 793	46 044		
	Post-High school - level 3	7 570	6 109	5 987	4 102	3 887		
Agriculture	Vocational education - level 1 and 2	3 892	3 556	3 455	2 698	4 243		
	High school- level 3	10 314	7 903	7 200	5 491	3 684		
	Post-High school. - level 3	1 336	1 578	1 352	1 394	1 143		
Services	Vocational education - level 1 and 2	21 420	17 333	22 616	20 614	23 587		
	High school- level 3	15 286	15 277	14 070	13 733	18 228		
	Post-High school - level 3	26 052	31 479	26 130	22 960	20 307		

Source: National Institute of Statistics



Structure of employment, according to education/qualification level (%)

Table 3

Education/qualification level	Romania		
	2000	2001	2002
Primary or no school graduated	14,2	13,5	8,5
Lower secondary	21,6	21,2	22,8
Vocational education (level 1 and 2)	21,6	22,3	22,1
High school (including technological, level 3)	29,1	29,1	29,3
Post-high school and foremen (level 3)	4,4	4,5	4,2
Higher education	9,1	9,4	12,9

Source: National Institute of Statistics, Eurostat Yearbook 2002

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Key words

Educational policy,
Phare,
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Internationally comparable statistics on education, training and skills: current state and prospects

Introduction

Internationally comparable data on education, training and skills have acquired particular importance with the growing together of European countries and the implementation of common EU policies and strategies. This data are also key to comparative research on education and training that aims at establishing an overview of education and training across countries.

Political and research interest in such data and the recognition of their key role for (European) economic and social policies are relatively new. Most developments in internationally comparable education and training statistics started in the 1990s. Therefore, international sources do not always (yet) provide the information required or long time series. Nevertheless, most sources are adapted constantly to cover upcoming needs. New sources and surveys are designed and the geographical coverage of international data is widening constantly. A number of research projects have also led to new concepts, methods, data and indicators that can be used by international organisations to improve available data and design new surveys (1).

Despite the substantial progress made in developing international statistics and indicators, missing or insufficient data and statistics still impede evidence-based policies, research analysis and informed decisions by individuals (e.g. for their educational or occupational choices). Indeed, comparable data on education, training and skills still suffer some drawbacks:

□ a considerable set of key data needed by policy-makers and researchers is missing;

□ many available data have not yet been fully exploited;

□ many limitations exist in comparing data across countries and over time.

Cedefop's research and policy reports (2), for example, have discussed in detail several of these problems. The Maastricht Study (Leney et al., 2004) (3) has also analysed, in a differentiated way, existing data and their limitations for assessing progress made by Member States in achieving the Copenhagen objectives for VET.

Data required for policy coordination at European level

New methods of policy coordination at European level require structured and continuous support in the form of statistical indicators and benchmarks. Therefore, closing the knowledge gap about comparable statistics has become a priority for the European Union.

The Lisbon conclusions defined the open method of coordination (OMC) as a means of spreading knowledge of best practices and achieving greater convergence towards the main EU goals while respecting the breakdown of responsibilities envisaged in various EU treaties. The OMC is a new form of cooperation for the Member States, based on a fully decentralised approach relying on variable forms of partnership and designed to help them to progressively develop their own policies. It is based essentially on:

□ identifying and defining jointly the objectives to be reached (benchmarks);



Pascaline Descy
Project Manager
'Research Reporting'
Cedefop



Katja Nestler
Expert Statistician
Cedefop



Manfred Tessaring
Head of the Area
'Developing Research'
Cedefop

Comparable statistics on education, training and skills are not only used by research and analysis to provide explanation and evidence of the functioning of European labour markets and of education and training systems, but also to construct indicators comparing EU Member States, comparing the EU with competitors and assessing the achievement of goals and benchmarks. Although substantial progress has been made, some essential data gaps still remain on issues such as expenditure on vocational education and training (VET), skill mismatches, outcomes of education and training systems, skill and competence levels of populations. Additionally, available data have various drawbacks that limit comparisons across countries and over time, existing sources are not always exploited sufficiently. The article aims to raise awareness of missing key data, and to increase transparency about available data sources, their potential and limits. In this respect, the annex gives a comprehensive overview of existing and forthcoming data sources.



□ commonly-defined yardsticks (statistics, indicators) enabling Member States to know where they stand and to assess progress towards the set objectives;

□ cooperation tools to stimulate exchange and dissemination of good practices. ⁽⁴⁾

The OMC is applied in the field of education and training. It aims at stimulating mutual learning processes using indicators and benchmarks, comparing best practices and organising periodic monitoring, evaluation and peer reviews.

Following this policy need, the Maastricht Communiqué (2004) identified 'the improvement of the scope, precision and reliability of VET statistics' as a priority, arguing that 'adequate data and indicators are the key to understanding what is happening in VET and what additional interventions and decision-making are required by all parties involved'. In parallel, the setting up of the standing group on indicators and benchmarks (SGIB) by the European Commission ⁽⁵⁾ was an important step not only in extending the use of available data and statistics, but also in initiating improvements in their coverage and quality. It is also encouraging that the Commission has just established, in the Joint Research Centre at Ispra, a research unit on lifelong learning with a focus on data and indicators.

Assessment of current comparable data provision

The table annexed presents the different sources at international level that provide comparable data on education, training and skills. In this section these sources are assessed in the light of current policy and research needs for comparable data and some methodological drawbacks are identified to provide directions for future research and development.

Policy and research needs for comparable data on VET, learning and skills

Combining policy and research need analysis with a review of the different sources identifies several information gaps and areas for improvement in current comparable data provision ⁽⁶⁾.

Data on expenditure on, and investment in, education and training needs to be refined to distinguish between types of expenditure (in initial and continuing vocational training; in VET and general education), between public and private sources of funding (including individuals), between expenditure on institutions and other kinds of expenditure (e.g. learning materials, accommodation and commuting costs). According to Leney et al. (2004) there is very little information on expenditure on initial VET and what we have is not satisfactory. Some data may be provided by countries' administrations and international sources but expenditure on initial VET is usually included in expenditure on (all) educational institutions. The current indicator of public expenditure on education as a percentage of GDP, provided by the Unesco-OECD-Eurostat (UOE) questionnaire, does not distinguish type of education (VET versus general education). Expenditure on continuing vocational training (CVT) is currently restricted to companies: information on costs of CVT courses provided by enterprises can be obtained from continuing vocational training survey in enterprises (CVTS) but data is limited to sectors of economic activity covered and do not include other forms of training. Public expenditures in active labour market policy measures - including training - are available from the labour market policy data collection (Eurostat) and the OECD ⁽⁷⁾ labour market programme database. Finally, there is not much information on individual or family expenditure on education and for initial and continuing VET, in particular.

Simple indicators such as VET participation and graduation rates are currently not produced easily using the UOE questionnaire data although they would contribute to better understanding of factors contributing to reducing drop-out rates and supporting more young people to complete upper secondary education. Furthermore, indicators of completion of educational programmes duplicate each other and results are inconsistent. The two main sources on enrolment and educational attainment: the UOE data collection and the EU labour force survey (LFS) lack comparability, leading to major discrepancies, particularly when comparing upper secondary graduation at typical age (UOE) and youth educational attainment (LFS), reaching 18 % or more in some countries (Leney et al., 2004). Data on transitions

⁽¹⁾ As an example, the site Research on Lifelong Learning attempts to provide a structured dissemination channel between researchers/expert educational statisticians and the European Statistical System by discussing results of comparative research projects that developed new statistical concepts, methods and/or data (<http://www.researchonlifelonglearning.org/>).

⁽²⁾ Information on the policy report and the three research reports published so far (1998, 2001, 2005) can be found on Cedefop's European Training Village (www.trainingvillage.gr) in the section Projects and networks: Policy report or Research laboratory.

⁽³⁾ Leney, T. et al. Achieving the Lisbon goal: the contribution of VET: final report for the European Commission. 15.10.2004. Available from www.refernet.org.uk/documents/Achieving_the_Lisbon_goal.pdf [cited 13.9.2005]. A synthesis report has been published by Cedefop: Tessaring, M.; Wannan, J. Vocational education and training - key to the future: Lisbon-Copenhagen-Maastricht: mobilising for 2010. Luxembourg: EUR-OP, 2004.

⁽⁴⁾ http://europa.eu.int/comm/education/policies/pol/policy_en.html#methode; detailed work programme on the follow-up of the objectives of education and training systems in Europe (Council of the European Union, 2002).

⁽⁵⁾ The SGIB consists of experts proposed by the Member States and of other experts designated by the Commission.

⁽⁶⁾ The main characteristics of the data sources mentioned below are detailed in the table at the end of the article, including abbreviations.

⁽⁷⁾ Organisation for Economic Co-operation and Development.



of VET graduates to the labour market, post-secondary or higher education, as compared to graduates from other pathways, are also not currently available from a standard source. The data from the ad hoc module on transition integrated in 2000 in the LFS are not yet fully exploited.

More detailed data on mobility – not only geographical but also occupational, sectoral and social/intergenerational – are necessary to understand the dynamics of employment and unemployment in the European labour market. However, the LFS does not allow the degree of data desegregation necessary to study these issues in detail due to sample size limitations. It would also be useful for research if more detailed characteristics of unemployed people (particularly long-term unemployed) and of the ‘hidden unemployed’⁽⁸⁾ were available from the LFS. There is also no specific comparable data source on skill shortages and mismatches (e.g. qualification requirements of vacancies or skill needs analysis by sectors or occupations).

Detailed data on VET teachers, trainers, tutors and other staff involved in training, their individual characteristics (age, gender, skills, etc.), earnings, status, roles and duties are required given the emphasis on the profession in EU and national policies. Currently, only information on personnel in educational programmes is available from the UOE questionnaire.

Overall data on outcomes of VET, education and lifelong learning⁽⁹⁾ to assess the efficiency and effectiveness of education and training systems, programmes and measures are missing. Currently there is no adequate source at European or international level to analyse these issues. The OECD programme for international student assessment (PISA) is a step in this direction as it measures students’ skills in selected domains and draws conclusions on the factors influencing the performance of various education and training systems. However, currently there is no way to assess the specific outcomes of VET. The OECD international adult literacy survey (IALS) and the adult literacy and life skills survey (ALL) measure adult performance in selected skill domains and relate it to a number of labour market success variables⁽¹⁰⁾. This kind of analysis, relying on skills levels, gives a better indication of the benefits of education and skills than the

educational attainment level used in indicators derived from the LFS. Nevertheless, as is the case for PISA, the assessment of adult performance does not specify VET in relation to general education. Also it is limited to basic skills domains, as reliable and valid direct measurement exists currently only for literacy, numeracy and analytical reasoning.

Detailed data on lifelong learning are needed, covering types, subjects and duration of courses, training providers (including micro-enterprises, public service, etc.), characteristics of participants and non-participants, and impacts on further life, career and participation in learning activities. Data should also include ‘non-traditional’ forms of learning, such as self-organised, distance learning, e-learning, etc. The current LFS structural indicator on lifelong learning, with information on participation in a period of four weeks prior to the survey, underestimates the extent of adult participation. The CVTS is restricted to company-provided continuing training (enterprises of at least 10 employees), and to employed people. It excludes the public sector and some industries because of difficulties with data collection. Data on participants in CVT do not indicate individual characteristics of participants (except gender). They also exclude more informal and non-formal work-related learning such as job rotation or quality circles to cover only CVT courses. Nevertheless, the forthcoming adult education survey should resolve part of the information gap on lifelong learning.

Education and training: inputs and outcomes

Current sources provide mainly information on the input to education and training (participation, expenditure, provision, time, etc.). Only a few sources – mainly LFS and OECD – provide data on outcomes (educational attainment of populations, drop-outs, skill levels, earnings, etc.). Furthermore, most sources do not provide a clear and analytical picture of the relationship between inputs and outcomes, often because one source does not cover or focus on both⁽¹¹⁾.

Developing better data sources and indicators on the outcomes of various forms of education, training and skills would contribute to providing crucial data on vulnerable and disadvantaged groups and to giv-

⁽⁸⁾ People who would like to work under certain conditions but are not registered unemployed (Descy and Tessaring, 2001, p. 240).

⁽⁹⁾ Including non-economic benefits and externalities.

⁽¹⁰⁾ A programme for international assessment of adult competences (PIAAC) is also under discussion between the OECD secretariat and member countries.

⁽¹¹⁾ The Eurobarometer surveys complete the current picture with some information on citizens’ opinions regarding lifelong learning and vocational training.



ing indications on priority areas for policy intervention and learning provision. Current effort in this respect should be extended and more systematically supported by the EU and other international institutions; extensive research programmes on the issue should be financed.

A fragmented picture of education, training and skills

Such international sources as exist provide a fragmented rather than a comprehensive view of education and training. They only allow analysis of single aspects because information across sources is difficult to combine. Moreover, in many instances results from different sources provide different pictures of the same issue. This is due to several reasons:

- ❑ sources focus on different subjects (e.g. labour force characteristics in the case of LFS versus provision of training to employees for the CVTS);
- ❑ sources use different definitions of education, training or skills (depending on the unit, the subject, etc.)
- ❑ sources refer to different statistical units (e.g. education programme as in the UOE questionnaires, enterprises in CVTS, households in LFS, individuals in IALS);
- ❑ sources have a different periodicity (some data are available annually, others over a longer cycle);
- ❑ sources have different country coverage;
- ❑ in most sources, education, training or skills are not the main subject but just one aspect covered, which leads to limited coverage of education and training issues;
- ❑ finally, reliability cannot always be ensured if data refer to a small number of units or if various characteristics are combined (e.g. gender + skills + age + country + ...).

There are also limitations in obtaining or interpreting time series resulting from changes in concepts and definitions. For instance, the benchmarks 'early school leavers' and 'lifelong learning' were strongly influenced by major methodological modifications made by Member States over the past years to achieve harmonisation. For example, in 2003,

France adjusted the reference period for participation in lifelong learning from one to four weeks. This doubled the participation rate compared with previous years. Comparisons are further hampered by the fact that countries have implemented changes at different times, thus making comparisons for a given year difficult (Leney et al., 2004).

Expected developments in future comparable data provision

Up to 2010, several new sources and/or survey cycles will be launched and will provide new data:

- ❑ the third CVTS (2006) will allow comparisons with data gathered in 1994 and 2000 and the identification of trends regarding training in enterprises;
- ❑ the adult education survey (AES, 2005-07) will provide comparable European data on participation in various forms of learning as well as obstacles to and attitudes towards learning;
- ❑ the EU-survey on income and living conditions (EU-SILC, 2004 onwards), is a longitudinal survey including variables related to income, poverty, social exclusion, living conditions, employment, health and education and training;
- ❑ the household budget survey (HBS, 2006), including education consumption expenditure, should provide further insights into households and individual spending on education;
- ❑ the third round of PISA (2006), will cover 58 countries and therefore provide a better understanding of the factors influencing the performance of education and training systems;
- ❑ the new OECD programme for international assessment of adult competences (PIAAC 2008-09), will pursue the efforts to measure the level of the adult population in selected skill domains while also assessing the use of selected skills in the workplace;
- ❑ the fourth trends in international mathematics and science study (TIMSS 2007), will pursue this cycle of internationally comparative assessments and provide data about trends in mathematics and science achievement over time;



□ the second information technology in education study (SITES 2006) will focus on the impact of investments in ICT in education.

Waiting for these new data, a few sources available at European or international level could be exploited or exploited better as their full potential for analysis has not been investigated yet. This is, for instance, the case for the second continuing vocational training survey in enterprises, the ad hoc modules on transition and on lifelong learning included in the LFS in 2000 and 2003 respectively, the labour cost survey, the time use surveys, the labour market policy data collection and the OECD ALL survey. Although this will not provide the complete picture needed, nor directly address the gaps identified above, this may still provide new insights and understandings.

Conclusions

Despite significant progress in the provision and use of comparable data on education, training and skills, further developments at EU and international level are hampered by a lack of strong guidance and cooperation. The concrete roles and responsibilities of the various actors – Member States, several Directorates General of the European Commission, Eurostat, Cedefop, the European Training Foundation and other agencies – are not always clear and distinct. Thus, possible double work and deficits in cooperation, including with other international bodies such as OECD, Unesco or the International Labour Office, reduce the effectiveness and coherence of the process of data improvement.

The process of adapting current data sources and of developing new ones at European and international level should not only aim at filling gaps and covering upcoming needs.

It should also have as an objective to improve methods and definitions across sources to form a congruent picture of lifelong learning in the EU and beyond.

One should also be aware that the provision of data specific for VET is not always an efficient option given the high survey and analysis costs and the relatively limited use of this information. Gathering data on VET should be embedded in the whole process of getting more reliable information on lifelong learning rather than a separate exercise.

Finally, the use of comparable European and international data by the research community is not as widespread as it could be. This is partly because comparable data may lose precision in the process of harmonisation; developing common concepts and definitions sometimes leads to deciding on lowest common denominators. However, the two main reasons may well be the difficulty in accessing the data and the lack of knowledge of existing data sources and their potential. In this respect, it is useful to note that Eurostat has recently provided free access to the New Cronos database where a number of predefined statistical tables and indicators are available, including structural indicators used in the framework of the Lisbon agenda ⁽¹²⁾ ⁽¹³⁾. Additionally, researchers may request from Eurostat access to subset microdata ⁽¹⁴⁾. The OECD also provides access to some datasets to the research community.

We hope that this paper will not only increase transparency of various data sources and promote their usage, but also encourage researchers to have a share in their further improvements and in new developments.

⁽¹²⁾ http://epp.eurostat.cec.eu.int/portal/page?_pageid=1996,45323734&dad=portal&_schema=PORTAL&screen=welcomeref&open=/&product=EU_MAIN_TREE&depth=1

⁽¹³⁾ The availability of (explanatory) metadata eases the use and interpretation of the statistics.

⁽¹⁴⁾ http://epp.eurostat.cec.eu.int/portal/page?_pageid=1913,32879116,1913_32879144&dad=portal&_schema=PORTAL.



Main European and international data sources on VET, education and skills				Annex 1
Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
UOE questionnaire (UIS [Unesco Institute of Statistics]/OECD/ Eurostat)	Initial education and training	Educational programme Annual (since 1992) All countries covered by the three organisations (EU 25, EEA, OECD countries, candidate countries, south-east European countries).	Enrolment, entrants, graduates, educational personnel, public expenditure in educational programmes (taking place at least partly in schools), class size. Structural indicator 'Spending on human resources': Public expenditure on education as a percentage of GDP. Structural indicator 'Science and technology graduates': Tertiary graduates in science and technology per 1 000 of population aged 20-29 years. Long-term indicator: Pupils in upper secondary education enrolled in vocational stream.	– Secondary data from national administrative sources; – follows the ISCED97 ⁽¹⁵⁾ (1998-2003) and ISCED76 (1992-97); – breakdowns possible by level of education, sex, age, type of curriculum (general, vocational), mode (full-time, part-time), type of institution (public, private) field of study, nationality; – Eurostat collects further information for EU countries by region and on foreign language learning (Eurostat education questionnaires).
Continuing Vocational Training Survey (CVTS) (Eurostat)	Continuing vocational training (CVT) and initial vocational training (IVT) in enterprises	Enterprise with at least 10 employees in NACE sections C-K, O ⁽¹⁶⁾ Reference years: 1993, 1999; from 2005 onwards every five years (regulations) 1999: EU 25 (except Cyprus and Slovakia), Bulgaria, Norway, Romania 1993: EU 12.	CVT: Training policies, organisation and management of CVT, types of CVT, other forms of CVT beyond courses, participation, training hours, cost, fields and providers of CVT. IVT: Participants, cost.	– Breakdown of participants/hours by sex, of hours by external/internal courses, of costs by direct and indirect costs; – extension to IVT from 2005 onwards; – inclusion of missing NACE sections and enterprises with fewer than 10 employees not compulsory; – access to micro-data might be granted.
Adult Education Survey (AES) (Eurostat)	Participation in adult learning	Individual, age: 25-64 first round 2005-2007 EU Member States (21), Romania, Switzerland	Participation in formal/non-formal education and training inside/outside working hours, methods and subjects of informal learning, access to information, obstacles in participation, attitudes towards learning, use of ICT, self-reported language skills, participation in cultural and social activities.	– Different ways of implementing in countries (separate survey (13), inclusion of core AES in existing surveys (8), registers (2)); – follows ISCED97, LFS and ILO definitions/classifications; – breakdown by sex, age groups, level of education, employment status; – legal basis concerning statistics on lifelong learning under development.
Labour Force Survey (LFS) (Eurostat)	Labour market characteristics (e.g. employment, unemployment, inactivity, hours of work, occupation) and sociodemographic characteristics (e.g. sex, age, education) of the population	Individual (at least 15 years old) and household annual and quarterly data (since 2003) EU Member States, EFTA, Bulgaria, Romania (EU-10 since 1983, EU 15 since 1995, EU 25 since 1999/2000)	Revised core module on education (2003): participation in regular education and training, participation in courses and other taught activities, educational attainment. Structural indicator 'LLL': Percentage of the adult population aged 25 to 64 participating in education and training (whether or not relevant to the respondent's current or possible future job) in the four weeks preceding the survey. Structural indicator 'Early school leavers': Percentage of the population aged 18-24 with at most lower secondary education and not in further education or training. Long-term indicators: – Population aged 20-24 having completed at least upper secondary education – Unemployment rates of the population aged 25-59 by level of education – Population aged 25-64 having completed at least upper secondary education.	– Follows ILO definitions and recommendations; – education data follows ISCED97; – breakdown by age, gender, nationality, labour force status; – some data only for people up to 64 years old people; – access to micro-data might be granted.
Labour Force Survey-ad hoc module on lifelong learning (Eurostat)	Adult learning	Individual (at least 15 years old) In 2003 EU Member States, Bulgaria, Iceland, Norway, Romania, Switzerland	Educational attainment, participation in/outside formal education and training, fields of education and training.	– Breakdown by age, gender, nationality, labour force status; – access to micro-data might be granted.
Labour Force Survey-ad hoc module on transition (Eurostat)	Transition of young people from education to working life	Individual aged 15-35 In 2000 EU 15, Hungary, Lithuania, Romania, Slovenia, Slovakia	Employment/unemployment, occupational status, social origin, educational attainment, job mismatch.	– Breakdown by age, gender, nationality, labour force status; – repetition in 2006 under discussion.

⁽¹⁵⁾ http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

⁽¹⁶⁾ http://europa.eu.int/comm/eurostat/ramon/other_documents/intro_cpa1996/en.cfm



Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
Community statistics on income and living conditions (EU-SILC) (Eurostat)	Income, poverty, social exclusion, living conditions, labour information, activity status	Individual (at least 16 years old) and household Annual from 2003/2004 onwards EU Member States; Iceland, Norway, Turkey from 2005	Educational attainment, current education activity, year when highest level of education was attained.	<ul style="list-style-type: none"> - Introduced to replace the ECHP (see below); - sociodemographic background variables; - cross-sectional and longitudinal data; - access to micro-data might be granted (delay of at least two years to the reference period).
European Community Household Panel (ECHP) (Eurostat)	Income, poverty, social exclusion, living conditions, employment, education and training, health	Individual (at least 16 years old) and household Annual 1994-2001 EU Member States, Iceland, Norway, Switzerland, new Member States, Bulgaria, Romania, Turkey	Participation in education and training, general education (duration, level), vocational training (duration, type, objective), educational attainment/age, language skills.	<ul style="list-style-type: none"> - Sociodemographic background variables; - longitudinal data; - follows ISCED76; - access to micro-data might be granted.
Labour Cost Survey (LCS) (Eurostat)	Level, structure and short-term development of labour costs	Enterprise or local unit with at least 10 employees, NACE sections C-K Four-yearly (since reference year 1996 according to regulation) EU Member States, Bulgaria, Iceland, Norway, Romania	Wages of apprentices, employers' contributions for apprentices, vocational training costs (excluding costs for apprentices).	<ul style="list-style-type: none"> - NACE sections A, B, L, O included in some countries; - LCS is part of the system on labour cost statistics.
Household Budget Survey (HBS) (Eurostat)	Household consumption expenditure on goods and services	Household every 5-6 years since 1988, next reference year is 2005 EU Member States, Bulgaria, Romania (1999)	Education consumption expenditure.	<ul style="list-style-type: none"> - Harmonisation of non-harmonised national data on consumption expenditure of private household; - breakdown by demographic and socioeconomic background variables; - low comparability across years; - low comparability across countries for education services; the variable may not be included in 2005.
Harmonised European Time Use Surveys (HETUS) (Eurostat)	Structure of time use, participation in activities, daily rhythm of the population	Individual (age varies across countries) Collected once for survey waves between 1998-2002 EU Member States (18 currently covered), Bulgaria, Norway, Romania	Time spent on education and training (classes and lectures, free time study).	<ul style="list-style-type: none"> - Statistics are based on non-harmonised national time use surveys; - breakdown by age groups, employment status, level of education, sex.
ICT household survey (Eurostat)	Household ICT usage	Household. Annual (first half of the year) since 2002 EU Member States	Use of Internet in relation to training and educational purposes (formalised educational activities, post education activities, other education activities).	<ul style="list-style-type: none"> - Based on legal act since 2004; - breakdown by age group, household type, objective 1 regions and other regions, type of formalised educational activities.
Structural Business Statistics (SBS) (Eurostat)	Business demography, labour and capital input, turnover, value added	Enterprise Annual since 1995 EU Member States, Bulgaria, Norway, Romania, Switzerland	Number of apprentices.	
Labour Market Policy data collection (LMP) (Eurostat)	Labour market policy	Labour market measures (Public interventions in the labour market ... distinguished from other general public employment policy measures in that they act selectively to favour particular groups ...) Annual (since 1998) EU Member States, Norway	Targeted employment policies of the EU countries resulting from the 1997 agreement to launch the European Employment Strategy. Summary tables on public expenditure and participants (stocks and flows) by type of action and by country and on participation by type of measure. Long-term indicator: Labour market policy expenditure in active measures by type.	<ul style="list-style-type: none"> - Links to the OECD database on LMP; - active measures: training; job rotation and job sharing; employment incentives; integration of the disabled; direct job creation; start-up incentives; - passive measures: unemployment and early retirement benefits; - additional qualitative information on each labour-market policy measure; - public expenditure distinguished by direct recipient (individuals, employers or service providers) and by the way the expenditure is disbursed (e.g. cash payment and foregone revenue).



Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
Labour market programme database (OECD)	Labour market programme (LMP)	Measures: active or passive since 1985 OECD member countries	Public expenditure on LMPs.	<ul style="list-style-type: none"> - All types of public spending, including national, regional and local; - excludes the private sector's spending on apprenticeship and other training. Similarly, training financed through payroll taxes is excluded; - active measures: public employment services and administration; labour-market training; youth measures; subsidised employment; measures for the disabled; - passive measures: unemployment compensation and early retirement due to labour-market reasons.
Programme for International Student Assessment (PISA) (OECD)	Student achievements	Young people aged 15 enrolled in an educational institution every 3 years OECD member and partner countries willing to participate: 43 in 2000, 41 countries in 2003, at least 58 countries in 2006	Measure of performance in selected skill domains: reading literacy; mathematics literacy, scientific literacy, problem-solving.	<ul style="list-style-type: none"> - Breakdown by sociodemographic background of pupil; home language; migration background; - background variables on teachers and schools.
International Adult Literacy Surveys (IALS) (Statistics Canada, OECD, Eurostat, UNESCO)	Adult literacy	Individual aged 15-65 1994, 1996, 1998 20 countries	Performance in selected skill domains (prose literacy, document literacy and quantitative literacy). Creation of comparable literacy profiles across national, linguistic and cultural boundaries. Participation in adult education and training.	<ul style="list-style-type: none"> - One of the most sophisticated surveys to measure adult literacy according to prose literacy (understand and use information for texts), document literacy (locate and use information contained in various formats) and quantitative literacy (apply arithmetic operations to numbers embedded in printed materials); - breakdown by demographic variables, work history, education level, earning, etc.
Adult Literacy and Life Skills Survey (ALL) (OECD)	Adult literacy and life skills	Individual aged 16-65 2003 Bermuda, Canada, Italy Mexico, Norway, Switzerland, the United States	Performance in selected skill domains (prose literacy, document literacy, numeracy, analytical problem-solving).	<ul style="list-style-type: none"> - ALL is a large-scale, international comparative assessment designed to identify and measure a range of skills domains: prose and document literacy, numeracy, and analytical reasoning/problem solving; - breakdown by demographic variables, work history, education level, etc.
Programme for international assessment of adult competences (PIAAC) (OECD)	Competences and their impact on social and economic outcomes for individuals and countries	Individual 3 cycles of 5 years gap. First results available in 2010 voluntary participating countries	Performance in selected skill domains; use of selected skills in the workplace.	<p>Currently under preparation.</p> <p>The aim of PIAAC is to (a) identify and measure differences between individuals and countries in competences believed to underlie personal and societal success; (b) assess the impact of these competences on social and economic outcomes for individuals and countries; (c) gauge the performance of education and training systems in generating required competences; and (d) help to clarify the policy levers that could contribute to enhancing competences.</p> <p>The PIAAC first cycle will assess the skill level of the population in participating countries (literacy, numeracy, problem-solving, etc.) as well as the use of selected skills in workplaces using the job reporting approach.</p>
Special educational needs: student with disabilities, learning difficulties and disadvantages (SENDSD) (OECD)	Special educational needs	Students with special educational needs 2-yearly (since 1999) all OECD countries (includes 19 EU countries)	Education and training provision, special schools, public/private institutions.	<ul style="list-style-type: none"> - Rely on secondary data from national administrative sources; - breakdown by level of education, settings of provision, gender, age, size of special schools, teacher/pupils ratios, public/private institutions, etc.
Civic Education Study (CIVED 1999) (International organisation for education assessment - IEA)	Students' knowledge of fundamental principles of democracy, understanding of citizenship, trust in institutions and nations.	All students enrolled on full-time basis in the grade in which most students aged 14 are found (grade 8 in most countries) 1996-97 (qualitative case studies); 1999-2000 (data collection) 24 countries in phase 1 (14 EU); 28 countries in phase 2 (17 EU)	Civic and citizenship knowledge, attitudes and behavioural tendencies of pupils, curriculum and classroom practices, school climate, teacher characteristics.	<ul style="list-style-type: none"> - Contextual data collected from students and through teacher and school questionnaires; - breakdown by gender, civic knowledge, civic attitude, civic behavioural tendencies; - additional survey of upper secondary school students in some countries.



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Trends in International Mathematics and Science Study (TIMSS) (International Organisation for Education Assessment - IEA)	Assessment of students' mathematics and science achievement.	All students at several grade levels (4 years and 8 years of schooling + final year of secondary education) ----- 1995, 1999, 2003, 2007 ----- 46 countries in 2003 (12 EU Member States + Bulgaria, Norway, Romania)	Performance in mathematics and science; attitudes and self-concept; curriculum and classroom practices; teacher and school characteristics.	- Breakdown by grade, gender, maths and science knowledge, attitudes and self-concept, home socio-economic of pupils at grades 4 and 8; - extensive information about teaching and learning of mathematics and science collected from students, teachers and school principals.
Second on Information Technology in Education Study (SITES) (International Organisation for Education Assessment - IEA)	SITES-M1: Educational use of ICT SITES-M2: innovative pedagogical practices using ICT	SITES-M1: principals and technology coordinators in schools using computers at various grades (mandatory population: 14 years old); SITES-M2: teachers and learners in schools of grade 6, grades 7-9 and grades 10-12 ----- SITES-M1: 1998-99; SITES-M2: 2000-01; next issue: 2006 ----- SITES-M1: 26 countries (13 EU, Bulgaria, Norway.); SITES-M2: 28 countries (13 EU, Norway).	ICT in education related policies, teacher characteristics, pedagogical practices using ICT.	- Breakdown by grade; - SITES 2006 will deal with the impact of investments in ICT in education.
World Values Survey (WVS)	Worldwide investigation of sociocultural changes and values and beliefs of people in a particular society	Individuals more than 15 years old. ----- Irregular; last European wave in 1999 ----- 1999-2001: 60 societies covering 6 continents (almost 60 % of the world's population), 24 EU countries	Surveys on a range of social, political and moral issues. Questions on citizenship and democracy.	Survey organised through a network of leading universities all around the world (about 80 countries).
Eurobarometer on VET (DG PRESS, DG EAC, Cedefop)	Opinion of EU citizens on continuing and initial vocational training	Individual aged 18 to 64 ----- In 2004 ----- EU Member States	Source of acquired knowledge and skills, forms of CVT during and outside working time, recent training and reasons, training policy in the workplace, guidance on and objectives of training, future training.	Breakdown by country and sociodemographic characteristics (e.g. gender, age groups, occupational status, subjective assessment of urbanisation).
Eurobarometer on lifelong learning (DG PRESS, DG EAC, Cedefop)	Opinion of EU citizens on LLL	Individual, at least 15 years old ----- In 2003 (EU-15, Iceland, Norway) ----- In EU 10 (new Member States)	Past learning experiences, learning preferences, obstacles and incentives, opinion on lifelong learning, important skills, learning conducive environment.	Breakdown possible by country and sociodemographic characteristics (e.g. gender, age groups, occupational status, subjective assessment of urbanisation).

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