

Projects Modernization of the educational process in elementary and secondary schools (2009 – 2013)

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Abstract— Regional Education Reform in Slovakia is nationwide implemented in all schools for the third year now. The main pillars for achieving its objectives are national projects executed by the subvention of EU in operating program Education and coordinated by Ministry of Education, Science, Research and Sport of the Slovak Republic. This paper presents the objectives and activities of the projects Modernization of the educational process in elementary and secondary schools.

Keywords— MVP – ZŠ the National Project of Modernization of the educational process in elementary schools, MVP – SŠ the National Project of Modernization of the educational process in secondary schools, e-educational content, teacher's training, study materials for the modern education, educational portal.

opportunities for self-fulfillment and a new system of career advancement for teachers. Another aim of these projects is to increase the number of teachers participating in the programs of continuing education to acquire and develop their competencies required for the knowledge society. Basic target group for these projects are elementary and secondary school teachers, in total of 6850 teachers. Projects are implemented between 2008 and 2013 and are co-financed by the European Union.

Executive of the project: Institute of Information and Prognoses of Education, Staré grunty 52, 842 44 Bratislava.

Supplier of educational services: elfa, s.r.o., Park Komenského 7, 040 01 Košice

I. INTRODUCTION

National educational projects - a bridge leading to school reform?

Educational reform in primary and secondary schools in Slovakia, across the EU and the world is a long-term process, which is an essential part of changing the world around us.

The unmistakable signs of the reform still are: technological modernization, human resources training and in particular the change of learning process; whole-area and local as well. National projects of education are currently still seen as the fundamental pillar and tool for the state to create the conditions in the real time to achieve the objectives of the reform for all participating schools in the projects.

II. OBJECTIVES OF NATIONAL PROJECTS MODERNIZATION OF THE EDUCATIONAL PROCESS IN ELEMENTARY AND SECONDARY SCHOOLS

Projects Modernization of the educational process in elementary schools (MEP in elementary) ¹ and Modernization of the educational process in secondary schools (MEP in secondary) are about to innovate and modernize the content, methods and outputs of the educational process to reach new responsibilities of working in modern 21st century school- less memorizing for children, more interesting and varied lessons, better



Figure 1. Logos of the national projects MEP in elementary and EMP in secondary schools



Figure 2. Logos of the Operating program Education and European Social Fund

Aims of the projects EMP in elementary schools and EMP in secondary schools:

- To achieve changes in forms and methods of teaching in the schools due to the support of digital content and ICT.
- To prepare teachers for the active implementation of school reform and modernizing the education system of the further education for graduates and their preparation for life and work in a knowledgeable society.
- To provide schools with computers and other technical devices and laptops for teachers

- To provide schools with e- educational content for the selected general courses in elementary school (Mathematics, Physics, Chemistry, Biology, Geography, History, Slovak language, Music, Art, and for the First Grade courses) and for the general courses in secondary (Mathematics, Physics, Chemistry, Biology, Geography, History, Slovak language).
- To develop methodological materials for teachers with a theoretical background for the modernization process as well as specific methodologies and examples of modern forms and methods of education using ICT.

The primary target groups are teachers:

- 4,325 teachers in elementary school from the whole of Slovakia except Bratislava district (BD) and 380 teachers in elementary school from BD
- 1,840 teachers in secondary school from all over Slovakia except Bratislava district (BD) and 305 teachers in secondary school from BD.

The secondary target group of the projects MED in elementary and secondary schools are the students of this schools, because teachers are trained to actively apply new forms and methods of education in their work with the support of digital content and ICT.

Number of participating schools and registered teachers overview:

	Existing amount		Planned amount
Elementary schools	2191	88,49 %	2476
Secondary schools	797	93,65 %	851
Teachers (elementary schools)	5172	109,93 %	4705
Teachers (secondary schools)	2344	109,28 %	2145

Figure 3. Source: Monitoring of the projects MEP in elementary and secondary schools, September 2011

III. PROJECTS IMPLEMENTATION

2009

- In January, the Institute of Information and Prognoses of Education (IPE) established management team for the projects. At the same time, the building of a professional structure for the project, managed by coordinators and professional supervisors from universities and educational institutions started. In its first half public procurements by IPE were made, the expert teams for the target groups of general education courses were formed gradually. Expert teams consist of innovative teachers from elementary schools, secondary schools and universities from the whole of Slovakia.
- March to September, teachers started to sign in for the projects. Total number of signed in teachers from elementary and secondary schools is 7,790. Expert

Group selected the number of 6850 most suitable candidates for the training.

- Expert teams for the general education courses have been created (approximately 120 innovative teachers).
- The promotional and informational materials were created.
- Through the IPE portal (www.uips.sk), the participants could electronically log in to the project and in the same time the support call center for schools, project participants and public started to work.
- There were actually two portals created and used for the project at the beginning. In terms of current requirements arising from the practice of the projects, both are regularly updated and extended by new features.

3.1. Educational portal

(www.modernizaciavzdelavania.sk) serves to enable the educational content for the participants - trainees, for the organization of education and the final CONC. The portal is destined for the project trainees, lectors, consultants and the final work reviewers, the members of examination commission, the implementer and executive of the projects. This portal won second price in the competition "E-learning in praxis", that was announced during the eight year of international conference ICETA 2011. Portal is moreover the leading "e-face" of the projects – it enables information about the projects to the general public.

3.2. Internal portal for management and administration of the projects

(www.mvp.elfa.sk) is destined for internal management needs and project administration. Range of users is therefore compared to the education portal narrowed by the people from the professional teams (coordinators, supervisors, experts, developers, lecturers and consultants), the supplier and implementer of the projects. The portal is not intended for trainees, schools, general public not excluding.

Since October 2009 to June 2011 in the portals:

- 1,251,053 a total number of visits,
- 1573 average daily number of visits
- 9,573,360 page seeing
- 1,617,196 seeing the detail of the education
- 59.66% of multiple visits within one day
- 815,722 emails sent
- 78.722 GB - of data size
- 216 dynamic websites
- 7792 registered users

Source: elfa, s.r.o.

- Throughout September–November, the schools were gradually provided with hardware equipment for special classrooms and laptops for the teachers signed in for the projects.

- May to September training centers (TC) from all over Slovakia were selected to ensure optimum availability for trainees. At the same time, basic technical infrastructure for the TC was provided and the lecturers were selected.
- In October, the teacher training began in 28 TC in Module 1, which was focused on digital literacy. In the training, each participant received a methodical material and the exercises for praxis available on the portal as well.
- The teachers' education is integrated system of three Modules in the range of 100 hours for advanced to 106 hours for intermediate (related to a module – the same starting point for all trainees in the projects - digital literacy, a necessary requirement for many experienced teachers). Education runs in presence and in distance form, ends by creating thesis and the final examination. This teachers educating is accepted in the new system of teacher career.

In the final quarter of 2009, working on the additional methodical materials for Module 2 and Module 3 continued.



Figure 5. Educational portal: www.modernizaciavzdelavania.sk

2010

- In 2010, methodical textbooks for teachers for Module 2 and the common part for Module 3 as well as for the 17 selected subjects in elementary and secondary schools were issued. In these, the experimental digital content using ICT is verified. Overall, since the projects started, number of 20 methodical textbooks for teachers – each graduated trainee gets the textbook for Module 1, Module 2, and the common textbook for Module 3 and textbook aimed for the subject in which they received education were created and issued.
- At the same time, there is a digital library on the educational portal of the project, where there is the experimental digital content for every selected subject for trainees available.
- In February, all trainees completed Module 1.

- Since April, in 20 TC teachers educating in Module 2 “The modern didactic technique in teachers work” was launched. Module 3 preparation continues.
- In the summer, teachers started educating in Module 3 “Using the ICT in the subject”.
- In 2010, first 40% of trainees in Modules 2 and 3 were educated.

2011

- In March, the first final exam started.
- Educating process of the teachers is completed by creating the final thesis and its defense and a final examination in which they have opportunity to present their readiness to implement modernization elements to the educational process in elementary or secondary school. Teachers demonstrate adequate knowledge of ICT applications in teaching of their subjects with focus on the implementation of a national education program in elementary or secondary school. Teachers, who successfully completed the educational process of the projects, completed specialized training in law no. 317/2009 body of law: The teaching staff and professional staff are then granted 35 credits. The programs "Modernizing the education in elementary schools with ICT" and "Modernizing the education in secondary schools with ICT" are accredited continuing education programs (specifically as specialized training) in law no. 317/2009 body of law: The teaching staff and professional staff.
- Until May, 3,693 training days were completed by trainees.
- 13, 5% of all trainees (signed in teachers) calls for specific changes in the project. To move days of education, or to move the date of the final thesis defense and tests. This is because of the different life situations (change of employment, dismissal, cancelled schools, maternity or parental leave etc.).

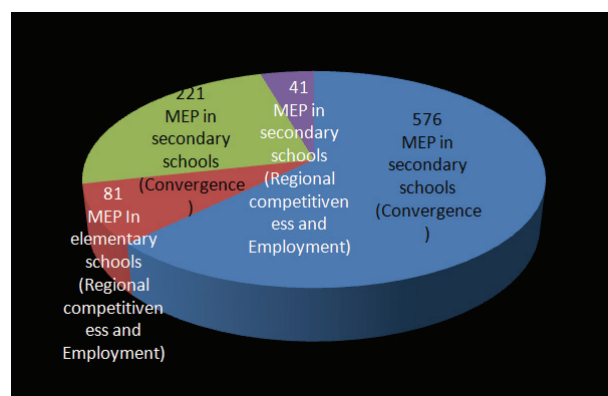


Figure 6. Source: Monitoring of the projects MEP in elementary and secondary schools, September 2011

Expert team: The nature of the project

Creative work of expert teams throughout the year is focused on detailed analysis of the current state in the range of modernization of education, i.e. new trends in ICT in primary and secondary school subjects and

analyzing and preparing the digital content for the education process. Innovative work of experts lines in the preparation of model guidelines for the modernization of education using ICT. The main directions of modernization are not set on technology but on the teaching process, changing the education atmosphere, increasing the activity of students and their own responsibility for their learning as well as the new competencies for the teacher in the process of modernization of education. Teachers' final thesis must be oriented on the new forms and methods of work in a modern school where ICT plays the only necessary role to achieve the aim of school transformation from traditional to modern – a 21st century school.

IV. CONCLUSION

Total number of 85% Slovak elementary and secondary schools are involved in the national projects Modernization of the educational process in elementary and secondary schools. This means that almost all schools involved in the project were provided by computers destined for multimedia computer classrooms (for supporting the implementation of the project MEP results in practice) and laptops for lecturers and trainees - the teachers who participated in the project and began to meet the objectives of project MEP by beginning to learn on the digital basis. Through this step they can get inspired by digital technologies that are available on the internet and free of charge, as well as the paid for software, to make their never-ending journey to the modern way of teaching easier, along with the continual self-education and updating the content of the curriculum / learning, which should reflect current and future needs of the primary target group of regional schools, as well as the projects MEP in elementary and secondary schools - students, as well as globally – the whole world.

Range (85% of elementary and secondary schools from Slovakia) and duration (2008-2013) of national projects Modernization of the educational process in elementary and secondary schools (for the exact classification of projects by the bureaucratic structures see endnote ⁱⁱ) are like 'quantitative' predestinating, that that in addition to implementation (in later stages) and after successful finishing of the projects (filled with measurable indicators - in this case the number of participating schools and successful teachers - graduates of the projects MEP) will be satisfied the basic purpose of the projects: to prepare teachers for the active adapting of education system for the needs of knowledgeable

society. That is executed as a part of the active implementation of school reform. The key to its fulfillment is considered to be teacher - with new competencies for education in the modern school.

V. ADDITIONAL INFORMATION

Current situation in the national projects Modernization of the educational process in elementary and secondary schools can be monitored at <http://www.modernizaciavzdelavania.sk>.

ⁱ Ministry of Education, Science, Research and Sport of the Slovak Republic with support from EU Structural Funds and national budget as well declared national projects for years 2008-2013:

Call OPV/K/RKZ/NP/2008-3 Modernization of the educational process in elementary schools

Of purpose: Convergence (whole Slovakia, except Bratislava district), project code: 26110130083

Of purpose: Regional competitiveness and Employment (Bratislava district), project code: 26140130013

Call OPV/K/RKZ /NP/2008-4 Modernization of the educational process in secondary schools

Of purpose: Convergence (whole Slovakia, except Bratislava district), project code: 26110130084

Of purpose: Regional competitiveness and Employment (Bratislava district), project code: 26140130014.

ⁱⁱ Classification of MEP projects: „Modernization of the educational process in elementary schools“(ITMS: 26110130083, 26140130013) and „Modernization of the educational process in secondary schools“(ITMS: 26110130084, 26140130014) – separately for Bratislava district (of purpose Regional competitiveness and Employment) and separately for the left whole Slovakia (of purpose Convergence), two mirror projects.

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REFERENCES

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- [2] <http://www.uips.sk>
- [3] <http://www.minedu.gov.sk>