



**Ministry of Education and Sports
of the Republic of Serbia
VET Reform Programme**



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GUIDELINES ON IMPLEMENTATION OF NEW CURRICULA IN SCHOOL PRACTICE

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ЦЕНТАР
за стручно образовање
и образовање одраслих

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Introduction

The main purpose and goal of modifying the curricula or introducing new curricula is the improvement of the teaching and learning process, as well as the quality of knowledge, skills and working competences, gained and mastered by student in the process of adoption of the curricula.

In secondary VET curricular innovations present the permanent need, caused by technological development and development of the labour market and public economy. When the scope of changes is so wide that it exceeds the level of teaching contents on individual school subjects, it is necessary to fully innovate the curricula and replace out-dated curricula with the new ones.

In the course of time interest of students for certain curricula decreases in a great deal (the enrollment of students into secondary schools is a relevant indicator) or they become less attractive in respect of economy's needs (the crisis of certain economic and non-economic branches). In that case such curricula are in the status quo position – there is no student enrollment into these educational profiles and they are not included in the open competition at republic level.

When new knowledge and skills are needed at the labour market, referring to existing occupation or new occupation, it is necessary to start up designing the curricula for relevant educational profile, serving as a basis for an occupation. New curricula may be tested before the implementation by introducing pilot programmes.

Both social partners and a wide range of experts from the field of education are involved into designing of the curricula. The procedure on preparation of new programmes may be initiated by: some school, the community of schools, social partners, the Centre for Vocational and Adult Education, the Ministry of Education and Sports of Serbia.

When the curriculum is verified through publishing in the “Educational Gazette” in respect of its implementation in school practice and when the schools where the curriculum is to be implemented are selected through the schools' network, it is necessary to support schools in implementation of new curriculum.

All the stakeholders have an important role in implementation of new curriculum at school level – students, parents, teaching and non-teaching staff at schools (principals, teachers, teachers-associates and professional support staff – *pedagogues, psychologists*), social partners, local community. The support and help are provided by the Ministry of Education and Sports of Serbia, the Centre for Vocational and Adult Education, local authorities, school boards.

The effectiveness of implementation process depends on several factors. Most of all, it is needed the consensus and involvement of all actors in the process. Each actor shall consider the consequences on his role in the implementation process of new curriculum.

Getting familiar with the implementation process of new curriculum is based on the system of instructions and explanations where teachers, individually and as a part of the group, are introduced with new curriculum, aimed to develop students' knowledge, skills, attitudes and various types of behaviours. It means introducing of new resources. Each change demands investing efforts - to cope to a series of problems emerging in the process, to organise and manage implementation and achieve objectives set. The implementation also requires: human resources, financial resources and the timeframe determined by school calendar and operation plan as well, deriving from the curriculum. The effectiveness of implementation requires permanent action, mutual cooperation of stakeholders, and the support of international institutions. Examples of mutual support in schools or between schools or regions should cover: the networking, constant communication, joint actions, conferences, etc.

In order to obtain successful implementation the atmosphere of support is necessary. Its characteristics are: mutual confidence and open communication between actors in schools and out of schools, resolving problems, engagement of most members of the school staff. The principals have key role in such process. They should be: well acquainted with projected changes and holistic implementation process, willing to be involved in the process of changes and prepared for it, and capable to put into practice various management and decision-making strategies in order to respond to teachers' needs. In larger schools, where the role of the principal is primarily managerial, the head of pedagogical school management (assistant director or deputy director, organiser of the instruction for certain sector) is in charge for such task.

The required characteristics for efficient realisation of their responsibilities are:

- Readiness for an open and immediate communication and cooperation with all agents of change;
- Strengthening and building of stable school community through ensuring professional development and career advancement for the school staff;
- Providing external (*out of school*) professional evaluation, when it is needed;
- Readiness to take risks;
- Positive attitude towards projected changes and using the enthusiasm to motivate others.

Strategies on Implementation of New Curriculum

The application of new curriculum shall be based on planning of physical, human, information and financial resources in order to ensure high quality learning and training of students in educational process. The instruction process is performed through the class system, mentor activities, practical activities in school or factory workshops, activities in laboratories, project activities, study visits, professional practice.

The quality of overall educational process does not depend solely on the quality of the curriculum, but also on the mode of its realisation. Main factors affecting on the quality of curricular implementation present all together basic elements of the very implementation process.

Main implementation elements are:

- I Adequate conditions for realisation of the curricula;
- II Informing teachers and students on aims and outcomes of new curriculum;
- III Informing teachers on the structure of the curriculum and its role in overall instruction process at school;
- IV Teacher training and training of all realisers of the curriculum;
- V Preparation of relevant learning materials;
- VI Efficient managing of curricular implementation process;
- VII Monitoring of instruction process realisation;
- VIII Connecting with enterprises and other social partners.

Implementation Elements

I ADEQUATE CONDITIONS FOR REALISATION OF THE CURRICULA

Each curriculum applied at school level is defined by teaching contents and:

- The standard (*the set of norms, enactment*) on premises, equipment, financial resources; as well as
- The standard (*the set of norms*) on qualifications of teachers, teachers-associates and professional support staff (*i.e. pedagogues, psychologists*).

needed for professional realisation of the educational process, learning process and training of students to enable them to perform tasks at their work place in the framework of certain occupation.

School verification means that the school meets all above mentioned conditions. When the schools are selected for the realisation of pilot programmes or the application of new curriculum is to be approved for some school, school verification shall be the first step in this process. The decision on verification issued by the Ministry of Education and Sports of Serbia serves as a proof for it and it is based on previous inspection visit to school by pedagogical supervisor (*educational inspector*).

Implementation phase of new curriculum is of a great importance for school management and professional support staff, due to the fact that it provides necessary information on:

- Organisational mode of instruction process - by school subjects and modules, prescribed by the curriculum;

- Teaching tools needed for realisation of the instruction process (for instance: PCs, photocopy device, paper, graph-folios, markers, chemicals, etc);
- Modes of instruction process monitoring, according to relevant programme, at school level (internal evaluation) and at republic level (external evaluation);
- Need for organising in-service teacher training in certain areas.

II INFORMING TEACHERS AND STUDENTS ON AIMS AND OUTCOMES OF NEW CURRICULUM

There are various sets of information relevant for introducing new or innovated curriculum into school practices:

1. **School staff - oriented information:** about aims and outcomes of vocational education for given educational profile; aims and tasks of new curriculum; its structure (instruction plan, school subjects, modules), planned operation modes and evaluation system;
2. **Parent and student - oriented information**
 - **Before student enrollment**, including clearly defined VET aims and outcomes for relevant educational profile;
 - **Information aimed to students enrolled into relevant educational profile**, that, apart from VET aims and outcomes for relevant educational profile, are to be informed on: instruction plan, class timetable, approximate testing timetable, written assignments, revision tests, individual student works / projects, professional practice, excursions etc.

This implementation element presents at the same time the phase on involving teachers and the professional support staff in the implementation process. These pieces of information may be prepared partly by the school, in cooperation with the Centre for Vocational and Adult Education and the Ministry of Education and Sports of Serbia. One information segment derives from official document, published in the Educational Gazette, and the second segment derives from School-based Programme, that is, the School Operation Plan, designed on the basis of agreement made within the Class Council.

Implementation phase includes innovating and upgrading of skills, comprehension and knowledge of teachers and the professional support staff, according to main objectives of the curriculum. This process is supposed to be realised through its various forms and types (exchange of ideas and attitudes, in-service training, seminars, trainings), at special meetings of the school staff or at meeting of the councils and cluster teachers¹ at school level.

Such activities are crucial for teachers, due to the fact that prompt provision of information ensures quality instruction and it enables qualitative learning process.

III INFORMING TEACHERS ON THE STRUCTURE OF THE CURRICULUM AND ITS ROLE IN OVERALL INSTRUCTION PROCESS AT SCHOOL

The Class Council responsible for immediate realisation of the curriculum consists of teachers and teachers-associates. Along with school management staff responsible for instruction process in school and professional support staff they are directly involved in application of the curriculum.

The curriculum is a public document and thus available to all stakeholders, but in introducing of new curriculum or innovations in existing curricula it is important to establish contacts between authors of the curricula on one side and the implementators on the other side, particularly in the case when usual and accepted format or attitude towards the curriculum has to be changed.

Since pilot curricula are based on modules, aims, outcomes and recommended teaching contents, it is necessary to help teachers to:

- Understand outcomes and the very essence of outcomes-based VET;
- Operationalise learning outcomes through teaching contents;
- Recognise teaching methods and modes that are the most appropriate for the realisation of such curricular concept;

¹ Professional body encompassing teachers of the same school subject at school level.

- Determine the list of professional literature for teachers and students as well, to be provided, i.e. recommended, by school to students and parents;
- Define assessment methods to be implemented for each module separately and holistic assessment procedure for school subjects;
- Design the timetable of school subjects and modules' realisation - in the course of school week, month, classification period, during school year²;
- Recognise mutual connections between modules within the same or different school subjects, in the framework of holistic curriculum ;
- Determine the timetables of testing, revision tests, written assignments, individual student works / projects, professional practice, excursions etc. to avoid overlapping and overburdening of students in the course of the same day, week or month.

Understanding of Outcomes and the Very Essence of Outcomes-Based VET

This implementation element means the clarification of educational process ensuring achievement of aims and outcomes set within relevant module (adopted knowledge, mastered skills and working competences). Naturally, it includes explanation of the term: "module outcomes".

The outcomes have a key role in the process of structuring and development of secondary VET programmes, that is, the teaching and learning process. The outcomes are more closely determined by the following levels:

- Effectiveness level;
- Efficiency level; and
- Interests level.

Effectiveness level shows whether we do the right thing, that is, whether the instruction is well-organised and projected to enable achievement of the aims set. The point is not in the very nature of aims, but in their achieving – whether they are achieved or not.

Efficiency level is determined on the basis of time and money needed for organisation and realisation of teaching and learning, leading to outcomes set.

Interests level shows the extent of students' interests for learning and its final effects.

The outcomes :

- To determine what student knows or is able to do - learning effects (formulated as active verbs);
- To enable flexible time planning, in accordance with defined outcome, within the module;

In pilot curricula teaching and learning are organised and implemented through **modules**. **The module** is defined as the set of functionally connected knowledge, skills and abilities (working competences) needed for performing certain job/task.

Through their structure modules enable gaining of various kinds of knowledge and competences, development of relevant set of skills and crossdisciplinary and crosssubject connecting of various teaching contents.

Operationalisation of Learning Outcomes through Teaching Contents

Planning and realisation of teaching and learning related to outcomes-based curricular model requires that initial element shall be an outcome. It serves as a basis for defining modes of evaluation and validation of outcomes. The outcomes are to be clearly defined.

In designing of operation plan, each teacher has to ask himself/herself:

- How to achieve set outcome through instruction process?
- What students should know in order to be able to demonstrate achievement of outcomes?
- How does look like the curriculum for my school subject?
- What is the most appropriate learning mode for students in order to make results and achieve outcomes?

The Most Appropriate Teaching Methods and Modes for the Realisation of the Curriculum

² There are four classification periods during school year (i.e. two in each semester), each lasting three months. Their purpose is to present the interim status of student performance and grades.

Successful teacher is supposed to implement optimal didactic method to achieve the best result in the educational process. It means interaction between teachers and students in respect of achieving outcomes defined by the curriculum.

The application of educational methods is determined by outcome level and the conditions of instruction process realised at school. It is assumed that teachers are competent for realisation of such methods. However, training for application of new methods can be included into the provision of in-service training.

A clear picture on possibilities of instruction process' realisation at school level is provided through one-day seminars realised in cooperation with the authors of the curricula. The purpose of these seminars is to enable teachers, according to prescribed curricula, to perform the following activities:

- To "translate" the aims and outcomes into their operation plan;
- To notice possible problems; and
- To make the list of needed in-service trainings.

These seminars, at the same time, would enable, to the authors of the curricula, an apparent insight into transparency and accurateness of the curricula, i.e. their flexibility in respect of achieving certain outcomes and the usefulness of recommended teaching contents, teaching methods and assessment modes, or the need for their redefining.

IV TEACHER TRAINING AND TRAINING OF ALL REALISATORS OF THE CURRICULUM

The implementation of new curricula is always linked with new teaching methods or new teaching aids. The teachers and the schools will be particularly stimulated in this period if teachers are supported through various planned and systematic in-service training programmes. It will contribute to better quality of the instruction process and consequently to better students' results.

Since all teachers are not evenly acquainted with instruction methodics and taking into account the fact that there are no developed and published methodics on VET instruction in the framework of different sectors, the need for continuous professional development of teachers is natural and logical. The application of new curriculum may be the most convenient time for accepting new teaching methods by teachers, but they need professional trainings.

On the other hand, many of them have not mastered computing skills, so a great number of information needed by themselves and students remains unexploited. The computers present an important teaching aid in the teaching practice and the emphasis should be put on so-called *computing literacy of teachers (functional literacy of the 21st century)*.

Apart from continuous methodical – didactical training, teachers of VET school subjects need professional development in the framework of basic occupation. New technologies in all areas of human activities, as well as new findings about the world around us and our influence to the nature, impose the need of continuous professional development of teachers, to prepare students upon to completion of education for the world of work, and responsible relationship towards themselves and the environment.

V PROVISION OF ADEQUATE LEARNING MATERIALS

New curriculum, particularly in the case of pilot curriculum, cannot be accompanied with publishing new adequate textbooks and learning materials. The role of teacher consequently becomes even more difficult and responsible.

In the framework of pilot curricula each school subject includes relevant literature for teachers and students. According to their knowledge and experience, teachers can prepare adequate learning materials and distribute them to students.

Unfortunately, our students are not used to learn from the textbooks, even if they are present. There are various reasons for that – from the economic ones, to the fact that teachers avoid to use textbooks because they are written in language that is not understandable for student population. Teachers and students emphasize the need that textbooks are to be written by secondary school teachers, since they are familiar with cognitive features of students of that age, and the correlation with other similar school subjects within the curriculum as well.

The practice of using various sources of information about the subject matter by students is even more rare. Education should develop students' need for permanent self-education and further education because it is one of actual demands at the labour market. One of numerous ways to develop such student habits is the preparation of diverse learning materials and the provision of textbooks and popular literature available at school.

Through use of the Internet and other technical aids students and teachers will get used to search for various information.

VI EFFICIENT MANAGING OF CURRICULAR IMPLEMENTATION PROCESS

To achieve best results through implementation of the curriculum it is needed to enable students to gain necessary professional knowledge, master skills and working competences. It is not enough to design programme well, and that teachers are the best pedagogues and experts, but to have efficient managing by the school management as well.

Principal / pedagogical decision-maker at the school and the professional support staff are to create conditions for implementation of the curriculum through the instruction process, as it is defined by the curriculum. Professional councils in charge for school subjects should also be involved into realisation and monitoring of instruction process.

VII MONITORING OF INSTRUCTION PROCESS REALISATION

When new curriculum is implemented at school, it is important to set up monitoring commission for the realisation process and its results – student achievements. At the same time, it is desirable to organise regular meetings of members of the Class Council aimed to exchange of information, mutual support and cooperation. One of the members of the Class Council, who is at the same time a member of school monitoring commission, is to be in charge for the managing of implementation process. Naturally, the best solution is to choose one of vocational subject teachers (if he is also the class teacher, it is an advantage) due to the fact that he/she has the best insight into all aspects of the instruction process in the class.

To facilitate monitoring of the process and its results, it is needed to form the data base on all actors in the process. Regular updating of the base enables regular monitoring, at school and republic level. The data base would serve as a basis for interventions in students' and teachers' work, when it is necessary, and needed evaluation of the curriculum, that is, teaching contents. The data base can be placed in one PC, that is not used for teaching purposes and that is available to all teachers, members of the Class Council, and the implementation process monitoring commission.

It should encompass the data on:

- Students attending the instruction in accordance to new curriculum (personal data; the performance by school subjects and classification periods - for individual students and for whole class...);
- Teachers delivering the instruction in the class (personal professional data; in-service trainings – the previous ones and the planned ones);
- School timetable;
- Social partners contributing to the realisation of the instruction process;
- School subjects and modules (module questionnaires, operation plans on module realisation; learning materials; written assignments; tests ...)

VIII CONNECTING WITH ENTERPRISES AND OTHER SOCIAL PARTNERS

The VET curricula are partly realised in the practical segment of the sphere of work (factories, workshops, hospitals, enterprises, tourist facilities and so on.....) through practical teaching, or

teaching in the block, or professional practice. Therefore it is necessary to establish firm links with relevant social partners, on the basis of drawing up the contracts on realisation of certain instruction segments.

VET school is obliged to spread the network of social partners since it is obvious that in the practice it is impossible to provide realisation of instruction segment in a single enterprise. On the other side, it is necessary that student during schooling realises this segment through engagement at various work places, to master the skill of adopting to various working conditions.

Social partnership is needed also to channel further development of school, i.e. harmonisation of the enrollment policy with the needs of the local economy, i.e. local social partners.

Due to all these reasons, working positions for realisation of practical instruction have to be provided in accordance with the tasks set in the curriculum. Social partner is to get familiar in detail with new curriculum and has to ensure free cooperation of its “instructors” (they work with students during realisation of the instruction in their facilities) and teachers in charge of practical instruction at school. They define operation plan and perform student assessment together, in accordance with the curriculum and current conditions at the enterprise. Social partner is obliged to provide his opinion on the curriculum even during its implementation, to enable standardisation of this segment during its possible redefining. Finally, social partners are the members of examination commissions at the final examination or VET “Matura”.

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In order to ensure successful realisation of instruction process according to these curricula, it is needed to organise one-day seminars with the class councils in all schools. The seminars will be facilitated by the authors of the curricula for each educational profile.

Seminar’s agenda shall be designed to enable group activities (class council) and individual activities of each teacher with the author of the curriculum on relevant school subject.

To achieve uniform structure of these seminars for each educational profile it is necessary to train authors – presenters, in respect of organisation of activities during seminars.

School seminars should be organised in three segments:

- I Presentation of the curriculum for each educational profile realised in school (work with the class council)
 - The framework for implementation of the curriculum in school practice;
 - Aims and outcomes of educational profile;
 - Instruction plan;
 - Organisation of the instruction.
- II School subjects (group activities)
 - The curriculum for given school subject;
 - Designing of operation plan on module/ topic, on the basis of the document;
 - Literature for teachers and students;
 - Teaching methods;
 - Assessment modes;
 - Correlation with other school subjects.
- III Pilot monitoring (activities with the class council and the pilot monitoring school commission)
 - Monitoring of pilot curriculum realisation;
 - Evaluation questionnaires and survey questionnaires ;
 - Pilot class data base.

It is needed to enable teachers to study official document *The Curriculum of Educational Profile Pilots* and the curricula for school subjects under their responsibility. Doing so the effectiveness of seminars would be ensured, since teachers and organisers of instruction at school level would be able to recognise possible issues and problems to be resolved during seminar activities.