

# **INTERNET SUPPORTED TRAINING COURSES FOR ADULTS: THE CASE OF SCHOOL CENTRE VELENJE**

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**First draft**

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## **1 THE DEVELOPMENT ISSUE: INTERNET SUPPORTED TRAINING COURSES FOR ADULTS, INCLUDING THE ELEMENTS OF EVALUATION**

Many schools and school centres in Slovenia that are primarily offering programmes of initial vocational education and training (VET) for youngsters, also offer (as their additional activity) accredited adult education programmes (initial VET programmes, adopted to the needs of adult population in a form of part-time or evening classes) and different shorter training and re-training courses for adults. While the initial education in Slovenia is rather centralised (in terms of organisation and financing, and in terms of nationally set curricula of educational programmes), the schools and school centres are expected to be more flexible in the area of adult education. First, because the classes have to be organised more flexibly to suit the needs of adult population that is mostly employed and can only be in education part-time, and second, because adults in most cases already have various working experiences, so both the content of the programmes and the ways of teaching and training have to take their experiences into account (and try to build on them). Besides, adult education is financed by the participants (either by individual participants, or by their employers, or by the National Employment Service through different active employment policy programmes), and it presents an important source of income for schools and school centres. That is why the schools are putting lots of effort in making adult education programmes appealing and interesting to the potential participants and to the organisations and

institutions that would finance the participation of individual adults (companies that would finance education and training for their employees; Regional and National Employment Services that finance the education and training of the unemployed).

While in the area of nationally accredited adult education programmes (formal programmes leading to a certain diploma – qualification or a degree of a technician), the schools can only be flexible in terms of organisation of education and training and in the teaching and training methods and approaches, in the area of shorter education and training courses the schools also develop the curricula (the content). It can be said that especially in the area of shorter education and training courses, the providers (schools and school centres) are behaving in a very market way and are very customer oriented. The schools compete with their adult education and training programmes and courses on the market of educational and training providers. They are trying to detect the training needs of bigger regional companies and establish a co-operation in the area of training of their employees; they are also trying to detect the general demand for certain skills and educational contents on the labour market and prepare programmes for that. The teaching and training approaches in these shorter courses are adapted to the needs of adults that already have many working and life experiences. Often these courses contain elements of team work, project work and the exchange of experiences and tacit knowledge among the participants. Since these courses present an additional source of income and promotion for schools (as well as for teachers and trainers), they are very motivated to constantly improve the contents of the courses and the teaching and training approaches to make the courses more relevant for individuals and companies, and more responsive to the established training needs.

It can be claimed that in the otherwise centralised educational system in Slovenia the adult education programmes, especially the short adult education and training courses present a possibility to develop the innovative teaching and training approaches and contents, which contain elements of integration of work and learning and integrate (and build on) the prior knowledge of participants in the courses. In Slovenia the short adult education and training courses can be viewed as windows of innovation and development in the educational system as a whole. This claim can be supported with the evidence that in most cases the teachers and trainers that participate in the education and training courses for adults are actually employed at the schools and school centres for teaching and training the youngsters in initial education. The experiences they gain with the innovative approaches in adult education can later on be used in the initial education too.

In our project we co-operated with School Centre Velenje, which is one of the biggest school centres in Slovenia that offers many regular initial VET programmes for youngsters. Besides this main activity, the school centre also offers accredited adult education programmes. But one of the important reasons why we decided to co-operate with this school centre in the project was the fact that it maintains well-developed contacts and co-operation with the major employers (companies) in the region. School centre already for several years prepares and carries out courses for refreshment of knowledge and skills for employees of two important companies in the region (one in the coal mine business and one in the manufacturing of home appliances business). The content of the courses is of a technical (professional) nature (the area of pneumatics and hydraulics), and is adopted to the needs of each company and the technology that is used there.

At least part of the courses content is tailor-made, following the demands set by the customer (the company). Courses are organised in the school centre and on the computer and training equipment of the school centre (but most of the training equipment was bought and is being modernised with the sponsorship of the companies). They take four to five days, up to eight hours per day. The employees that participate in the courses are selected at the companies.

We started to co-operate with the school centre at the moment when two elements (potential changes) of the courses were being discussed and looked for possible solutions. One impulse for a need to implement some changes in the content of the courses was coming from the companies' side, especially from the company manufacturing the home appliances (Gorenje company). Because of the more and more extensive use of computer regulated technology in the companies, even the workers and mechanics that before had nothing to do with the computers, would now need to have at least basic computer literacy. The question was whether and how is it possible to integrate the basic computer usage skills in the otherwise vocational-technical content of the short-duration courses. The other development issue came from the side of the organiser of the courses at the school centre. He was concerned about the issue of the quality of the courses and how to improve the quality of the teaching approaches and customer satisfaction (in this case the customers being both, the companies paying for the training, and the participants – employees themselves). It was clear that for improving the quality and for better adoption of the content of the courses to the real needs of the companies and of the participants, a more complex and systematic feed back on the courses would be needed. A more complex feed-back should involve all actors: the persons responsible for organisation of training in the companies and the supervisors of the employees that participate in the courses (for assessing the results of the training from the participants' work performance point of view), the organiser in the school centre, the teachers/trainers and the participants (trainees). It should as well embrace different phases of the course – from its preparation and organisation to its content and implementation and at the end as well the results (whether the participants actually learned something and whether they are using the new or refreshed skills when they are back at work).

Through the co-operation of the School Centre Velenje in our project, the existing training courses were enriched and modernised with the support of the computer technology and Internet. During the courses the participants use the computers (for some of the contents, for seeing the simulations on the computers, for testing their content related knowledge at the beginning and at the end of the course, and for the electronic evaluation of the course at the end). This way, the participants in the courses while refreshing their vocational-technical knowledge and skills in pneumatics and hydraulics, at the same time learn how to use the computers (how to use the mouse, the keyboard, how to access the Internet and how to find the content of the course in the Internet, etc.). On the top of that it was agreed with both companies, which send their employees to the courses, that at least one computer with the access to the Internet would be installed at the working place of the participants of the courses, so that they can use it for checking on the contents even after the course and for asking questions related to the content of the training to the teachers and trainers of the School Centre (via e-mail). This way, the communication and co-operation between the school centre, the small private agency (PIA) that is co-operating with the school centre by preparing the needed software and putting

the course materials in the electronic versions, the companies and the individual participants of the courses, is turned from an occasional event into a permanent training network. All the actors involved have the access to the Internet site, with the content of the courses, the electronic evaluation, test of knowledge (from the content of the courses) information about next courses, e-mail addresses to ask content-related questions, etc.

Another innovative element, that was added to the courses was the evaluation of all phases of the course and by all actors involved. The evaluation is done in the electronic version and is as well put on the Internet. It ensures both the organisers in the companies, the organiser in the school centre and also the teachers and trainers with the immediate and complex feed back on the course.

## **2 BACKGROUND INFORMATION ON SCHOOL CENTRE VELENJE (SCV) AND ITS VOCATIONAL AND TECHNICAL METAL ENGINEERING SCHOOL (VTMES)**

The School Centre Velenje (SCV) was established in 1958 by the Ministry of Education and Sport, with the Velenje Coal Mine as a co-founder. It is composed of six schools (five secondary and one post-secondary) that present its organisational units:

- Vocational and Technical Electro and Computer Science School,
- Vocational and Technical Metal Engineering School,
- Vocational and Technical Mining School,
- Vocational and Technical School for Services,
- General and Professional Gymnasium,
- Post-secondary Professional Electro School (2-year programme).

The Vocational and Technical Mining School is the oldest school within the SCV and marks the very beginning of the School Centre in the Šaleška valley. Other secondary schools were established in response to regional economic needs and they therefore contribute to regional development. In the 1998/99 school year a Professional Gymnasium (leading to the maturity exam) was introduced to enable pupils whose interests are of a more technical nature to enter university (technical and natural science studies).

The activities of the SCV are co-ordinated by a collegiate body. Individual schools are headed by principals and operate relatively autonomously. The integration of various vocational, technical and also more general schools into one organisational unit (school centre) has many positive effects. On one hand, it enables effective work co-ordination, lowers work costs, enables individual schools to realise their ideas and projects and makes co-operation with others more effective. On the other hand, various training programmes at different levels allow pupils to acquire education in accordance with their interests and abilities (if a pupil drops out from a

certain programme, he/she is offered the chance to enrol in another programme within the School Centre).

In total, the SCV runs 19 educational programmes and has about 2,600 pupils. The School Centre employs 260 teachers, trainers and other staff members.

All of the SCV's main activities are financed by the Ministry of Education and Sport. However, about 20% of the SCV's finances are realised on the (educational and training) market, by trading its own products or services (courses for adults).

The school that co-operated in our project - Vocational and Technical Metal Engineering School (VTMES) is part of School Centre Velenje, but operates autonomously. It was established in 1958. The trend observed in recent years is a falling interest among pupils for programmes offered by the VTMES, which can be explained by the specific situation facing the metal engineering industry (the collapse of several big companies from that sector). To attract the pupils the team of the teaching and training staff, together with the school principal, is trying to make the programmes more appealing to the pupils, also by implementing several new teaching and training approaches. This includes the use of computers in the teaching process, project work of the pupils, building of the atmosphere of cooperation among the teachers/trainers and between the teachers/trainers and the pupils.

The VTMES offers seven programmes of initial youth vocational and technical education. The proportion of practical training differs between the programmes (according to their duration).

In addition to the initial youth education programmes, the VTMES also offers an accredited programme for adult education (4-year programme to attain the qualification of technician of engineering) and several so-called functional educational programmes for adults. Functional educational programmes for adults are different programmes created in accordance with the demand of certain companies such as Gorenje, the Velenje Coal Mine, or institutions such as the National Employment Office - Velenje regional unit. Examples of such programmes are:

- seminar for workers of the Gorenje company for maintaining machines used in production,
- seminar on safety when working with explosive and dangerous materials, and
- course on AVTO-CAD.

The VTMES employs 41 teachers and trainers, and shares 6 administrative and 7 technical workers with other schools within the School Centre Velenje. The school also co-operates with external collaborators (persons otherwise employed in companies in "real practice") to enable realisation of its practical training and adult education. The teaching and training staff is relatively young, very dynamic and highly motivated. The atmosphere of cooperation is strongly supported by the head of the school.

The technical equipment of the school is quite modern. It has a computer room, with 17 workstations, which are linked to each other and enable pupils to access the Internet. In addition, there are 22 personal computers. The VTMES is also well equipped for teaching the professional subjects. There are classrooms where all necessary instruments are available (equipment to gain knowledge of reshaping and handling metals, to programme the CNC engines, equipment for

computer constructing, etc.). For practical training, there are different workshops in the school and the school is trying to obtain a high level of simulation of real working situations and problems. For example, practical training of auto-mechanics is held in a workshop where all necessary equipment for testing and servicing motor vehicles (car jack, path for car testing) is provided. Part of the practical training is also performed in co-operation with companies (for example in Gorenje company).

The school's teachers and trainers are well aware that the quality of practical training is very important and they also involve themselves in developing teaching instruments and training methods. One important achievement was a preparation of the so-called exercise notebook for the hydro-mechanics subject (the result of co-operation among teachers of vocational and technical secondary schools in Velenje, Maribor and Trbovlje, and the company PIA Velenje, whose main activity is the development and production of software). This exercise notebook is the second in a series. In the first one, the focus was on the subject of static and, in the third one, currently in preparation, the focus is on the subject of dynamics. These exercise notebooks are a form of multi-media supported learning (ARHIMED programme). They simplify the learning process by introducing practical examples into theoretically-oriented subjects.

The VTMES' teachers incorporate various computer programmes into their work. In the 1997/98 school year, a computer programme called SOKRAT – “Presenting, Teaching and Assessing Knowledge through the Internet” - was introduced. The programme was prepared by the company PIA Velenje and was tested by the VTMES. After the testing period at the VTMES, the programme was then applied in other schools, as well as in distance learning (using the Internet). This kind of computer programmes is a new form of teaching that freshens up traditional classes.

Teachers and trainers employed by the VTMES participate in different forms of in-service training such as seminars and courses, especially in pedagogic and andragogic fields, as well as courses on technological and technical novelties that are organised by specialised institutions and by companies. Teachers often participate in specialised fairs and collaborate with teachers from other schools in Slovenia and also take active part in different committees and study groups for modernising curricula.

The VTMES has established various forms of links with enterprises that provide help (material, professional and personal - trainers) to the school in executing its educational and training activities. The most important links are with the company Gorenje Velenje and with the Velenje Coal Mine. Also notable are links with the companies PIA, KIVI, APS, VEPLAS, VEGRAD (all of which come from the region). There are different forms of professional cooperation between the companies and the school going on, such as: the common projects, the companies sponsoring the training equipment of the school, company specialists cooperating in practical training, some companies also perform practical training for pupils and prepare short seminars for teachers (for example, Gorenje).

The school offers different forms of educational programmes to companies, from accredited programmes for adults to functional programmes of education and training, which are designed according to specific needs of certain companies. Companies for which functional programmes

are mainly developed are Gorenje Velenje and the Velenje Coal Mine. The VTMES also closely co-operates with the Employment Office - Velenje regional unit. Often the unemployed are enrolled in different programmes offered by the VTMES.

The VTMES' innovative work yields good outcomes that are shared with other secondary schools through different organised seminars. Some products, developed as a result of pupils' research work or through pupil training, also have extensive general application, for example in learning processes, or even create some profit out of their usage (in some cases selling certain products of training or of research work).

### **3 THE PROCESS OF IMPROVING THE EXISTING PRACTICES AND IMPLEMENTING THE CHANGES**

#### **3.1 Internet supported training network**

The idea of developing an Internet supported training network for adults is based on the transfer of the experiences with the computer supported education and training for young students to the area of adult VET. Actually, the connections between the actors involved in the training network existed before too, but were on a more temporary and occasional basis: when the companies expressed the need for the specific training for part of their employees or the school offered the training to the companies. With the computer and Internet supported links among all actors in the training, the network becomes more systematic and permanent. Besides, the response time of the school to introduce the improvements in the training and/or to prepare new programmes for the new emerging needs of the companies is shortened, due to the quick feed-back that the school can get through the links in the network.

The innovation that is introduced in the training network is the use of computers. Namely, the trainees from both companies (Gorenje and Coal Mine) are mostly men, aged between 30 and 45, with vocational and professional secondary education, who have very little experience with the computers (if any experience at all). Since the basic computer literacy is becoming more and more important in the everyday working situations, the VTMES proposed to introduce the elements of computer literacy in the already existing training courses (of pneumatics and hydraulics). The courses are still about the professional issues, but as a side-effect the trainees learn how to use the computers and how to access the Internet and search for certain information on it.

The Internet-supported VET-network embraces the VTMES, the private company responsible for development and maintaining of the software (PIA), companies Gorenje and Coal Mine and the individuals (adult trainees, later on also those in regular education). The content of the network are the tailor-made training programmes for the needs of the two co-operating companies (training programmes of pneumatics and hydraulics). Trainees have the access to the materials on Internet (from their companies, from school and from their homes) not only during the training course, but also after the course (they can ask questions via Internet and solve concrete problems together with the trainers).

The Internet supported training network is thus composed of the following elements:

- VTMES as a central and co-ordinating VET institution creates courses in co-operation with interested employers, offers lectures, provides training in the school workshops, places the content of the courses on the Internet, provides a home page and link the network by e-mail, offers to students Internet training consultants, issues certificates of the training, etc.
- PIA private company develops the relevant software: home page, presentation and advertising of courses, course contents and checking questions, registration forms, initial and final evaluation forms, and prepares the evaluation data for analysis.
- Enterprises (Gorenje Velenje, Coal Mine Velenje) indicate VET needs, collaborate in course design, register students, offer some teachers/trainers from the company to cooperate with the school, provide computers at the workplaces, which should be linked to the network, provide final training in real work situations for course participants, etc.
- Students (part-time) are registered with the VTMES (by e-mail), attend courses and training in VTMES, are linked to the network from their homes and companies, repeat and train the subjects on their home computers or in companies, discuss among themselves and with the Internet training consultant via e-mail, etc.

The steps taken for creation of the Internet supported training network by the VTMES within the project were the following:

- The content of the course was prepared in the electronic version (but the participants still receive it also in the paper version) and partially put on the Internet. This ensures that the participants of the courses can access the content also after the course, if they have any doubts or questions about it.
- The information about the courses (the content, the dates, etc.) was also put on the Internet and is easily accessible at the home page of the school centre.
- The participants start the course with familiarising themselves with the usage of the computers: the first thing they do at the course is that they fill-in a short test (on the computer) checking their prior knowledge about the content of the course. There are about 50 questions, and each participant randomly chooses 10 of them. The trainers are there to help them with the use of computer (how to use a key board, the mouse, etc.).
- Computers are used during the course too, mostly for certain simulations (a special software).
- At the end of the course the participants again fill-in the test on the computer, again composed of random questions.
- It was agreed with both companies that the computers (one or two) will be installed in the working place of the trainees, so that they could check some information or the content of the training again, or could ask questions to the trainers even after the course, when they are back in the concrete working situation.

The first course organised in the described way was a course of hydraulics and pneumatics. It was run for Coal Mine Velenje company in Spring 2000.

It can be said that the re-organisation and improvements of the already existing training courses at the VTMES into a training network, based on the use of computers and the Internet, brought two added values for the courses and for the school and other actors involved:

- A more systematic and permanent connection through a network that enables a quick feedback on all training related issues to all actors involved, and
- The trainees learn the basic computer literacy as a side-effect of training on other vocational and professional issues.

### **3.2 Electronic evaluation of training courses**

In the situation of an increasing importance of education and permanent training of employees for the flexibility and adaptability of companies to market, technological and other changes, evaluation of training programmes and their results is becoming important both for the companies and for training organisations. Of course, evaluation is not a new element in the training process, but it is rarely integrated in the whole training cycle. Usually the training programme, the training process and the training outcomes are evaluated from the point of view of newly acquired knowledge and skills (using the method of tests). This evaluation approach could be sufficient for the initial (regular, more general) education programmes, but is inadequate for the specific training programmes for employees from companies. In this case, the evaluation should focus primarily on the level of correspondence between the identified training needs of companies and the training results (which strongly depend on quality of the training programme and the training process). On one hand, for the companies the training of their employees is not a purpose in itself, but is in function of efficiency, productivity and adaptability of their labour force. Therefore, the companies (that finance the training) need to know if the training was appropriate, i.e. if it really covered the identified training needs, how efficient it was, and if it has any positive influence on the job performance of trainees (so that the training costs are justified). On the other hand, the training organisations that prepare (design and implement) programmes for the companies try to be responsive to the needs of companies. Often they try to prepare tailor-made programmes, but with lack of detailed information on the training needs of companies, this is very difficult.

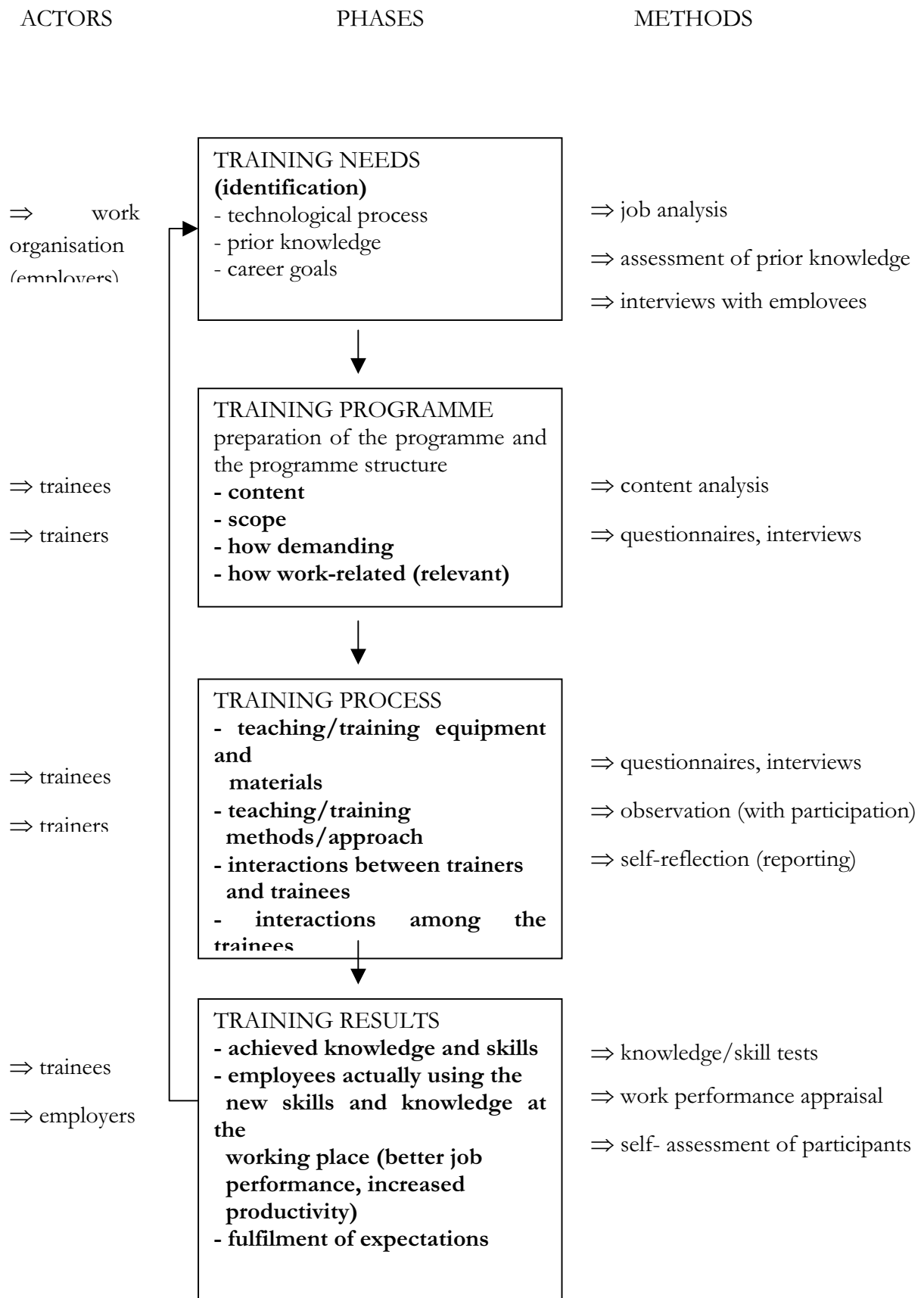
Therefore, from the perspective of the integration of work and learning, it is important to connect together all phases of the training cycle. The training cycle starts with the identification of training needs, transforming these needs to the training programmes (preparation of the programmes), implementation of the training programmes (training process), and ends up with the results that are supposed to match the initially identified needs.

Specific evaluation elements (as well as the procedures and techniques) can be ascribed to every phase of the training cycle, thus forming an evaluation cycle (spiral). The evaluation model that we present is based on a combination of functional and structural approach. By functional approach we mean that the evaluation logic of the whole cycle should focus primarily on the correspondence between the key goals of the training – as defined by the main actors – and other phases of the training process. There are always different aspects of training process that can be evaluated, but if the main training goals are not well defined, the evaluation can not answer the

crucial questions of how successful and/or efficient the training was (is) for any of the participating actors (employers/companies, trainers/training organisations, trainees). On the other hand, the structural approach implies that at each phase of the evaluation cycle there are different elements that can be evaluated, different points of view from which they can be evaluated (i.e. points of view of different actors), and also different methods of evaluation.

Thus, the evaluation model that was proposed combines phases of the evaluation cycle (assessment of training needs, training programme, training process and training results) and the elements of each phase, with the actors who participate in evaluation at each phase and the methods that can be used. The model is schematically presented in the Scheme 1 below.

Scheme 1: The evaluation model



The first phase of the training cycle represents the identification of training needs in the companies. This is done at the level of work organisation (company), by the in-company technology, human resource and educational experts. Identification of training needs has to embrace the demands of the technological and work process in certain organisation, the prior knowledge of employees and the so-called career goals of employees. Training needs at the company level equal to technologically and work-process required standards of knowledge and skills plus career knowledge and goals minus prior knowledge of the employees. Methods for assessment of training needs are job analysis (for identification of needed knowledge and skills related to the technological and work standards in the company), assessment of prior knowledge, and interviews with the employees (for determining the career goals of individual employees). Clear identification of training needs is crucial for next phases of the training process, especially for the tailor-made training programmes (without this information the training providers can only prepare broader training programmes). In the phase of training need identification the process of identification can be evaluated (the methods used) or the formulation of the training needs.

The second step in the training cycle is the training programme – its preparation and its structure. In case of the programme preparation the important thing is the assessment of both, the responsible people from companies and the organisers from the training organisation on the co-operation in preparation of the training. Different elements of the training programme can be evaluated, i.e. the content of the programme (how interesting it is, how related to the needs, how well different issues inter-relate, etc.), the scope (too broad, too narrow, too many issues, etc.), how demanding the programmes is (according to the prior knowledge of trainees, too demanding, on a too low level...), how work-related and relevant it is (how well were the real working issues covered), etc. The actors of evaluation can be trainers, trainees and responsible persons from the company for which training is being prepared (assessment through the questionnaires, interviews) or experts for the content related issues (methods: content analysis, expert assessment).

The third phase in the cycle is the training process itself. Some of the most important elements of the training process that can be evaluated are:

- the equipment and materials that were used in the process of training (how modern they are, how close to the equipment used in the real work situations, how understanding and useful are the learning materials, etc.),
- teaching and training approach and methods (how traditional or modern, how much active participation of trainees, how many standardised situations, how qualified are the trainers themselves and how close to the understanding of real working situations, etc),
- interactions between trainers and trainees (how responsive are the trainers, how are they prepared and able to answer concrete questions, how are they able to motivate the participants, etc.),
- interactions among the trainees (implementation of team work, group dynamics, etc.).

Both main actors of the training process participate in its evaluation: the trainees and the trainers, the common methods are standardised questionnaires and interviews, as well as structured reports (self-reflection). External observers can participate and assess the training process.

The training results represent the last phase of the training process and correlate back to the first phase (identified training needs). The elements of the results that should be evaluated are:

- the achieved knowledge and skills (how much did the trainees actually learn) – this is evaluated with different tests that the trainees have to fill-in at the end,
- the reaction of trainees themselves (how satisfied they are with the training, to what degree did the training fulfil their expectations, do they feel that they gained some new knowledge and skills, etc.) – evaluated through self-assessment of trainees,
- the degree to which the employees (trainees) actually use the newly acquired knowledge and skills at the working place (better job performance, increased productivity, etc.) – this can only be evaluated by the supervisors of employees in the company (job performance appraisal).

The more detailed evaluation questions that were agreed upon with the VTMES are presented in the Annex 1.

The steps that were taken to introduce the electronic evaluation of the training courses for adults in the newly established Internet supported training network were the following:

- The discussion between the team of teachers and trainers from the VTMES and the team of researchers from the Faculty of Social Sciences on the proposed evaluation model. The team from VTMES agreed with the concept.
- The common work of both teams on the concrete questions for evaluation of the training courses by all actors in the training process. As a result the concrete questions were developed.
- PIA private company prepared the evaluation software including the developed questions and modalities and put it on the Internet (on the home page of the VTMES).
- The evaluation software (as well as the questions and modalities) was tested on two training courses and each time the corrections were made to the questions (to clarify the meaning, etc.).
- The first analyses of evaluation results were made and the comparisons of the answers of different actors on the same issues (reflections of the same issues).
- The electronic evaluation was fully implemented in Autumn 2000.

## 4 ANNEX 1:

### EVALUATION QUESTIONS FOR EACH OF THE PHASES OF THE TRAINING CYCLE

#### First phase: identification of training needs

In the case of identification of training needs performed in the enterprises: demands of the technological and work process (technological and work demands) + career knowledge – prior knowledge.

In the case of educational and training institutions trying to establish the training needs in the environment (in order to prepare training programmes for the companies or for the market): a combination of different methods, i.e.:

- following the data (information) on employers' demand for certain occupational profiles and for certain skills and knowledge,
- intensive contacts with the employers in the environment,
- interviews with the employers,
- surveys among the employees and among the employers (to find out what they see as the main deficiencies in skills and knowledge and where they would need the training),
- surveys among the participants of previous training programmes,
- experiences with previous training programmes,
- following of the development of knowledge in certain areas,
- following the development of new occupations,
- following the new trends in training, didactic approaches, etc.

Evaluation in the phase of identification of training needs is focusing on the questions how the training needs were identified, how clear and specified are they and whether the goals of training have been clearly set on the basis of the identified needs.

#### Second phase: preparation and the structure of the training programme

It is important to take into account the views of all participating actors. In the case of preparation of the training programmes these are the companies, organisers (the persons in the educational institutions that are responsible for preparation of the programmes), the implementers (teachers and trainers), the (potential) participants (trainees). The structure of the programmes can be evaluated by the companies, the implementers (teachers, trainers) and the participants (the trainees).

The possible questions that can be asked to evaluate the preparation of the programme are the following:

1. From the point of view of companies (clients):

- how are they satisfied with the co-operation (contacts) with the organisers from the educational institution,
- are they receiving clear and well structured (prepared) information about the training programme?

2. From the point of view of organisers (persons from educational institutions that are responsible for preparation of the programmes):

- how they assess the co-operation with the companies (contact persons from the companies), that are the clients,
- are they receiving clear and structured information about the training needs and the goals of training,
- do they understand the expectations of the company (client),
- does the company (client) clearly present the concrete problems that should be solved by training,
- do they know who the participants of the training (the focus group) would be (how homogenous or heterogeneous would be the trainees, what will be the level of knowledge and the working experience of trainees...),
- are they familiar with the expectations of (potential) trainees,
- assessment of the way how the information about the programme is disseminated to the potential participants, whether it reaches the potential participants (focus group).

3. From the point of view of implementers (teachers, trainers):

- do they receive all the necessary and relevant information from the organisers of the seminar (relation between the organisers and implementers of the training programme),
- are they familiar with the expectations of the client (company),
- do they know the concrete problems that should be solved by the training,
- do they know who the participants of the training (the focus group) would be (how homogenous or heterogeneous would be the participants, what will be the level of knowledge and the working experience of participants...),
- are they familiar with the expectations of (potential) participants.

4. From the point of view of (potential) participants (trainees):

- when and how are they informed about the training programme (about the content and how it would be implemented),
- can they express any preferences about the content and/or the organisation of the programme.

**The possible questions that can be asked to evaluate the structure of the programme are the following:**

1. From the point of view of companies (clients):

- how well does the programme respond to the identified training needs,
- assessment of how well is the content of the training programme related to the concrete working problems.

2. From the point of view of implementers (teachers, trainers):

- is the content of the programme suitable for the prior knowledge and experiences of participants,
- reflection on how interesting the programme is for participants,
- reflection on the scope of the programme,
- assessment of the relation of the programme to the concrete work problems (how work-related the programme is, if it is not: how to make it more work-related).

3. From the point of view of participants (trainees):

- is the content of the programme suitable for their prior knowledge and experiences,
- assessment of how interesting the programme is for them,
- assessment of the scope of the programme (too many different things inside, too intensive...),
- is the programme related to the problems that they meet at their working places,
- will they be able to use the new knowledge and skills when they are back at work.

### **Third phase: the training process**

For evaluation of the training process the points of view of implementers (teachers, trainers) and trainees have to be taken into account. The questions for both actors are the same and can be put to the following clusters:

a) Training place, equipment, materials

- is the place of training suitable,
- how modern or old-fashioned is the training equipment,
- how close is the training equipment to the equipment that the trainees are using while working,
- how understandable, structured and useful are the learning materials,
- are the materials suitable for the level of prior knowledge and experiences of trainees,
- are the computers used for training and how.

b) Didactics and approach:

- how modern or traditional is the approach (assessment of the teaching/training approach),
- how actively are the participants (trainees) involved (assessment of participation),
- are the training situations mostly standardised or more open,
- assessment of commitment of teachers and trainers,
- assessment of whether the teachers and trainers have enough knowledge of concrete problems of working environment that the trainees are facing,
- is the training enough linked to the practical problems or is it more abstract.

c) Interaction between the trainers and trainees:

- assessment of the responsiveness of the trainers (to the questions and comments of trainees),
- do the trainers succeed in motivating the trainees for active participation and learning,
- assessment of the atmosphere during the training.

d) Interaction among the trainees themselves:

- assessment of the group dynamics,
- assessment of the team work (common solving of the exercises, etc.).

e) Organisation of the training:

- is the training performed according to the plan (time- plan, etc.),
- assessment of the responsiveness of the organisers to the organisational problems.

**Fourth phase: training results**

Training results are evaluated after the training. There are three dimensions of the training results that should be evaluated.

a) Reaction of the participants after the completed training:

- how satisfied are the participants with the training,
- how well did the training respond to the expectations of participants,
- assessment of the participants whether they gained new knowledge and skills (they learned something new),
- do they believe they would use the newly acquired knowledge and skills at their working place,
- do they believe they would perform their work better (quicker...) because of the newly acquired knowledge and skills.

b) Achieved knowledge and skills (what did the participants actually learn):

- assessment of newly acquired knowledge and skills with the method of tests of knowledge and skill testing.

c) Actual usage of the newly acquired knowledge and skills in the working process:

- are the participants actually using the new knowledge and skills on their working place,
- work performance appraisal,
- effect on the organisation (according to different criteria, i.e. less mistakes at work, higher autonomy, higher productivity, less complains of the clients...).