

## **Overall Evaluation of National Projects and of Their Contribution to Education**

### **PRIORITY AXIS 1**

#### **1. Modern education – digital education for general subjects**

Out of activities implemented so far, the national project had an impact on establishing the prerequisites for content reform of education at elementary and secondary schools by the use of innovative forms and methods of teaching, mainly through the mobilisation of creative teachers who took part in the process of making scenarios for a subsequent creation of digital education subjects. After the finalisation and expert approval it will be possible to make use of more or less 14,200 digital education subjects taught in common pedagogy practice. This will be facilitated by creating technological basis for schools that consists of equipping 2,659 schoolrooms with interactive boards, managing laptops and sound systems – which will make a real basis for content reform of education processes taking place at elementary and secondary schools. At the same time, given its nature, the project contributed to a wide activation of teachers willing to engage in the modernisation of education and reform processes. The national project ensures the provision of digital and printed content for supporting the education and the operation of central applications for the Ministry of Education, Science, Research and Sports of the Slovak Republic via existing Data Centre for Elementary Schools, Secondary Schools and Universities, as well as activities related to the popularisation of the school system focusing on technical and scientific field of study.

The national project will have a direct impact on a minimum of 543,560 pupils and 42,100 teachers at 2,659 elementary and secondary schools across the Slovak Republic, with the exception of the Bratislava Self-Governing region. All teachers who were actively teaching can get involved in the creation of digital education subjects. A minimum of 800 active teachers will be working on the creation of 12,800 digital education subjects. Priorities will tackle the digitisation of the topics under the State Educational Programme that were not covered by digital subjects. Some 543,560 concessions will be bought within the framework of the national project for at least 30,000 digital subjects and at least 30 types of working books for 11 general subjects (according to the ISCED classification).

The main tools for the development of an information and knowledge-based society include modernisation of the education content in the ICT, innovation of ICT knowledge of teachers and pupils, enhancement of Slovak elementary and secondary schooling in order to make it more competitive with developed EU countries, and ensure permanent innovation of the knowledge of citizens via lifelong learning.

The national project will have a positive impact on several areas and aspects of education. The main contribution of the national project lies with long-term support and enhancement of study specialisation on the part of pupils of primary schools and secondary schools in respective general subjects that are most relevant to the pupils in terms of their prospective career path. Such targeted use of study with regard to their anticipated career path can reflect market demands, and thanks to the flexibility and competitiveness of their knowledge young people will become an important part of the society being able to meet the conditions relating to the information era. Thanks to the support provided by the national project professionals to the teachers, it will be possible to develop collaboration in identifying the topics that constitute a priority for continuous development of digital content. Through the development of practical skills of teachers in the process of creating the local content of digital education subjects, it will be possible to interlink the comprehensive digital content not only with the State Education Programme and curricula of respective subjects, but also with pedagogical notions regarding the course of a lesson. Focused preparation of teachers for the use of didactic tools, digitised materials and adapted video recordings shall ensure their smooth and natural integration within the lessons. Actual results and experiences stemming from the implementation of the digital education shall exert pressure on the long-term enhancement of quality and level of the

digital content provision even after the completion of the national project. Thanks to its openness, it can be incorporated into further projects and activities focused on the creation and modernisation of the education processes in Slovakia.

Regarding the sustainability of the national project, it can be concluded that after the project completion the use of the digital content will continue to be carried out by the Institute of Information and Prognoses in Education (UIPS) and, at the same time, by the pedagogical staff involved in cooperation. It will be necessary to take a strategic decision on the provider of the didactic tools for the next period and especially with regard to the evaluation of experience in the framework of the national projects activities. The role of secondary factor will be taken on by experience acquired from the international cooperation in the framework of which national project experts as well as teaching staff will get know-how on current modern trends in this field, and will be able to assess if the existing provider fulfils these trends, and will also be able to update and develop the didactic tools dossier being provided in order to draw nearer to the new trends within an acceptable time framework. It will be possible to use the local content in a sustainable manner since copyrights to staff works will be subject to decisions taken by the Beneficiary or their contracting party (school) and thus with the help of standardisation achieved by minimal technical parameters relating to didactic tools it will be possible to arrange their export and re-import into another tool providing a technically acceptable environment for education.

## **2. Supporting the professional orientation of elementary schools pupils on vocational education and training by developing polytechnic education focused on the development of professional skills and work with talented people**

The main aim of the national project is to strengthen the interest of the pupils in vocational education by, among others, equipping classrooms for subjects such as chemistry, physics and technical science in a way so that pupils can develop in a practical and illustrative manner their professional skills via “polytechnic education”, while applying modern methods and forms of education. Based on the reactions from professional associations, there is a clear need to develop the interest of pupils in polytechnic education so that they can carefully consider, when deciding about their future job, the specialisation they would study with regard to their actual chances on the labour market and the needs of the Slovakia economy.

This need is confirmed by Emília Haasová in the article *Methods and Forms of Work Applied in Technical Education, the World of Labour and Technical Science*: “Act No. 245/2008 on Education (School Act) and on changes and amendments to some acts established a legal framework for launching a content reform. Art. 6 provides a definition of the State Education Programme which must contain framework educational curricula. These curricula set the quantity of cases relating to the technical education subject in the 4<sup>th</sup> year of elementary school with an extent of one class, and 0.5 classes for the 7<sup>th</sup> and 8<sup>th</sup> years of elementary school per week.

This suggests that there is an evident reduction in educating the pupils in areas guaranteeing the development of manual know-how, skills, habits and experience that are necessary for further physical and psychical development of pupils, and this is also in contradiction with Art. 4 letter e) which stipulates that “the aim of education is to enable children or pupils to develop their manual skills, creative, artistic, psychomotorical knowledge, and current knowledge, and work with them by means of practical exercises in areas concerning related education or current labour market demands”. This arrangement is contrary not only to the law provision quoted above, but also to Art. 3, letter n) of the Act on Education which stipulates that “education under this Act is based on the principles of balanced development of all aspects of children’s and pupils’ personality in school education.”

The project outputs will include recommendations for didactic tools to be used during practical classes, as well as standards for technical classes and innovation of forms and methods concerning the teaching in the above-mentioned areas.

In order to be able to reach the project objectives, we started with ensuring increased numbers of classes in selected 49 pilot elementary schools in biology, chemistry and, in particular, technical science. Thanks to equipping technical classrooms and laboratories pupils will be able to orientate in

areas such as *Man and Nature* and *Man and the World of Labour* in a more practical way, as well as to do more experiments.

The national project and the above mentioned *Analysis of problems causing low interest of elementary school pupils in vocational education and training at secondary vocational schools* opened up a lot of issues that were addressed across the society. Parents, teachers, pupils and employers start to agree on the necessity to deal with practical skills of pupils since they attend elementary school. Apart from this it is also necessary to pay attention to pupils' career guidance much sooner than it is common: it means that it is very late to start identifying the professional orientation of elementary school pupils on vocational education when attending the 8<sup>th</sup> or the 9<sup>th</sup> year of elementary school, as a result of which the project objectives related to career guidance are formulated in a right way. It is crucial to tackle the issue of pupils' professional orientation as early as in the 5<sup>th</sup> year of elementary school; this will be facilitated by software tool designed to identify the professional orientation of pupils, together with methodologies and catalogues of jobs as viewed by children. Naturally, it is very important to make use of new equipment and facilities of technical classrooms, software tools and methodologies prepared by teachers.

Working with talented youth by means of putting together combined teams of elementary schools pupils and secondary schools students has started to bear fruit, since it enables elementary school pupils and their teachers to get acquainted with secondary vocational schools through workshops, instructions lessons for pupils and competitions taking place in the premises of secondary vocational schools. Elementary school pupils were not able to imagine what subjects they would study at respective schools. The newly prepared *Catalogue of occupations as viewed by children* will definitely help them to decide on their future career.

Technical classrooms will be used also after completion of the national project; at the same time, standards will be adopted with regard to equipping elementary schools with technical classrooms for physics, technical science and biochemistry.

The project will bring not only modernisation of educational content of elementary school pupils in the areas *Man and Nature* (biology, physics, chemistry) and *Man and the World of Labour* (technical science), but also better orientation of elementary school pupils when choosing their future occupation. In connection with the national project sustainability we can conclude that it is crucial to pursue these paths:

1. By using of equipped technical classrooms that will continue to be accessible also after the national project is over; by making use of optional lessons of the framework education plan under the State Education Programme for ISCED 2 aimed to enhance the educational areas *Man and Nature* and *Man and the World of Labour*.
2. By improving the quality of respective levels of career guidance of pupils in making their own decisions based on actual understanding of their knowledge, skills, interests and values and possibilities thanks to the tool for identifying the orientation of pupils on vocational education.
3. By keeping on with continuous training of teaching staff on new methods and forms of education enhancing the development of polytechnic education.
4. By continuing organising competitions aimed at finding out the quality and level of vocational educating the schools: remarkable achievements and remarkable rankings of students taking part in competitions demonstrate the quality of school education programmes and the application of the principles of experiential learning.

### **3. Modernisation of education processes at secondary schools**

The main aim of the national project – to prepare teachers for active implementation of the school reform, innovate and modernise the content, methods and outcomes of the teaching process, increase the proportion of teachers participating in further education programmes so as to gain and develop their competences necessary for a knowledge-based society, and to transfer knowledge acquired under the project to other colleagues not involved in the project training – has been successfully accomplished.

687 secondary schools from across Slovakia (with the exception of the Region of Bratislava) have been engaged in the projects, and 4,939 desk personal computers, 1,840 laptops for teachers involved in the educational project activities and 687 data projectors have been supplied within the framework of the projects, resulting in considerable improvement of the quality of ICT at schools involved in the project.

Training activities aimed at developing ICT skills, individual digital literacy, teachers' preparedness to use modern didactic tools, and at developing their knowledge in applying ICT in specific subjects engaged 1,997 teachers from secondary schools who use their knowledge acquired by attending the different training modules and the new modern e-content of subjects while working with youth, and also act as representatives of modern education elements at schools and transfer their knowledge and experience to colleagues who have been absent from the project. The education programme created under the project under Act No. 317/2009 Coll. on Teaching Staff and Specialised staff, as amended, was accredited for specialised continuous education, thanks to which successful graduates who successfully defended their thesis and passed the exam can work as school specialists in the modernisation of education with ICT support.

An enormous asset in fulfilling the project objectives related to the preparation of some innovative teachers (multipliers) for new competences in teaching processes are sets of methodological textbooks which are appreciated by project participants, other teachers, university experts, and many schools repeatedly raised the requirement to supply at least one complete set of these textbooks to each school. Another project benefit is the large number of innovative didactic tools, innovative materials, interactive animations, worksheets, presentations, video instructions and other teaching aids created under the project, which are available to teachers in the Digital Library and which can be used when preparing their lessons.

Overall, the national project can be evaluated as successful in terms of achieving the goals that have been set via direct assignment. All measurable result indicators were achieved. The resources allocated to the project helped improving the IT quality of schools engaged in the project, and specifically through teachers involved in the educational project activities it was possible to innovate the content and methods of the teaching process in the given subjects and increase the share of teachers participating in further education, thus contributing to a gradual transformation of traditional schools to modern schools of the 21st century, being much more interesting both for pupils and teachers.

Regarding the sustainability of the national project, it can be concluded that the school reform of secondary schools will continue after termination of the project. Teachers trained under the national project will be help at schools to train other teachers, introducing new teaching methods using ICT in modern 21<sup>st</sup> century schools. The implementation of activities related to the pilot project of education modernisation is an important prerequisite and a part of continued improvement of the modernisation of education and of the quality of education results for developing the knowledge-based economy and competitiveness at the European labour market. The project outputs (experimental digital content, new methodology and model ICT classes) will be subject to analyses and will be summarised as recommendations for further educational projects under the OP Education.

#### **4. Modernisation of the education process at elementary schools**

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161 elementary schools from across Slovakia (with the exception of the Region of Bratislava) have been engaged in the projects, and 12,783 desk personal computers, 4,303 laptops for teachers involved in the educational project activities and 2,032 data projectors have been supplied within the framework of the projects, resulting in considerable improvement of the quality of ICT at schools involved in the project. Training activities aimed at developing ICT skills, individual digital literacy, teachers' preparedness to use modern didactic tools, and at developing their knowledge in applying ICT in

specific subjects engaged 4.669 teachers from elementary schools from outside the Region of Bratislava, who use their knowledge acquired by attending the different training modules and the new modern e-content of subjects while working with youth, and also act as representatives of modern education elements at schools and transfer their knowledge and experience to colleagues who have been absent from the project. The education programme created under the project under Act No. 317/2009 Coll. on Teaching Staff and Specialised Staff, as amended, was accredited for specialised continuous education, thanks to which successful graduates who successfully defended their thesis and passed the exam can work as school specialists in the modernisation of education with ICT support.

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## **5. External evaluation of school quality encouraging self-evaluation processes and school development**

The primary project output is the newly created school performance self-assessment model. In creating it, the Beneficiary drew on the Scottish innovation experience while taking into consideration the result of the European project *Evaluation Quality in School Education* (EQSE). Its aim was to set up the philosophy and self-assessment tools and self-evaluation profile (SEP) stemming from the project in a way that instead of mechanical application of received methods and tools the project enhances efficient transformation of all these elements according to the conditions and needs of a specific school. The project brings to the forefront the school not as an institution but rather as a teaching organisation with an emphasis on processes that should take place or that take place at schools. It is also important to see that this approach has been at least partially verified in our school environment and has brought about promising results under the international project *Bridges across Boundaries* (BaB). According to this approach, the school life cycle is divided into four main domains (results, processes at classroom level, processes at school level, relations with the environment), subsequently characterised through twelve areas. This enables to judge what is going on at school from the perspective of pupils, school staff and parents. By collecting and comparing various opinions, it presents an opportunity to gain objective information on the school and to identify the phenomena that are important for the school. Another important principle relating to this approach is that it enables individual schools to decide on as to what and how they include in the self-evaluation processes, and that such processes take place not only at school level, but also in individual classrooms.

Working with this self-assessment model produces an image regarding the quality of school from various points of view, and it ensures an open exchange of views among various actors involved in school life, thus creating a supportive climate for self-assessment. The outcome of such self-assessment is a sort of internal audit that becomes more effective the more genuinely it describes the actual state of play. The school performance self-assessment model was subject to various presentations made at conferences, including experience from its pilot phase. The publication produced in this regard was made distributed to 2,000 schools throughout the Slovak Republic, and it is expected to help schools to gain more information on self-assessment and on its implementation, which will be useful in the process of increasing the quality of the school itself. Regarding national project sustainability, it can be concluded that the SSI will continue carrying out inspections according to the elaborated methodology and tools. By applying a centralised approach in evaluating schools, it will be possible to identify the level reached by inspected schools, and its strengths and weaknesses (deficiencies) which will have to be addressed by schools in view of improving their level. Recurrent inspections of the same schools will help to find out in what way the school dealt with the deficiencies, and how the school improved its level. Based on the newly created self-evaluation model, schools will be able to identify the state of play (level) themselves, and to address the problems without awaiting the opinions of external evaluators, which will enable them to remedy any deficiencies sooner, thus improving quality of teaching processes and school development as such. The school self-assessment model will be published on the SSI website and will be made available to the public, and it will be also promoted in the media and at various school-related activities.

## **6. Developing secondary vocational education**

The project implementation will address the issue of interlinking vocational education and training at secondary vocational schools with employers' needs; enhancing the quality and readiness of future secondary vocational schools graduates with regard to their abilities to find employment after completing secondary vocational education and training; cooperation with professional associations; defining a model of multi-source financing and standards for the funding of secondary vocational schools; career guidance and professional orientation of secondary vocational school pupils with respect to the need to prepare in the most flexible way for possible changes on the labour market.

The national project activities include pilot activities pursued within the content reform of education based on the involvement of the representatives of professional associations in individual processes affecting the focus of individual study areas, including at their final phase, up to feedbacks (recommendations) for future revisions of school education programmes and didactic tools, including teaching tools and introducing necessary changes. These activities also concern delivering didactic tools of tangible and intangible nature, as well as didactic tools for the modernisation of education contents designed for pupils, improving the quality of education at secondary vocational schools involved in the project.

These activities include implementing and completing the process related to the creation of standards for space, equipment and materials for the different teaching areas and study fields, enhancing cooperation between secondary vocational schools by organising regular working meetings aimed at sharing their experience and dealing with common issues, investing in specific further education and training of teaching staff via mobility (study trips abroad aimed to enhance further education of teaching staff and transfer know-how back to Slovakia in order to promote the reform and development of vocational education at secondary vocational schools) and delivering didactic tools of tangible and intangible nature, as well as didactic tools designed for the modernisation of education content for pupils and for the enhancement and increase of the quality of vocational education and training at secondary vocational schools engaged in the process. The aim of these activities is to increase and enhance the overall quality of secondary vocational schools in all study fields falling within the competence of State Institute of Vocational Training.

Based on the involvement of representatives of professional associations in the implementation of the national project *Developing the secondary vocational education*, it will be possible to get employers' feedback regarding career education in different study fields, feedback concerning the process of

education including the focus of education content, didactic tools, as well as peer-reviews of existing and new didactic tools and methods. Regular collection of data from employers and the monitoring of the placement of graduates on the labour market will enable introducing a new tool for future orientation of study fields. The dual system of education at secondary vocational schools will be verified within the context of the Slovak vocational education and training system.

By means of career guidance and further training of career counsellors and teaching staff working in this area at secondary vocational schools, pupils of secondary vocational schools will get access to better professional orientation, increasing their chances on the labour market.

Regarding national project sustainability, it can be concluded that creating the established network of secondary vocational schools and professional associations engaged in the project will continue sharing experience and jointly addressing the problems (A1.1, A2.1). Cooperation with professional associations is a continuous process, and since its functioning in the framework of the national project has been linked to the work of the Government Council for Vocational Education and Training, sustainability will be guaranteed also after termination of the national project activities (A2.1). The didactic tools, digital curricula, worksheets and ICT for schools involved in the project will be utilised also after project completion (A1.1, A2.1). Further education of teaching staff through further education mobilities and courses will be subject to funding under current expenditure of schools/ministry, or will be covered grants under Community programmes, other domestic or foreign grants and EU Structural Funds (A1.1, A2.1, and A3.1). Trained career counsellors will continue working at secondary vocational schools engaged in the activities also after the termination of the project activities, and make use of the tool for career guidance (A3.1).

## **7. Educating teachers in the context of the creation of school education programmes**

Development of school educational programmes represents a content reform of the school system. The educational activities under the project include implementation of further education of teaching staff for the acquisition and development of competences that ensure efficient transformation of traditional school to a modern one.

The educational and methodological activities carried out in the project framework will contribute to the innovation in the content and methods of education at schools, and to the improvement of the quality of learning outputs. The main objective is to educate pupils to satisfy labour market needs in a knowledge-based society.

The projects of education for teachers in connection with the creation of school educational programmes are built on the strategic goal of nationwide retraining and education of teaching staff at elementary and secondary schools. The reason for the application of this goal is to implement a content reform of education – quality preparation and development of school educational programmes. The objective is to provide teaching staff at elementary and secondary schools with a comprehensive training programme focused on the development of school educational programmes via continuous training activities by trained lecturers and distance learning. For these purposes an e-learning (educational) portal will be created.

The main project benefit is the training of its 7,018 participants on the creation of school educational programmes, the printing of 21 additional multimedia educational materials for elementary and secondary school teachers, and the development of an educational portal, which will continue to serve as a primary means of complementary education for elementary and secondary school teachers. Another important project benefit is the publishing of teachers' newspaper called *Učiteľské noviny* which provides regular information on the implementation of the national project's activities, as well as information about the general situation in the school system. By 31 December 2013, 68 issues were published and distributed.

Regarding sustainability of the national project, it can be concluded that the continuous operation of innovated school educational programmes will be secured by following means: continual application of modern methods, tools and ways of teaching, continuous improvement of the quality of teaching content based on feedback from the market (employers, successful graduates, etc.), continual publication of periodicals for teaching staff and other employees working in the field of education and

learning, and continual development and distribution of educational materials for teaching staff and other employees working in the field of education and learning.

## **8. Evaluating the quality of education at elementary and secondary schools in Slovakia in the framework of the ongoing content reform of education**

The positive impacts of the project implementation are multi-faceted. The implementation of the project activities enables to prepare other testing so that it is possible to evaluate the quality of schools and education. Introducing the monitoring at the intersection of all ISCED degrees enables to follow the added value of schools compared to the quality of their education. Given the big number of trained teachers and participants in professional training and workshops, schools are expected to take a positive approach to testing and better understanding of the processes of national and international measurements and the ways of evaluating tests. The project outputs are very useful, especially in the form of publications, professional materials and publishing activities by employees. The most useful findings resulting from the outputs of activities include:

- pupils of secondary schools are more successful in tests from Slovak language and literature, when it comes to reading with understanding, compared to the period before introducing the school reform, which demonstrates that schools pay much more attention to reading with understanding;
- the innovated tests from Slovak language and literature intended for pupils of secondary schools with Hungarian as the language of instruction include tasks related to listening with understanding, in which pupils achieve comparable results as reading with understanding, and the introduction of these tests is received positively;
- the weak results of students of elementary schools in English language tests at A2 level refer to a low level of foreign language teaching at the second grade of elementary schools;
- added value is one of the indicators of the quality of schools; it is also important to take into account the educational aspects provided by schools;
- added value can be measured in Slovakia only at secondary schools with respect to the subject Slovak language and literature;
- it will be possible to measure added value at elementary schools only after introducing the comprehensive testing of 5<sup>th</sup> year students;
- the results of schools are influenced by the social and economic status of pupils, their motivation to learn, and cognitive assumptions that will be considered in the process of calculating the added value of schools;
- these indicators represent a very useful feedback for schools in order to adjust their internal processes towards enhancing the quality of education process.

Regarding project sustainability, it can be concluded that the results of the project activities – creation of software solutions for tasks, trained authors of tests, innovated methodology for test creation and evaluation, innovated tests and new types of on-line tests, the system of external testing at ISCED 1 and ISCED 3 levels – will be implemented after the termination of the project. Trained teachers and teams of creators will be cooperating in the preparation of tests in the years to come. The created methodology of external evaluation and evaluation of the quality of education and school will be verified in the framework of the project at selected schools and will be extended and adjusted for all schools in Slovakia after project completion. Research in electronic testing will contribute to the development of on-line testing in line with the transformation of traditional schools to modern ones and in line with international trends.

## **9. Improving the quality of education at elementary and secondary schools using electronic testing**

The following testing took place during the reference period: training of multipliers, educational courses for creating testing tools, training of multipliers on financial literacy, training of multipliers on statistical literacy, training of multipliers on scientific subjects, training courses on creating testing



tools for financial literacy, training courses on creating testing tools for science subjects, and training courses on creating testing tools for statistical literacy. The teams of authors created the first sets of tasks that are currently awaiting preparations for benchmark testing. The teams created more than 3,500 tasks (Slovak language and literature and reading literacy, Hungarian language and literature and reading literacy, Slovak language and Slovak literature and reading literacy, mathematic literacy, English language, German language). The tests of reading and mathematic literacy run twice in order to check their validity. The coordination materials for creating tasks and tests were prepared during authors' active preparation of test tasks and tests.

During the monitored period, pilot electronic testing at 69 elementary and secondary schools on a sample of over 8,600 pupils was carried out as scheduled. A plan for the distribution of computer equipment to schools was also developed. Electronic attitudinal questionnaires were distributed to eleven schools in order to make an analysis of measurements in education. A public procurement for the software supply of electronic testing and related services was successfully completed. The project also included a survey of premises for establishment of regional contact centres in which authors, reviewers and guarantors of tasks and tests can stay in mutual contact.

The national project will provide a modern electronic test system to participating schools from all Slovak regions as a tool for teaching staff to objectively examine the knowledge, skills and key competences of their pupils and, at the same time, provide feedback to schools, teachers and pupils. In the preparation for e-testing introduction to schools, an ICT survey was conducted in 2013, which evaluated the technical feasibility of schools to participate in electronic testing and created the conditions for distribution of computers to schools (supplementation of PCs) according to the criteria valid early 2014. Thanks to the project, hundreds of teachers from all regions get free specialised training in the development of testing tools (tasks and tests) for the electronic environment in general subjects. Trained teachers do contractual work for the national project executor and create test tasks. Hence, an e-database of 30,000 tasks and 150 tests for ISCED 2 and ISCED 3 gets gradually developed, the top quality tasks being intended for national certified measurements of NICEM (National Institute for Certified Educational Measurements). The project provides free training for ICT school administrators for online testing, motivates creative teachers, and encourages self-assessment of schools. The National Institute for Certified Educational Measurements established a network of regional contact centres where teachers who are authors of tasks can meet guarantors.

With regard to the national project's sustainability, we can conclude that it produces an opportunity for a gradual introduction of electronic testing in Slovakia. The project implementation will include development of testing facilities for pupils in schools (40,000 test facilities are expected to be created). An extensive database of tasks (approximately 30,000) will be developed from selected general subjects. The main purpose of this database will be assessment of pupils and test compilation for external as well as internal evaluation of pupils, not only throughout the project duration, but also after its completion. After completion of the project, external electronic evaluation of pupils will continue to be implemented in subjects and educational areas specified by the Ministry of Education. Based on these evaluations, regular recommendations will be made to increase the quality of education in the specified areas and to make the entire educational system more effective. The legislative changes necessary for transition from paper-based to nationwide expansion of electronic forms will be continuously initiated. Experiences acquired from electronic testing will be used after project completion for the introduction of electronic testing in the field of vocational subjects.

## **10. Foreign language training for elementary school teachers under the Concept of Foreign Language Teaching at Elementary and Secondary Schools**

### Added value of the project

- support for teacher's education in the field of lifelong learning throughout Slovakia, in particular in less economically developed regions, and increased competitiveness of regions;
- improving the quality of the educational system in the Slovak Republic;
- satisfactory language competence of secondary schools graduates;
- increased mobility of professionals in the field of education;

- improving the evaluation credibility of learning outputs in the field of foreign language teaching in the Slovak Republic;
- active participation of the Slovak Republic in creating a multilingual and multicultural Europe in accordance with the recommendations of the European Commission and Slovak participation in creating the EU language policy.

The project trained professionals on the creation of latest evaluation tools for assessing language proficiency on CEFR level (Common European Framework of Reference for Languages). It also provided accredited study programmes to gain a qualification in teaching foreign languages with a focus on the target group of younger school age children.

The organisational and educational portal [www.educj.sk](http://www.educj.sk) was created for teachers participating in the project.

Also an extensive international cooperation was developed for participating teachers, including access to and use of basic tools of the Council of Europe to improve language learning – CEFR for Languages, EPI, etc. The national project met 100% of its objectives in 2013 and substantially contributed to the improvement of foreign languages education at the primary level of education in Slovakia.

The project provided all participating schools with technical and professional equipment, including higher education institutions, and it also provided data projectors, laptops, linguistic and professional software, extensive textbook funds for teachers, and a big amount of specialised literature for teachers. Furthermore, the project enabled draft description of the study field called pre-school and elementary pedagogy focused on acquiring and maintaining 100% qualification in teaching the subject foreign languages at the first grade of elementary schools.

The project created university project offices at 9 pedagogy and technology oriented universities. All universities managed to provide high quality education throughout the project despite the fact that Slovakia is suffering from a lack of qualified teachers of foreign languages on all levels of the education system, vocational education, as well as language education.

Overall, the project provided 3,325 teachers with added qualification in teaching the subject foreign languages, of whom 85% teach English, 11.7% teach German, 2.2% teach Russian, and 1.1% teach the Romance languages (French, Spanish and Italian). It means 97% qualifications of teachers of the first grade level of elementary schools in foreign languages since the school year 2013/2014. The initial value was 0% qualified teachers at the first grade of elementary schools. The achieved objective since the school year 2013/2014 is 97% of qualified teachers at the first grade of elementary schools.

Regarding project sustainability, it can be concluded that qualified teaching of foreign languages at the first grade level of elementary schools has been secured together with the use of innovative methodological materials for the further education of foreign languages teachers and the teaching of foreign languages at elementary and secondary schools. The following activities were carried out as well: implementation of innovative educational programmes in the education and training of foreign languages teachers at the first grade of elementary schools, use of new modern procedures in the training of foreign language teachers within their lifelong learning programmes, mandatory ICT use in foreign language teaching, and new forms and methods of teaching, such as e-learning at the first grade of elementary schools, implementation of quality monitoring modules of all foreign language teachers at the first grade of elementary schools, close cooperation among institutions (elementary and secondary schools, universities alongside language centres) in the implementation of the project's benefits into education, promotion of mobility, exchange stays, study visits, establishment of joint partnerships between elementary schools at home and abroad in foreign language teaching at the first grade of elementary schools, and 100% innovation of university training of teachers studying preschool and elementary education as a system element of the content reform of education.

## **11. Higher education institutions as driving forces of the development of a knowledge-based society**

To meet the needs of students for an optimal preparation for their future occupation so that become the most demanded job seekers and obtain an attractive job offer with a perspective of professional rise, is

possible only when if study fields, education content and motivation of higher education institutions are set and innovated on the basis of actual needs of labour market and companies. Yet, the current feedback from employers is one of the key elements of accommodating study programmes and education content to the needs of practice.

The national project will, *inter alia*, contribute building links between higher education and corporate demands by means of:

- Identification and supporting those study programmes that have a high potential for delivery of high quality graduates for that corporate sector which contributes to the GDP most – at present and in the future;
- Making use of instruments for extending and improving the practical parts of education of higher education students – by creating a network of cooperation and targeted focus on the necessary competences,
- Introducing methodology for the obtaining of information on the needs of the practice as regards the number of higher education graduates, their specific qualifications, integrating the views of employers, economic development prognoses, experience of graduates and higher education programmes (the project focuses on priorities, the key driving forces of development);
- Providing support to the innovation of curricula for highly promising study programmes in line with knowledge, skills and practical preparation, as desired by practice;
- Providing support to successful teaching centres through material equipment;
- Setting up a system for long-term sustainability following up on the real interest of employers, higher education institutions and the Ministry of Education in this joint undertaking;
- Enhancing the popularisation and availability of information on higher education programmes that will prove to be highly perspective with setting the system as open for new, ambitious study programmes to be preferred by the practice.

Since the project launch on 1 June 2013, it was possible to establish cooperation between higher education institutions and enterprises, kicking off the process of interlinking the needs of employers with the demands for the education of higher education students. Examples of good practice were identified in the framework of cooperation between higher education institutions and enterprises. By means of popularisation measures, it was possible to raise awareness of the project under which it is possible to make use of the support for ensuring practical education of students of higher education institutions in the corporate sphere.

Regarding project sustainability, it can be concluded that after the completion of the project activities, the cooperation established between higher education institutions and the private sector is expected to continue, and the content of education will be adjusted accordingly. The methodology and other strategic documents that were elaborated under the project will provide recommendations for long-term sustainability of positive effects arising from links established between higher education institutions and the corporate sector. The pilot network of cooperation will act as permanent contact between higher education institutions and the business sphere, whereby it will be possible for students to obtain necessary competences in order to have better chances on the labour market. At the same time, popularisation will enable to increase the interest of potential students in study in those study fields and study programmes that are really useful to meet market demands and which will contribute to achieve a positive economic growth in Slovakia.

## **PRIORITY AXIS 2**

### **1. Further education of elementary and secondary school teachers in informatics**

The national project's outputs include:

- education programme for specialised teaching of informatics (614 participants successfully completed the programme);

- education programme for qualifying education of general subject informatics (165 participants successfully completed the programme);

- education programme for specialised teaching of modernisation of informatics teaching in elementary and secondary schools (516 participants successfully completed the programme).

Teachers who participated in the education programme under activity 1.1 are, thanks to the developed and taught modules, prepared and highly qualified to teach newly introduced subject of informatics in the second to fourth year classes of elementary school. Teachers who successfully completed further education in informatics should be able to draft and implement the education of informatics in these classes. Thanks to high quality of education ensured by further education in informatics, the teachers are expected to be prepared to handle possible changes in teaching informatics at their respective schools (new hardware, emerging software programs suitable for teaching, new approaches to teaching). They should be able to respond effectively to changes and use them to improve their education as well as the education of their pupils to a greater extent. Under activity 1.2, 199 teachers qualified to teach informatics, 59 study materials were made available for 59 modules that teachers would be able to use in their informatics classes. Teachers also learned new methods of education they can apply in their teaching practice. The project was an incentive for other teachers to educate themselves further and gain approbation for another subject – informatics.

The main benefit of the project, which appeared to be a secondary activity under 1.3, but with a considerable output, were numerous final theses written by the participants, many of them being really good and usable as auxiliary material by their colleagues.

Regarding sustainability, it can be concluded that during the project's implementation education programmes will be accredited and higher education institutions will be able to use them even after the project comes to an end. Elementary and secondary school teachers will be able to educate themselves at higher education institutions, completing these programmes and enhancing their qualifications. Other higher education institutions will be able to use the bases of such newly created and tested programmes for the development of their own programmes. Teachers will thus get a better opportunity to expand their education. This project will provide an opportunity for a limited number of teachers (199) to educate themselves, but after the project is over, their numbers may increase. Computer equipment obtained from the project will continue to serve teachers and pupils.

## **2. Professional and career growth of teaching staff**

By offering a wide range of educational programmes and having a broadly defined target group the national project, professional and career growth systematically addresses continuous education of teaching staff and specialised staff.

One of the major outputs of the professional and career growth project and a system tool in the regional school system are professional standards that are part of the upcoming legislative changes.

The importance of the implementation of the national project *Professional and career growth of teaching staff* lies in providing the following added value of the education of teaching and specialised staff:

- human resources development in education: modernisation of the educational process in schools conducted by professionally trained graduates;
- increase in the professionalism of teaching profession by setting up the process of continuing education with the implementation of quality standards and assessment tools of professional competence;
- satisfying the needs of the education sector employees – their choice and demand of educational needs with the possibility of obtaining credits and increasing personal career development and salary range;
- technological and material support of educational environment in schools (ICT, education portal and new teaching resources);

- creating a quality learning environment in order to increase the knowledge level of pupils in the regional schools (in accordance with the PISA study conclusions and other assessments which evaluate the quality of education in the Slovak Republic).

Regarding sustainability, we can conclude that after the completion of the project activities, the Methodology and Pedagogy Centre will continue to develop educational programmes in accordance with the actual needs of school practice, and provide accredited educational programmes aimed at improving professional competencies of teaching staff and specialised staff all financed from the state budget. The existing capacities for educational training of teaching staff and specialised staff will continue to be used for this purpose. Network of lecturers – experts will provide educational services in accordance with the needs of schools and of both teaching and specialised staff that not involved in the project. State budget funds will continue to finance the e-portal's operations, which includes professional standards, files of accredited educational programmes, innovative teaching strategies and digital learning resources, e-learning programmes and methodological materials. The e-portal will be regularly and continuously updated.

### **3. KomPrax – Competences for practice**

The national project *KomPrax – Competences for Practice* seeks to increase the quality of youth work informal education. Informal education complements formal education that takes place within the formal teaching process and contributes to the development of skills, abilities and attitudes. The aim of the project is to ensure that youth can acquire competences that cannot be provided by schools in a sufficient manner and that is needed for succeeding on the labour market and in youth work.

The national project enables youth, via informal education, to obtain competences viewed as important by their future employers as well as for their future career in society. It will help them take responsibility for the environment they live in, respond to the needs in their surroundings, organise small-scale projects and verify their competences in practice. Thanks to positive experience, the national project motivates young people to keep working on themselves and to develop mainly social and personality skills (soft skills) that are of key importance for their professional success.

The project includes establishing partnerships with employers and formal education institutions which will make a platform for cooperation between individual organisations and institutions and will contribute to the recognition of the benefits of informal education in working with the youth. Thanks to the project the society will gain young and self-confident people having developed their key competences – active citizens and beneficial employees or future employers. The recognition of informal education in youth work will, moreover, contribute to rank it among the standard ways of education and, hence, towards a comprehensive development of youth with respect to the preparation for professional life.

The project sets two fundamental objectives: the development of competences of young leaders, voluntary and professional youth workers by means of the development of informal education in youth work, and the recognition of the benefits of informal education in youth work and of enhancing competences for the labour market and future life of the youth.

In order to achieve the project aims, we provide for the education of young leaders and of voluntary and professional staff working with the youth. In the framework of education, these persons are also in charge of implementing individual small-scale projects of up to EUR 200, which provide space for strengthening and verifying the competences acquired. As for complementary education, small-scale projects focus on activities relating to specific educational topics. The education activities have impacts on training participants and on youth work and informal education taking place in this framework, since participants, via their small-scale projects and some other activities, disseminate the results of training after the completion of education, thus developing the youth competences outside the school environment. In order to recognise the benefits of informal education in youth work, functioning partnerships were created in regions; one of such key outputs is the *Declaration on the recognition of the benefit of informal education in youth work.* This declaration commits all stakeholders to recognise the competences obtained in the course of informal education in youth work, while the functionality and the impact of informal education is still subject to verification to be completed. The on-going competition of creative works was used as a tool to inform the public, having created a database declaring the specific competences acquired by the participant.

The project impact on education as consists of enhancing the competences of actors in informal education in youth work and related quality development of youth work and quantity development of activities taking place in it. At the same time, it supports the recognition of competences acquired through informal education in youth work, thanks to which participants have better chances on the labour market.

Regarding project sustainability, it can be concluded that acceptance and the use of minimal competence profiles (MCP) with respect to leaders working with youth will be ensured by the work of the Accreditation Commission of the Ministry of Education, Science, Research and Sports of the SR for specialised activities in youth work. IUVENTA in collaboration with the providers of formal and further education will include the newly created MCPs the content of education provided to employees of school facilities.

Researchers will continue to work in structures intended for promoting research on youth. Their potential will continue to be utilised in the creation of evidence-based policy and its subsequent evaluation in the framework of regular reports to the European Commission and the National Council of the Slovak Republic, and for enhancing the development of regional youth policies.

The database for the recognition of youth work will be regularly updated and completed with graduates from further education. The database itself will be regularly promoted and presented. Partners will continue to work in the implementation of education of youth work leaders. Regional self-governments will be motivated to incorporate education activities into their strategic concepts and plans, and roundtables will be held on a yearly basis.

#### **4. PRAKTIK – Practical skills through informal education in youth work**

The school reform of the Slovak Republic focuses on the development of a knowledge-based society. While several measures were taken in formal education with regard to the transformation of traditional schools to modern ones, there is a lack of supporting measures in informal education and training when it comes to satisfying the actual needs (for instance, preparation of the youth for transfer from school to employment, increasing the qualification of employees working with the youth, etc.).

School facilities still use traditional way of organising spare-time activities for children and the youth. The abilities of youth workers to develop key competences through thematic activities are not sufficiently developed due to the absence of education in thematic areas. Researches highlight two fundamental needs in the field of:

- the necessity of innovative approaches and creativity in youth work;
- considering needs emerging among children and youth in spare-time activities for children and youth.

The PRAKTIK national project was started due to continuously increasing demands to bring more innovative approaches and creativity into informal education, the need to better equip youth on their path from school to employment, promotion of social inclusion and equality of opportunities on the labour market, the need to make use of the potential of key competences through interest education in youth work in Spare-Time Centres, the need to mediate to the youth the key competences needed for their education and to enhance their competences, to develop the competences of youth workers, as their role in youth education and training is irreplaceable, as well as the need to ensure the transfer of experience from youth workers to youth leaders.

Of the activities carried out so far, the project had an impact on the identification of innovative approaches to youth work with regard to the current needs of youth in different regions. At the same time, the project contributed to informing youth workers about the need to update and innovate “traditional” youth work, and defined specific programmes expected to ensure change. Cooperation with formal education institutions was established in order to ensure viability of formal education with informal education.

The PRAKTIK national project:

- enhance the system of informal education of the youth;
- improve and innovate the quality of further education of youth workers and youth leaders while taking note of specific requirements made by our society, especially by young people;

- establish better connection between formal and informal education;
- through its creativity meet the requirement of a knowledge-based modern society, thus increasing youth interest in experiential learning;
- create 7 thematic youth centres (TYC) in Slovak regions (except for Region of Bratislava); every TYC will thematically focus on one out of seven defined topics under the PRAKTIK national project;
- during the project and also after its completion all methodical materials will be utilised by youth workers and teaching staff, and will be made accessible to the public.

Regarding project sustainability, we can conclude that the national project will create seven TYCs covering the entire territory of Slovakia. The thematic youth centres will be dedicated to traffic transport through experiential learning, global education, enhancing mentoring, supervision and organisational preparation of activities (organisational logistics of activities). The quality of TYC events will be increased by means of new work methodology, thus improving the offer of TYC activities. High-quality accredited programmes will increase the interest of the youth in youth work. Enhanced skills will increase the quality of events to be attended by a higher number of participants. Experiential thematic learning will complement formal education, promoting the skills necessary for everyday life of the youth. Innovative education will increase the competitiveness on the labour market. Through thematic education events, the national project will prepare graduates for the implementation of short-term events and stay-based events. The complexity of education enhances cooperation between generations. The website containing video instructions will provide a tool for obtaining thematic know-how, and through its dissemination also closer cooperation between sponsoring organisations (such as Association of Spare-Time Centres, Youth Council of Slovakia, etc.) will be enhanced. The TYCs will also support the preparation of other methodological materials. By collaboration with higher territorial units, they will ensure the continuation of their activities in the framework of regional support for youth work development.

## **5. Educating kindergarten teaching staff as part of the reform of education**

The benefits of the national project:

- ensuring and facilitation of the enhancement of digital competences for all kindergarten teaching staff by supplying technology to all kindergartens in Slovakia;
- improving the managerial competences associated with full computerisation leading towards long-term development of the kindergartens in accordance with the concept of modern school of the 21st century;
- upgrading and innovating professional competencies of kindergarten teaching staff in different learning areas;
- introducing innovative methods into educational practices by creative activities' training within the project's educational tasks,
- supporting the development of the lifelong learning system by further education;
- creating room for professional discussions and exchange of experience needed to gain new knowledge and to improve the educational process through specialised seminars, conferences and training events;
- using portal sections for obtaining information needed to support the education of kindergarten teaching staff;
- preparation of professional educational materials and promoting more efficient educational processes in kindergarten,
- gathering information and synopsis regarding the latest strategies for pre-primary education in EU member countries and around the world through professional internships and to use well-tested knowledge from abroad and include it into the processes of pre-primary education in the Slovak Republic,
- updating the state educational programme for pre-primary education, what should include the current global trends and lessons learned during professional internships;

- allowing career and salary growth of teaching staff by completing the training programmes, changing the attitude of kindergarten teaching staff towards a positive perception of the continual education and its importance.

The project activities have so far had an impact on deepening professional knowledge of new methods and procedures in the teaching of physical education for physical education teachers with first attestation, thus contributing to the improvement of the educational process and increasing the attractiveness of exercises for pupils through innovative methods. The project transforms these new methods and approaches to physical exercise into outputs in the form of publications and, at the same time, monitors the motoric skills of elementary and secondary schools pupils.

Regarding project sustainability, it can be concluded that the project will have a multiplying effect at national, regional and local levels. Accredited educational programmes will become part of the lifelong learning for teachers. The educational portal will continue to operate. All children will have equal opportunities thanks to the implementation of the content reform in all regions and to unified procedures. The quality of educational practice will increase, and teaching staff will get an overview of the latest knowledge in the field of education and other related sciences. Acquired digital competences will enable teachers to apply the content reform into educational practice and allow them to use innovative, progressive and interactive methods.

## **6. Development of the National System of Qualifications**

The national project and its outputs and overall execution contributes to the implementation of EU initiative in terms of interconnecting specialised education and training for the labour market through the identification and description of qualifications. These activities are intended to increase the relevance and recognition of individuals' learning in the context of lifelong learning. An important feature of this national project is the gradual establishment of a communication base between education in all its forms and the social partners, in particular those who represent employers, since they are a key element in identifying the labour markets needs and interpreting them into the language of formal and informal education.

The National Qualifications System is one of the tools that can help to enter the labour market either in our country or abroad better prepared. By creating a system of qualifications and references comparable to the European Qualifications System, we can make it easier for people to facilitate the recognition of their qualifications across Europe. At the same time, the National Qualifications System can help to balance the needs of the market and the educational content and also enable people to gain recognition of their acquired practical skills.

The Slovak National Qualifications System will present a comprehensive overview of our country's qualification system, describing partial and full qualifications and based on them, it will define the evaluation criteria, which are necessary for an individual to get their qualification recognised. The objective is that people who for whatever reason need to have their qualification recognised, for example, because it is required by their employer, do not have to go back to school again, if they can prove that they worked in the specified field for the required amount of time. Obtaining qualification for Slovak citizens becomes faster and more flexible. It is possible to acquire it gradually and to a certain level full qualification units and climb the ranking of the NQS via the system of qualification recognition. In addition it is feasible to work with the established National Qualifications System and based on it to compare education outputs achieved by various forms of education.

It is inevitable to establish mutual communication between employers and educational institutions in order to fulfil expectations and bring desired effects in the process of setting up the National Qualifications System and its consequent utilisation. In order to establish a high quality national system, the setting up of the NQS must involve the employers' organisations like employers' associations, federations, chambers, trade unions and other professional employers' organisations. Additional involved parties include professionals active in the labour market research, vocational education and lifelong learning system.

Regarding sustainability of the national project, we can point out that the positive effects generated by the system tools will strengthen the public interest in all forms and methods of lifelong learning. We assume that the implementation functionality of both the NQF and the NQS will be a positive element



and the requested form when entering new employment or undergoing a job change even after this project will be over. Information system will be publicly available, sufficiently promoted, and the manual how to use the information system will be also publicly available. The NQF and the NQS will represent a logical and coherent system providing information on the existence of qualifications and the possibility of their obtaining and recognition. The NQF and the NQS will ensure horizontal and vertical links between formal, non-formal and informal education and learning.

After the project completion, it is crucial to maintain both systems functional, which means to monitor continually the situation in the field of professions and qualifications, to identify any change in qualifications in a given profession, to monitor newly created qualifications in relation to the job positions and so forth. The basic premise for the sustainability of the project results is the establishment of the National Council for Education and Qualifications as an authority which keeps monitoring and approving new qualifications and cooperating with the government sector councils and employers in this area.

## **7. Further education and counselling for adults as a tool for better chances on the labour market**

As of 31 December 2013, a questionnaire for collecting feedbacks was created and used in order to make corrections in the monitoring and forecasting of educational needs and potential shortcomings among the representative sample of small and medium-sized organisations, and background information for press releases on 25 counselling centres for adults in 7 Slovak regions and a report on the accreditation of 44 education programmes under vocational education were prepared.

In November 2013, 24 e-Learning versions of the Module Education Programme (MEP) for acquiring professional qualification and two MEPs for specific qualifications were taken over. The delivery of the MEPs was preceded by testing and reviewing of the e-Learning versions of MEPs, and the professional and study materials were prepared by working group members since December 2013. The materials contain a summary of most common topics/questions of final exams and professional qualification exams.

The following supporting documents/materials were prepared for the planned professional qualification exams: Examination Order, Internal Guideline on the Examination Order, Report on the Course of Exam, Application for Verification of Professional Qualification, and Certification of Qualification. Draft certificates and letters of appointment for members of examination committees were also prepared, as well as a guiding brochure for tutors containing a detailed description of 40 qualifications with the aim to facilitate the orientation and competences for specific jobs/work positions.

As of 31 December 2013, the e-Learning version of the MEP under the title “Mentors in adult counselling processes in the field of further education” was delivered, including related teaching materials and multimedia didactic tools, PCD methodological guidance through operational, organisational, administrative and professional consultations, continuous implementation of meetings/workshops of mentors with regional employers with the purpose of providing information on the national project content, and provision of individual, informative and group counselling, making monitoring visits in 25 counselling centres, regular processing of monthly statements and the control of submitted attendance sheets from individual counselling activities and attendance sheets and minutes from workshops with employers and training regarding diagnostic system for mentors containing qualification standards of module education programmes to be prepared.

The national project will contribute to increasing adult participation in further education by developing a system of further education and adult counselling by ensuring the quality of education programmes intended for further education, creating a network of counselling institutions and mainly by the attendance of employers to further education. This will increase the credibility in the system of further education and the credibility of people participating in the activities in the framework of further training about this system.

Regarding sustainability, we can conclude that the national project standards set with regard to the quality of the further education and adult counselling will be regularly checked by the Ministry of Education, Science, Research and Sports of the Slovak Republic on the basis of the Act on Life-Long Learning. At the same time, methodological instructions will be issued with regard to submitting

accreditations for further education programmes. The project outcomes will also lead to legislative changes. New education programmes will be created in the framework of further education and will be made available to all education institutions for further use, forming the basis for creating new education programmes satisfying labour market demands. The newly created education programmes will be provided to offices of labour, social affairs and family as programmes suitable for unemployed, including the possibility of recognition of professional qualifications. The established network of adult counselling centres will continue to be utilised for the implementation of NÚCŽV activities after the project completion.

## **8. Activation methods in education**

The first part of project evaluation took place in 2013. 200 schools and educational institutions participated in the evaluation process, of which 188 had an official contract for the cooperation on the project.

585 teaching and/or specialised staff participated in the evaluation process. Specialised content for expert analyses defined in the project was also explained, literature as well as software licenses for existing electronic learning systems were specified and the complete lists of literature and electronic licenses were put together.

The project's objective is to use the advanced interactive communication tools as well as interactive digital devices developed within the project during and after its completion in the educational process in order to maximise the knowledge – thus preserving the sustainability of the project results. Improved use of activation methods in education with a focus on emotional intelligence and media literacy is a prerequisite for the development of a knowledge-based society.

The project will develop an accredited educational programme within standard educational processes, designed for teaching staff and specialised staff, i.e. people who want to pursue mainly education and the creation of value systems. The programme will become a long-term usable platform that opens the door for its graduates to a valuable know-how gathered within the project, in particular know-how from non-departmental professional areas that have the potential to significantly enrich the educational process (media, audiovisual devices, coaching, etc.). In 2013, the accredited educational programme was being prepared, which was in the process of referral to Accreditation Commission for approval and it is expected that the programme will be accredited by June 2014.

Target groups in the activity 1.1 and 1.2 have a significant impact on the quality of the educational process on pre-elementary, elementary and secondary levels of the educational system. Most valuable outputs of the project are qualified human resources that with their further activities in the field of educational and vocational practice represent the most natural element of the sustainability of project outputs. A very valuable sustainable output from among the project's benefits in relation to human resources is the elimination of excessive respect, cultivation of habits and set up of premium user skills in relation to the use of modern digital technologies and communications systems.

Regarding national project's sustainability, we can conclude that the newly accredited educational programme *Activation methods in education* will become a stable part of education programmes for schools and school institutions. The objectives resulted from the implemented analyses will be a long-term source of actual development activities in specific areas of education. Schools and school institutions, which send their teaching staff and specialised staff to participate in the education, will be fitted with interactive whiteboards for effective and professional use of interactive digital devices that are part of an education packages developed within the project in order to increase the use of activation methods in education within the educational processes. The participants among education staff will acquire access to know-how, impulses from external environment and from abroad, as well as the ability to apply this know-how in solving problems and challenges in the education sector.

### **PRIORITY AXIS 3**

## **1. Through education of teaching staff towards inclusion of marginalised Roma communities**

As of 31 December 2013, eight continuous education programmes were accredited, 14 teaching sources were created, 537 participants completed education, other 4,520 participants are still involved in the education process, 20,797 pupils come from marginalised Roma communities involved in the implementation of project activities, the CVS is implemented at 200 elementary schools with 1,850 units, etc.

This national project related to the implementation of continuous education programmes for teaching staff has largely facilitated the creation of school education programmes; and the inclusion of voluntary subjects considerably change the approach, interest and activity of pupils from MRCs in the education process thanks to their content, focus and application of new teaching methods and procedures, using newly created teaching sources. These changes have a positive impact not only on pupils' school attendance, but also on the overall school climate.

The aim of the project was to support an effective implementation of the pedagogic school model with CVS and to modernise the teaching process at the schools involved using ICT (purchase of 400 interactive systems). The CVS implementation was supported with didactic tools provided to 200 elementary schools in the following categories: gardening tools, kitchen, musical instruments, games, sports equipment, consumables, pottery wheels and furnaces, sewing, books, creativity and fine arts materials.

The project implementation contributed directly and indirectly to increasing the education level by improving education services provided by teaching staff and specialised staff at schools with high concentration of pupils from MRCs. The enhancement of professional competences of teaching staff and specialised staff is the pillar of the project and of subsequent changes in their school success rate for quality education of this specific target group. The full-time education system enabled effective development of pupils from MRCs also outside classroom, including spare-time care, and provided the possibility to extend their elementary knowledge under a specific education programmes for pupils who did not complete elementary school. The teaching sources created for this target group are expected to contribute to the development of the personality of these pupils in the cognitive, affective and psycho-motoric field, and to the creation of an inclusive environment in classrooms and at schools during the provision of full-time educational care, and to promote the school success of pupils and their interest in education.

Regarding the sustainability of the national project, it can be concluded that after the project completion the pedagogic model of the school with a full-time education system will be implemented in and presented as an example of good practice to other elementary school with a high concentration of pupils from MRCs. The generation of added value in the results of activities after the project completion is based on the respective legislative background (Act on Teaching Staff and Specialised Staff, and Act on Education and related implementing regulations) and new partner schools. Teaching staff and specialised staff who attended the training activities will be able to promote the inclusion of pupils from MRCs at schools as multipliers. The newly created and accredited continuous education programmes will provide education to other participants after the project completion. The added value will be the new teaching sources for pupils, used also by the next generations of pupils. The trained teaching assistances will use their knowledge and experience in the implementation of the pedagogic school model with CVS in their teaching work. An implementation and sustainability study will be conducted under the project, containing not only an analysis of the existing legislative background at the time of the project, but especially recommendations for the decision-makers.

## **2. Inclusive education model at pre-primary education level of the school system**

An analysis of the training needs of teaching staff and specialised staff was carried out under Activity 1.1 in March and April 2013.

The opinions and experience of teaching staff and specialised staff reflect their education needs and indirectly highlight the quality of their work and the needs of children from MRCs.

On the basis of a quality and quantity survey, the Beneficiary found out that kindergarten and their staff (teachers) are, in most cases, adequately prepared for the education of such children in terms of their personal traits, and do not reflect upon ethnic differences among children. They rather see big differences between Roma and non-Roma children under the negative influence of the family background on their education. This is where see space for kindergartens in mitigating these social, family and economic impacts on children. According to the Beneficiary, children from MRCs often do not even get to kindergartens due to various reasons: the over-sized capacities of kindergartens, i.e. the numbers of kindergartens and their capacities are not enough to admit children; or children from MRCs do not get to kindergartens because of preferring non-Roma children upon admission, mainly under the pressure by non-Roma parents. In case a kindergarten is situated further from a segregated settlement, the physical distance represents another barrier to its accessibility for Roma children from such settlement. The family itself often fails to create the conditions for the child to attend a kindergarten for various reasons, especially for economic reasons and for the failure to perceive the need of pre-primary education in the child as a basis for their education in the future.

The research findings suggest that to increase the quality of education of children in kindergartens and to improve their preparedness for entering elementary school and, hence, to eliminate the admission of children to special schools, it is necessary to meet the following needs of teaching staff:

- expand the didactic and methodological knowledge of teachers to enable them to pursue the philosophy and practice of social inclusion of children from MRCs in kindergartens, and to extend their knowledge about the processes and ways of inclusive education with 100% occupancy or over-occupancy of classrooms;
- employ teachers' assistants helping children from MRCs to overcome social, cultural and communication barriers;
- cooperate with a support service of specialised staff and other entities and institutions directly within kindergartens;
- enjoy legally defined system help from the side of responsible entities and institutions from the counselling, social and non-governmental sector in addressing the social and cultural disadvantages of children from MRCs.

The results of the analysis suggest that teachers' motivation towards inclusive education is based on their relatively strong inner attitudes, but their work with children from MRCs, which is not easy for the said reasons, is not remunerated to a sufficient extent both socially and financially.

The part of research findings on education needs of teaching staff suggests that specialised staff need diagnostic tools for objective diagnosing of children from MRCs, field social workers and teachers' assistants who can help specialised staff to provide better special assistance and care for children and families from MRCs, as well as legally defined systemic help by competent entities and institutions from the counselling, social and non-governmental sector in addressing the social and cultural disadvantages of children from MRCs.

The Beneficiary considers it important to note that state facilities show a disproportion between specialised personnel relative to the number of kindergarten within the territorial competency of the given workplaces. Specialised staff often reflected on the obstacles posed to the provision of quality and early psychological, special pedagogic and socio-pedagogical care by rejecting cooperation on the side of parents.

All these findings arising from the quantity and quality research of the *Analysis of training needs* served as a basis for developing accredited continuous education programmes that the MPC will implement (one innovative education programme for teaching staff, and one updated education programme for specialised staff) and of four teaching sources.

The MPC selected 110 kindergartens attended by children from MRCs or located in regions with a concentration of members of the marginalised Roma community. The IEM will be implemented in these kindergartens during two school years with the help of other accompanying activities.

IMV consists of several parts; the part on the principles of developing inclusive curricula at pre-primary level of the school system and on the model of creation of inclusive school education programmes (SEP) is perhaps the most relevant to the inclusive practice of kindergartens.

According to this principles and the model, each kindergarten would create its own tailor-made school education programme reflecting the needs of the kindergarten itself and the needs of children and their parents or the community. This can be considered a contribution of such SEPs to the elimination of admission of children to special schools, as it will enable to expand the content of education towards targeted preparation of children for studying at elementary school, stimulation of the required psychological partial functions of children for learning, and towards compensation of the little motivating family background. Inclusive SEPs created according to our model will also open effective cooperation with families, the community, and also with centres of pedagogical and psychological counselling and prevention, and with centres of special pedagogical counselling. Such cooperation would bring better communication between the stakeholders, greater participation of all stakeholders in the education of these children, and to an increased number of children from MRCs in kindergartens and to their better school preparedness.

Such cooperation also involves the admission of teachers' assistants to kindergartens to help eliminate the social and communication barriers of children and parents from MRCs against the institution and the public. The salaries of teachers' assistants will be covered from the national project funds throughout its duration. From the total number of 110 admitted assistants, 82% are of Roma origin, speaking the Roma language. The Beneficiary evaluates this fact very positively, and considers it an important step towards reducing the language barrier. The knowledge of Slovak is insufficient in part of children from MRCs upon entering the kindergarten, which considerably complicates their adaptation; on the other hand, in addition to the adaptation of education in Slovak language it is also necessary to consider various forms of integration of the Roma language in the education process, which can be largely facilitated by Roma-speaking assistants.

Since kindergarten attendance is not compulsory and especially children from MRCs are missing in kindergartens, many of them come into contact with school in the age of entering compulsory school attendance. In this period of their lives, their admission/non-admission to special school or their failure in common schools is influenced by many phenomena: weak or no communication in the language of instruction and related inability to understand the matter, failure to acquire basic hygienic skills, self-service, graphomotorics and others, inability to take up obligations, emotional instability, etc. These phenomena constitute a reason for enrolling a child to a special school. Another problem is lack of elementary schools nearby Roma communities and the related parents' perception of the education of their children as unimportant. The awareness-raising programme of the national programme addressing parents of children from MRCs, their children in pre-school age, as well as government and self-government staff working with MRCs, seeks to eliminate these phenomena. One UZ will be developed for this awareness-raising programme. The Beneficiary expects that this programme will raise the awareness of parents and of government and self-government staff about the benefits of inclusive education model for future success of children at schools, increased parents' interest in pre-primary education of their children, changed attitudes of the Roma community as a whole to education in kindergartens and to education in general, and last but not least, prevention of segregation. The Beneficiary highlights the big potential of the awareness-raising programme towards parents and towards increasing their inner motivation to educate their children, which can have a positive impact on reducing the number of children from MRCs in special schools.

The reason for the absence of children from MRCs in kindergartens is poor capacities of these schools. Another frequent problem is their limited accessibility – lack of financial resources for transport. The NP seeks to address this barrier by reimbursing the travel costs of 200 to 250 children travelling to/from remote Roma communities to kindergartens.

Other accompanying activities implemented under the national project: max. 10 trips with an educational focus per each kindergarten, exchange visits and exchanging good practice between kindergartens, publishing of examples of good practice and experience in the implementation of the inclusive education model on the website, creation of teaching sources by teaching staff, work of consultants/tutors in kindergartens facilitating the implementation of the IEM, and use of a didactic package as a support tool for the IEM implementation and modernisation of the education process.

Regarding the sustainability of the national project, it can be concluded that after project completion the inclusive education model will be implemented in the kindergartens involved in the project, and will be presented as an example of good practice to other kindergartens attended by children from MRCs or in municipalities/towns with a concentration of MRCs. Sustainability will be guaranteed by

trained teaching staff and specialised staff, as well as the purchased equipment which will stay in the kindergartens involved in the project (interactive systems, didactic devices). The generation of added value in the results of activities after the project completion is also based on the legislative background (content of school education programmes), active participation of stakeholders – kindergartens, new partnerships, and electronic means for sharing created under the SEPs, new teaching sources and methodologies and their improvement.

Teaching staff and specialised staff, after completing training under the project, will be able, as multipliers, to support the inclusion of children from MRCs in their respective schools and organisations. The analysis of the existing situation carried out under the inclusive education model will contain not only an analysis of the existing legislation during the project period, but also proposals of conceptual and legislative nature serving to the decision-makers in adopting related measures that would allow systemic promotion of the sustainability of project objectives after completion of the national project.

### **3. Comprehensive counselling system for preventing and influencing socio-pathological phenomena in school environments**

Under this national project, the Beneficiary seeks to take use of the opportunity to improve the functioning of the educational counselling and prevention system: through the modernisation of its equipment, completion of methodologies, methodological instruments and new expert sources, equipment for school libraries, creation of a digital application platform of the VÚDPaP for the educational counselling and prevention system, development of new methodological instruments and procedures, adaptation of foreign methodologies, further education of the teaching and specialised staff of the educational counselling and prevention system not only via common presentation forms, but also via distance learning through the digital application platform, promotion of professional counselling services of the educational counselling and prevention system among parents and the general public, making counselling services available, reduction of the concerns of parents (fears from „stigmatisation“) about taking use of educational counselling for their children; elevating the social status of professional counsellors within the educational counselling and prevention system, creation of a digital application platform of the VÚDPaP for the educational counselling and prevention system. These activities would significantly contribute to meeting the needs of the group of disabled children and their parents, also by improving inter-disciplinary cooperation within the educational counselling and prevention system between counselling facilities, centres of pedagogical and psychological counselling and prevention, centres of special pedagogical counselling, and educational advisors at schools. Equally important project result is increased awareness of children with special educational needs and of their children about the world of labour, about the possibilities of choice from interesting study and education fields and about their links to labour market demands, and about the possibilities of their professional career when adult.

The Beneficiary has set out ambitious targets for the national project related to strengthening social integration, optimising the development of pupils with special educational needs using effective educational counselling and efficient prevention of social pathology. The Beneficiary also seeks to improve counselling for pupils (and their parents) in their career decisions, thus increasing the chances of young people on the labour market (prevention of unemployment in adult age, especially of long-term unemployment). The support and integration of pupils with special educational needs in society and in the labour market, while meeting the demands of a knowledge-based society, will also increase the long-term competitiveness of the Slovak Republic.

The national project is expected to be highly sustainable and disseminate its outcomes, as the investment in time and money (NFC) will relate to established public institutions and the school counselling system (VÚDPaP, educational counselling and prevention facilities) which is available to all irrespective of their socio-economic status. Methodological innovations, modern methodological tools, new teaching and information sources, and last but not least, improved qualification of counselling staff can be long used in the public interest – in effective educational counselling and prevention with regard to the compensation of learning defects, disabilities, behavioural defects of

pupils, and in the optimisation of their career decisions, in their preparation for the labour market, and prevention of unemployment (especially long-term one).

## **PRIORITY AXIS 4**

### **1. Foreign language training for teachers of elementary and secondary schools in the context of the Concept of Foreign Language Teaching at Elementary and Secondary Schools**

#### **Added value of the project**

- support for teacher's education in the field of lifelong learning throughout Slovakia, in particular in less economically developed regions, and increased competitiveness of regions;
- improving the quality of the educational system in the Slovak Republic;
- satisfactory language competence of secondary schools graduates;
- increased mobility of professionals in the field of education;
- improving the evaluation credibility of learning outputs in the field of foreign language teaching in the Slovak Republic;
- active participation of the Slovak Republic in creating a multilingual and multicultural Europe in accordance with the recommendations of the European Commission and Slovak participation in creating the EU language policy.

The project trained professionals on the creation of latest evaluation tools for assessing language proficiency on CEFR level (Common European Framework of Reference for Languages). It also provided accredited study programmes to gain a qualification in teaching foreign languages with a focus on the target group of younger school age children.

The organisational and educational portal [www.educj.sk](http://www.educj.sk) was created for teachers participating in the project.

Also an extensive international cooperation was developed for participating teachers, including access to and use of basic tools of the Council of Europe to improve language learning – CEFR for Languages, EPI, etc. The national project met 100% of its objectives in 2013 and substantially contributed to the improvement of foreign languages education at the primary level of education in Slovakia.

The project provided all participating schools with technical and professional equipment, including higher education institutions, and it also provided data projectors, laptops, linguistic and professional software, extensive textbook funds for teachers, and a big amount of specialised literature for teachers. Furthermore, the project enabled draft description of the study field called pre-school and elementary pedagogy focused on acquiring and maintaining 100% qualification in teaching the subject foreign languages at the first grade of elementary schools.

The project created university project offices at 9 pedagogy and technology oriented universities. All universities managed to provide high quality education throughout the project despite the fact that Slovakia is suffering from a lack of qualified teachers of foreign languages on all levels of the education system, vocational education, as well as language education.

Overall, the project provided 3,325 teachers with added qualification in teaching the subject foreign languages, of whom 85% teach English, 11.7% teach German, 2.2% teach Russian, and 1.1% teach the Romance languages (French, Spanish and Italian). It means 97% qualifications of teachers of the first grade level of elementary schools in foreign languages since the school year 2013/2014. The initial value was 0% qualified teachers at the first grade of elementary schools. The achieved objective since the school year 2013/2014 is 97% of qualified teachers at the first grade of elementary schools.

Regarding project sustainability, it can be concluded that qualified teaching of foreign languages at the first grade level of elementary schools has been secured together with the use of innovative methodological materials for the further education of foreign languages teachers and the teaching of

foreign languages at elementary and secondary schools. The following activities were carried out as well: implementation of innovative educational programmes in the education and training of foreign languages teachers at the first grade of elementary schools, use of new modern procedures in the training of foreign language teachers within their lifelong learning programmes, mandatory ICT use in foreign language teaching, and new forms and methods of teaching, such as e-learning at the first grade of elementary schools, implementation of quality monitoring modules of all foreign language teachers at the first grade of elementary schools, close cooperation among institutions (elementary and secondary schools, universities alongside language centres) in the implementation of the project's benefits into education, promotion of mobility, exchange stays, study visits, establishment of joint partnerships between elementary schools at home and abroad in foreign language teaching at the first grade of elementary schools, and 100% innovation of university training of teachers studying preschool and elementary education as a system element of the content reform of education.

## **2. Training for kindergarten teaching staff as part of the education reform**

The benefits of the national project:

- ensuring and facilitation of the enhancement of digital competences for all kindergarten teaching staff by supplying technology to all kindergartens in Slovakia;
- improving the managerial competences associated with full computerisation leading towards long-term development of the kindergartens in accordance with the concept of modern school of the 21st century;
- upgrading and innovating professional competencies of kindergarten teaching staff in different learning areas;
- introducing innovative methods into educational practices by creative activities' training within the project's educational tasks,
- supporting the development of the lifelong learning system by further education;
- creating room for professional discussions and exchange of experience needed to gain new knowledge and to improve the educational process through specialised seminars, conferences and training events;
- using portal sections for obtaining information needed to support the education of kindergarten teaching staff;
- preparation of professional educational materials and promoting more efficient educational processes in kindergarten,
- gathering information and synopsis regarding the latest strategies for pre-primary education in EU member countries and around the world through professional internships and to use well-tested knowledge from abroad and include it into the processes of pre-primary education in the Slovak Republic,
- updating the state educational programme for pre-primary education, what should include the current global trends and lessons learned during professional internships;
- allowing career and salary growth of teaching staff by completing the training programmes,
- changing the attitude of kindergarten teaching staff towards a positive perception of the continual education and its importance.

The project activities have so far had an impact on deepening professional knowledge of new methods and procedures in the teaching of physical education for physical education teachers with first attestation, thus contributing to the improvement of the educational process and increasing the attractiveness of exercises for pupils through innovative methods. The project transforms these new methods and approaches to physical exercise into outputs in the form of publications and, at the same time, monitors the motoric skills of elementary and secondary schools pupils.

Regarding project sustainability, it can be concluded that the project will have a multiplying effect at national, regional and local levels. Accredited educational programmes will become part of the lifelong learning for teachers. The educational portal will continue to operate. All children will have equal opportunities thanks to the implementation of the content reform in all regions and to unified procedures.

The quality of educational practice will increase, and teaching staff will get an overview of the latest knowledge in the field of education and other related sciences. Acquired digital competences will enable teachers to apply the content reform into educational practice and allow them to use innovative,



progressive and interactive methods. After the project's completion, the Methodology and Pedagogy Centre will take part in other project activities, thus leaving room for the sustainability of the project results and propagation of established practice.

### **3. Modernisation of the education process at secondary schools**

The project activities have been completed in accordance with the detailed description on 30 November 2013. The main aim of the project, which was to prepare teachers to actively implement the school reform, upgrade and modernise the content, methods and outputs of the teaching process, increase number of teachers participating in programmes of further education in order to obtain and develop competences necessary for the knowledge society and share the skills acquired through the project with other colleagues who did not participate in training activities, has been achieved.

112 secondary schools from the Region of Bratislava participated in the project, and their computer equipment was supplied and financed from state budget resources.

317 secondary schools teachers from the Region of Bratislava took part in the training process aimed at developing ICT skills, digital literacy, preparedness to learn the to use modern teaching techniques and enhancing their knowledge on the use of ICT in a particular subject. These teachers use their acquired skills and knowledge from individual training modules and creation of modern e-content for individual subjects when working with pupils, and, at the same time, they act as a vehicle of modern school education in order to share their experience and knowledge with colleagues who have not participated in the project. The educational programme developed in the project was accredited as specialised continual education pursuant to Act No. 317/2009 on Teaching Staff and Specialised Staff, thanks to which successful graduates who successfully defended their thesis and passed the exam can work as school specialists in the modernisation of education with ICT support.

An enormous asset in fulfilling the project objectives related to the preparation of some innovative teachers (multipliers) for new competences in teaching processes are sets of methodological textbooks which are appreciated by project participants, other teachers, university experts, and many schools repeatedly raised the requirement to supply at least one complete set of these textbooks to each school. Another project benefit is the large number of innovative didactic tools, innovative materials, interactive animations, worksheets, presentations, video instructions and other teaching aids created under the project, which are available to teachers in the Digital Library and which can be used when preparing their lessons.

Overall, the national project can be evaluated as successful in terms of achieving the goals that have been set via direct assignment. All measurable result indicators were achieved. The resources allocated to the project helped improving the IT quality of schools engaged in the project, and specifically through teachers involved in the educational project activities it was possible to innovate the content and methods of the teaching process in the given subjects and increase the share of teachers participating in further education, thus contributing to a gradual transformation of traditional schools to modern schools of the 21<sup>st</sup> century, being much more interesting both for pupils and teachers.

Regarding the sustainability of the national project, it can be concluded that the school reform of secondary schools will continue after termination of the project. Teachers trained under the national project will be help at schools to train other teachers, introducing new teaching methods using ICT in modern 21<sup>st</sup> century schools. The implementation of activities related to the pilot project of education modernisation is an important prerequisite and a part of continued improvement of the modernisation of education and of the quality of education results for developing the knowledge-based economy and competitiveness at the European labour market. The project outputs (experimental digital content, new methodology and model ICT classes) will be subject to analyses and will be summarised as recommendations for further educational projects under the OP Education.

### **4. Modernisation of the education process at elementary schools**

The project activities have been completed in accordance with the detailed description on 30 November 2013. The main aim of the project, which was to prepare teachers to actively implement the

school reform, upgrade and modernise the content, methods and outputs of the teaching process, increase number of teachers participating in programmes of further education in order to obtain and develop competences necessary for the knowledge society and share the skills acquired through the project with other colleagues who did not participate in training activities, has been achieved.

2,032 elementary schools from the Region of Bratislava participated in the project, and their computer equipment was supplied and financed from state budget resources.

445 elementary schools teachers from the Region of Bratislava took part in the training process aimed at developing ICT skills, digital literacy, preparedness to learn the to use modern teaching techniques and enhancing their knowledge on the use of ICT in a particular subject. These teachers use their acquired skills and knowledge from individual training modules and creation of modern e-content for individual subjects when working with pupils, and, at the same time, they act as a vehicle of modern school education in order to share their experience and knowledge with colleagues who have not participated in the project. The educational programme developed in the project was accredited as specialised continual education pursuant to Act No. 317/2009 on Teaching Staff and Specialised Staff, thanks to which successful graduates who successfully defended their thesis and passed the exam can work as school specialists in the modernisation of education with ICT support.

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Regarding the sustainability of the national project, it can be concluded that the school reform of elementary schools will continue after termination of the project. Teachers trained under the national project will be help at schools to train other teachers, introducing new teaching methods using ICT in modern 21<sup>st</sup> century schools. The implementation of activities related to the pilot project of education modernisation is an important prerequisite and a part of continued improvement of the modernisation of education and of the quality of education results for developing the knowledge-based economy and competitiveness at the European labour market. The project outputs (experimental digital content, new methodology and model ICT classes) will be subject to analyses and will be summarised as recommendations for further educational projects under the OP Education.

## **5. External evaluation of school quality encouraging self-evaluation processes and school development**

The primary project output is the newly created school performance self-assessment model. In creating it, the Beneficiary drew on the Scottish innovation experience while taking into consideration the result of the European project *Evaluation Quality in School Education* (EQSE). Its aim was to set up the philosophy and self-assessment tools and self-evaluation profile (SEP) stemming from the project in a way that instead of mechanical application of received methods and tools the project enhances efficient transformation of all these elements according to the conditions and needs of a specific school. The project brings to the forefront the school not as an institution but rather as a teaching organisation with an emphasis on processes that should take place or that take place at schools. It is also important to see that this approach has been at least partially verified in our school environment and has brought about promising results under the international project

*Bridges across Boundaries (BaB)*. According to this approach, the school life cycle is divided into four main domains (results, processes at classroom level, processes at school level, relations with the environment), subsequently characterised through twelve areas. This enables to judge what is going on at school from the perspective of pupils, school staff and parents. By collecting and comparing various opinions, it presents an opportunity to gain objective information on the school and to identify the phenomena that are important for the school. Another important principle relating to this approach is that it enables individual schools to decide on as to what and how they include in the self-evaluation processes, and that such processes take place not only at school level, but also in individual classrooms.

Working with this self-assessment model produces an image regarding the quality of school from various points of view, and it ensures an open exchange of views among various actors involved in school life, thus creating a supportive climate for self-assessment. The outcome of such self-assessment is a sort of internal audit that becomes more effective the more genuinely it describes the actual state of play.

The school performance self-assessment model was subject to various presentations made at conferences, including experience from its pilot phase. The publication produced in this regard was made distributed to 2,000 schools throughout the Slovak Republic, and it is expected to help schools to gain more information on self-assessment and on its implementation, which will be useful in the process of increasing the quality of the school itself.

Regarding national project sustainability, it can be concluded that the SSI will continue carrying out inspections according to the elaborated methodology and tools. By applying a centralised approach in evaluating schools, it will be possible to identify the level reached by inspected schools, and its strengths and weaknesses (deficiencies) which will have to be addressed by schools in view of improving their level. Recurrent inspections of the same schools will help to find out in what way the school dealt with the deficiencies, and how the school improved its level. Based on the newly created self-evaluation model, schools will be able to identify the state of play (level) themselves, and to address the problems without awaiting the opinions of external evaluators, which will enable them to remedy any deficiencies sooner, thus improving quality of teaching processes and school development as such. The school self-assessment model will be published on the SSI website and will be made available to the public, and it will be also promoted in the media and at various school-related activities.

## **6. Educating teachers in the context of the creation of school education programmes**

Development of school educational programmes represents a content reform of the school system. The educational activities under the project include implementation of further education of teaching staff for the acquisition and development of competences that ensure efficient transformation of traditional school to a modern one.

The educational and methodological activities carried out in the project framework will contribute to the innovation in the content and methods of education at schools, and to the improvement of the quality of learning outputs. The main objective is to educate pupils to satisfy labour market needs in a knowledge-based society.

The projects of education for teachers in connection with the creation of school educational programmes are built on the strategic goal of nationwide retraining and education of teaching staff at elementary and secondary schools. The reason for the application of this goal is to implement a content reform of education – quality preparation and development of school educational programmes. The objective is to provide teaching staff at elementary and secondary schools with a comprehensive training programme focused on the development of school educational programmes via continuous training activities by trained lecturers and distance learning. For these purposes an e-learning (educational) portal will be created.

The main project benefit is the training of its 639 participants on the creation of school educational programmes, the printing of 21 additional multimedia educational materials for elementary and secondary school teachers, and the development of an educational portal, which will continue to serve as a primary means of complementary education for elementary and secondary school teachers.

Another important project benefit is the publishing of teachers' newspaper called Učiteľské noviny which provides regular information on the implementation of the national project's activities, as well as information about the general situation in the school system. By 31 December 2013, 68 issues were published and distributed.

Regarding sustainability of the national project, it can be concluded that the continuous operation of innovated school educational programmes will be secured by following means: continual application of modern methods, tools and ways of teaching, continuous improvement of the quality of teaching content based on feedback from the market (employers, successful graduates, etc.), continual publication of periodicals for teaching staff and other employees working in the field of education and learning, and continual development and distribution of educational materials for teaching staff and other employees working in the field of education and learning.

## **7. Improving the quality of education at elementary and secondary schools using electronic testing**

The following testing took place during the reference period: training of multipliers, educational courses for creating testing tools, training of multipliers on financial literacy, training of multipliers on statistical literacy, training of multipliers on scientific subjects, training courses on creating testing tools for financial literacy, training courses on creating testing tools for science subjects, and training courses on creating testing tools for statistical literacy. The teams of authors created the first sets of tasks that are currently awaiting preparations for benchmark testing. The teams created more than 3,500 tasks (Slovak language and literature and reading literacy, Hungarian language and literature and reading literacy, Slovak language and Slovak literature and reading literacy, mathematic literacy, English language, German language). The tests of reading and mathematic literacy run twice in order to check their validity. The coordination materials for creating tasks and tests were prepared during authors' active preparation of test tasks and tests.

During the monitored period, pilot electronic testing at 69 elementary and secondary schools on a sample of over 8,600 pupils was carried out as scheduled. A plan for the distribution of computer equipment to schools was also developed. Electronic attitudinal questionnaires were distributed to eleven schools in order to make an analysis of measurements in education. A public procurement for the software supply of electronic testing and related services was successfully completed. The project also included a survey of premises for establishment of regional contact centres in which authors, reviewers and guarantors of tasks and tests can stay in mutual contact.

The national project will provide a modern electronic test system to participating schools from all Slovak regions as a tool for teaching staff to objectively examine the knowledge, skills and key competences of their pupils and, at the same time, provide feedback to schools, teachers and pupils. In the preparation for e-testing introduction to schools, an ICT survey was conducted in 2013, which evaluated the technical feasibility of schools to participate in electronic testing and created the conditions for distribution of computers to schools (supplementation of PCs) according to the criteria valid early 2014. Thanks to the project, hundreds of teachers from all regions get free specialised training in the development of testing tools (tasks and tests) for the electronic environment in general subjects. Trained teachers do contractual work for the national project executor and create test tasks. Hence, an e-database of 30,000 tasks and 150 tests for ISCED 2 and ISCED 3 gets gradually developed, the top quality tasks being intended for national certified measurements of NICEM (National Institute for Certified Educational Measurements). The project provides free training for ICT school administrators for online testing, motivates creative teachers, and encourages self-assessment of schools. The National Institute for Certified Educational Measurements established a network of regional contact centres where teachers who are authors of tasks can meet guarantors.

With regard to the national project's sustainability, we can conclude that it produces an opportunity for a gradual introduction of electronic testing in Slovakia. The project implementation will include development of testing facilities for pupils in schools (40,000 test facilities are expected to be created). An extensive database of tasks (approximately 30,000) will be developed from selected general subjects. The main purpose of this database will be assessment of pupils and test compilation for external as well as internal evaluation of pupils, not only throughout the project duration, but also

after its completion. After completion of the project, external electronic evaluation of pupils will continue to be implemented in subjects and educational areas specified by the Ministry of Education. Based on these evaluations, regular recommendations will be made to increase the quality of education in the specified areas and to make the entire educational system more effective. The legislative changes necessary for transition from paper-based to nationwide expansion of electronic forms will be continuously initiated. Experiences acquired from electronic testing will be used after project completion for the introduction of electronic testing in the field of vocational subjects.

## **8. Professional and career growth of teaching staff**

By offering a wide range of educational programmes and having a broadly defined target group the national project, professional and career growth systematically addresses continuous education of teaching staff and specialised staff.

One of the major outputs of the professional and career growth project and a system tool in the regional school system are professional standards that are part of the upcoming legislative changes.

The importance of the implementation of the national project *Professional and career growth of teaching staff* lies in providing the following added value of the education of teaching and specialised staff:

- human resources development in education: modernisation of the educational process in schools conducted by professionally trained graduates;
- increase in the professionalism of teaching profession by setting up the process of continuing education with the implementation of quality standards and assessment tools of professional competence;
- satisfying the needs of the education sector employees – their choice and demand of educational needs with the possibility of obtaining credits and increasing personal career development and salary range;
- technological and material support of educational environment in schools (ICT, education portal and new teaching resources);
- creating a quality learning environment in order to increase the knowledge level of pupils in the regional schools (in accordance with the PISA study conclusions and other assessments which evaluate the quality of education in the Slovak Republic).

Regarding sustainability, we can conclude that after the completion of the project activities, the Methodology and Pedagogy Centre will continue to develop educational programmes in accordance with the actual needs of school practice, and provide accredited educational programmes aimed at improving professional competencies of teaching staff and specialised staff all financed from the state budget. The existing capacities for educational training of teaching staff and specialised staff will continue to be used for this purpose. Network of lecturers – experts will provide educational services in accordance with the needs of schools and of both teaching and specialised staff that not involved in the project. State budget funds will continue to finance the e-portal's operations, which includes professional standards, files of accredited educational programmes, innovative teaching strategies and digital learning resources, e-learning programmes and methodological materials. The e-portal will be regularly and continuously updated.

## **9. Development of the National Qualifications System**

The national project and its outputs and overall execution contributes to the implementation of EU initiative in terms of interconnecting specialised education and training for the labour market through the identification and description of qualifications. These activities are intended to increase the relevance and recognition of individuals' learning in the context of lifelong learning. An important feature of this national project is the gradual establishment of a communication base between education in all its forms and the social partners, in particular those who represent employers, since they are a key element in identifying the labour markets needs and interpreting them into the language of formal and informal education.

The National Qualifications System is one of the tools that can help to enter the labour market either in our country or abroad better prepared. By creating a system of qualifications and references comparable to the European Qualifications System, we can make it easier for people to facilitate the recognition of their qualifications across Europe. At the same time, the National Qualifications System can help to balance the needs of the market and the educational content and also enable people to gain recognition of their acquired practical skills.

The Slovak National Qualifications System will present a comprehensive overview of our country's qualification system, describing partial and full qualifications and based on them, it will define the evaluation criteria, which are necessary for an individual to get their qualification recognised. The objective is that people who for whatever reason need to have their qualification recognised, for example, because it is required by their employer, do not have to go back to school again, if they can prove that they worked in the specified field for the required amount of time. Obtaining qualification for Slovak citizens becomes faster and more flexible. It is possible to acquire it gradually and to a certain level full qualification units and climb the ranking of the National Qualifications System via the system of qualification recognition. In addition it is feasible to work with the established National Qualifications System and based on it to compare education outputs achieved by various forms of education.

It is inevitable to establish mutual communication between employers and educational institutions in order to fulfil expectations and bring desired effects in the process of setting up the National Qualifications System and its consequent utilisation. In order to establish a high quality national system, the setting up of National Qualifications System must involve the employers' organisations like employers' associations, federations, chambers, trade unions and other professional employers' organisations. Additional involved parties include professionals active in the labour market research, vocational education and lifelong learning system.

Regarding sustainability of the national project, we can point out that the positive effects generated by the system tools will strengthen the public interest in all forms and methods of lifelong learning. We assume that the implementation functionality of both the National Qualifications Framework and the National Qualifications System will be a positive element and the requested form when entering new employment or undergoing a job change even after this project will be over. Information system will be publicly available, sufficiently promoted, and the manual how to use the information system will be also publicly available. The National Qualifications Framework and the National Qualifications System will represent a logical and coherent system providing information on the existence of qualifications and the possibility of their obtaining and recognition. The National Qualifications Framework and the National Qualifications System will ensure horizontal and vertical permeability between formal, non-formal and informal education and learning.

After the project completion, it is crucial to maintain both systems functional, which means to monitor continually the situation in the field of professions and qualifications, to identify any change in qualifications in a given profession, to monitor newly created qualifications in relation to the job positions and so forth. The basic premise for the sustainability of the project results is the establishment of the National Council for Education and Qualifications as an authority which keeps monitoring and approving new qualifications and cooperating with the government sector councils and employers in this area.

## **10. Further education of elementary and secondary school teachers in informatics**

The national project's outputs include:

- education programme for specialised teaching of informatics (85 participants successfully completed the programme);
- education programme for qualifying education of general subject informatics (34 participants successfully completed the programme);
- education programme for specialised teaching of modernisation of informatics teaching in elementary and secondary schools (73 participants successfully completed the programme).

Teachers who participated in the education programme under activity 1.1 are, thanks to the developed and taught modules, prepared and highly qualified to teach newly introduced subject of informatics in the second to fourth year classes of elementary school. Teachers who successfully completed further education in informatics should be able to draft and implement the education of informatics in these classes. Thanks to high quality of education ensured by further education in informatics, the teachers are expected to be prepared to handle possible changes in teaching informatics at their respective schools (new hardware, emerging software programs suitable for teaching, new approaches to teaching). They should be able to respond effectively to changes and use them to improve their education as well as the education of their pupils to a greater extent. Under activity 1.2, 199 teachers qualified to teach informatics, 59 study materials were made available for 59 modules that teachers would be able to use in their informatics classes. Teachers also learned new methods of education they can apply in their teaching practice. The project was an incentive for other teachers to educate themselves further and gain approbation for another subject – informatics.

The main benefit of the project, which appeared to be a secondary activity under 1.3, but with a considerable output, were numerous final theses written by the participants, many of them being really good and usable as auxiliary material by their colleagues.

Regarding sustainability, it can be concluded that during the project's implementation education programmes will be accredited and higher education institutions will be able to use them even after the project comes to an end. Elementary and secondary school teachers will be able to educate themselves at higher education institutions, completing these programmes and enhancing their qualifications. Other higher education institutions will be able to use the bases of such newly created and tested programmes for the development of their own programmes. Teachers will thus get a better opportunity to expand their education. This project will provide an opportunity for a limited number of teachers (199) to educate themselves, but after the project is over, their numbers may increase. Computer equipment obtained from the project will continue to serve teachers and pupils.