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Vocational Education and Training Reform Programme**

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**“VOCATIONAL PEDAGOGY”
IN VOCATIONAL EDUCATION
TEACHER TRAINING**

**A Training Programme for Internal and
External CATs in the VET Reform
Programme – Phase II**

Developed by

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*“Tell me and I forget,
Teach me and I remember,
Involve me and I learn.”*

*Benjamin Franklin
(1706-1790)*

“What is Vocational Pedagogy?”

Well, we have been asked this question many times by our colleagues in Serbia since we introduced the term and now we even made room for a first three-day workshop. We do want to be frank with you and make an effort – at least – to describe what we think “Vocational Pedagogy” is.

When we refer to Benjamin Franklin’s quote above and try to involve our students so that they will really learn and not simply be told over and over again – such as Benjamin Franklin demanded more than 250 years ago – there are quite a few things to consider.

Not only in Serbia, but also in the rest of Europe the “state of the art” in teacher training in vocational education and training has changed dramatically in the last 10-15 years. As a result, new teacher training programs in vocational education and training have emerged that focus on:

- New profiles for vocational trainers with an emphasis on work and business processes in vocational disciplines (instead of on the inherent systematic structure of a vocational discipline),
- Combining theoretical and practical aspects of teaching in learning situations that have real life or real work experience,
- Vocational teachers who can more and more teach both, theoretical and practical aspects in their discipline,
- New work methods and new roles of teachers (“from a lecturer towards a moderator of learning”),
- Preparation of a new generation of vocational pedagogues who can plan, carry out and evaluate lessons in such a way that joint solutions can be found with the students (instead of answering questions that have been answered hundreds of times by generations of students),
- Relevance of teacher training for students, employers and teachers themselves (relevance in the sense of moving swiftly and gainfully from the vocational training system into the labour market).

These and probably much more are the key issues of “Vocational Pedagogy” and you are probably right in saying that this is impossible to learn in three days! This is why Vocational Pedagogy is a recurrent issue in both pre-service and in-service teacher training for teachers in vocational schools in Europe these days. In some countries programs are run which support new teachers in vocational schools for the first two years of their new career (pre-service teacher training) and then provide guidance and counselling for the rest of their professional work life as vocational teachers (in-service teacher training).

Our objective with this second pedagogical course – called Vocational Pedagogy - will be to sensitize you for the many pedagogical issues related to teaching in vocational schools and the main focus of this three-day workshop will be on:

- Lesson planning and choosing the right topics in vocational subjects,
- Identifying key competencies in vocational education and Competence-Development Oriented Learning,
- Making your own experiences with Micro Teaching (MT) in vocational education,
- Identifying verifiable criteria for observation of vocational lessons,
- Developing forms for recording Micro Teaching (MT) sessions as well as Trial-Run Teaching Situations (TRTS),
- Getting comfortable with the approach of “Reflection Learning”¹ in vocational education, and
- Starting to think about work- and business process related learning in vocational education.

This course comes, once again, within the pilot in-service teacher training for teachers and directors in the MoES-CARDS VET II program. This is the second course within this program and it will be offered for internal Change Agent Teachers (CATs) as well as for external CATs.

This course will be accredited by the MoES in Serbia and teacher training credit points will be awarded for it. Each participant will receive a certificate at the end of the program.

We are very much looking forward to working with you again this time!

¹ Reflection Learning as it is used here refers to the German “*Handlungsorientierung*” and means structuring learning processes in vocational education and training which are relevant for learners, stress comprehensive and joint planning in groups and produce planning strategies that take concrete actions and finally evaluate the results. Lecturing in vocational training used to be learning that can be compared to students expected to learn driving a car by continuously remaining in the passenger seat. Reflection Learning on the other hand will put students in the driver’s seat of their own vocational learning! The English term “Reflection Learning” was to my knowledge first used by SIEMENS in Germany in the early 1990s.

Table 1: Organization of Teacher Training in “Vocational Pedagogy”

Days	Training Modules	Content	Objectives
Day I morning Day I afternoon	Block 1 and 2 Block 3 and 4	Experiences in working as CATs in the last 2 months Topics in Vocational Education, Relationship of Lesson Planning and Topics, Competencies and Qualifications	<ul style="list-style-type: none"> • Exchange experiences in working as CATs, • Developing, phrasing and introducing a new topic, • Developing confidence in lesson topics, • Getting familiar with the concept of “key competencies”
Day II morning Day II afternoon	Block 5 and 6 Block 7 and 8	Structural Analysis of Lessons and Guidelines for Lesson Observation, Micro Teaching (MT) Preparation Micro Teaching Preparation and Implementation	<ul style="list-style-type: none"> • Developing Criteria for Lesson Observation and Analysis, • Learning how to prepare MT, • Planning and Carrying out MT
Day III morning Day III afternoon	Block 9 and 10 Block 11	Micro-Teaching Implementation Transfer Potential for Internal and External CATs	<ul style="list-style-type: none"> • Planning, Carrying out and Evaluating MT, • Identifying Ways of Using Vocational Pedagogy in Pilot Schools in Serbia

Block 1: Experiences in working as CATs in the last 2 months

Topic: We evaluate our new learning experience as CATs!

Objective: Exchange experiences in working as CATs

1.	Course work and introduction	Moderator team will refer to script and give explanations
2.	Looking back at experiences as CATs in the last couple of months	Method: Networking (see method card 19)
3.	Discussion of strengths, weaknesses, opportunities and threats (SWOT) in working as Change Agent Teachers (CATs)	Circle

Block 2: Developing Topics in Our Lessons

Topic: The path to the topic in my vocational subject

Objective: Developing, phrasing and introducing a topic in schools

1.	Getting ready to identify topics with the question: Which lesson topic is more likely to motivate learning: “ HACCP Standards Application ” or “ Standards Application of Food Safety System – The Path to the best quality meal? ” (After the students have been introduced with kitchen facilities, food flow and necessity for quality control and safety measures).	Reflecting on the following key questions: What is my relationship as a teacher to the content? What do I want to get across? How do I relate to the content with my group? Where are opportunities, where are limitations? How can I make the topic “lively”?
2.	Thoughts and recommendations for phrasing topics	Method: Flip Chart, maybe with a mind map
3.	Task: Find topics in your vocational subject in your own school and explain your line of thought!	Method: Group work

Block 3: Lesson Preparations under a Perspective

Topic: My lesson should have a topic – preparations under a perspective!

Objective: Developing confidence in shaping out lesson topics

1.	Thoughts and advice about topic preparation	Method: Group Work – Evaluation , (see Method card 12) Discussion of the topic proposals of the participants from the previous work blocks under the aspect “what should the students learn this topic for?”
2.	Introduction: A bridge from topic to teacher and learning group	“1001 Beginnings” , moderator plays an interactive game with participants
3.	Process of shaping the topic	The three levels of “topic-centred-communication’ following Kuhn (1975) <ul style="list-style-type: none"> • individual • group and • content

Block 4: Competencies, Qualifications and Objectives – Where Are the Differences?

Topic: We are thinking about “what” our students should learn in our lessons in our own vocational subjects!

Objectives:

- **Agreeing on “what” our students should learn and “how” this learning process should look like**
- **Developing differences between learning objectives, competencies and qualifications**

1.	Working out different levels of objectives in lesson planning: <ul style="list-style-type: none"> - Interdisciplinary - Competency-based - Work-oriented - Life skills - Educational - Moral - Etc. 	Method: question-related , with the participants
2.	Analysis of phraseology of learning objectives, skills, competencies and qualifications	Presentation of a catalogue of objectives and classification in learning objectives, skills, competencies and qualifications by the participants (see Annexes 1 and 4)
3.	... And what are our objectives for the work in our own vocational subjects?	Plenary discussion

Block 5: Structural Analysis for Lessons and Developing Guidelines for Observing Lessons

Topic: We will develop criteria for observing lessons!

Objectives:

- **Getting acquainted with the number of variables in reflection learning processes**
- **Developing criteria for lesson observation and analysis**

1.	Question: What are the aspects that a vocational teacher should reflect on insofar as lesson planning, carrying out lessons (didactically and methodologically) and his/her own teacher interaction with the class are concerned?	Methods: Cards (see method card 5)
2.	Clustering of results in new categories	Visualisation of results on the wall
3.	Assigning observation tasks for the following teaching situation in close relation to what the workshop participants have just developed in the first phase of this block	Using the Form for Recording Trial-run Teaching Observations (see Annex 2)

Block 6: Micro-teaching (MT) Preparation

Topic: We will develop an understanding of how to work with Micro-teaching with our colleagues!

Objective: Learning how to prepare Micro Teaching situations

1.	Question: What can we focus on in a teaching situation that does not last a whole hour, but maybe only 15 minutes and which is carried out not with students, but in front of other teachers who will be both "students" and "observers"?	Plenary
2.	What is Micro Teaching? Finding a Definition and Identifying Tasks	Method: Reference Text (Method Card: 21) and Annex 3
3.	Assigning Micro-teaching assignments for teachers in the three different sectors IT, Travel and Tourism and Wood Processing	Group Work

Blocks 7-10: Micro-teaching (MT) Implementation

Topic: We will plan, carry out and evaluate our own Micro-Teaching situations and help to evaluate other Micro-Teaching sessions!

Objective: Planning, Carrying out and Evaluating MT

1.	Planning and preparation of Micro-Teaching situations in groups according to interest of the teachers and according to sector emphasis	Group Work
2.	Different groups will carry out Micro-Teaching in front of fellow CATs	Method: Micro-Teaching (which will be videotaped!)
3.	Analysis and evaluation of Micro-Teaching	Group Work and Plenary

Block 11: Transfer Potential for Internal and External CATs

Topic: We introduce ways of dealing with Vocational Pedagogy in our own schools!

Objective: Identifying Ways of Using Vocational Pedagogy in Pilot Schools in Serbia

1.	Explanation of the main characteristics of what internal and external CATs will do with the element of Vocational Pedagogy in their own schools	Individual and/or group preparation
2.	Presentation of findings	Methods: Info Market (see method card 20)
3.	Possible adaptations in Serbian vocational schools	Round-table discussions

Annex 1: The Eight “Key Competencies” in the European Union

Following the Lisbon process and the subsequent discussion about the role and functions of vocational education and training in Europe, the principles underlying the discussion about the development of a framework for Key Competences in the European Union were that

- The framework is the first European-level attempt to provide a comprehensive and well-balanced list of the key competences that are needed for personal fulfilment, social inclusion and employment in a knowledge society. It aims to serve as a “reference tool” for policy-makers and for those responsible for creating learning opportunities for people at all stages of lifelong learning, allowing them to adapt the framework as appropriate to learners’ needs and contexts.
- The terms ‘competence’ and ‘key competence’ are preferred to ‘basic skills’, which was considered too restrictive as it was generally taken to refer to basic literacy and numeracy and to what are known variously as ‘survival’ or ‘life’ skills. ‘Competence’ is considered to refer to a combination of skills, knowledge, aptitudes and attitudes, and to include the disposition to learn in addition to know-how. A ‘key competence’ is one crucial for three aspects of life:
 - ✓ personal fulfilment and development throughout life (cultural capital): key competences must enable people to pursue individual objectives in life, driven by personal interests, aspirations and the desire to continue learning throughout life;
 - ✓ active citizenship and inclusion (social capital): key competences should allow everybody to participate as an active citizen in society;
 - ✓ Employability (human capital): the capacity of each and every person to obtain a decent job in the labour market.

Definition of Key Competence

In accordance with the broader approach adopted by the working group on key competences, the overall definition of ‘key competence’ is as follows:

Key competences represent a transferable, multifunctional package of knowledge, skills and attitudes that all individuals need for personal fulfilment and development, inclusion and employment. These should have been developed by the end of compulsory schooling or training, and should act as a foundation for further learning as part of lifelong learning.

Overview of “Key Competencies”

<p>1. Communication in the mother tongue</p>	<p>Communication is the ability to express and interpret thoughts, feelings and facts in both oral and written form (listening, speaking, reading and writing), and to interact linguistically in an appropriate way in the full range of societal and Cultural contexts — education and training, work, home and leisure.</p>
<p>2. Communication in a foreign language</p>	<p>Communication in foreign languages broadly shares the main skill dimensions of communication in the mother tongue: it is based on the ability to understand, express and interpret thoughts, feelings and facts in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal contexts — work, home, leisure, education and training — according to one’s wants or needs. Communication in foreign languages also calls for skills such as mediation and intercultural understanding. The degree of proficiency will vary between the four dimensions, between the different languages and according to the individual’s linguistic environment and heritage.</p>
<p>3. Mathematical literacy and basic competences in science and technology</p>	<p>Mathematical literacy is the ability to use addition, subtraction, multiplication, division and ratios in mental and written computation to solve a range of problems in everyday situations. The emphasis is on process rather than output, on activity rather than knowledge. Scientific literacy refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural World. Competence in technology is viewed as the understanding and application of that knowledge and methodology in order to modify the natural environment in response to perceived human wants or needs.</p>

<p>4. Digital competence</p>	<p>Digital competence involves the confident and critical use of electronic media for work, leisure and communication. These competences are related to logical and critical thinking, to high-level information management skills, and to well-developed communication skills. At the most basic level, ICT skills comprise the use of multi-media technology to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet.</p>
<p>5. Learning-to-learn</p>	<p>'Learning-to-learn' comprises the disposition and ability to organize and regulate one's own learning, both individually and in groups. It includes the ability to manage one's time effectively, to solve problems, to acquire process, evaluate and assimilate new knowledge, and to apply new knowledge and skills in a variety of contexts — at home, at work, in education and in training. In more general terms, learning-to-learn contributes strongly to managing one's own career path.</p>
<p>6. Interpersonal and civic competencies</p>	<p>Interpersonal competences comprise all forms of behaviour that must be mastered in order for an individual to be able to participate in an efficient and constructive way in social life, and to resolve conflict where necessary. Interpersonal skills are necessary for effective interaction on a one-to-one basis or in groups, and are employed in both the public and private domains.</p>
<p>7. Entrepreneurship</p>	<p>Entrepreneurship has an active and a passive component: it comprises both the propensity to induce changes oneself and the ability to welcome, support and adapt to innovation brought about by external factors. Entrepreneurship involves taking responsibility for one's actions, positive or negative, developing a strategic vision, setting objectives and meeting them, and being motivated to succeed.</p>
<p>8. Cultural Expression</p>	<p>'Cultural expression' comprises an appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, corporal expression, literature and plastic arts.</p>

Annex 2: Form for Recording Trial-run Teaching Observations

Trial-run Teaching Situation Observations with Ms. / Mr.

.....

On Lesson
In Topic
Class

1 Planning the Lesson

Class Situation

Didactic Decisions

Selection of Content

- Reduction
- Setting priorities

Objectives

- Interdisciplinary
- Competency-based
- Oriented towards real life and employment
- Educational

Process Planning

Intended Students' Independence

Articulation

Work Forms

Media and materials

Learning Success Control

Innovative Potential

**Conclusion for Planning Competency:
Didactic Competency**

2. Implementing the Lesson (Content)

Recognizable Phases

Independent planning of students

Shaping out objectives

Independent carrying out by students

- Appropriate level for students
- Content correctness
- Setting priorities
- Oriented towards real life and employment

Independent assessment by students

Learning Success Control

<p>Conclusion for Implementation Competency (Content):</p>

2. Implementing the Lesson (Methods and Communication)

Learning Arrangement

(Training, Lecture, Project)

Social Class Activity

(Group, Individual, or Partner Work)

Didactic Function

(Exercise, Transfer, Application, Control etc.)

Patterns of Learning

Communication Competency

- Communication structure
- Clarity and Style
- Modulation
- Division of communication between students and teacher

Media and material usage**Student Participation and means to make students participate**

Conclusion for Implementation Competency (Methods and Communication):
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3. Teacher Activity**General Behaviour/Activities**

(Security, Calmness etc)

Promotion of

- Self-orientation
- Methodical competency
- Learning competency
- Social competency
- Morale
- Communication competency

Activities in disruptions**Educational competency****Relation with the students**

- Appreciation
- Understanding
- Emotions

Conclusion for Teacher's Activities: Pedagogical and social competencies

Annex 3: Micro Teaching

What is Micro Teaching (MT)?

Micro Teaching (MT) is school-like teaching which is carried out in the presence of peers (other teachers) and/or under the supervision of teacher trainers. MT can be used to simulate both lesson phases and whole lessons outside the real world of school situations with our students in vocational schools.

The teachers apply the rules and expectations for planning sequences of Micro Teaching. In partner work or in group work, they will plan and carry out MT situations, such as for example for introduction phases, for different main lesson phases and for assessment phases.

They will be able to structure small elements of lesson phases within the short setting of the Vocational Pedagogy seminar with the perspective of gaining a repertoire for more sophisticated teaching in their own vocational schools in Serbia.

MT should – if possible – be videotaped and can be used very well for counselling processes providing enough protection and discreetness before trying out teaching approaches in the real world of schools. Micro Teaching offers an abundance of learning opportunities with immediate feed back to teachers from vocational schools in Serbia and elsewhere.

This is why MT will be performed regularly now in most of the next workshops within the teacher training component of the MoES/CARDS VET II project with the intention of both getting used to performing in front of fellow teachers as well as broadening a repertoire of different teaching techniques and finally getting used to receiving feed back from other teachers.

Furthermore, Micro Teaching will be used in order to prepare the vocational teachers in Serbia for the teacher training program in Applied Vocational Pedagogy in the spring of 2007, where *trial-run teaching situations* (TRTS) in vocational schools in Serbia will be provided for each CAT in the course of the whole Trainers Training Program. To ensure a high quality standard for these TRTS, we want to work as much and as early as possible with the method of Micro Teaching (MT) to support these.

Annex 4: Worksheet on “KEY COMPETENCIES”

The importance of key competencies might become clear with the help of a role play.

You imagine being a school director and asking yourself what kind of abilities you would prefer as a boss. What do you expect the pass-outs of the training to be able to do so that your own role as boss becomes easier?

Imagine the performance steps of the duty your team has given the highest ranking for technical complexity. By giving an answer to the following questions, can tell something about the expected training outcome in a subjective way.

a) *It is NOT necessary to control the quality of performance of your staff always by yourself in every step because you think that self-assessment is possible, if staff is rewarded with extra pay.*

- (1) Control is necessary
- (2) Described situation is desirable, but not realistic
- (3) Described situation is possible if staff is paid adequately
- (4) Personal control is not always necessary

b) *Do you think your staff could and should be self-responsible in planning the work steps, in preparing the tool box, in planning the consumables, division of labour etc. so that you yourself can concentrate on more urgent management work.*

- (1) No, this is director's duty
- (2) Nice, but unrealistic
- (3) Yes, but in certain extent
- (4) Yes completely

c) *Do you want your staff to be able to read manuals in a systematic way and work accordingly and to find specifications for tools, parts, machines and processes in books, catalogues and in the Internet?*

- (1) Not needed
- (2) Desirable, but not important
- (3) Important
- (4) Very urgent

d) *Every few years new technologies lead to new job requirements. I want my staff to be able to keep pace and know how to learn by themselves and on-the-job because, school cannot send them to upgrading courses.*

- (1) Not needed
- (2) Nice, but unrealistic
- (3) Needed in far future
- (4) Urgent, now

Add up all the numbers you have ticked off now. The sum total is _____

In case your sum is less than 10 your expectations as an employer are very conservative.

If more than 14 come out as sum it is a good example for thinking in ways modern management with delegation of responsibility works.

Write down the arguments you exchanged within the team. After every team work session there will be a plenary for presentation of the team work results. The other teams want to know why you have come to your results. So whatever opinion you might have, the important thing is to have reasons why you have come to these results.

Method Card 019: Network

Usage	<p>Pre-prepared cards with key words for the training workshop are placed on the ground. Each participant picks one card that they can relate to very well. If they do not find any card to relate to, they can take a new one and write a key word on it.</p> <p>Then one person starts with one card, puts it down and says why they picked it. The person who feels closest to this card idea puts the next one down (maybe marking it with an arrow to the previous one) and so on until every participant has put their own card down. Eventually the whole card system turns into a network or organizational setting of the workshop topics. Clusters can be built and some headlines be found.</p>
Comment	<p>The group should have no more than 20 participants, and there should be about twice as many cards as participants. This method can be used very well at the beginning of a workshop (combined with an introduction phase even). The cards focus on the topic, but leave some room for personal getting-to-know each other.</p>
Materials	<p>Cards with key words, empty cards, and pens.</p>
Examples	<p>In preparing a workshop on reflection learning I once prepared the following cards for using the network method at the beginning of my workshop:</p> <ul style="list-style-type: none"> • Teamwork • Annual didactical planning • Workshop teaching • Higher work load • Many different materials • Independent planning • Organizational requirements • Teacher becomes facilitator in a learning process
Workshop cycles	<p>This method can be used in getting to know each other in a very early workshop cycle combined with early workshop planning and structuring.</p>

Method Card 020: Info Market

Usage	<p>The participants pick those topics where they are “specialists” and prepare a presentation within a group of “fellow specialists”. This can always be used when groups have worked on different issues and before a plenary phase, when the moderator wants to make sure that all the groups have the same level of information.</p> <p>4-5 students/participants/teacher trainees/etc. get together and prepare a little assignment in such a way that the rest of the group will be able to come by and “shop” what they have to present. In the room, arrangements need to be made for market places with stands.</p>
Comment	<p>This method is very useful for sharing information and usually lets weaker participants flourish a little bit, since they are getting this “aura” of expert knowledge that they can pass on to the others.</p>
Materials	<p>Anything that is available and that makes it look like a real market. Items that can be found in a real market place, such as stands, umbrellas and big signs make it look more realistic.</p>
Examples	<p>Anything that needs to be fed back into a class/workshop/teacher training situation after a group phase with different assignments would be appropriate, such as:</p> <ul style="list-style-type: none"> • Introducing the different departments of a model enterprise, • Explaining the strategy that was used in a management game played in different groups, • Using a specific method in different situations in Serbian vocational schools, • Identifying ways of dealing with Vocational Pedagogy in our schools, • Etc. . . .
Workshop cycles	<p>This method can be used in sharing information and making it available to other groups.</p>

Method Card 021: Reference Text

Usage	<p>The participants receive the most important information in one text which is clearly structured and gives the essential definitions and explanations. The reference text (in German: <i>Leittext</i>) serves as a basis info feeder on a specific subject and needs to be read and understood by everyone in the group. Reference texts can be read individually or with a partner and have the advantage (over a talk) that participants can decide on their own pace of learning.</p> <p>Group work can be very well prepared with reference texts.</p>
Comment	<p>Reference texts are considered to be very important in reflection learning, because they reduce the amount of information to what is absolutely essential to know when starting learning processes where students plan, carry out and evaluate their own learning.</p> <p>In writing these texts four things should be kept in mind:</p> <ul style="list-style-type: none"> • Simplicity – writing them in such a way that everybody can understand them, • Structured presentation – so that it is clear what is really important, • Succinctness – in case of doubt, too short is better than too long, • Additional stimuli – i.e. working with examples that students/participants can relate to.
Materials	<p>Texts that need to be prepared by teachers/moderators/teacher trainers before they are used in the classroom.</p>
Examples	<p>A text that describes the four elements of a marketing mix and analyses criteria for good marketing approaches and gives evidence why others may have failed. Such a text, for example, would be very specific about considering different kinds of costs (maybe with an example) and would give advice how to calculate prices for a specific product in a specific market.</p> <p>Studying this reference text could then, for example, be followed by a group phase in which 5 different marketing approaches had to be compared and analyzed by different groups.</p>
Workshop cycles	<p>This method can be used in information phases.</p>