Erudio

Thematic evaluation of the operational programme Education within the programming period 2007 – 2013 and its effects on target groups

Client: The Ministry of Education, Science, Research and Sport of the Slovak Republic
1 Stromova, 813 30 Bratislava

14 April 2020

Contractor

ERUDIO Ltd.

16 Košovská cesta

971 01 Prievidza

www.erudio.sk

Team of evaluators

Ing. Ján Helbich

Mgr. Lucia Ulbriková

Ing. Lucie Bučinová

Ing. Petr Bučina, CSc.

Ing. Lucia Greschnerová

Mgr. Romana Juríková

Mgr. Lýdia Zimániová

It should be noted that the content, findings and recommendations of this evaluation report are the sole responsibility of the contractor ERUDIO, Ltd. Likewise any opinions expressed in this report are the responsibility of the service provider and not of the Ministry of Education, Science, Research and Sport of the Slovak Republic.

Contents

1. Acronyms

APVV	Slovak Research and Development Agency
CEM	The Centre of Education Management
DOP	demand-oriented project
EQF	European Qualifications Framework
EP	European Parliament
ESF	European Social Fund
EU	European Union
FM CU	Faculty of Management of the Comenius University
HEI	higher education institution
ICT	information and communications technology
IROP	Integrated Regional Operational Programme
INTERREG	European Territorial Cooperation
KEGA	Cultural and Educational Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic
MRC	marginalised Roma communities
MESRS SR	The Ministry of Education, Science, Research and Sport of the Slovak Republic
NFC	non-repayable financial contribution
NP	national project
NQF	National Qualifications Framework
NRP	National Reform Programme
NSRF	National Strategic Reference Framework
OP	operational programme
OPE	Operational Programme Education
OPHR	Operational Programme Human Resources
PISA	Program for International Student Assessment
PO	priority axis
SAS	Slovak Academy of Sciences
SEP	school educational programme
SME	small and medium enterprise
SR	Slovak Republic
SF	structural funds
UN	United Nations Organisation
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VEGA	Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences
VET	vocational education and training

2. Executive summary

Context

The global objective of the operational programme Education (OPE) was *„ensuring competitiveness of the Slovak Republic in the long run by adapting the system of education to the needs of a knowledge-based society"*. The programme covered all elements of the education system in Slovakia. In terms of geography, the whole region of the Slovak Republic was eligible while the highest allocation was targeted to regions outside Bratislava. Its aim was primarily to modernise and support education on all levels of the education system and initiate processes towards a competitive and dynamic economy. The support of an individual and his/ her competences was essential and so was the inclusion of disadvantaged groups of citizens into the standard school system and subsequently their employability in the labour market.

OPE was implemented through five priority axes that were further divided into several measures. Financially, it drew on the EU funds, namely the European Social Fund (ESF), the state budget and individual resources of beneficiaries through co-financing.

Methodology

The focus of this ex-post evaluation was the thematic evaluation and evaluation of effects of the supported projects on the target groups within a selected sample of 150 demand-oriented projects (DOPs) and 37 national projects (NPs). The key approach was a theory-based impact evaluation aimed at reconstructing and verifying the Theory of Change on the level of individual measures and national projects. Theory of Change is an evaluation concept that enables an assessment whether the interventions led to the changes intended. The focus of the evaluation is represented by six selected OPE measures:

- Measure 1.1 Transformation of Traditional School into a Modern One;
- Measure 1.2 Higher education institutions and research & development as the driving forces in the development of a knowledge-based society;
- Measure 2.1 Support of continuing education;
- Measure 3.1 Raising the educational level of members of the marginalised Roma communities (except calls supporting Local strategy of Complex Approach);
- Measure 4.1 Transformation of Traditional School into a Modern One for the Bratislava Region;
- Measure 4.2 Raising competitiveness of the Bratislava Region through the development of higher and continuing education.

Key findings

OPE was implemented **in line with wider EU policies** as well as ESF principles in the programming period 2007 – 2013, namely regarding the social inclusion, eliminating regional disparities, anti-discrimination and the support of human resource development. At the same time, it coincided with the adoption of a new school act and so has significantly contributed to implementation of the reform in the regional schools. OPE also **supported and enabled essential systemic changes**, for instance the development of the National qualifications framework and increasing qualification of teaching and specialised staff of schools on all levels. It created conditions for the support of educational and self-study activities of a particular target group which subsequently enabled the development of the system of continuing education which nowadays represents a common practice of school staff.

The thematic focus of the selected sample of NPs and DOPs within individual measures corresponded to the needs of a changing social situation towards modernisation of processes in education whether in relation to innovation of the teaching practice through material and technical provision, an increased level of education of teaching staff and modern teaching approaches or in relation to a stronger link of the educational process and labour market needs.

Pupils and students experienced the effects and positive impact of the evaluated projects through new learning resources, modern teaching aids and ICT equipment which became a part of the educational process. OPE **significantly contributed to modernisation of a high number of schools and school facilities not only on the material but on the curricular level, too**. Given the opportunities of continuing education, teaching and specialised staff acquired competences and skills in using modern teaching resources and technical equipment but also in using innovated teaching methods and approaches. While some interventions focused on specific areas of education (for instance, teaching of Informatics and foreign languages or Polytechnical and Physical Education), others represented more general and easily transferrable competences such as activating methods in education or inclusive model of education. Although a large number of specific outputs of individual projects has limited lifespan (ICT equipment, accredited training programmes), they are perceived as instruments through which certain processes and new attitudes were instigated. The acquired skills and knowledge continue to be used by teachers and so contribute to capacity building of particular institutions as well as to the sustainability of positive project impacts. However, these changes cannot be quantified as generally, measurable indicators focused on the number of training participants rather than on the actual change and use of new knowledge in practice.

In terms of **impact**, the operational programme has contributed to substantial positive changes not only on the **individual level** – related to teaching and specialised staff through continuing education or to pupils and students through an increased interest in education and learning, but also on the **institutional level** as professional capacity of project beneficiaries has strengthened by the acquired project management knowledge and skills.

External factors also affected the impact of the supported interventions on the target groups. The school act from 2008 and its amended version from 2011 present the most significant ones as they introduced several changes and systemic measures in the regional schools. In addition, the innovated State educational programme from 2015 presented a direct positive influence on several projects, for example by supporting teaching of subjects such as Biology, Chemistry, Physics and Technology. The act on teaching and specialised staff from 2009 introducing professional standards and a credit system of continuing education of teachers was an important external factor, too. In tertiary education, a legislative change from 2018 related to the accreditation system played a critical role as it threatened some study programmes developed through the OPE.

Recommendations

Based on the ex-post evaluation, the evaluators formulated several recommendations. At first, it is required to **probe specific objectives with a specific need, alternatively with prospective beneficiaries and their inclination as to their achievement** to ensure demand in all specific objectives of the programme. A potential solution might be an appropriate information campaign to raise an interest of target groups and prospective beneficiaries. Similarly, **a long-term support of a reform platform for all levels of education** is recommended to avoid a situation where some types of potentially beneficial activities remain outside the interest, for instance the support of alternative models of primary and secondary schools, international mobility of students and teachers as well as a wider support of pre-primary education. In terms of the setup of the operational programme, it is important to apply **the same terms and conditions for the whole region of the Slovak Republic**. Within the operational programme, there were a few instances when some applicants did not include adequate personnel costs in the project budget. This has resulted in insufficient remuneration of some project beneficiaries (typically teaching staff in DOPs). Therefore, each call for proposals should **explicitly specify the rules of remuneration of the teachers involved** as for them, project implementation represents an activity beyond their typical work duties. This evaluation was undertaken approximately five years after the end of its implementation which was one of the limiting factors. It is directly linked to the reliability of the information the interviewed persons could provide. In most NP cases, there is no reliable qualitative information available regarding target groups and therefore, it is extremely important to **systematically introduce external evaluations of all NPs**, ideally in two intervals – half-way through the project implementation and approximately six months after the project activities have ended.

3. Introduction

3.1 A legislative overview of the Slovak education system in the context of the OP Education

Changes in society after 1989 were reflected in all areas of life in Slovakia; however, the need to reform the education system could not be met by a fundamental legislative change for a long time. The nature of education policy in Slovakia was based on the document Further Development of the Czechoslovak Education System, which was conceived in 1976 and codified by different school acts from 1978 to 1984 (act on primary and secondary schools, act on school facilities, act on public administration in the education system, act on higher education). In connection with the need arising from the change of political establishment, Act No. 29/1984 on the system of primary and secondary schools was amended several times and remained in force until 2008.[1]

The need to reform education and all key areas of life was intensified by the accession of the Slovak Republic (SR) to the European Union (EU). In 2005, the Slovak Government adopted the Strategy of Slovakia's Competitiveness by 2010 that is considered the National Lisbon Strategy, and subsequently in 2005 the National Reform Programme of the Slovak Republic for 2006 - 2008 (NRP) was adopted. These key national documents defined the needs of the Slovak society with the accent on the competitiveness growth and elimination of disparities in relation to other EU Member States. The National Reform Programme 2006 - 2008 has set the objectives of the Slovak Republic and proposed instruments to achieve them. In education, the transformation of a traditional school into a modern one was considered the main pillar of the prosperity of the Slovak Republic. The NRP emphasised the need to draft and approve a new school act to regulate all types of education as its priority. In higher education, the NRP focused on capacity building and significant quality improvement. To achieve these objectives, it was necessary to improve the accessibility of higher education and ensure the availability of financial resources as well as to facilitate recognition of diplomas. In lifelong learning, it highlighted the adoption of a lifelong learning strategy as well as the national programme of Learning Regions, thus ensuring compliance with current labour market requirements. The integration of children from risk and marginalised groups into the standard school environment became a priority of the Slovak Republic in order to facilitate the access to education for these groups. This was also to be included in the new school act.[2]

3.1.1 European Union and Lisbon Strategy

With the accession of the Slovak Republic to the EU on 1 May 2004, Slovakia also gained access to financial instruments in order to eliminate regional disparities in accordance with the EU common cohesion policy. These financial instruments are mainly EU funds. In the shortened programming period 2004 – 2006, Slovakia followed the National Development Plan approved by Brussels, which managed four operational programmes (OPs) financed from the structural funds and the Cohesion Fund. In addition to these programmes, Slovakia also benefited from other European Community initiatives such as EQUAL and INTERREG III.[3]

The primary experience from the operational programme management and the EU funds drawing could be used by Slovakia in preparation of the National Strategic Reference Framework of the Slovak Republic for 2007 - 2013, in which the structural assistance management and implementation was divided into 11 operational programmes. The Ministry of Education, Science, Research and Sport of the Slovak Republic (MESRS SR) was appointed the role of the managing

---

[1] Education System in the Slovak Republic. Online:
http://web.uips.sk/download/rs/Vzdelavaci_system_v_Slovenskej_Republike.pdf
[2] National Reform Programme 2006 – 2008
[3] Programming Period 2007 – 2013, 2006. Online: https://euractiv.sk/section/regionalny-rozvoj/linksdossier/programove-obdobie-2007-2013/

authority for the Operational Programme Education (OPE).[4] As part of the ex-post evaluation of the Operational Programme Education, it is necessary to point out that the 2007 - 2013 programming period was the first comprehensive period in which Slovakia could draw the EU funds. The situation of Slovak schools and educational institutions at that time required complex solutions and developing conditions for their overall modernisation, both in terms of their material provision as well as the curricular and related legislative reform of the educational system.

On the European level, the need to adapt educational systems to a knowledge-based economy was emphasised foremost in the first decade of the 21st century, highlighting the link between the education sector and the labour market in order to maximise the EU competitiveness. The Lisbon Strategy from 2000 (and its 2005 revised version) became the starting point for changing the European area towards a dynamically developing knowledge-based economy, highlighting the need to increase employment, make the labour market more attractive, support equal opportunities and social inclusion that serve as the basis for enhancing social cohesion and ensuring sustainability. The need to support the knowledge-based society and to promote lifelong learning emerged and this presents an educational institution as a place for developing pupils and students' key competences through formal, non-formal and informal education.[5]

In 2010, the European Council approved a strategy for the next period called Europe 2020 based on the coordination of economic and employment policies to ensure economic growth and employment. The Europe 2020 strategy was based on the need to reflect the situation arising in the context of the global economic crisis that also had a negative impact on the achievement of the objectives set by the original Lisbon Strategy. The Europe 2020 strategy has therefore also addressed measures to mitigate effects of the economic crisis. It was thematically based on three priorities: intelligent, sustainable and inclusive growth. In the field of education, it has set a specific objective of reducing the drop-out rate below 10%, while increasing the proportion of people aged 30-34 with a university degree to 40% minimum. There was an effort to interconnect all objectives in the Europe 2020 strategy. For example, higher levels of education should contribute to increased employability and the employment rates' progress should help reduce poverty. On the other hand, increased research and development and innovation capacity across all sectors of the economy combined with a more efficient use of resources should increase competitiveness and foster job creation. The National Reform Programme of the Slovak Republic 2010 was the first programme to respond to the Europe 2020 strategy as well as to the European Commission recommendations. According to them, Slovakia should, foremost, improve the state of public finances and allocate resources primarily to education, research and infrastructure. Slovakia should focus on education and research and development systems' effectiveness as well as on the business environment improvement and unemployment reduction.[6]

The Operational Programme Education, created for the 2007 - 2013 programming period, was one of the tools for implementing systemic changes aimed to adapt the education system to the needs of the knowledge-based society in order to contribute to the long-term competitiveness of the Slovak Republic. In terms of meeting the set objectives, OP Education focused on the overall transformation of a traditional school into a modern one, increasing the higher education accessibility and quality, opening up the system of further education for the widest possible range of citizens and increasing the educational level of marginalised groups.

3.1.2 School system reform in 2008 – Act N. 245/2008 on Education (school act)

The new school act has brought a number of changes to the educational process with the aim to modernise educational institutions and systematically change their approach in preparing youth and employees. Free pre-elementary education was enacted for children one year prior to the start of compulsory education, and kindergartens were included in the school system. The act established the education principles and objectives as the basis for educational standards'

---

[4] Programming Period 2007 – 2013, 2006. Online: https://euractiv.sk/section/regionalny-rozvoj/linksdossier/programove-obdobie-2007-2013/

[5] The Europe 2020 Strategy. Online: https://www.eu2020.gov.sk//roky-2000-%e2%80%93-2005/

[6] National Reform Programme of the Slovak Republic 2010

development (which are part of state educational programmes), created conditions for education system quality control and evaluation (through the National Institute for Certified Educational Measurements, the State School Inspection, school founders and schools themselves), modified the conditions for school admission and completion (cancelling A, B, C levels of secondary school final exams, leaving the possibility of passing a foreign-language examination at several levels according to the European Framework of Reference for Languages).

The educational reform in 2008 brought the introduction of a two-tier model of educational programmes consisting of state educational programmes and school educational programmes, that provided schools with a greater degree of autonomy in curriculum development and divided responsibility for their creation between central government authorities and individual schools. The main idea of new state educational programmes' content changes was, on the one hand, an effort to reduce knowledge memorisation in favour of the key competences' development and, on the other hand, an effort to integrate the contents of relevant subjects into the so-called education areas. The state educational programme was created for different types of schools and was the starting point for the development of specific school educational programmes that considered the specific local and regional conditions and pupils' needs (and labour market requirements in secondary specialised schools), but also existing school personnel conditions. The new school act stipulated that state educational programmes are binding for all schools when developing the school educational programmes, regardless of their type (state, private or church schools), and their official language (whether it is the state language or a language of a national minority).[7] In addition to the new school act, an important part of the educational reform was the adoption of Act no. 317/2009 on teaching and specialised staff and on amendments and supplements to certain acts that introduced a set of rules for placement of both teaching and specialised staff in career levels and career positions, thus creating a basis for change in their remuneration. This act, together with other regulations and decrees that further specified other aspects of work of teaching and specialised staff [8] (scope of their activities, qualifications and individual qualities and predispositions for teaching and specialised staff, introduction of a system of so-called credits) supplements the new school act in order to achieve a comprehensive reform of education in the Slovak Republic. One of the key tools for the actual implementation of the reform of education was OP Education 2007 - 2013.

3.1.3   A brief overview of changes in education after 2007

In addition to the school act effective from 1 September 2008 and two related laws adopted in 2009: the act on vocational education and training and the act on teaching and specialised staff, a brief overview of other changes in education in Slovakia after 2008/2009 is included. Foremost, these include significant legislative changes, changes to the state educational programme as well as other documents covering the area of education that have been identified as potential external factors affecting the sustainability of OPE projects' outputs and outcomes. For more details on specific external factors identified by NP and DOP beneficiaries and/ or the evaluators, see chapter 6.4.

Regional schools (primary and secondary schools)	
2015	change of State Educational Programme
	• an increased quota of science classes; established compulsory English language classes in the 3rd school year at primary schools and a facultative second foreign language class for pupils in the 7th - 9th school year, enhanced technical education at

---

[7] Summary Report on the Evaluation Status of the School System, Schools, Teachers and Pupils in the Slovak Republic, 2012. Online: http://www.oecd.org/education/school/CBR_SVK_Slovak_version_final.pdf

[8] - Regulation of the Government of the Slovak Republic no. 422/2009 that establishes the scope of a direct teaching activity and a direct educational activity of teaching staff
- Decree of the Ministry of Education No. 445/2009 on Continuing Education, Credits and Attestations of Teaching and Specialised Staff
- Decree of the Ministry of Education No. 437/2009 that establishes qualification prerequisites and special qualification requirements for individual categories of teaching and specialised staff

		the first stage of primary school and technology class at the second stage of primary school
2017	amended act on financing of primary and secondary schools and school facilities	
		• extending the financial support for transport for specific pupils, financial support for children in kindergarten education, for children whose parents are in need; reducing the administrative burden, providing a financial support for the physical activities course in nature for specific pupils
2018	amended act on vocational education and training	
		• changes in dual education system aimed to make employers' (mainly SME entrepreneurs including the self-employed) involvement more effective
2018	amended school act (act on education)	
		• determining the number of pupils at eight-year grammar school based on an objectively measurable criteria – number of first-year pupils at eight-year grammar schools cannot exceed 5% of the total number of pupils in the given school year in the Slovak Republic
2019	amended act on teaching and specialised staff	
		• regulates the rights and duties of teaching and specialised staff, their work activities and professional development, the remit of the MESRS SR, establishes the Central Register of Employees of Schools and School Facilities
		• a change of bonuses for credits to a system of bonuses for professional development – a new bonus can be obtained by teaching and specialised staff in several ways: passing a language examination; extension study; specialised study or innovation study. Bonuses that had already been granted (or to be granted by the end of August 2019) to continue to be paid until the end of August 2026.
2019	amended school act (act on education)	
		• change in foreign language education – pupils in the 3rd school year at primary school will be able to choose their first foreign language[9]
Tertiary/ higher education		
2018	new act on the higher education quality and an amended act on HEIs	
		• introduces a completely new system of accreditation in higher education that will be overseen by the independent Slovak Accreditation Agency for Higher Education
		• introduces an internal quality assurance system for higher education that must comply with the standards defined by the Slovak Accreditation Agency for Higher Education
2018	amended act on HEIs	
		• simplifies the design and adaptation of study programmes, including interdisciplinary and joint study programmes, and introduces a new type of a study programme - interdisciplinary studies
2019	amended act on HEIs	
		• a new system of study fields, regulation of the provision of state budget subsidies, changes in the organisation of the Slovak Academy of Sciences (SAS), changes in the area of remuneration of employees, changes in the candidate requirements for job positions within HEIs[10]
Vocational education and training and adult learning		
2009	act on lifelong learning	
		• established an Information system of continuing education
2015	new act on vocational education and training	
2018	amended act on vocational education	

[9] National Reforms in School Education, 2019. Online: https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-school-education-63_sk

[10] National Reforms in Higher Education, 2019. Online: https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-higher-education-63_sk

	• changes in connection with dual education system[11]
Inclusion of marginalised Roma communities	
2008	Medium-term Development Concept of the Roma Minority in the Slovak Republic SOLIDARITY - INTEGRITY - INCLUSION 2008 - 2013
2012	Strategy of the Slovak Republic on Roma Integration by 2020

3.2 Operational Programme Education

The global objective of the OP Education was: „*ensuring competitiveness of the Slovak Republic in the long run by adapting the system of education to the needs of a knowledge-based society.*" The managing authority of the OP Education is the Ministry of Education, Science, Research and Sport of the Slovak Republic. Intermediate bodies under the managing authority for the OP Education were the Agency of the Ministry of Education for EU SF (for priority axes 1, 2, 3 and 4 except measure 2.2) and the Ministry of Health of the SR (measure 2.2).

OP Education covered all levels of the educational system in Slovakia - primary, secondary and tertiary education, continuing education as well as science and research, and from the geographical perspective it covered the whole territory of the Slovak Republic. In addition to the global objective, it defines priority axes, individual measures and activities that were supported in the Convergence and Regional competitiveness and employment objectives. Given the need to create a knowledge-based society in Slovakia and the need for its competitiveness growth, the operational programme aimed to modernise and support education at all levels of the educational system and to launch processes towards a competitive dynamic knowledge-based economy as well as towards the inclusion of a disadvantaged group of citizens in the standard school system and their success in the labour market.

OP Education was implemented through five priority axes:

Priority axis 1 Reform of the educational and vocational training system covers primary, secondary and tertiary/ higher education:

- Measure 1.1 Transformation of a traditional school into a modern one
- Measure 1.2 Higher education institutions and research & development as the driving forces in the development of a knowledge-based society

Priority axis 2 Continuing education as an instrument of human resource development:

- Measure 2.1 Support of continuing education
- Measure 2.2 Support of continuing education in the health sector

Priority axis 3 Support to education of persons with special educational needs:

- Measure 3.1 Raising the educational level of members of the marginalised Roma communities
- Measure 3.2 Raising the educational level of persons with special educational needs

Priority axis 4 Recent education for a knowledge-based society for Bratislava Region:

- Measure 4.1 Transformation of a traditional school into a modern one for the Bratislava Region
- Measure 4.2 Raising competitiveness of the Bratislava Region through the development of higher and continuing education

---

[11] National Reforms in Vocational Education and Training and Adult Learning, 2019. Online: https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-vocational-education-and-training-and-adult-learning-63_sk

- Measure 4.3 Technical assistance for the Regional competitiveness and employment objective

Priority axis 5 Technical assistance for the Convergence objective:

From the financial point of view, the programme drew EU funds and state budget funds. In total, 92.48% of the allocated financial resources (EUR 501,915,441.44 in total) were spent to complete the programme. As of 14 September 2017, a total of 1,086 projects in the amount of EUR 786,205,291.62 were contracted. During the implementation of the programme, 76 projects with a contracted amount of non-repayable financial contribution (NFC) in total amount of EUR 88,078,934.97 were extraordinarily terminated.

The total amount of financial resources allocated for 2007 – 2013 programming period is as follows:

Table 1.1 Drawing of EU and state budget financial resources by priority axes as of 14 September 2017[12]:

	Allocation (EU)	Allocation (state budget)	Spending (EU)	Spending (state budget)	Share of spending per EU commitment in %	Share of spending per state budget commitment in %
Priority axis 1	309,841,525.03	54,677,916.47	298,429,304.54	44,782,893.17	96.32%	81.85%
Priority axis 2	130,906,465.98	23,101,141.70	104,075,988.82	17,533,935.65	79.50%	75.90%
Priority axis 3	63,385,000.00	11,185,589.00	62,067,854.04	10,425,871.75	97.92%	93.21%
Priority axis 4	17,590,227.58	3,104,158.87	16,381,703.70	2,690,797.82	93.13%	86.68%
Priority axis 5	21,005,541.29	3,706,861.11	20,962,540.32	3,698,963.90	99.79%	99.79%
TOTAL	**542,728,759.88**	**95,775,667.15**	**501,915,441.44**	**79,101,601.01**	**92.48%**	**82.59%**

The intervention logic and the achievement of objectives of individual priority axes and measures are analysed in detail in the following chapters of this evaluation report.

---

[12] The Ministry of Education, Science, Research and Sport of the SR: Final Report on Implementation of the Operational Programme Education in Programming Period 2007 - 2013, Bratislava, 2017

4. Methodology

This ex-post evaluation of Operational Programme Education 2007 - 2013 was carried out from November 2019 to April 2020, approximately five years after the end of its implementation period. The focus of the evaluation were the following selected measures of OP Education:

- Measure 1.1 Transformation of Traditional School into a Modern One;
- Measure 1.2 Higher education institutions and research & development as the driving forces in the development of a knowledge-based society;
- Measure 2.1 Support of continuing education;
- Measure 3.1 Raising the educational level of members of the marginalised Roma communities (except calls supporting Local strategy of Complex Approach);
- Measure 4.1 Transformation of Traditional School into a Modern One for the Bratislava Region;
- Measure 4.2 Raising competitiveness of the Bratislava Region through the development of higher and continuing education.

The evaluation did not cover measure 2.2 – Support of continuing education in the health sector, measure 3.2 – Raising the educational level of persons with special educational needs, measure 4.3 – Technical assistance for the Regional competitiveness and employment objective, nor the priority axis 5 – Technical assistance for Convergence objective.

The main aim of the evaluation was a content review and assessment of contribution of implemented projects to target groups in the sample of 150 demand-oriented projects (Appendix 2) implemented in 21 calls for proposals for demand-oriented projects and 37 national projects (Appendix 3) as selected by the client.

The evaluation consisted of an analysis of existing documentation, developing the Theory of Change for each measure (total of 6) and each national project (total of 37) and semi-structured interviews with representatives of the beneficiaries of all selected national and demand-oriented projects and the employees of the relevant sections of the Ministry of Education, Science, Research and Sport of the Slovak Republic (by telephone or personally). A special task for the evaluators was to develop a list of products (outputs) which were created within the selected 37 national projects (Appendix 8).

Personal and phone interviews with representatives of the national projects' beneficiaries were conducted from February to March 2020. Out of the sample of 37 NPs the evaluators were able to conduct interviews with representatives of 31 NPs. In four cases the data collection was carried out in a written form, in the other two cases the contact details of the project beneficiaries could not be detected (*New trends in English teachers' training at primary schools* – NP 22 within the measure 2.1 and NP 33 within the measure 4.2).

Phone interviews with representatives of the demand-oriented projects were conducted in February 2020. All 150 beneficiaries were contacted, 109 phone interviews were conducted and 15 representatives of the beneficiaries were asked to answer in the written form. Interviews with 17 beneficiaries could not be carried out as no response nor interview date managed to be achieved after multiple attempts. Considering a substantially long time since projects' completion, several of the interviews could not be conducted as none of the project beneficiaries worked in the given institution any longer, or the organisation of the beneficiary ceased to exist in the meantime. In these cases, the evaluation was based exclusively on the sources available from the project documentation, especially from the follow-up monitoring reports.

In addition, personal and phone interviews with representatives of the Ministry of Education, Science, Research and Sport of the Slovak Republic were conducted to clarify, the broader context of the OP Education implementation and to identify its impact on the whole education sector in Slovakia. Specifically, there were three interviews with the representatives of the Section of

Regional Schools, the Section of Higher Education Institutions and the Section of Lifelong Learning carried out.

Finally, based on synthesis of the findings from the sample of projects, the evaluators assessed whether the expected Theory of Change for each evaluated measure and NP was functional. The result represents an actual way of change, which identifies the impacts caused by the carried-out intervention and reveals whether the given objectives of the measure were achieved. The findings were used to answer the evaluation questions and to formulate recommendations for the 2021 – 2027 programming period. These were formulated utilising the synthesis and identification of common themes within individual measures taking into account the selected sample of national and demand-oriented projects. Based on the project documentation and individual interviews, the evaluators have assessed the degree to which a given project from the selected sample has contributed to the achievement of specific aims of the particular measure. The contribution was assessed using the following scale:

- high – project's aims are in line with specific aim/s of the measure and the project implementation has significantly contributed to their achievements and to positive impacts on target group from a long-term perspective;
- rather high – project aims are in line with specific aim/s of the measure and significant short-term and potentially long-term positive impacts on target group have been achieved thanks to the project;
- rather low – although project aims are in line with specific aim/s of the measure, no significant contribution from the target group needs' perspective has been identified;
- low – no short-term nor long-term positive impacts from the target group needs' perspective have been identified.

Individual project assessments are included in Appendix 6 (Evaluation of selected DOPs) and in Appendix 7 (Evaluation of selected NPs).

5. Analysis

The focus of the analysis and evaluation is the six selected measures of OP Education. Considering the complexity of their intervention logic, the logical model of each evaluated measure is presented in a form of a Theory of Change, which is the main result of the analysis (Appendix 1). In this chapter only a brief description of individual measures is presented.

Measure 1.1

Measure 1.1 Transformation of a Traditional School into a Modern One was focused mainly on regional schools and transformation of a traditional way of teaching and learning into a more modern one, especially by implementation of innovative teaching forms, a curricular reconstruction of education and by investing into human resources to introduce these methods into practice. The quality improvement of school administration and management has become a part of the initiative to enhance the quality of regional schools and to direct it towards fulfilling of the existing needs of pupils and students of primary and secondary schools. This measure was formed in accordance to the new legislation as a support of the introduced reform of general and vocational education. In combination with appropriate career guidance it creates conditions for increasing job opportunities for pupils and students of primary and secondary schools in the knowledge-based society.

In this measure, 12 national and 41 demand-oriented projects were evaluated.

Measure 1.2

The baseline for establishing the **measure 1.2 Higher education institutions and research & development as the driving forces in the development of a knowledge-based society** was the need to accommodate the higher education to the requirements of a knowledge-based society. Projects supported by this measure have introduced principles of culture of quality into regional higher education institutions and improved the quality of study programmes by introducing innovative forms of education and progressive carrier counselling. One of the objectives of the measure was also a systematic and comprehensive support of human resources development at higher education institutions and in research and development to improve the scientific quality on levels comparable to global standards. The streamlining of administration and management of higher education was one of the means applied. The measure also focused on establishing international cooperation to support the long-term development of these institutions.

In this measure, one national and 26 demand-oriented projects were evaluated.

Measure 2.1

Principles of a knowledge-based society support acquiring a qualification in formal, non-formal and informal education. Enhancing the quality and enabling access to education was supported by the **measure 2.1 Support of continuing education** which focused on improvement of training programmes' quality within non-formal education and lifelong learning. The objective of this measure was to facilitate access to training programmes for target groups in accordance with their existing needs, to improve their competitiveness in the labour market or to increase or renew the level of their key competences. Establishing the system of continuing education has therefore supported the human resource development and permeability among all forms of education.

In this measure, nine national and 16 demand-oriented projects were evaluated.

Measure 3.1

The need to educate and integrate pupils from MRC was reflected in the **measure 3.1 Raising the educational level of members of the marginalised Roma communities.** This measure addressed the need to provide primary and secondary education to the groups of residents suffering from a high level of social exclusion and the need to raise their competitiveness in the labour market. Therefore, the objectives of this measure focused on facilitating access of MRC to formal education by continual work with individual pupils and by forming bonds of cooperation with whole communities. Additionally, projects supported the implementation of principles of inclusive education and establishment of an educational process that contributes to social inclusion of pupils from MRC. Simultaneously with developing conditions for integration of the target group, further training to teaching and specialised staff was provided to increase the level of key competences of staff working with this target group.

In this measure, three national and 17 demand-oriented projects were evaluated.

Measure 4.1

The **measure 4.1** was conceived as a replicating measure to the measure 1.1 in the Bratislava Region, and therefore it supports principles of transformation of traditional methods of teaching and learning into modern ones. The measure 4.1 also considered specific needs of primary and secondary schools characteristic for this region. These included especially the need to support its competitiveness. The measure that focused on programmes of formal education supported the implementation of a new school act in the Bratislava Region and helped establish conditions for innovative methods to be adopted in the process of teaching and learning. The objectives were achieved by creating new opportunities for teaching staff training and by applying evaluation instruments for educational activities of schools and school facilities to ensure the quality of schools and school facilities on the institutional level.

In this measure, eight national and four demand-oriented projects were evaluated.

Measure 4.2

The objective of the **measure 4.2** was **Raising competitiveness of the Bratislava Region through the development of higher and continuing education.** From the national perspective, the Bratislava Region is the most important centre of higher education culture and represents a centre with high potential for growth of research and development as the highest concentration of universities and scientific institutions is located in this region. Raising competitiveness of higher education institutions was carried out mainly by emphasising the importance of raising the quality of the education provided in accordance with existing needs of a knowledge-based society. Specific objectives included raising the quality of study programmes, innovation of their content and forms of education, human resource development in the field of research and development, support of cooperation among higher education institutions and organisations in research and development and focus on the quality of institutions of continuing education.

In this measure, four national and two demand-oriented projects were evaluated.

6. Key findings

The following section is divided into seven chapters which represent individual evaluation questions:

1. To what degree has the thematic focus of supported projects corresponded to the target groups' needs?
2. What outcomes/ outputs have been achieved through OP Education and which external factors have contributed most to programme/ projects' implementation?
3. To what degree have the supported demand-oriented and national projects contributed to the change achieved, i.e. to the improved status of target groups within education?
4. What factors played a role (positive or negative) in the achievement of effects of supported interventions for target groups?
5. To what degree can the acquired findings be used for preparation of calls for proposals in the programming period 2014 – 2020?
6. How (suitably) do intervention objectives correspond to the needs of the EU?
7. To what degree is the intervention coherent with the wider EU policy?

For easy navigation, evaluation questions include hypertext links to the appropriate chapter. The chapters are divided per individual measures within which the evaluators address a given evaluation question considering a given measure and respective projects from the sample. Measure 1.1 is further divided per school types (primary and secondary schools).

A summary at the end of each individual question reviews key findings regarding individual measures.

6.1 To what degree has the thematic focus of supported projects corresponded to the target groups' needs?

6.1.1 Measure 1.1

Primary schools – national projects

In line with individual calls for applications for a non-repayable financial contribution within the measure 1.1, the target groups were represented by pupils and teaching staff. The needs of these target groups were in fact the needs of a changing social situation towards globalisation, modernisation of processes and elimination of disparities among individual regions of the EU. In some respects, the needs of the target groups differed; however, their common denominator within the selected evaluated projects was a need to secure schools' material provision including teaching and learning resources, computer technology and software programmes. On the other hand, there was a need to develop key competences, especially literacy, language and information and communications technology (ICT) skills.

The National Strategic Reference Framework 2007 – 2013 identified several shortcomings, for instance the lack of financial resources, persistence of traditional themes and practices in education, insufficient material and technical provision of schools, inadequate conditions for meeting the complex and diverse educational needs of teaching staff in schools and school facilities. [13]

The need to focus on the literacy development of primary school pupils as well as on the training needs of teaching staff to develop these competences in pupils is also emphasised in the report by the National Institute for Education published in 2006 drawing on the results of international PISA 2003 assessment. It was these results that pointed out the low achievement in literacy testing of

---

[13] National Strategic Reference Framework 2007 - 2013

15-year old pupils where Slovakia obtained the lowest results among the EU countries.[14] In line with this baseline situation and the needs identified in the education system, the assessed national projects within this measure were designed accordingly.

Within the national project *Support of primary school pupils' professional orientation to vocational education and training by development of polytechnical education to enhance job skills and work with talents* (NP 9), programmes of continuing education for **primary school teaching staff** were developed. They focused on practical skills in the field of 'Man and the world of labour' and 'Man and nature' as well as on knowledge about new procedures and new technologies. The aim of the project was to support the professional orientation of primary school pupils towards vocational and specialised education whereby innovated forms and methods of teaching and learning in connection with modern technical provision of classrooms could lead to an increased interest and motivation in given subjects. As a result, modern classrooms of Physics, Technology, Biology and Chemistry were created and fully equipped at 49 primary schools. At the same time, three innovative programmes of continuing education for teaching staff were carried out with a focus on practical teaching and learning. In addition, further training for teachers dealing with professional orientation of pupils was developed and carried out to enable them to learn the latest trends from the education and career counselling. This aspect was supported technologically, too as the schools involved in the project were able to use a software tool for identification of pupils' professional orientation and an electronic catalogue of job positions with a focus on technical areas. More information on project outputs and impacts can be found in chapter 6.2.1 and 6.3.1.

Measurable indicators of project outcomes were achieved or exceeded (for example the number of teaching staff members involved in training activities). The needs of teaching staff concerning the methodology and pedagogy of technical subjects were also connected from the perspective of further support through career guidance and detailed descriptions of technical job positions. This was supported by material and technical provision and equipment which had the expected positive and motivational effect on the second primary target group – **primary school pupils**. Outcome indicators were exceeded several times (the planned target of 4,960 pupils involved in project activities in comparison with the achieved 16,562 pupils). The project managed to address the low interest of primary school pupils in technical subjects and subsequently, in vocational education and training (VET). This is a trend supported by all EU member states in line with the Lisbon Strategy and Europe 2020 strategy. This national project responded to the key needs of the target group in the initial phase – by focusing on primary school pupils who are in the process of making decisions about their future careers it addressed the issues exposed in a later phase (i.e. in low numbers of VET pupils).

The project responded to the needs of the target group comprehensively as it focused not only on pupils in general but also on talented youth by its engagement in specialised competitions in subjects such as Physics, Chemistry, Biology and Technology. This activity was in line with the aim to motivate these pupils to study VET considering the needs of the labour market and their future employability.

The same approach was adopted towards the needs of the target groups in the project *Support of polytechnical education at primary schools* (NP 10) that was a direct continuation of the aforementioned project. The target groups were represented by **primary school pupils** and **primary school teaching staff** who increased the level of their professional competences related to technical subjects through continuing education. Owing to a higher quality of training and education of teaching staff, the schools involved experienced an increased interest of pupils in polytechnical subjects. As in the previous project, it was also supported by technological and material provision as modern teaching resources, laboratories and an opportunity to carry out practical experiments in polytechnical education have a direct effect on natural curiosity and motivation of primary school pupils.

---

[14] Literacy of Slovak pupils in PISA 2003 study, 2006. Available on:
https://www.nucem.sk/dl/3489/%C4%8Citate%C4%BEsk%C3%A1_gramotnos%C5%A5_-_2003.pdf

In the project *Foreign languages' training of primary school teaching staff to support the Concept of Foreign Language Teaching at Primary and Secondary Schools* (NP 12), the needs of the target group – teachers of the 1st and 2nd stage of primary schools – were directly influenced by legislation. In 2008, a new State educational programme was published which stipulated a compulsory foreign language from the primary education level. This national project aimed to enable qualified teachers to *supplement* and *extend* their education so that a national implementation of a compulsory foreign language on the 1st stage of primary schools could be successfully achieved. Two target subgroups were created – teachers of the 1st stage of primary schools without a qualification to teach a foreign language were able to *supplement* their education and participate in a language training and teachers of the 2nd stage of primary schools who were qualified to teach a foreign language were able to *extend* their education by pedagogical and psychological methods of teaching a foreign language on the 1st stage of primary schools. Teachers could choose from six foreign languages (English, German, French, Italian, Russian and Spanish) and through this project, nearly 100% competence of teaching a foreign language on the 1st stage of primary schools was accomplished. However, from 2011/2012 school year the English language became a compulsory foreign language on the 1st stage of primary schools which had a negative impact on project outcomes – teachers newly qualified in other foreign languages could not actively apply their qualification.

Primary schools – demand-oriented projects

Within the measure 1.1, the needs of the target groups were fully reflected in planned activities and outcomes of individual demand-oriented projects. Similarly to national projects, these projects also focused thematically on innovation of the educational process and **the development of key competences of pupils** through new teaching and learning resources, manuals, interactive teaching tools as well as further training of teaching staff with the aim to acquire and enhance competences necessary for transformation of a traditional school into a modern one.

Based on the telephone interviews and analysis of available project documentation it can be concluded that the needs of the target groups were met to a large extent. More than a half of respondents (53%) stated that meeting the needs of the target groups was successful to a high degree. The remaining respondents (45%) even declared that the needs of the target groups were fully met. This aspect could not be assessed in the instance of one project as a telephone interview was not conducted and the question could not be answered based on the project documentation only. One respondent stated that the needs of the target group were met adequately as this target group included pupils from MRC with specific needs. Another respondent concluded that the needs of the target groups were met to a certain extent only; however, this was caused by external factors. In this instance, the beneficiary was a special school which was affected by legislative changes through which the composition of pupils in school altered (integration of a large group of pupils into standard schools) and the innovated teaching and learning resources as well as methods of teaching were no longer suitable. The structure of the target group changed and so did its needs. A similar process was not confirmed in the case of the second special school that was in the selected sample of assessed projects so it cannot be concluded whether this was a unique case or a typical one for special primary schools in general.

Secondary schools – national projects

The target groups of national projects in secondary schools are primarily represented by **teaching staff and staff working in education**. Outcomes of some NPs also had a direct impact on **pupils** and this target group was specifically stated in the project documentation. However, it is clear that project outcomes have a direct or indirect impact on pupils and their needs irrespective of their stated presence in the documentation.

Within the measure 1.1, there was a total of 12 NPs and analogically further eight NPs for the Bratislava Region within the measure 4.1. As measures 1.1 and 4.1 differed in one specific objective only, the NPs were similar and implemented nearly identically. The target groups of individual school levels overlapped within NPs. Only three NPs focused exclusively on secondary schools (NP

3, NP 7 and NP 24); there were nine NPs focused on kindergartens and primary schools. The remaining eight NPs dealt with primary and secondary schools and in two instances, in addition to the target group of teaching staff, school inspectors were included, too (NP 8 and NP 27). The needs of the target groups that had been identified are rather diverse and each NP addresses a specific one.

OPE in its baseline analysis states that many secondary school graduates face employability difficulties as they do not meet employers' requirements, for example in problem-solving, flexibility, language and ICT skills. The current structure and content of education is not sufficiently linked with technical and technological changes nor demands placed on individuals by a knowledge-based society. Furthermore, it is not suitably oriented towards acquiring of necessary key competences and it is not connected to the business sector.

The focus of most NPs was the development of competences of pupils and teaching staff and generally the education corresponding to the needs of a knowledge-based society. This measure can be regarded as crucial to address the first specific objectives of the measure 1.1 (*innovate content and methods, raise the quality of education for the labour market needs in a knowledge-based society* and *focus the training and continuing education of pedagogical personnel toward acquiring and developing the competences needed to transform a traditional school into a modern one*). No NP addressed the third specific objective of the measure 1.1 (*improve the quality of school administration and management and stimulate them to more openness to the needs of local communities*). Two NPs directed their activities towards the fourth specific objective (*ensure institutional quality of schools and school facilities*) - *External evaluation of the school quality supporting self-evaluation processes and school development* (NP 8 and NP 27) implemented by the State School Inspection. Although the performance indicators were met, it is important to point out that at this time, secondary schools were not prepared for targeted quality improvements and the project outputs were utilised in a limited number of schools.

In terms of the target groups' needs, NP 3, NP 7 and NP 24 are regarded as the most relevant ones:

The beneficiary of the projects *Modernisation of the educational process at secondary schools* (NP 3 and NP 24) was the Slovak Centre of Scientific and Technical Information. The needs of the target groups were identified correctly and preparation of teaching staff for the publication of a new state educational programme, electronically available multi-media and digital teaching and learning resources, increasing the digital literacy of teachers and methodological support in introducing ICT into the teaching process were at the forefront of interest of teaching staff in primary and secondary schools as expected. This was confirmed by outcome and impact indicators which were exceeded in all instances.

The beneficiary of the project *Development of vocational education* (NP 7) was the State Vocational Education Institute. Narrowing the target group of pupils and teaching staff in secondary specialised schools enabled a more precise definition of their needs. The agenda of VET was addressed by a discussion related to changes in the state educational programme and the content of this discussion corresponded to the focus of project key activities.

During the initial phase of the project in 2013 it was evident that one of the shortcomings of VET was a weak connection between school and practice and between competences acquired in school and those required by future employers. Therefore, the project focused on collaboration between schools and employers for a dual system of education reflecting the needs of the local region. Pupils' support was also important and it was managed by career counselling and professional orientation. The project significantly contributed to an interconnection of VET with the needs of future employers and increased the quality and readiness of future graduates in relation to their employability.

The teaching and learning resources acquired and provided to project schools as well as ICT for modernisation of the educational process including worksheets were used after the project implementation in line with the project objectives. All outcome and impact indicators were exceeded and the number of secondary school pupils taking part in project activities was exceeded nearly three times.

Secondary schools – demand-oriented projects

In the projects implemented by secondary schools were defined identical target groups: teaching staff and pupils of secondary schools. From the perspective of pupils and the achieved impact, it was not relevant whether the project outputs met their needs primarily or secondarily through increased teachers' competences.

The DOPs focused on meeting the needs of **secondary school pupils** especially by offering new or innovated methods of teaching and learning and by providing teaching resources focusing on the effectiveness of the educational process and on enhancement of the necessary labour market competences. In relation to this, a concept of professional and career counselling in schools was supported to help secondary school pupils in their professional orientation or in the process of selection an appropriate area for their further study.

Regarding the target group of **teaching staff**, the projects focused on enhancing their competences to enable the curricular reform of education and transformation to a knowledge-based society. This involved introduction of modern teaching and learning methods including the use of ICT. The third group of target group needs was represented by material and technical provision.

When comparing the objectives of individual projects with specific OPE objectives for both measures (1.1 and 4.1), it can be concluded that the projects focused mainly on the practical aspect of needs rather than institutional changes.

A statistical analysis of key activities of the evaluated projects in secondary schools demonstrated that approximately a half of the activities was directed on a general (broadly defined) innovation of processes of teaching. Training of teaching staff represented 25% of key activities of the implemented projects. The remaining 25% of key activities focused on securing teaching resources and materials and on material and technical provision and equipment of classrooms for a modern process of teaching and learning.

6.1.2 Measure 1.2

National projects

Considering the need of manpower capable of producing added value and to promptly adapt to ever-changing conditions and requirements of the labour market, the objective of the measure 1.2 was *to support improvements in the quality of education and in the development of human resources in research and development with the aim of achieving permanent adaptation of higher education institutions to the existing and prospective needs of a knowledge-based society*.

During the preparation of individual calls for proposals within this measure, the demands on the quality of the personnel, technical and infra-structural provision in Slovak universities were increasing which was reflected in the needs of target groups as defined in national and demand-oriented projects.

In line with the requirements stated in the National Strategic Reference Framework 2007 – 2013, it was necessary to eliminate all shortcomings of the tertiary system of education in Slovakia, especially the insufficient link between higher education institutions (HEIs) and research and development, a weak transfer of knowledge, experience and innovative processes into practice, the lack of scientific productivity or monitoring of graduates' employability. Only a small percentage of young people selected scientific careers and this needed to be addressed through motivation of students and doctorands to work in the academic world after graduation. A weak aspect of the Slovak tertiary system was also an insufficient connection of HEIs and businesses and subsequently, a lacking practical use of the research and development findings.[15]

---

[15] National Strategic Reference Framework 2007-2013

The focus of the national project *Higher education institutions as drivers of the knowledge-based society* (NP 13) was a systemic optimisation of tertiary education with the aim to modify individual educational programmes according to the labour market needs. This need was declared especially by employers who perceived the graduates as ill-equipped for solving practical work-related tasks. This need was similarly recognised by students themselves who aimed for the highest possible probability of their employability after graduating. Likewise, the cross-connection with practice is critical for operating of HEIs not only from the perspective of graduates' employability but also from the perspective of research, further sources of funding and overall prestige. The aim of the project was to deliberately instigate a nationwide interest in the study of prospective professionally oriented fields of study, namely technical and scientific as is in the interest of the economy of the Slovak Republic. More information on project outputs and impacts can be found in chapter 6.2.2 and 6.3.2.

Demand-oriented projects

Within the selected sample of evaluated DOPs (N=26), the activities focused on **a wider range of target groups**. The biggest groups were represented by university students (15 projects), university teachers/ teaching staff (11 projects), doctorands (11 projects), research and development staff (nine projects), university management (five projects) and post-doctorands (two projects). It should be pointed out that majority of projects (20) was aimed at two or more target groups whose needs overlapped or complemented each other.

The objectives of evaluated projects can be divided into three groups in order to provide a comprehensive view on the thematic focus of projects in their relation to measure objectives and target groups' needs. The first group can be defined as an attempt to increase the quality of university management, the second group of objectives can be oriented towards innovation and modernisation of study programmes and subjects and the third group focused on the development of the quality of education and knowledge potential of human resources, often in relation to strengthening of international collaboration. In four projects there were included objectives of the second and third group.

6.1.3   Measure 2.1

National projects

The baseline of the measure 2.1 is an assumption that further education of teaching staff secures higher quality of the educational process. This intention was to be addressed comprehensively by the *Concept of professional development of teachers in career progression* from 2008. Its objective was to increase professional competences of teaching staff in schools and school facilities. After the new school act was approved in 2008, an *Act on teaching and specialised staff* (Act N. 317/ 2009) was adopted. Key requirements on teaching profession are stated in several international documents, for instance according to the Lisbon Strategy, these are 'a high qualification, lifelong learning, mobility and partnership'.[16] In 2009, an *Act on lifelong learning* was adopted according to which the professional development covers not only the dimension of formal education (through continuing education and training of teachers) but also self-study of teachers. The above-mentioned legislative changes were designed to bring a higher quality of teachers' work as well as create suitable conditions and motivation for their further development. To achieve these objectives, two tools were developed:

- professional standards defining requirements for professional competences of teachers. This was a basis for a career system that enables career progression. According to this system, a system of continuing education of teachers was created as part of their lifelong learning.

---

[16] https://www.pulib.sk/web/kniznica/elpub/dokument/Cernotova1/subor/5.pdf

- a credit system that takes into account teachers' education in the system of continuing education. It is directly connected to the system of evaluation and remuneration of teaching staff and it has a motivational effect.[17]

The first instrument of this systemic change was carried out through the national project *Professional and career development of teaching staff* (NP 15). Its objective was to create **professional standards for teaching staff**. These represent a normative defining a set of professional competences necessary for a standard performance of teaching or specialist activities for a category and subcategory of teaching and specialised staff classified within a particular career level and career position.[18] Although professional standards fulfil multiple functions (for example as a tool for self-reflection to assess own teaching activity or as a tool for career development and progression), they will not bring an increased quality of the educational process themselves as they are one component in the system of support only.

The needs of teaching and specialised staff were the focus of an analysis carried out as part of the project mentioned above. Identification of educational needs of this target group enabled targeting education at genuine needs of the educational practice which leads to an increased interest and motivation of teaching and specialised staff in training activities. Based on the analysis findings, the project implementing institution (The Methodology and Pedagogy Centre) developed **a system of accredited programmes of continuing education** that created conditions for successful implementation of the *Act on teaching and specialised staff*.

Another systemic change related to the system of continuing education and to the process of recognition of educational attainment was the development of the qualifications system. In 2008, as a result of recommendations by the European Parliament and the Council, the *European Qualifications Framework for Lifelong Education* was established. Its aim was to increase transparency, comparability and transferability of qualifications of European citizens. A common European reference framework was formed covering all forms and levels of education – those acquired through formal education and training but also those that were acquired in the private sector.[19]

Following this development, the Government of the Slovak Republic agreed on the need to create a **National System of Qualifications** which was carried out through the national project *Development of the National system of qualifications* (NP 19). In linking the National system of qualifications with reference levels of the European qualifications framework, the **National qualifications framework** plays a key role (implemented through the same project). On the national level, it represents a transparent and structured model of an existing qualifications system (it covers all existing qualifications) while on the international level, it serves as a tool for comparing qualifications with the European qualifications framework and their transferability and recognition in the European region.[20]

Both systemic changes – professional standards for teaching and specialised staff and the national system of qualifications – were implemented through national projects and addressed European strategies in the education system from the perspective of its players and their needs. The need of lifelong education of teaching staff was based on the Lisbon Strategy and is directly related to an attempt to increase the quality of education in Slovakia (national project *Professional and career development of teaching staff*). On the other hand, by defining knowledge, skills and competences for individual qualifications the transparency of the system will increase. At the same time, an access to lifelong education will improve by supporting interconnecting of formal, non-formal and informal education and learning (national project *Development of the National system of qualifications*).

---

[17] https://www.pulib.sk/web/kniznica/elpub/dokument/Cernotova1/subor/5.pdf

[18] https://www.pulib.sk/web/kniznica/elpub/dokument/Cernotova1/subor/5.pdf

[19] Recommendations of the Council in relation to the European Qualifications Framework for Lifelong Education https://www.minedu.sk/data/att/10053.pdf

[20] Methodology for the development of the National qualifications framework of the Slovak Republic, 2013

In addition to system projects that introduced new elements in the system of lifelong education, projects considering **specific needs of a target group** in the educational process were implemented within the measure 2.1. For example, teacher training of Informatics teaching (national project *Further Informatics training of teachers at primary and secondary schools*) or teaching of Physical Education (national project *Increasing qualifications of teachers of Physical and Sport Education*). In the first instance, the project was based on a legislative change, namely the 2009 reform introducing Informatics on the 1st stage of primary schools and amending professional requirements on the teaching staff of this subject. In the second case, it was a result of a need to increase qualifications of teachers of Physical Education on the 1st and 2nd stage of primary schools.

Similarly IUVENTA – Slovak Youth Institute implemented two projects focused on a specific target group – **professional and voluntary youth workers and leaders for youth work** (national project *KomPrax – Competences for Practice* and *PRAKTIK – Practical skills through non-formal education in youth work*). The baseline for both projects was the *Act on support of youth work* (Act N. 282/2008) which defined basic terms related to youth unifying and clarifying the terminology. Both projects were also in line with European initiatives such as *EU Youth Strategy* (2009) which recommended investing into youth and at the same time strengthening its status. The issue of youth work became one of the priorities and through the projects mentioned above the needs of professional and voluntary youth workers were addressed by a specific training programme.

Demand-oriented projects

Further training support within the measure 2.1 was directed on supporting the raising the quality of non-formal education with a focus on the development of key competences but also on enhancing and raising staff qualifications.

Calls for proposals for DOPs within this measure were designed for **various target groups** including support of further training in industry, tourism and other sectors and also support of active ageing and improving the quality of life of senior citizens.

Among the target groups in the selected sample of DOPs (N=16) were the senior citizens over 50 years old (12 projects), management staff of tourism facilities, services staff (two projects), manufacture staff, technical and economic personnel, staff and management of a selected food production company (one project) and staff working in the engineering industry (one project).

The diverse composition of the target groups was reflected in the variety of their needs, too. The target group of senior citizens consisted mainly of no longer active citizens out of the working process and their needs focused on developing and enhancing of competences with the aim to improve their quality of life and their social contacts. The target group of employees (irrespective of whether they were management or manufacture staff) defined their needs towards the development of key competences to increase their competence profiles in the labour market, adapting to the needs of a knowledge-based society or raising the competitiveness of their company.

6.1.4   Measure 3.1

National projects

The measure 3.1 was focused on specific educational needs of members of the marginalised Roma communities (MRC) with the aim to raise their educational level and employability in the labour market. Social exclusion, segregation and a persistent tendency to place Roma children into schools for mentally and physically disabled represent the most critical problems leading to the development gap. One of the key priorities of the Slovak Republic in education is therefore integration of children and youth from MRC into the standard school environment to improve their employability prospects.

Globally, children's rights including their right to education *on the basis of equal opportunity* was adopted by the United Nations (UN) General Assembly as a *Convention on the Rights of the Child* in 1989. By adopting the *Convention on the Rights of Persons with Disabilities* in 2006, the right for the disabled to inclusive education was established. Inclusive education became an integral part of the reform agenda of institutions such as UN, UNESCO and the EU. The basis of this agenda is to keep as many children as possible in the main educational stream and eliminate segregation of children with specific educational needs. From the perspective of the teaching and learning process, this approach requires complex competences of teaching and specialised staff which was the baseline for national projects *Teaching staff training to support inclusion of marginalised Roma communities* (NP 35) and *Inclusive model of education at the pre-primary level of the school system* (NP 36). The target groups of these projects were **teaching and specialised staff of primary schools** (NP 35) **and kindergartens** (NP 36). For the development of programmes of continuing education the analysis of educational needs prepared within the project *Professional and career development of teaching staff* (NP 15) was not used as it did not take into account specific needs and approach to working with children from MRC and instead, a new targeted analysis of needs was undertaken.

To strengthen inclusion, it was necessary to focus not only on teaching staff but also on **pupils and parents from MRC** who represented the primary target group in relation to activities supporting a closer cooperation between schools and families/ communities from MRC.

While the above-mentioned projects were dedicated to the *development* of the inclusive environment (NP 35 in primary schools, NP 36 in kindergartens), the project *PRINED – Inclusive Education Project* (NP 37) used the previous experience and findings and *implemented* inclusive education in kindergartens and primary schools. All projects also provided the school facilities with material provision supporting social inclusion of pupils from MRC. This had a substantial motivational effect (see chapter 6.2.4). For example, in the project *PRINED – Inclusive Education Project* the outcome indicators were significantly exceeded – target of 2,000 pupils from MRC involved in formal educational programmes in comparison with 6,634 as the number achieved.

Demand-oriented projects

In the evaluated DOPs, the target groups were represented by pupils from MRC as well as by school teaching staff. In terms of the school types, the sample of evaluated projects included primary schools, primary schools with kindergartens, special primary schools, a primary school with the Hungarian language and also secondary specialised schools. A common need for **pupils from MRC** was acquiring of new knowledge and skills and an ability to apply them in practice, completion of compulsory education and transition to next levels of education.

On the other hand, **teaching staff** needed skills for working with pupils from MRC to develop their own competences and create conditions for their social inclusion.

The objectives of individual projects were defined in line with the needs of the target groups. They focused on raising the educational level of pupils from MRC through formal education, support of social inclusion of members of MRC, easier access to education, increasing their literacy level. This was to be achieved by new and innovated forms and methods of teaching and learning. Based on the respondents' feedback it can be concluded that the thematic focus of the projects corresponded to the needs of the target groups.

6.1.5   Measure 4.1

National projects

Within the priority axis 4 and specifically the measure 4.1, the OPE focused on transformation of a traditional school into a modern one for the Bratislava Region. As this region is the most developed in the Slovak Republic, it required a unique approach considering its specific needs in education.

Despite good cooperation, material and methodological support of schools by owners and school offices (as acknowledged in the OPE), a need to modernise the methods of teaching and learning with the use of ICT equipment, introduce new teaching and learning resources in primary schools as well as improve unsatisfactory results of literacy testing was identified in the Bratislava Region. These needs were reflected in the thematic focus of individual projects. In addition, project activities were also directed towards the support of preparation and further training of **teaching staff of kindergartens and primary schools** as meeting this need played an important role in achieving a curricular reform of education in the Bratislava Region.

Within this measure, four national projects were evaluated and their target groups and their needs did not differ from the projects implemented within the measure 1.1. Therefore, more details on this issue can be found in chapter 6.1.1.

Demand-oriented projects

As the sample of the evaluated projects included only one project within the measure 4.1, it is not possible to conclude whether the findings can be applied generally across primary schools in the Bratislava Region. Thus, it is necessary to view them as results and findings of a specific project only. The target group was defined as **pupils and teaching staff** in this project.

The findings related to secondary schools within the measure 4.1 are included with the findings from the measure 1.1 for secondary schools to provide a comprehensive view of the projects implemented in secondary schools as the subjects of evaluation were identical.

6.1.6   Measure 4.2

National projects

The characteristics of the Bratislava Region are particularly evident in the system of tertiary education as numerous HEIs are located in Bratislava – both public and private – offering nearly all fields of study. As the capital of the Slovak Republic, Bratislava is the largest and the most important centre of tertiary education and also of research and development in Slovakia. However, it was necessary to support modernisation and develop innovative forms of education, support the human resource development in research and development, improve collaboration with the private sector and foreign HEIs with the aim to increase the competitiveness of the whole region of Bratislava.

The focus of the measure 4.2 was further education and training together with tertiary education. There were enough providers of these services within the Bratislava Region; however, during the OPE preparation, a necessary legal and institutional background to direct and encourage as many groups of citizens in lifelong learning as possible did not exist.

The sample of national projects that were evaluated within this measure comprised projects with the same target group – **teaching and specialised staff** of schools and school facilities. In two instances, these were systemic changes – the development of professional standards that were the basis for establishing the system of continuing education for teachers (project *Professional and career development of teaching staff*) and the development of the National system of qualifications (project *Development of the National system of qualifications*). The objective of the remaining evaluated project was to increase competences of the target group in teaching Informatics in primary and secondary schools (project *Further Informatics training of teachers at primary and secondary schools*). The target groups and their needs therefore did not differ from the projects implemented within the measure 2.1. More information is included in chapter 6.1.3.

Demand-oriented projects

The beneficiaries of two evaluated projects within the measure 4.2 were two universities. They both defined their target group as **university teachers and doctorands**, one of them also included

university students. The project objectives were different, one beneficiary directed the project activities to increasing the quality of the doctorand study and support of international research which was successful and the objective was fully met. The other beneficiary aimed for the development of a bachelor study programme in a foreign language.

Thematically, both projects corresponded to specific needs of the target groups and these were successfully met through project activities.

Summary

The thematic focus of national as well as demand-oriented projects within the **measure 1.1** corresponded to the needs of a changing social situation to modernisation of processes in the education system. This was reflected in the setup of the planned interventions – through innovation of the process of teaching and learning (modern teaching methods, teaching resources, using ICT, material and technical provision) key competences of pupils will increase. Regarding secondary school pupils, a key need was to increase their employability in the labour market. Based on the analyses and interviews with the beneficiaries of the assessed projects it can be concluded that this setup was effective and was aligned with the real needs of the target groups in primary and secondary schools.

The baseline for the **measure 1.2** was a real need of tertiary education demonstrated by insufficient personnel, technical and infrastructural provision. Connecting HEIs with research and development and the labour market was problematic, too. These aspects echoed in the needs of the target groups such as students, management and university teaching staff and research and development staff. The selected sample of evaluated projects covered all types of eligible activities and focused on diverse needs of a wide range of target groups. A project that was designed to address this agenda systematically was included in the selected sample of evaluated projects (*Higher education institutions as drivers of the knowledge-based society*).

The basis of the **measure 2.1** was an assumption that further education of teaching staff leads to higher quality of the educational process. This principle was applied in practice by two national projects whose objective was a systemic optimisation through professional standards and the National system of qualifications. The projects focused on the needs of the target groups comprehensively as prior to the development of programmes of continuing education, a targeted analysis of educational needs was carried out. In terms of the demand-oriented projects, the target groups were particularly diverse (senior citizens over 50 years, management staff in tourism, manufacture staff, staff working in the engineering industry) with various and specific needs. This diversity was in line with one of the specific objectives of the measure and the requirement to continuously enhance qualifications of persons in the labour market as required by the knowledge-based society.

The measure 3.1 focused on specific educational needs of members of MRC with the aim to raise their educational level and employability in the labour market. From the perspective of the projects that were assessed, the setup of individual interventions was effective. Prior to their implementation, a targeted needs analysis was undertaken and target groups were not represented only by pupils from MRC but also by teaching and specialised staff working with them, their families and a wider community. The inclusive approach that was applied proved necessary.

Although the **measures 4.1 and 4.2** had a specific geographical focus on the Bratislava Region, the needs of the target groups were identical to those within the measures 1.1 and 2.1.

6.2 What outcomes/ outputs have been achieved through OP Education and which external factors have contributed most to programme/ projects' implementation?

6.2.1 Measure 1.1

Primary schools – national projects

The title of the measure 1.1 Transformation of traditional school into a modern one corresponds to the changes sought by the project beneficiaries to a high extent. Their objective was the overall reconstruction of primary schools not only in terms of their material provision, but also in terms of their curriculum.

Contextual factors also played an important role in national projects 9 and 10 implemented by the State Vocational Education Institute. In 2015, with the introduction of the innovated State educational programme, the subsidy for teaching of Physics, Chemistry and Biology on the 2nd stage of primary schools was increased. As many primary schools at that time did not have any classrooms available for teaching of these subjects (or the classrooms were obsolete), the demand and interest in the projects was high. Thanks to the national project 9, it was possible to build and provide equipment for **polytechnical classrooms** at 49 pilot schools; in national project 10, this increased to 161 primary schools. Modern classrooms and teaching aids enabled a greater degree of practical teaching that significantly contributed not only to the development of practical working skills but also to a greater interest in technical subjects. These outputs were actively used not only during the project implementation but are still used today as this type of material and technical provision is not subject to such rapid deterioration as, for example, information technologies. A questionnaire survey after the project's completion at participating schools confirmed that "they observe that children are more active and interested in the classes since they can use teaching aids and equipment."

Partial outputs of both projects are also **methodological materials and manuals** for new teaching aids that are expected to be actively used even after the projects' completion. This aspect was not the subject of a questionnaire survey conducted by project implementers. These outputs are publicly available on the project's website, but the data on the number of its visits are not available.

In both projects, **continuing training programmes** were created in the field of Man and nature (Biology, Chemistry, Physics) and Man and the world of labour (Technology) that also focused on introducing innovative methods into the teaching process in the given subjects. Trained teachers have applied new forms and methods to the teaching process although data on whether these teachers have remained in those positions to date are not available. Nevertheless, based on the results of the questionnaire survey and the feedback after the completion of both projects, it can be assumed that the level of competences of trained teachers has increased and had a positive effect on the quality of the teaching process of polytechnical subjects.

Training programmes for teachers in primary schools were also prepared within the national project 12. Their focus was twofold - the first group consisted of programmes for teaching of foreign languages, the second group consisted of programmes for teaching of pedagogy and psychology for the 1st stage of primary schools. These training programmes were accredited and provided by HEIs. After the accreditation expired, part of the content continues to be used, as in 2015, two HEIs submitted one of these programmes for comprehensive accreditation.

As part of this measure, **a software tool for identifying the professional orientation of primary school pupils** was prepared, that was actively used by teachers and career counsellors. Similarly, **an electronic catalogue of job positions** and their requirements have been created, that is still publicly available on the project's website, but the data on the number of its visits or on specific searches and use of the catalogue are not available. However, its placement on the website does not presume a high attendance, as it is neither on the front page, nor is it sufficiently visually marked.

Primary schools – demand-oriented projects

Similarly, in most demand-oriented projects, the project proposals were demonstrated in the overall modernisation of school material provision, such as the introduction of ICT in the teaching process, providing equipment for classrooms and laboratories, but also in modernisation of the subjects' content and applying new teaching forms to increase student activity. In line with the transformation of the educational process, training courses for teaching staff were provided, in particular training aimed at improving their ICT skills and supporting their key competences necessary for work with primary school pupils.

The outputs of the projects can be divided into two categories:

a) tangible outputs;

b) intangible outputs.

The tangible outputs of the projects were mainly ICT equipment (interactive whiteboards, computers, notebooks, data projectors, printers and other equipment), the establishment of language laboratories and specialised classrooms for science subjects. Within the tangible outputs, the most frequently used was the **information and communication technology** that enabled the introduction of new teaching methods into the educational process.

The most serious factor influencing the use of ICT devices is their lifespan and usability in a longer period of time. It is directly conditioned by technological development. Since the development is rapid, some ICT devices (such as laptops, teaching software, e-book readers, multipoint classrooms[21]) are not expected to be used for a long time. These aids often require a higher level of service intervention or a complete replacement after a relatively short period of time. Based on telephone interviews, most respondents confirmed that they use ICT tools purchased under this operational programme until today (except for one primary school). However, almost half (41%) of the surveyed primary schools have undertaken at least a partial replacement of ICT equipment since the project completion. Representatives of one school stated that especially at the beginning of the project implementation they encountered problems with the functionality of ICT tools that greatly affected their usability in the teaching process. The problem was in the incompatibility of older software programmes with new devices, according to the representatives of one school. On the other hand, some respondents declared that the purchase of equipment during the project led them to subsequently expand the methods of digital teaching and to purchase additional didactic technology.

The most important output for schools was didactic technology in the form of **interactive whiteboards** and equipment. A lower use of the technology was recorded only in one of two special primary schools surveyed, where external factors, such as the introduction of an inclusive model of education in primary schools, contributed to the lower results. The given model supports the integration of pupils with special educational needs of category A[22] which significantly influenced the percentage of these pupils in a special primary school. The substantial decline in the number of pupils, who are more likely to succeed in introducing new methods, has resulted in a higher percentage of pupils with multiple and combined disabilities (categories B and C[23]) attending school for a longer period of time after the project completion. The special educational needs and higher demands of working with these pupils have largely contributed to the lower success of the implementation of modern tools (especially ICT) in teaching and resulted in return of traditional teaching forms in some classes or groups of pupils. In the second evaluated special school, a similar situation was not confirmed, the percentage division of pupils into categories was not examined during the survey.

In addition to ICT equipment, the most frequently purchased projects outputs were **teaching aids** (professional literature, maps, visualisation aids, software aids, etc.). Their use in the teaching

---

21 Type of interactive testing of pupils using a voting device
22 Category A – pupils with mild degrees of mental disabilities
23 Category B – pupils with moderate degrees of mental disabilities; Category C – pupils with severe degrees of mental disabilities

process or preparation for competitions was confirmed by all respondents. The use was influenced to a lesser extent only by the process of unsuccessful or complex public procurement, which led to the non-delivery of teaching aids or professional literature (two respondents). Another factor that influenced the possibilities of their use is the lesson time management and a large amount of teaching materials and aids not allowing to use didactic software or specific teaching aids (for example pottery circles).

According to a survey carried out by the evaluation team, the most valuable project outputs were considered the outputs in the form of **didactic and methodological materials created during the project by teaching staff**, especially newly created methodological materials, worksheets, workbooks and presentations. In some cases, these materials were the only available teaching materials in the teaching of Informatics, or cross-cutting topics such as environmental or regional education. All respondents confirmed the intensive or active use of these teaching materials during the project implementation. All respondents except one confirmed their use to some extent until today. The exception was one primary school where the use of these materials is declining.

28% of respondents claimed that despite active efforts to use teaching materials, they do not use these aids in their original form. The most common factor that affected the level of use of methodological materials was the need to update them due to the ongoing changes in the State educational programme that was confirmed by 18% of the respondents. These changes involved mainly the content of the subjects which resulted in a more significant transfer of the created aids to the curricula of other school years or in a change of subjects' subsidy not allowing teachers to use the created materials to the full extent or even prevented their use. 10% of the respondents explained that they still use the resources rather as a supplementary material, mainly due to creation of new, more up-to-date versions.

Up to 73% of primary schools use the material outputs of the project to the same extent as during the project implementation, especially the purchased equipment (interactive whiteboards), teaching materials and aids. Representatives of other primary schools stated that they currently use the project outputs to a lesser extent than immediately after the project completion.

The values of a modern school are also reflected in demand-oriented projects in the implementation of **innovative teaching methods** in the teaching process. These include outputs in the form of experiential or project teaching that according to the survey was successfully implemented. Nationwide, the introduction of new methods was assessed by the respondents as successful. A higher interest of pupils was observed in the case of one-off outings such as **excursions, trips and stays abroad**. More intensively fulfilled curricula through experiential teaching in the form of trips and excursions also contributed to the support of pupils' social and civic competences, especially in the field of regional education. The conduction of stays abroad in countries such as the United Kingdom was aimed at improving students' language skills. However, these activities were carried out only during the project implementation.

The intangible outputs of demand-oriented projects were mainly **training courses for teachers** in the field of ICT or courses focusing on the development of literacy. Through them, teaching staff learned to work with digital aids and learned to develop new methodological materials which were considered the most significant contribution in terms of the target group needs. The specific impacts of these outputs are discussed in more detail in chapter 6.3.1.

Secondary schools – national projects

Even though the outputs and outcomes achieved in particular NPs are diverse, they all contribute to the objectives of the measure 1.1. They can be divided into several main categories.

Innovative methods for all forms of teaching practice were covered mainly in NP 3, NP 5 and NP 7 and took the form of various educational activities. The national project *Modernisation of the educational process at secondary schools* (NP 3 and NP 24) provided secondary school teachers with a data centre with experimental e-content to be used in the teaching process at secondary schools utilising ICT. The project *Evaluation of the education quality at primary and secondary schools in the*

context of the current curricular reform (NP 5) conducted training courses for teachers on the topic of evaluating the education quality at primary and secondary schools in the context of the current curricular reform. The project *Development of vocational education* (NP 7) organised continuing training courses for teaching staff in secondary school with a focus on mobility.

Electronically available multimedia and digital materials for teaching can be divided according to target groups into materials for teaching staff and materials directly intended for secondary school pupils. For example, *Modern education - digital education for general education subjects* (NP 1) focused on the development of 14,200 digital objects for students that are based on and support teaching in accordance with the State educational programme for 11 general education subjects. The term digital object means multimedia videos, animations, interactive exercises, sound records, visual additions to educational content, text documents, websites or presentations. The project *Modernisation of the educational process at secondary schools* (NP 3 and NP 24) developed seven innovative methodological textbooks for the training of secondary school teachers, focused on didactic models of education for the new State educational programmes utilising ICT (subjects: Mathematics, Physics, Chemistry, Geography, Biology, Slovak language, History) as well as other digital teaching aids created by secondary school experts and teachers during the trainings. The project *Teachers' training to support the development of school educational programmes* (NP 11 and NP 29) created training programmes on Methodology of the School Educational Programme (SEP) development for primary, grammar and secondary schools. For the distance education in the form of online courses, a Manual for distance education in the field of SEP development was created on the training portal.

The project for the **development of career guidance** *Development of vocational education* (NP 7) focused on changes in the content of vocational education according to the practice needs and requirements. The project verified the implementation of dual education system elements and involved 31 specific teaching and study fields, seven professional organisations operating in vocational training and 131 employers in the dual education system. The term career guidance includes counselling as to which type of secondary school is suitable for specific primary school graduates, as well as which type of higher education is suitable for secondary school graduates. The project *Modern education – digital education for general education subjects* (NP 1) activated the Community Portal, which included motivational videos for primary schools aimed at promoting secondary schools study programmes in metallurgy, mining, geology and geotechnics, engineering, electrical engineering, applied chemistry, technical chemistry, chemistry of silicates, processing of leather, plastics, food industry, agriculture, healthcare. Motivational videos for secondary schools were also prepared and focused on the promotion of selected higher education study programmes: life and lifeless nature science, ecological and environmental sciences, technologies, construction and production, agricultural and forestry science, veterinary.

Monitoring the level of knowledge, skills and key competencies of pupils and monitoring trends in school quality is an important assumption for evaluating changes in the level of key competences of primary and secondary school pupils. The project *Evaluation of the education quality at primary and secondary schools in the context of the current curricular reform* (NP 5) focused on all ISCED levels 1 to 3, with project outputs such as tests and tasks collections for various subjects in the form of a database application equipped with a graphical interface. The project *Raising the quality of education at primary and secondary schools utilising electronic testing* (NP 6 and NP 26) prepared testing tools for verifying pupils' knowledge and key competences, including a database of 30,000 tasks and a database of 130 tests.

Among the needs of secondary schools, **ICT equipment** for the preparation of teaching aids and teaching materials as well as for the teaching itself was identified as one of them. This issue additionally concerned a large part of NPs, except for NPs implemented in the Bratislava Region. Within the project *Development of vocational education* (NP 7), ICT and a software license for the use of a technological platform of teaching aids aimed at modernising the content and methods of education for pupils were delivered to the participating secondary schools. A total of 321 pieces of equipment and licenses for digital content were delivered to 229 secondary schools. In addition, 400 licenses for the PROFsmeSOŠ software tool (www.profsme.sk) were delivered to 361 schools.

Secondary schools – demand-oriented projects

The characteristic outcomes of projects implemented at secondary schools correspond to the structure of projects key activities. Practically 75% of the outputs concerned the innovation of the teaching process, the creation of **teaching aids and materials and material and technical provision**. The remaining quarter of the activities' outputs generated outcomes in the field of education and competences development of teaching staff.

The innovations were largely focused on educational plans, content focus of subjects and related didactic materials and teaching aids. A key element of innovation was the use of ICT in the preparation of lessons, in the teaching process and in the verification of pupils' acquired knowledge.

In the field of material and technical provision, modern electronic educational devices were procured in order to equip specialised classrooms or complete the equipment of specialised laboratories.

In the activities focused on the training of teaching staff, the predominant outputs were trainings, seminars and other types of raising the qualifications. Accompanying outputs were methodological materials for innovated subjects. A large part of the training of teaching staff took place in a way that required the active approach of the training participants and their participation in the creation of the resulting methodologies and educational procedures.

Most of the outputs of the implemented activities were used already during the project implementation and subsequently immediately after its completion. After time, some outputs began to be outdated or were technically obsolete. This concerned in particular the content of professional subjects from areas with high dynamics of knowledge development. Teaching materials for such subjects therefore require continuous review and update.

The situation was identical in the area of schools' provision with computer technology and progressive electronic equipment, that, however, have a short moral lifespan. Therefore, some equipment was decommissioned immediately after the end of the project's sustainability period.

The rate of use of the outputs related to the training of teaching staff was individual. A negative factor in this regard was leaving of trained teaching staff from schools. On the positive side, however, in most cases, investment in teacher training is also transferred to new teachers.

The way how schools treat the outputs of project activities and their release varies. Some outputs were presented to public, for example, on the school's website and serve to strengthen the school's prestige. At the same time, they also fulfil a motivational role for new pupils enhancing their interest in studying at a given school. Nevertheless, typically schools provide teaching materials to their own pupils and teachers only.

6.2.2   Measure 1.2

National projects

The aim of the project *Higher education institutions as drivers of the knowledge-based society* (NP 13) was to strengthen the cooperation of universities with the private sector in the development of new study fields and programmes and improvement of the existing ones. The project fulfilled this objective with several follow-up activities that ensured the active participation of university teachers, students and companies. A total of eight HEIs and 123 companies participated in the project. Within the project, **100 prospective study programmes** were selected, for which Slovak and foreign experts proposed innovations aimed at improved the quality of competences required by future employers, 82 of them introduced these innovations into the teaching process to some extent. At the same time, a platform for the training of university students in real conditions of business practice was created: 373 students took part in long-term education and 3,455 students took part in one-day excursions, 276 of them abroad. There were also 30 **practical training centres** at the participating HEIs equipped with teaching aids.

Demand-oriented projects

Compared to primary and secondary schools, the outputs of the measure 1.2 differ significantly. The high degree of HEIs autonomy and other public and private institutions that participated in the calls for proposals under the measure 1.2 allows them to create their own study programmes, carry out research activities and build quality management systems as well as develop various international cooperation initiatives. These differ significantly from other forms of formal or non-formal education.

The outputs in this measure were mainly of an intangible nature that was supplemented by material provision in the form of equipped laboratories, technology or training materials. The outputs focused mainly on three areas reflecting the common goal of increasing the quality of provided education and increasing the quality of science and research in accordance with the knowledge-based society needs.

a) **development of a school quality system:**

- creation of strategic documents and guidelines for the quality management system;
- creation of a feedback system;

b) **development and innovation of study programmes and their content towards their improvement and internationalisation and support of the graduate's transition into practice:**

- development of bachelor's, master's and doctoral study programmes;
- development of subjects for study programmes;
- development of study materials for study programmes;
- development of training courses and seminars;
- creation of opportunities to connect study programmes with practice;
- career guidance;
- material provision of study programmes and training courses (software solutions, newly built or reconstructed laboratories, training centres, preparations, etc.);

c) **support of the development of human resources in cooperation with foreign institutions in the field of science and research and support of the inter-university cooperation:**

- support of the international cooperation in the field of education and research through business trips, internships and grant mechanisms;
- completion of training courses in the field of foreign languages;
- outputs of international cooperation (publications, textbooks, methodologies, etc.);
- material provision of research.

The outputs of the project also differ in their duration. The outputs from the first group were accessible to target groups already during the project implementation, especially **international cooperation activities, lectures, workshops, promotional activities** etc. that were in most cases one-off outputs. The second group outputs could be applied only after their development within the project and were intended for long-term use within the institutions, such as **documents, guidelines and study programmes** developed during the project implementation.

Based on the survey, the majority of the outputs were developed or intensively used during the project implementation and most of them are still being used in their original or updated form by up to 46% of institutions. The institutions have succeeded in creating all the necessary documents for the quality improvement system, and a great part of the developed study programmes are currently accredited and open to those interested in study. It is understandable that due to the external factors influence, some outputs could not be completed or made fully accessible to the target groups (for example, due to unsuccessful accreditation of the developed study programme). However, these beneficiaries claim to use these outputs at the interdisciplinary level or for profiling at a lower level of education and are internally available to another target group.

The outputs are largely accessible only internally within the participating institution. Almost a half (46%) of the evaluated projects confirmed their outputs are publicly available (these are typically strategic documents, e-books, etc.). A special part of the projects was the international cooperation and the associated specialised publications that are publicly available in libraries or indexed journals. The outputs of the research were also targeted to other specialised workplaces. 39% of the respondents stated that the outputs are not publicly available and are intended primarily for internal use (especially study materials or other unpublished internal documents).

In terms of international cooperation, the outputs were highly valued especially from the perspective of the long-term development of the quality of study programmes at universities, HEIs and specialised institutions as well as from the perspective of a long-term profit from research through publications and acquired knowledge and scientific procedures.

6.2.3   Measure 2.1

National projects

The aim of the measure 2.1 was "to support the increase of the quality of further education with an emphasis on the development of key competences, deepening and increasing the qualifications of employees", that largely indicates what the planned outputs within these interventions were. From the evaluated sample, most of the national projects created **continuing education programmes** that focused on the target groups' needs, as described in more detail in chapter 6.1.3. A comprehensive system of further education for teaching and specialised school staff was developed within the project *Professional and career development of teaching staff* (NP 15) that was preceded by an in-depth analysis of the needs of this target group in comparison with newly created professional standards (see chapter 6.1.3). A total of 616 accredited training programmes were developed representing a comprehensive offer of further education for all categories of target groups (divided on the basis of the professional standards).

Within the evaluated sample of projects, programmes of continuous education with a specific focus were developed, for example on teaching Informatics (national project *Further Informatics training of teachers at primary and secondary schools*) or Physical and Sports Education (national project *Increasing qualifications of teachers of Physical and Sport Education*). Similarly, an accredited programme *Activating methods in education* was developed within a project with the same title (NP 20) focusing on the importance and application of activating methods in the educational process with an emphasis on media literacy.

Special training programmes for voluntary and professional youth workers were created and implemented by IUVENTA in two national projects - *KomPrax - Competences for practice* (40 training programmes), *PRAKTIK - Practical skills through non-formal education in youth work* (nine training programmes).

Although, all of these programmes have already lost the accreditation, their content can be still used, for example in the form of re-accredited programmes (IUVENTA) or by adapting the content for other projects (for example in the *Project is a change* project which directly uses the training programme of IUVENTA). Their training programmes are also publicly available on the website in the form of modules and the data prove that the attendance and demand for these materials is large (in the period from 1.2.2019 to 31.1.2020 2,765 users visited the website www.komprax.sk).

Under this measure, two outputs at the system level were developed representing the basic pillar of the education system:

- **professional standards for teaching and specialised staff** - developed and implemented through the project *Professional and career development of teaching staff* (NP 15). They represent norms defining the competences of the staff also in relation to their career positions (see chapter 6.1.3).

- **The National qualifications framework and the National system of qualifications** - developed within the project *Development of the National system of qualifications* (NP 19), they define the knowledge, skills and competences for individual qualifications and represent a link to the European qualifications framework (see chapter 6.1.3).

The use of these outputs is pre-determined by their nature - professional standards are a normative document that is directly covered and referred to by the *Act on teaching and specialised staff* (2019) and serves as a starting point for the preparation of continuing education of this staff. In the second case, in December 2017, the MESRS SR officially confirmed the adoption of the National qualifications framework (NQF) and the National system of qualifications and through the accession process, the NQF was connected to the EQF.[24]

Similarly as in the measure 1.1 and the measure 2.1, the programmes of continuing education and increasing the level of target groups competences were supported by **material and technical provision**, such as notebooks, data projectors, USB, and software for participants and graduates of Informatics (NP 14) , sets of aids for the subject of Physical Education (NP 18) or by providing equipment for continuing education classrooms, namely computer and didactic technology (NP 15). Most of these outputs are still actively used today, except for notebooks and software that generally have the shortest lifespan in terms of their deterioration and obsolescence.

Through the evaluated national projects, several **methodologies, manuals and methodological sheets** were developed (for example, the national project *Development of professional competences of teachers of kindergarten, primary and secondary schools to support the success of the primary education system reform*) that are publicly available on project implementers' websites. The data on number of visits and use of these materials are not available.

In addition, the use of **educational media** that were developed in the national project *Activating methods in education* (NP 20) and represent a total of 132 educational video programmes, 13 software solutions for interactive elements and 264 pre-defined content is not clear, too. Through an open license, these digital aids were meant to be freely accessible to all schools and school facilities, but this has not happened to date. These are fully innovative digital tools created for all types of schools (including special and boarding schools, primary art schools, free-time centres) for children from 3 to 18 years of age covering ethical, health, media and traffic education. This particular output thus represents a comprehensive e-learning offer that has a wide potential use not only in the educational process, but through television broadcasting it can play the role of alternative teaching in crisis situations, such as unpredictable closure of school facilities.

Demand-oriented projects

In the measure 2.1, cities, universities and private companies as beneficiaries focused on lifelong learning of various groups of the adult population. The main outputs of all projects were training courses developing key and professional competences of the target groups.

In most projects, the created training courses lasted only during the project implementation. At present, only three interviewed institutions continue to provide the created **training programmes**. This is a consequence of the expired accreditation and the termination of funding from project resources.

The material outputs of most projects are **teaching materials**, purchased **computer equipment** or **sports equipment**. During the implementation of training activities, all project outputs were used by the target groups more intensively than after the end of their implementation. Most of the outputs that are used after the project completion are also publicly available (in nine evaluated projects). This is particularly evident in case of projects whose beneficiaries are cities.

---

[24] https://www.minedu.sk/slovensky-kvalifikacny-ramec-a-narodna-sustava-kvalifikacii/

6.2.4　Measure 3.1

National projects

The first specific objective of the measure 3.1 was "to promote the social inclusion of MRC members by facilitating their access to formal education and the acquisition of skills needed in the labour market". The model of inclusive education has thus naturally become the main output of the national projects implemented under this measure. The process of its development became a key activity in the national project *Teaching staff training to support inclusion of marginalised Roma communities* (model of inclusive education in primary school) and also in the project *Inclusive model of education at the pre-primary level of the school system* (model of inclusive education in kindergarten). Thus, **a teaching model of a school with an all-day schooling system** was created serving as a tool for the inclusion of pupils from MRC. It enabled a systematic influence on children and pupils also in the afternoon through after-school clubs. The basic premise of this model was that an attractive and stimulating environment will increase the interest of children and pupils in school events, and thus improve their attendance, behaviour and school results. The selection and setting of activities therefore corresponded to the specific needs of pupils from MRC. For example, it allowed them to dedicate time for school preparation that proved to be an effective element with significant positive impacts (see chapter 6.3.4).

The implementation of an inclusive model of education requires a high level of teaching as well as professional competences of staff and therefore, it was necessary to **create accredited continuing education programmes** with a specific focus on working with children and pupils from MRC, specifically 12 accredited programmes (*Teaching staff training to support inclusion of marginalised Roma communities*) and two accredited programmes (*Inclusive model of education at the pre-primary level of the school system*). All programmes developed within these projects remained in the offer of educational programmes of the Methodology and Pedagogy Centre even after the projects' completion until the expiry of their accreditation.

However, these programmes did not only focus on training of individuals; a key aspect was the cooperation of teaching and specialised staff. Therefore, the given projects also enabled the **personnel support** necessary for the implementation of inclusive education and created:

- 400 job positions for teaching assistants - *Teaching staff training to support inclusion of marginalised Roma communities*
- 163 job positions for teaching assistants - *Inclusive model of education at the pre-primary level of the school system*.

The continuation of the financing of the mentioned job positions was ensured by the follow-up project *PRINED – Inclusive education project*, specifically:

- 400 job positions for specialised staff;
- 50 job positions for teaching staff.

Despite the contribution of these newly created positions for the participating kindergartens and primary schools, only a relatively small number were maintained after the projects' completion - 137 teaching assistants from the project *Teaching staff training to support inclusion of marginalised Roma communities*, 13 teaching assistants from the project *Inclusive model of education at the pre-primary level of the school system*, 23 members of specialised staff and 41 teaching assistants from the *PRINED – Inclusive education project*.

Specialised staff formed so-called **inclusive teams** that could include a school psychologist, a speech therapist, a special school teacher a medical teacher, and a social teacher (the composition of these teams varied according to specific needs; not every team included all the positions listed). These programmes were also accompanied by **teaching resources, methodologies and manuals**. Within the project *PRINED – Inclusive education project* (NP 37), specific methodological materials and manuals were developed, for example, for the implementation of screening examinations and stimulation programmes. It was the absence of these examinations and subsequent stimulating activities (for example, for the development of speech, communication, graphomotor skills) that led

to the frequent placement of children from MRC in special schools for pupils with mental disabilities.

Through these projects, **interactive systems** for the participating kindergartens and primary schools were also purchased. These focused mainly on the development of personality and cognitive process (perception, imagination, attention, memory) in order to provide enough stimulation that children from MRC often lack. A similar role was played by **teaching sets** supporting social inclusion (such as hygienic and socialising aids) and aids for sports, music and arts activities to which children from MRC and socially disadvantaged environment do not normally have access.

Demand-oriented projects

Projects under the measure 3.1 focused on increasing the educational level of primary and secondary school pupils from MRC which was also reflected in the outputs of the demand-oriented projects implemented under this measure. The outputs of the projects of the measure 3.1 largely correspond to the measure 1.1, as they did not target exclusively pupils from MRC. A substantial part of the projects was the material and technical provision of the schools which was available for all pupils. The projects also aimed to provide specific teaching aids needed especially for the integration of pupils from MRC and innovation of teaching content towards social inclusion and equal opportunities.

The most frequent output within the evaluated projects was **ICT equipment** (computer technology, data projectors, interactive whiteboards, etc.) to which students from MRK previously had limited access. The intensive use of this technology during the project implementation was confirmed by all respondents. 15 out of 17 primary schools still use ICT outputs. In other primary schools, they limited the use of technologies purchased during the project due to their deterioration and obsolescence.

The use of **teaching aids and specialised literature** to the same extent after the end of the project was confirmed by almost all interviewed schools. In case of pupils from MRC, the interviewed respondents especially appreciated the visualisation aids that helped to remove barriers in understanding and increased the pupils' interest in teaching and learning. In teaching practice, teachers appreciated aids such as talking pens, video sequences or interactive exercises that helped children improve their reading skills. The rate of utilisation of aids decreased after the end of the project only in two schools - they renewed the resources through other projects, or no longer organised interest activities for which the aids were intended due to time and financial reasons.

Training courses for teaching staff have created conditions for successful implementation of work with new teaching aids and created space for the development of new pedagogical documentation that is still being used by most of the teachers. A special output in this category consists of other forms of teaching, such as **tutoring courses and excursions** for pupils from MRC. The continuation of these courses and excursion persists, but the excursions continue to a lesser extent and at the expense of the pupils.

In the selected evaluated projects, there were three secondary specialised schools that developed similar outputs of material equipment as primary schools. The given outputs are currently being used in vocational training and in one secondary specialised school their use was extended to newly developed external study. A special output was the creation of a **motivational scholarship** at the secondary school; however, it is no longer available after the project completion.

The public availability of outputs is limited by their use directly in the teaching process and the publication of parts of the outputs (methodological materials) was confirmed only by three (18%) of the evaluated schools.

6.2.5   Measure 4.1

National projects

The key outputs of the evaluated national projects in this measure include **material and technical equipment of specialised classrooms** at 16 primary schools in the Bratislava Region (*Support of polytechnical education at primary schools*), training programmes for kindergarten and primary school teachers (*Training of kindergarten teaching staff to support the education reform*, *Foreign languages' training of primary school teaching staff to support the Concept of Foreign Language Teaching at Primary and Secondary Schools*) or **a collaborative educational portal with educational content for teachers** (*Modernisation of the educational process in primary school*).

As the nature of these outputs and outcomes is identical to those achieved by the mirrored projects under the measure 1.1, more information is provided in chapter 6.2.1.

Demand-oriented projects

The outputs of the project (worksheets, manipulation cards and pictures, video recordings, methodological manual) were fully used during and after the project implementation by the target groups, especially **the methodology and teaching and didactic aids**. The training of teaching staff took place during the project implementation in the planned form and scope. Nevertheless, there were administrative obstacles with a negative impact on the project implementation. There were discrepancies between the project language/ terminology and the school language/ terminology which led to inconsistencies, especially in relation to the spending of funds.

6.2.6   Measure 4.2

National projects

Two projects evaluated under the measure 4.2 aimed to achieve outputs and outcomes that, by their nature, had a wide national scope and application. More information on the development of professional standards and the National system of qualifications can be found in chapter 6.2.3.

Similarly, the outputs of the project *Further Informatics training of teachers at primary and secondary schools* are identical with the outputs of the mirrored project implemented under the measure 2.1 (see chapter 6.2.3).

Demand-oriented projects

As this measure also mirrored the measure 1.2, it focused on similar outputs and outcomes as the projects supporting universities and institutions active in the field of science and research, namely improving the quality of study fields and development of international cooperation. Under this measure, two projects were evaluated and they both set different goals.

The main output of the first project was establishing an international cooperation that was achieved mainly through the successful implementation of **foreign mobility** and the development of relations with foreign institutions. Within the framework of this established cooperation, professional articles were published at the international level and new knowledge was acquired in the field of working procedures that contributed to the overall increase of the quality of the institution. At the same time, this success was reflected in the upcoming **doctoral study programme in English**, where it was possible to develop a number of subjects taught by foreign lecturers in a foreign language.

The telephone survey showed that **international cooperation** is currently continuing and that mutual international ties enable the creation of other professional articles and publications. To this day, doctoral study programme in English enables to study in English and this is appreciated especially from the perspective of university internationalisation. Teaching in a foreign language

takes place in modern classrooms based on syllabi developed within the project and is supported by professional teaching materials. The only barrier to this study programme is lower adaptability of the older generation to the current progress in teaching in the English language as many professionals do not speak the language at the required level. However, the success of the programme is supported by the fact that the most important subjects are taught in English and are therefore to some extent also available to foreign students.

International cooperation was also the aim of the second project evaluated under this measure. The **study programme developed in English** has received accreditation and is currently creating opportunities to study European law in Slovakia. The greatest benefit is the offer of foreign language subjects. They are updated as required and the materials are available to all target groups in the library or in the form of e-books. The contribution of training to work in the European international area is particularly appreciated, as modern syllabi respond to current vocational training needs. It thus gives university teachers who have completed **language training** and doctorand students the opportunity to lecture and publish in English. In case of this university in Bratislava, doctorand students acquired practical skills in **international competitions of lawsuit simulations**, conducted within the project. Video recordings of the competitions are currently available in the preparatory years.

Based on the survey, it can be assessed that the outputs of both evaluated projects were successfully developed and are still relevant today. The continuation of international research activities and the focus on improving the quality of study programmes has thus become the driving force of the further development of both beneficiaries towards increasing of the professional quality at the university level.

Summary

The majority of the projects' outputs of the **measure 1.1** concerned the innovation of the teaching process, the material and technical provision including ICT, the development of teaching aids and methodological materials. Specific training programmes focusing on new teaching forms and methods were also necessary to achieve qualitative changes in the educational process and the transformation of a traditional school into a modern one. Most of the outputs are still actively used today; except for ICT equipment that is expected to have a relatively short lifespan. Excursions, trips and stays abroad, that were conducted only during the projects' implementation for understandable reasons, proved to be particularly effective in terms of motivation. However, the operational programme significantly contributed to the modernisation of many schools and school facilities - not only in material provision but also in terms of their curriculum.

The outputs of the projects of the **measure 1.2** were foremost of an intangible nature and thematically, they represented mainly strategic documents and manuals of universities, innovated study programmes at universities and also support for international cooperation in the field of science and research. In particular, innovations represented a greater connection between higher education and the labour market needs as well as the subsequent employability of graduates. Overall; however, the outputs of the measure 1.2 responded to the specific needs of different study fields of individual universities, so it is not possible to generalise their contribution.

The measure 2.1 created two outputs that represent the basic pillar of the education system - professional standards for teaching and specialised staff and the National qualifications framework. Both outputs serve as a starting point for the system of continuing education of employees. Their long-term use and even legislative anchoring are inevitable. At the same time, a large number of outputs focused on specific educational needs (in the field of Physical Education, Informatics, youth work) and also played a key role as they represented completely new procedures and opportunities for the given target group.

The most critical output of the projects in the **measure 3.1** was the teaching model of inclusive education, from which many other outputs were derived. It represented the introduction of a new all-day schooling system to ensure the cooperation of so-called inclusive teams. Their personnel were secured through the national projects; their professional readiness was enabled by continuing education programmes for work with children and pupils from MRC. At the central level, professional methodologies, manuals and instructions were created and owing to them, the incorrect placement of children from MRC in special schools was reduced.

As the **measure 4.1 and 4.2** focused on the same target groups needs as the measure 1.1 and 2.1, the type and nature of the outputs of these measures are identical.

6.3 To what degree have the supported demand-oriented and national projects contributed to the change achieved, i.e. to the improved status of target groups within education?

6.3.1. Measure 1.1

Primary schools – national projects

In this measure, two extensive interventions were carried out in a form of national projects, aiming to increase vocational competences of primary school teachers in teaching Polytechnical Education. Based on measurable indicators, such as the number of teachers involved in the educational activities of the project, both projects were successful, and the level of competences of the target group increased. This had a positive effect on the secondary target group – primary school pupils who demonstrated **an increased interest in polytechnical education subjects**. This outcome was confirmed by a questionnaire survey carried out within the projects as well as by a high number of pupils, who participated in the Primary School Professional Activities (which was a result of one of the activities in the project 9). Teachers described an increased motivation and enthusiasm of pupils as well as their families since in several cases family members were also involved in the project activities.

From the pupils' perspective, an element which helped achieve the intended effects was the training of education and career counsellors, who supported pupils in the selection of secondary school and their future occupation by informing them about vocational job positions with regard to the given region.

In addition to this, organising and attending domestic and international competition in vocational education and training also brought a positive impact on primary school pupils. The teaching and learning processes at primary and secondary schools were creatively and effectively linked together – talented primary school pupils competed in joined teams with secondary school pupils and cooperation with regional companies was formed. Altogether, 1,658 pupils from the whole Slovakia took part in the vocational competitions. Such interest and motivation displayed in an increased number of primary school pupils, who then applied to secondary specialised school study.

As previously indicated in chapter 6.1.1, the project *Foreign languages training of primary school teaching staff to support the Concept of Foreign Language Teaching at Primary and Secondary Schools* (NP 12) reacted to a particular legislative change and achieved qualification of almost 100% of teachers to ensure teaching of a compulsory foreign language on the 1st stage of primary schools. Teachers either supplemented or extended their education, which ensured a successful national implementation of this legislation and the project strategic objective was achieved to a high level (4,500 teachers with supplemented/ extended education). **The level of language and specialist competences of foreign language teachers on the 1st stage of primary schools increased**, having a positive impact on the process of teaching and learning. However, the effect was not achieved in the long-term as in the school year 2011/2012 the English language became a compulsory foreign language on the 1st stage of primary school. This fact had a negative impact on the project outcomes as the teachers trained in other foreign languages had no opportunities to apply their new qualification. Although the English language on the 1st stage of primary schools ceased to be compulsory in 2019/2020 and pupils can choose a different foreign language, the preference and dominant position of the English language persist. It remains to be seen, to what extent will the trained teachers be able to apply their knowledge in teaching other foreign languages again after such a long time.

Regarding the national projects, which had an objective to support and innovate the process of teaching and learning of polytechnical education at primary schools (NP 9, NP 10), a certain degree of sustainability can be assumed, since the continual training of teachers was supported by developing methodological manuals for given subjects, and especially by material and technical provision of classrooms for Physics, Chemistry, Biology and Technology. This type of teaching tools has an incomparably longer lifespan than for instance computer equipment and according to the

State Vocational Education Institute, which was responsible for the project implementation, all participant schools use this equipment and teaching aids up to this day. Similar feedback was provided in the case of using a publicly available electronic catalogue of job positions. Even though its placement on the website is not dominant, it has become an actively used instrument for education and career counsellors at primary schools according to the project beneficiary.

Perhaps the most remarkable contribution of the given projects, regarding their sustainability and their long-term impact, is the fact that they served as an inspiration and a model for a great number of schools, which were not directly involved in the activities and decided to innovate technical classrooms utilising the same teaching aids through the Integrated Regional Operational Programme (IROP)[25]. Such an accomplishment was based on the encouraging results and impacts achieved particularly by the national projects in the Operational Programme Education. The projects served as models for new project proposals, which aimed to increase attractivity of teaching and learning processes in technical subjects and consequently increase the number of pupils studying at secondary specialised schools. From the contextual perspective, this has an undeniable effect on fulfilling the needs of the labour market and employability of future graduates.

Primary schools – demand-oriented projects

Meeting the objectives and especially the needs of the target groups within individual projects can be evaluated based on particular changes and results, which had been achieved through the conducted activities. Regarding teachers as a target group, the respondents from the evaluated sample of 41 projects acknowledged as a result the fact that teachers completed training and were able to **apply the acquired knowledge and skills into the teaching process** and also develop and prepare their own teaching materials, tasks, exercises, which could be consequently used in practice. The most significant part regarding the key competences was the teachers' training in ICT and language skills, and also acquiring abilities to develop literacy of pupils. Many teachers completed study trips abroad, mainly for the purpose of improving their language skills. Respondents often mentioned that thanks to the project **the teachers' interest in further training continued** even after the project completion and were more willing to participate in other projects and activities inside and outside the school. Some respondents appreciated facilitating teachers' preparation for the teaching process thanks to the new resources and equipment. Respondents also appreciated new interactive classrooms, which were built and fully equipped in several schools through the project (language laboratories, ICT and science classrooms). They strongly emphasised that it was the first project of such a scale implemented at their school and therefore they appreciated the opportunity to acquire material provision for their schools and innovate the whole process of teaching and learning. Teachers were also given an opportunity to increase their competency profile, since in their opinion, their starting position was significantly limited, especially regarding the interactive aids, ICT equipment and overall material provision.

Regarding the target group of primary school pupils, the most significant change was recorded in their **increased interest in the learning process** and increased attractivity of mainly those subjects which were included in the project. The pupils learnt to utilise new teaching aids and quickly acquired new ICT skills. A high number of the respondents (48%) observed an increased attractivity of the teaching and learning processes and an increased interest of pupils in the subject content of lessons, where the new didactic aids and teaching materials were used. Several respondents emphasised the contribution of experiential forms of learning. The respondents who took part in excursions and study trips as part of the project, appreciated their contribution to pupils' understanding of the lesson content and improvement of their study results. Respondents observed an improvement of language and ICT skills during the project (subjective assessment, quantitative data were not available) and also an increased interest of pupils in reading and learning foreign languages. Respondents from schools with pupils with special educational needs observed that the lesson content was more accessible for these pupils and utilising interactive aids

---

[25] Specific call PO2-SC222-PZ-2016-2 with specific objective Improvement of key competences of primary school pupils

increased the level of their involvement in the process of teaching and learning, increased their activity in lessons and improved their test results. Some respondents remarked that thanks to modern teaching and learning methods, pupils accomplished excellent results in various competitions and improved their results in national and international testing. One of the respondents mentioned that it created opportunities for talented pupils to extensively develop their talent.

In terms of impact on school facilities as institutions, the following factors were identified:

- improved school quality;
- improved school's competitiveness within the given region;
- school's development in regional research;
- established cooperation among schools, local authorities and the private sector.

Persistence of the identified impacts until now was an important question during the phone surveys – in as much as 98% of the demand-oriented projects the persistence of the results/ impacts up to this day was confirmed. The other 2% comprised projects where the phone interviews were not successfully conducted.

Up to 71% of the contacted respondents mentioned that unintended results were also achieved during the implementation of the project. The most frequent unintended results declared by the respondents in the phone interviews were the following:

- improved team cooperation of primary school teachers;
- teachers' interest to join projects, improved management skills;
- utilising teaching aids acquired through the project in after-school activities and other subjects as well;
- cooperation among schools, exchange of experience and knowledge in education.

External factors of various character also affect achieving the desired results/ impacts. This fact was verified in the phone survey as well. 61% of the contacted respondents confirmed the external factors' influence, from which negative factors were found in more than a half of the cases, those being especially:

- legislative changes and the related School educational programme amendment;
- an extensively long public procurement process;
- a change of the schools' management.

The transformation of a traditional school into a modern one, improved preparation of pupils for the needs of the labour market and further education require modernising of the teaching and learning processes, which is a challenging process. Qualified teachers who have the required competences are able to apply modern elements into the teaching process and in doing so, support the literacy skills and the key competences development of their pupils. Based on the information obtained from the conducted phone interviews and analysis of the available project documentation, it can be concluded that the supported demand-oriented projects significantly contributed to the achieved changes and improved position of primary school teachers and pupils in the education system.

Secondary schools – national projects

National projects implemented in the secondary school sector aimed to contribute to various system changes. Considering the great diversity of their focus, it is not possible to generalise their impacts, but rather **to estimate the extent of the impact of the individual interventions:**

Modern education – digital education for general education subjects (NP 1) - The Slovak Centre of Scientific and Technical Information

The project outputs completely correspond to the baseline needs of the target groups – primary and secondary school pupils and their teachers to use innovative methods of teaching and learning, based on utilising ICT. Produced **digital objects and motivational videos** are an appropriate

instrument for quality improvement of pupils' training and adequately contribute to developing their key competences. However, it is necessary to state, that the number of teachers using the project results after the project completion reached only a half of the expected number. The expected targets were not reached in case of number of schools that use the project results either.

Modernisation of the educational process at secondary schools (NP 3 a NP 24) - The Slovak Centre of Scientific and Technical Information

The project outputs correspond to the baseline needs of the target groups, especially regarding teachers needing to gain competences for working with ICT and the necessary methodological and technical background. The teachers consequently applied **the acquired knowledge and competences** into the process of teaching and learning and therefore met the baseline needs of the secondary school pupils. In doing so, they increased their readiness for actualisation in the knowledge-based society. The positive fact is that the expected extent to which the project outputs would be used after its completion was achieved.

Evaluation of the education quality at primary and secondary schools in the context of the current curricular reform (NP 5) - The National Institute for Certified Educational Measurements

In this project, **innovative testing instruments and methods of their verification** were developed, so that the school quality and the quality of education in the context of the curricular reform of education could be empirically evaluated. The project's objective was to provide schools/ pupils with a feedback concerning quality and development of education. In this context, the project results are used by the target group even after the project completion. In this way, the schools can understand the rate of their effectiveness on the national scale. The detailed analyses are provided to the MESRS SR so that the effort in the lower-performing regions can be addressed.

Raising the quality of education at primary and secondary schools utilising electronic testing (NP 6 a NP 26) - The National Institute for Certified Educational Measurements

The main project output was a developed **national measurements system for development of education**. In the long-term, monitoring of pupils' level of knowledge and key competences is ensured as well as monitoring the level of the educational process at schools.

Development of vocational education (NP 7) - State Vocational Education Institute

The project reacted in a relatively complex way to the existing needs in the field of improving the secondary specialised education, focusing on cooperation among schools and employers for establishing a real dual system of education considering the needs of a particular region. The support of pupils by providing career guidance and occupational orientation counselling were also important. Implementation of the project addressed the matter of linking the vocational education and training at secondary specialised schools with the needs of employers though improvement of quality and training of future secondary specialised school graduates in relation to their employability after graduation, as well as the cooperation of secondary specialised schools with professional and corporate organisations and establishment of a model of multi-source financing and financing norms of secondary specialised schools. The project verified the effectivity of **introducing elements of a dual education system** and integrated 31 particular study programmes, seven corporate and professional organisations operating in vocational education and training and 131 employers into the dual system of education.

External evaluation of the school quality supporting self-evaluation processes and school development (NP 8 a NP 27) - The State School Inspection

Although all project results are in accordance with the identified needs of the target groups, their extensive utilisation in practice is not evident. From the expected number of 1,220 schools that were supposed to be using the project results after its completion, the external quality evaluation was only used by 196 schools, with the highest interest recorded at schools in the Bratislava Region. These national projects' impacts are therefore low.

Teachers' training to support the development of school educational programmes (NP 11 a NP 29) - State Vocational Education Institute

All identified baseline needs of the target groups were addressed by the project's results, as well as the measurable indicators, which were mostly exceeded thanks to completed training courses, and issuing of the Teachers News. In this context, it can be concluded that the utilisation of the project outputs by teaching staff of primary schools, grammar schools, secondary specialised schools and employees working in the field of education was received positively.

Secondary schools – demand-oriented projects

In regard to the target groups, the expected impact of demand-oriented projects was formed in the Operational Programme Education as an expected change: *Teaching staff with ICT competences actively contribute to the transformation of a traditional school into a modern one* and *Pupils with enhanced key competences.*

Based on the analysis of the demand-oriented projects' impacts, it is possible to observe that the educational activities significantly affected **improvement of teachers' competences**, which consequently manifested themselves in the educational process. Although using ICT was perceived as challenging in the process of increasing teachers' competences it was an indispensable condition for the transformation of a traditional school into a modern one. The dynamic development in the field of ICT requires continual training of users utilising these technologies. Secondary school pupils and youth in general have got an advantage in comparison to the older generation (teachers) as they live with ICT practically their whole life and are therefore more prone to adapt the new evolution in this field. Improving teachers' ICT competences was therefore extremely important.

The second, but an equally important challenge for teachers was an overall change or orientation in education towards training pupils in order to maximise their employability in the labour market in the modern (knowledge-based) society.

In the evaluated demand-oriented projects, pupils were a secondary target group whose needs were supposed to be met by the teachers' influence. The process of teaching and learning improved in general, the modernisation of the schools' technical facilities and innovated didactic tools and teaching aids acquired during the implementation of the demand-oriented projects was reflected in their results and **improvement of pupils' key competences**.

One of the attributes of a modern school (in comparison to the traditional one) is the attitude of pupils towards education. This particular shift in attitude was noted by some respondents as the project's unintended impact. Introducing new methods and approaches initiated an increased interest of pupils in studying, it enhanced their creativity and motivation to learn.

6.3.1 Measure 1.2

National projects

National project *Higher education institutions as drivers of the knowledge-based society* (NP 13) was one of the first large initiatives to establish cooperation of higher education institutions and the private sector in the process of education. This cooperation focused on adapting the contents and forms of 100 selected prospective higher education study programmes to the needs of the labour market and including university students in discovering real needs and bringing real solutions to the problems and innovations in companies. Although the real extent of the innovation carried out in the prospective study programmes of HEIs involved is not known, the project recorded significant impacts on the students involved. Almost a half of the 373 students who completed the long-term education in companies were **offered a job position** and approximately one quarter received an **offer of another form of cooperation** – for example an extension of the practical education, domestic or international internship, assistance with diploma theses or research tasks.

Demand-oriented projects

Although the particular results related to the target groups differ in several aspects, it may be concluded that the main changes for the following groups were as follows:

- higher education institutions employees completed training (teachers, management employees, employees working in the field of science and development or doctorand and post-doctorands, the target group varied depending on the project) aiming to develop selected skills (especially ICT, language and analytical)
- **higher education institutions employees acquired skills** that could be used in developing manuals, teaching materials (teachers, management) and implementing the informational system into practice (management);
- higher education institutions employees were introducing quality standards at the higher education institution (management, teachers, research and development staff);
- **international cooperation** was extended, including networking, dual study programmes, conferences and study/ lecture stays abroad (management, teachers, doctorands and post-doctorands, research and development staff);
- management and teachers at higher education institutions developed new and innovated study programmes for accreditation, using new and innovative forms and methods of teaching, including e-learning and dual study programmes;
- students and doctorands could complete new and innovated study programmes and utilise new and innovated forms of learning, including e-learning and dual study programmes;
- target groups used new laboratories and established centres of development, classrooms, teaching materials, aids, teaching texts and materials, purchased books and publications (students, teachers, doctorands and post-doctorands, research and development staff);
- publication activity of the target groups increased (teachers, doctorands and post-doctorands, research and development staff).

All given groups of results are necessary for the target groups in general. An individual need of individual higher education institutions, faculties, educational programmes or the target groups was decided by the applicant/ beneficiary by submitting or not submitting an application for a non-repayable financial contribution. Additionally, it can be concluded that the projects' focus addressed practically the whole scale of eligible activities, which could be financed from the financial resources of the European Social Fund in the sector of higher education institutions.

From the evaluated sample of demand-oriented projects (26), in 69% unintended results and their implementation were discovered. Positive unintended results declared in most of the evaluated projects can be divided into two groups as follows:

- established cooperation of higher education institutions with foreign universities in more areas than had been planned during the project;
- project outputs helped the target group and also the higher education institution achieve progress in fields that were not directly targeted by the projects and could be identified as interdisciplinary or institutional overlap of the project outputs.

Regarding the external factors influencing the extent of successfully achieved results, such effects were confirmed in 16 respondents (62%) of the whole sample of 26 projects, while the following negative factors resonated among them:

- changes in legislation regarding the accreditation, publication activity and employment relations;
- extensively long public procurement process;
- interest in accredited study programmes considering the attractivity of location where the project was implemented (according to respondents' statements students preferred to study in the capital of the Slovak Republic or foreign universities);
- interest of HEI's employees to join the system of quality evaluation at the HEI;
- lack of qualified specialists at required level.

In 11% of the project sample, the extent of the external factors could not be verified as the phone interviews were not carried out.

In the context of the projects' contribution to the further implementation of additional projects or follow-up activities, the implemented demand-oriented projects were very successful. Up to 73% of the evaluated projects (N=26) contributed to applicants' participating in other calls in grant schemes or other operational programmes, as well as projects such as ERASMUS, INTERREG, APVV[26], VEGA[27], KEGA[28]. According to respondents' statements, the projects were beneficial as they established and enhanced international cooperation with other HEIs and the private sector. The project results and outputs contributed to developing new study subjects or even new study programmes in several HEIs.

6.3.3   Measure 2.1

National projects

In the measure 2.1, two national projects were implemented, which represented systemic changes of education and their character directly underlies their long-term impact. In the first case, it was **professional standards for teaching and specialised staff.** They became a normative document from which many following processes evolved – for example career development through the process of attestation of teachers, professional development through establishment of further training programmes or processes of evaluation and remuneration of employees according to competency profiles. The professional standards are also used in study programmes of higher education institutions that prepare future teaching and specialised staff.

In the second case it was the development of a **Slovak qualifications framework** and **National qualifications framework** which created a way of linking the national system of education and qualifications to the European one. The given project represented the first phase of a long-term process which currently continues in a form of recognising the qualifications, which will allow implementing mechanisms for flexible acquisition of qualifications outside the formal education system.

As previously mentioned in chapter 6.2.3, the objective of the measure 2.1 is directly influenced by outputs and expected impacts of given projects. Since the given measure was targeted at **improving competences of target groups**, the measurable indicators were mostly represented by a number of graduates who completed the educational activities:

- more than 65,600 members of teaching and specialised staff - *Professional and career development of teaching staff;*
- 22,628 young people involved in the project activities – *KomPrax – Competences for Practice*;
- 11,814 young people involved in the project activities - *KomPrax – Competences for Practice*;
- 10,751 members of teaching and specialised staff – *Activating methods in education;*
- More than 3,300 teachers of Physical and Sport Education – *Increasing qualification of teachers of Physical and Sport Education*;
- 2,400 members of teaching and specialised staff - *Development of professional competences of teachers of kindergarten, primary and secondary schools to support the success of the primary education system reform*;

---

[26] Slovak Research and Development Agency
[27] Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences (VEGA)
[28] Cultural and Educational Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic (KEGA)

- 1,320 teachers of Informatics - *Further Informatics training of teachers at primary and secondary schools.*

All of the given projects met or exceeded planned indicators of the number of educational programmes' graduates and given the nationwide focus and number of participants of further training, a positive impact on the level of competences of the target group can be assumed. Also, a further improvement of the process of teaching and learning can be assumed. Some of the projects also supported the material and technical provision (Physical Education sets, teaching aids for Informatics) which can have a positive effect on the process of teaching and learning and the pupils, too.

Thus, it can be concluded that owing to a comprehensive offer of further training courses which was facilitated through this operational programme, there was an **increase in interest of the target groups in programmes of lifelong learning** and it undeniably managed to increase the number of participants in these programmes. Human resource development occurred not only in relation to the target groups, but also in terms of providers of programmes of lifelong learning, as the number of certified and gradually experienced lecturers and trainers increased. The positive impact was therefore recorded in the programmes and institutions of further training which directly leads to the meeting the specific objectives of the measure 2.1.

Demand-oriented projects

The largest target group in which the projects' impacts were identified by phone interviews, was the target group of senior citizens older than 50 years. Through participating in educational activities, they strengthened and further developed their **key competences** in the field of ICT, foreign languages, handicrafts, fitness activities and healthy lifestyle. An increased interest of the target group in education and self-study was identified as well as a decrease of a communication barrier and improvement in establishing new relationships and strengthening the existing ones. Social relationships were also developed with senior citizens from twinning towns which encouraged international cooperation.

Employees working in the tourism sector acquired **knowledge and skills for practice**, especially improved competences and qualifications in ICT, foreign languages, marketing skills, management, communication and gastronomy, which in beneficiaries' opinion in many cases helped increase the visiting rate of the facility and therefore, generally supported tourism in the given region.

In all project from this measure where the phone interviews were conducted (11), the respondents declared lasting results/ impacts until this day although there are no specific data available.

External factors affecting the project results were recorded only in three cases, among which were the insufficient interest of senior citizens in the activities, delayed reimbursement of incurred expenditure from the provider of the non-repayable financial contribution, and in one case the company providing training terminated the contract and therefore, the town as a beneficiary had to secure the educational activities from their own resources.

6.3.4   Measure 3.1

National projects

The objective of all evaluated project in this measure was to increase pedagogical and vocational competences of employees of kindergartens and primary schools with a special focus on work with children from MRC. Based on measurable indicators such as the number of educational activities graduates, the projects were successful and it can be concluded that the level of competences of the target group has increased. The strongest factor confirming this statement is an increased interest of the secondary target group – children and pupils from MRC – in project activities, specifically in the all-day schooling system. From this point of view, the impact indicators were exceeded multiple times, for instance in the project *Teaching staff training to support inclusion of marginalised Roma*

communities (NP 35), where 22,325 pupils got involved in the project activities in comparison to the planned number of 15,000. Similarly, in the project *PRINED – Inclusive Education Project* (NP 37), 6,634 pupils participated in the project activities while the target number of participants was 2,000.

Based on these results it can be assumed that the participant schools approached the implementation of after-school clubs systematically – not only through the pedagogical and vocational training of their employees whose competences for working with pupils from MRC evidently contributed to the improvement (thanks to targeted continual education), but also given the structure and content of these clubs, which were designed to attract pupils' attention and motivate them. One of the aspects, which was very effective and had a direct **positive effect on study results of pupils**, was introducing preparation and study for the lessons during the after-school clubs. This approach was consequently used by several other schools and currently presents a common practice in after-school clubs. Introducing the all-day schooling system had a positive impact on other areas as well – the number of missed lessons of pupils from MRC, which is one of the most common problems of MRC pupils, decreased by 30%.

These changes were significantly influenced by establishing cooperation with pupils' parents and the MRC community through awareness raising programmes and consulting. Many of them were carried out directly in Roma settlements and focused on triggering parents' interest in schooling and education. Given the well-targeted training, the specialised workers undertaking these activities possessed the multicultural skills necessary for their successful managing.

Based on the implemented projects and introducing of the inclusive education model in the participant kindergartens and primary schools, the principle of the inclusive approach was confirmed demonstrating a positive impact not only on pupils from the disadvantaged environment, but also on the *school as a whole* and it became the most effective instrument for eliminating the discriminating attitudes.

Demand-oriented projects

Project outputs utilisation in this measure aiming to increase the level of education of primary and secondary school pupils from MRC has an effect on the achieved changes or project impacts. These were identified through phone interviews with 11 respondents.

According to the representatives of the beneficiaries, the impact on primary school and secondary specialised school teachers were as follows:

- given the developed ICT and literacy skills, teachers were able to **apply the acquired knowledge into practice** while developing worksheets, teaching materials and exercises;
- acquired **skills in the field of inclusive education** and special pedagogy helped teachers approach pupils with special educational needs individually, especially pupils coming from MRC;
- **improved communication** among the pupil's family from MRC and teachers.

The impacts mentioned above contributed to quality improvement of the process of teaching and learning and therefore to improvement of conditions for integration of MRC pupils. Impact on primary and secondary specialised school pupils from MRC were identified by the beneficiaries as follows:

- developed key competences and acquired knowledge needed for the labour market;
- improved educational and hygiene habits;
- improved attendance;
- improved awareness of MRC pupils of their own culture;
- increased number of pupils who continued studying in higher grades and at secondary schools;
- improved social inclusion of MRC pupils.

All of the contacted respondents confirmed lasting of the impacts until this day.

The external factors that had an effect on achieving the project results were confirmed during ten individual interviews. The most resonating factor was an insufficient cooperation of parents, which was demonstrated in the lower degree of interest of pupils from MRC to join the learning process and project activities. Administrative burden influenced the teachers' motivation to enter other projects.

6.3.5   Measure 4.1

National projects

The impact of the projects implemented in the measure 4.1 is closely related to the projects, which were carried out within the measure 1.1, since these were nationwide interventions such as compulsory teaching of a foreign language on the 1st stage of primary school (project *Foreign languages training of primary school teaching staff to support the Concept of Foreign Language Teaching at Primary and Secondary Schools*). Similar projects were *Training of kindergarten teaching staff to support the education reform* and *Modernisation of the educational process at primary schools.* Their impact was to some extent pre-determined as they directly complemented the mirrored projects with only one difference – they focused exclusively on beneficiaries in the Bratislava Region. As previously mentioned in chapter 6.1.5 the needs of teaching and specialised staff in the Bratislava Region did not differ significantly from other regions. This was demonstrated in the fact that all projects carried out the same activities whether inside or outside the Bratislava Region. The only exception was the *Modernisation of the educational process at primary schools* (NP 25) which did not provide technical equipment and teaching aids for participant schools within the measure 4.1.

Demand-oriented projects

The supported project contributed to improving pupils' **literacy and language skills** which was manifested in pupils' above average results in national testing. According to the respondent, this was reflected in internal evaluations as well as they continue to use the tests developed through the project. In addition, the overall quality of education at this primary school improved which was confirmed by grammar schools that appreciate preparedness of the primary school leavers. On the other hand, the teaching staff improved their **competences in support of literacy skills development**, they learnt how to organise the lessons using them, they improved their ICT skills and continue to apply them in lessons. They use modern educational forms in teaching the English language and appreciated mainly the professional development facilitated through the project.

The contribution of the project was shown in a form of unintended impacts, specifically in the fact that the project improved cooperation of the teaching staff and enhanced school's reputation (primary schools from other regions of the Slovak Republic contacted them and included the newly created exercises into their curricula). According to the respondent, the project overall received a positive feedback and pupils continue to present their theatre performances that had been rehearsed during the project in various after-school events even after the project completion.

6.3.6   Measure 4.2

National projects

In terms of the measurable indicators of impact, the success rate of individual evaluated projects in the measure 4.2 varied. In the project *Professional and career development of teaching staff* (NP 15), the number of employees who participated in the project educational activities was exceeded

multiple times – 9 214 in comparison with the planned 2 000 participants. In the project *Further Informatics training of teachers at primary and secondary schools* (NP 14), 122 schools were involved while the planned number was 60. In the project *Development of the National qualifications framework* (NP 19), the number of employees participating in the project educational activities was 185 compared to the planned 455.

On the other hand, the overall impact of these projects is an integral part of the impacts of projects carried out in the measure 2.1 as these were nationwide interventions such as the development of professional standards for teaching and specialised staff (project *Professional and career development of teaching staff*) or the development of the National qualifications framework (project *Development of the National qualifications framework*). Thus, their implementation in the Bratislava Region did not present any specific characteristics leading to different impacts. The overall impact of these projects is therefore described in detail in chapter 6.3.3.

Demand-oriented projects

In this measure, two demand-oriented projects were evaluated. The success of the first one was confirmed by the established **cooperation with countries abroad and international mobility** which led to implementing new approaches and publishing professional articles as well as quality improvement of research at level comparable to foreign universities. In addition to this, it also led to implementing a doctoral study subject in the English language which was supported with the presence of foreign lecturers and caused quality improvement of the education at this university.

The second project's objective was met by developing and obtaining accreditation of a master's study programme instructed in the English language. Thanks to this, **the variety of offered subjects in the English language increased** and students gained practical skills by participating in lawsuit simulation training. The university also benefited from organising international competitions and accepting applicants from other countries. University lecturers increased the use of the English language in teaching, they had an opportunity to give lectures and publish in the English language and they also participated in the international mobility activities. Doctorands were also given an opportunity to study and give lectures in English.

Summary

The positive impact of the projects in the **measure 1.1** was supposed to be achieved by implementing innovative methods, didactic aids and ICT into the process of teaching and learning. Within the evaluated sample, these effects have been achieved and confirmed. The interest of pupils in the subjects that were included in the projects (for example polytechnic education) increased, which manifested itself in their study results. Material and technical equipment had an intended motivational effect, and both are still used to a high extent (except the ICT equipment). The projects also had a positive impact on the school's teaching staff who improved the level of their professional competences owing to the training focused on an active utilisation of modern teaching approaches. However, in most instances, these statements were not proved by qualitative data as the indicators were limited to documenting the number of participants in the training activities and did not reflect the real change and the utilisation in practice. In this context, a systematic evaluation of the projects and their specific impacts on the target groups is a significant shortcoming.

Regarding the national projects, which were evaluated within the **measure 1.2**, the positive impact was recorded especially on the target group of HEI students in a form of an offered job position or another form of further cooperation. The positive effects achieved through the demand-oriented projects were demonstrated in the newly acquired skills of the HEI employees, extended international cooperation and development of new study programmes. The real extent of innovation of the given subjects or the particular results of cooperation among HEIs and companies were not identified.

In the **measure 2.1**, two national projects were implemented and their nature directly influenced their long-term impacts. The development of professional standards and the National qualifications framework represent systemic interventions, effects of which persist until these days and are embedded in legislation. Based on the results of the demand-oriented projects, it was confirmed that they reflected the needs of (various) target groups and they could utilise the new knowledge and skill in practice. Through the OPE, the interest in programmes of lifelong learning has increased and so has the number of their participants.

Significant positive impacts on children and pupils from MRC was achieved through projects in the **measure 3.1**, not only thanks to targeted further training for teachers working with them, but mostly thanks to implementing an inclusive model of education in participating schools. The positive effects were demonstrated in a form of a strong interest of pupils from MRC in after-school clubs and improvement of their attendance and study results. At the central level, professional methodological manuals and instruction materials were developed having a direct impact on a reduced number of pupils incorrectly placed into special schools. Positive effects were demonstrated not only in the target group of children and pupils from MRC, but from the perspective of the whole school.

The impacts of the projects implemented in **measures 4.1 and 4.2** are closely related and they are, to a high extent, identical to the impacts of the projects in measures 1.2 and 2.1, as these were nationwide interventions.

6.4   What factors played a role (positive or negative) in the achievement of effects of supported interventions for target groups?

6.4.1   Measure 1.1

Primary schools – national projects

Within the measure 1.1, the most significant external factors affecting the projects' outcomes were the following legislative changes:

- introduction of the State educational programme in 2008 which stipulated a compulsory foreign language from the primary level of education. It created a need to increase the number of teachers qualified for teaching a foreign language on the 1st stage of primary schools.

- Amended school act from 2011 introduced the English language as a compulsory foreign language on the 1st stage of primary schools. This had a negative effect on teachers who acquired a new qualification for teaching of a different foreign language as they could not apply their qualification.

- Introduction of the innovated State educational programme in 2015 which increased the funding for subjects Physics, Chemistry and Biology on the 2nd stage of primary schools. It created a need to innovate/ develop not only classrooms for these subjects but also new teaching methods and forms. This factor had directly influenced the national projects 9 and 10.

As already stated in chapter 6.3.1, national projects implemented within this measure had a positive impact on target groups, for example an increased level of professional competences of teaching staff or a more attractive process of teaching and learning for primary school pupils. From the sustainability perspective it can be assumed that teaching staff continue using their new skills, innovated methods and forms in the educational process although exact data on participants of continuing education and their current job positions are not available. However, in the national project *Foreign languages' training of primary school teaching staff to support the Concept of Foreign Language Teaching at Primary and Secondary Schools* (NP 12), the teachers who extended their qualification to teach a different foreign language to English could not apply their newly-acquired competences as from the school year 2011/2012 the English language was a compulsory foreign language on the 1st stage of primary schools. Although from the school year 2019/2020 the English language is no longer compulsory and pupils can choose a different foreign language, the preference and dominant position of English persist (see chapter 6.3.1).

Demand-oriented projects

The primary target group of demand-oriented projects were primary school pupils who continue to benefit from the acquired knowledge and skills. To ensure a continuous development of their key competences, it is necessary to sustain the achieved outcomes and results and support follow-up activities in the field of formal and non-formal education.

The OPE projects provided primary schools with new ICT equipment and enabled them to get first experience with projects. This has encouraged schools to participate in other project initiatives, directly or indirectly related to OPE objectives. Nearly 73% of the primary schools assessed within the measure 1.1 confirmed their involvement in another project. The most common follow-up initiatives were small projects providing **ICT equipment**, for instance by COOP Jednota and KIA Motors Slovakia Foundation, the Android Project – An External Informatics Teacher, Slovenska Sporitelna projects and Microsoft projects. The follow-up activities focusing on **key competences** were supported by grant schemes to prevent criminal and pathological events but also environmental projects such as *Green school*, *Learning garden*. Intercultural understanding was supported by projects *Educate Slovakia* and *Comenius* and they created a collaboration developing language skills through programmes such as *ERASMUS+* and *eTwinning*. Offers by the Operational Programme Human Resources were used as well, namely *IT Academy – education for the 21st century*

supporting teacher training in ICT and modernisation of subjects such as Mathematics, Informatics, Science and specialised subjects. Similarly, a project within the call for proposals *More successful in a primary school* supported the quality of education and equal opportunities through developing suitable environment for integration of pupils with special educational needs and pupils from MRC. One of the schools participated in an IROP programme.

A negative impact on the projects' sustainability was demonstrated by a short lifespan of ICT equipment as well as by legislative changes, namely **frequent changes of the State educational programme** which was modified during the implementation of these projects. Primary schools were affected several times as it was necessary to amend the newly created teaching resources as per new requirements and in some cases, they had to be reviewed. Working with pupils and introduction of innovative teaching processes was also affected by negative effects caused by **personnel changes**. A high turnover of staff trained within a project had a strong impact on one school only although it was considered by other schools as a potential risk factor for project outcome sustainability. A negative impact of external factors was perceived by primary schools' representatives in **ever-changing needs of target groups** that were caused by an increased number of pupils from special primary schools in primary schools or by an increased number of pupils in category B or C in special school classes triggered by a gradual integration of category A pupils in standard primary schools.

Secondary schools – national projects

The effects of external factors on implementation of national projects identified by interviews had mostly a negative character. Overall, these effects can be divided into three basic levels:

The first level is represented by **framework conditions and legislative environment shaped by MESRS SR**. For example, if by changing the State educational programme the time allocation of individual subjects changes, it can have a negative impact on the outcome of projects implemented before that. From this point of view, a legislative transparency of long-term intentions and their predictability by professionals is necessary. On the other hand, a legislative support of project outcomes can be a positive factor as in the project *Evaluation of the education quality at primary and secondary schools in the context of the current curricular reform* (NP 5). As a result, the nationwide testing on the ISCED 1 - ISCED 3 educational level as per the new concept by MESRS SR is undertaken in schools on a yearly basis.

The second level comprises **the environment shaped by the secondary schools' owners**, typically by self-governing regions. It can be reflected in the regulation of numbers of first-year secondary school pupils and the development of prospective fields of study with potentially high employability in the labour market. In introducing a dual system of education, an important role is also played by the school owners and employers and their associations.

The third level is represented by **the existing environment on the level of secondary schools**. In the Theory of Change, all external factors affecting the outcome of the interventions was conditioned by certain *interest*, namely *interest of schools in collaboration, interest of teaching staff in introducing innovations in the process of teaching and learning, interest of teaching staff in further training, interest of schools in implementation of changes*.

While in DOPs the first two levels played a more significant role, in NPs it was especially the third level. It is evident that the contribution of NPs within the OPE and their impact on the target groups is considerably influenced by schools' interest in implementing NPs' outcomes. It therefore depends on the extent to which teaching staff and school management identified with objectives of individual NPs.

The sustainability of NPs and their long-term impact on the institutional level are rather high. It can be concluded that the higher the level of alignment of objectives with those that secondary schools are willing to accept, the higher their long-term impact. The achievement of objectives is easier when supported by legislation.

Secondary schools – demand-oriented projects

The most important factor affecting the achievement of expected outcomes of DOPs is the quality of the project setup, the definition of its objective and key activities leading to its achievement. Most DOPs are designed well and they reflect the needs of a particular school, teaching staff or pupils.

When assessing the project outcomes and their contribution to the achievement of the specific objectives of the measure 1.1, the outcome of most of them was achieved to a *high degree*. In five projects, their contribution to the specific objectives was *above the average*. In two projects, the respondents thought the contribution was to a *lower degree* which was caused by organisational changes in secondary schools. The most significant negative factor was a **discrepancy in the view of the school and its owner on the school's next development and operation**. Another negative factor was a **discrepancy between the educational capacity and the actual regional need**. This was observed in both scenarios – the school's capacity was sufficient but the pupils' interest was not and conversely, the school's capacity was not able to address the high pupils' demand.

The sustainability of DOPs was formally secured although some outputs have lost their lifespan even before the end of the project sustainability period.

Further training of teaching staff cannot be seen as a one-off activity and should run continually. At the same time, many teaching resources require interim reviews, especially if they are related to areas with intensive technological development and research. Also, teaching resources gradually become outdated and are subject to wear and tear.

A long-term positive effect can be assumed in projects that managed to instigate certain processes, changed the view of the school as being an educational institution, changed teachers' attitude to a long-term need of further training and also changed the attitude of pupils to learning.

6.4.2   Measure 1.2

National projects

HEIs possess a considerable degree of independence which is evident in their decision making to participate or not in national or demand-oriented projects. In the national project *Higher education institutions as drivers of the knowledge-based society* (NP 13) only eight out of 25 HEIs outside Bratislava got involved. This means that students and teachers from other HEIs could not directly participate in the project activities. Given the OPE setup, university students and teachers from Bratislava HEIs were not eligible target groups within the project despite the fact that there is a high concentration of HEIs in this region. As a result, prospective target groups of this project were considerably reduced. A high degree of autonomy of HEIs also meant that individual HEIs made their own decision to what degree they would implement the experts' recommendations regarding prospective study programmes. There is no information available to what extent these recommendations were translated to the educational process of HEIs. One of the reasons of a large number of HEIs not taking part in the project could be the fact that within tertiary education, there is no ideal beneficiary of a similar national project. NP 13 also had to deal with difficulties related to public procurement which caused a delay of some activities or even their cancellation (e.g. establishment of teaching centres in businesses).

One of the positive factors that affected the outcome of the interventions was a gradual increase of interest and trust which had a positive impact on the interest of HEIs to participate in the project. Similarly, several businesses that had been previously hesitant expressed an interest to participate. In 2006, the Centre of Education Management (CEM) at the Faculty of Management of the Comenius University (FM CU) in Bratislava started its activities as an attempt to continue with some of the activities of the NP 13. It focuses on research in tertiary education, especially connecting education with the labour market needs and cooperation with the research and development. CEM had full access to methodologies, manuals, data, information as well as project outputs and aimed to build on them with its own research activities and analytical work.

Based on the interview with the Slovak Centre of Scientific and Technical Information, the **cooperation of HEIs, namely of faculties and businesses** has been sustained and further enhanced on a bilateral basis even after the end of the national project. It takes place through the following: interactive workshops, presentation days of businesses, career days, short-term and long-term internships focusing on final theses in line with the needs of businesses, excursions, seminars, lectures and so on.

Demand-oriented projects

More than a half of the respondents (58%) stated that there existed external factors affecting the sustainability of project outcomes and outputs. Out of seven respondents who did not confirm the existence of such factors, four respondents added that this was because of an internal focus of the project (focused on university management) or their staff that is employed long-term is able to observe the development curve of the school quality and external factors do not see as a threat. An additional reason was stated in relation to the hypothetic nature of external factors and the assumption that only a significant legislative change would be considered critical (e.g. enormous outflow of teachers).

External factors that were mentioned by the respondents were mostly those that had a negative impact on the outcome of the supported interventions. More specifically, this was **a legislative change** related to the accreditation system by the act N. 269/2018 on ensuring the quality of tertiary education which was seen as a risk to some study programmes. On the other hand, two respondents marked this legislative change as positive in terms of the introduction of the system of quality because owing to the OPE they were well prepared for these changes.

Other external factors with a negative impact on the sustainability of outcomes the respondents identified an interest of students in the new and innovated study programmes, financial resources to support HEIs and research, a need to upgrade the technical equipment, an interest of the private sector to collaborate with HEIs or sufficient internal capacity. More specifically, based on the type of the institution, an amended act on HEIs was mentioned as it weakened the position of the Slovak Academy of Sciences and prevented it from undertaking certain activities. A discrepancy between the state approach to private and public HEIs was perceived similarly.

6.4.3   Measure 2.1

National projects

Continuing education of teaching and specialised staff was conditioned in legislation by the Act on teaching and specialised staff N. 317/2009 adopted in 2009. Together with the professional standards, a credit system was created taking into account teachers' education and training in the system of accredited continuing education. This was a basis for the system of differentiated remuneration of teachers. However, the system poses a risk that the key motivator of further training is pay progression rather than improvement of performance. Also, career progression does not necessarily mean a higher quality of teaching and learning as other factors enter into this process such as teacher's personality and skills.[29]

Despite that it can be concluded that through the national projects implemented within the measure 2.1 and with a legislative support, a defining shift was instigated in further training of teaching and specialised staff that has persisted till today. This long-term process of changes has played a key role in increasing the quality of the educational process and in the human resource development in general.

---

[29] http://www.noveskolstvo.sk/article.php?105

Demand-oriented projects

The sustainability of activities within the measure 2.1 is dependent mainly on external factors that directly affect the sustainability of project outcomes or outputs. Currently, some institutions continue in providing courses of lifelong education. However, these activities are limited by the interest of target groups that is not even across all training programmes. Based on the survey, a half of the evaluated projects (50%) is affected positively or negatively by external factors; 31% of the respondents stated that this effect cannot be specified.

6.4.4 Measure 3.1

National projects

The evaluated projects implemented within the measure 3.1 had a significant instigating character in several aspects. For the first time, an inclusive model of education has been implemented with children and pupils from MRC. It covered kindergartens and all levels of primary schools and presented a possible systemic solution considering specific characteristics of pupils from this group.

The evaluated projects were the first considerable impulse that has confirmed – by its outcomes and impacts - the necessity of financial and personnel support for schools with high numbers of pupils from MRC. They also demonstrated that they are well-founded (as confirmed by the international PISA testing) and that segregation of the educational system has a negative impact on students' attainment. This corroborates the fact that pupils' social background influences their attainment to a strong degree and it is necessary to increase the level of inclusion of the educational system.

Based on their practical experience, the directors of several schools involved in these projects came to the same conclusions and after the end of the implementation of these projects, they proactively looked for other sources of funding for maintaining the inclusive teams (made of teaching assistants, school psychologists, speech therapists) and special interest groups that formed the all-day schooling system. For example, they managed it through co-financing with the school owners.

Owing to these national projects, a targeted personnel provision for working with pupils from MRC was addressed by establishing inclusive teams with specialist skills and competences. These were acquired through newly-created teaching and learning resources for all basic subjects in primary schools that had not existed centrally before. Currently, they are being used by the schools involved in the projects only as these materials are not publicly available nor available through the beneficiary's website (the Methodology and Pedagogy Centre).

Demand-oriented projects

Within the evaluated sample of 15 projects, eight of them confirmed the existence of external factors affecting the outcomes of the supported interventions. The next seven respondents stated that the sustainability of project outcomes/ outputs is secured without any external effects; however, it is to a large extent dependent on internal capacity and financial resources of the beneficiary.

6.4.5   Measures 4.1 a 4.2

National and demand-oriented projects

The external factors that had an impact on project outcomes within the measures 4.1 and 4.2 were legislative changes whose scope and effectivity were nationwide (see chapter 6.4.1 and 6.4.3). No specific factors related to the measures 4.1 and 4.2 exclusively were identified.

Summary

The measure 1.1 was focused on introducing new systemic measures into the practice of the regional schools. Therefore, an obvious external factor was legislation, especially a new school act from 2008 and its amended version from 2011 that introduced a compulsory English language on the 1st stage of primary schools. This had a negative impact on the teachers who extended their qualification through NP 12 to teach a different foreign language. Although from the school year 2019/2020 the English language is no longer compulsory and pupils can choose a different foreign language, the preference and dominant position of English persist. On the other hand, the introduction of the innovated State educational programme in 2015 strengthened the sustainability of NP 9 and NP 10 which focused on teaching of Physics, Chemistry, Biology and Technology. Regarding DOPs, in addition to legislative changes, an opportunity to participate in follow-up projects was important, too as schools were able to supplement and upgrade their ICT equipment and teachers were able to continue in further training activities. Some DOPs considered the turnover of teaching staff who participated in further education within the OPE as challenging. For secondary schools, an important role was also played by their owners, mostly self-governing regions which every year set the number of first-year pupils and so modify the fields of study that are available. In testing and introducing the dual system of education, interests of employers and their associations are important, too as demonstrated in the project *Development of vocational education* (NP 7).

Within **the measure 1.2** only one project was implemented - *Higher education institutions as drivers of the knowledge-based society* – in which the impacts on the target groups were limited by a low interest of HEIs outside Bratislava and the fact that HEIs in Bratislava were not eligible to participate in the project. However, the project managed to gain the interest and trust of the academic sector as well as businesses and in the form of a newly-established Centre of Education Management it continues in its efforts to engage HEIs with the labour market. For DOPs within tertiary education, an important role was played by a legislative change related to the accreditation system which threatened the functioning of some study programmes created within the OPE.

Legislation was essential in setting up the national projects within **the measure 2.1**, namely the act on teaching and specialised staff from 2009 which introduced the professional standards and a credit system of continuing education of teachers. Equally, the development of the National system of qualifications through the project *Development of the National system of qualifications* and its connection to the European qualifications framework was initiated by the Government of the SR. The projects related to youth work were influenced by the act on supporting youth work from 2008. DOPs were implemented by a wide range of public as well as private beneficiaries with diverse external factors. Majority of the beneficiaries stated that even in 2020 they continue with lifelong educational activities.

The measure 3.1 created and pilot-tested an inclusive model of education in the environment of children and pupils from MRC both within kindergarten and primary schools. External factors that limited its potential benefits were absent follow-up projects enabling maintaining newly-established job positions of specialised staff and teaching assistants which caused a discontinuity in promising activities in many schools. Building trust and maintaining interest of individual MRC members proved challenging, too.

The measures 4.1 and 4.2 were implemented as mirrored initiatives in the Bratislava Region. External factors affecting the implementation of these projects were identical to those within the measures 1.1, 1.2 and 2.1.

6.5 To what degree can the acquired findings be used for preparation of calls for proposals in the programming period 2014 – 2020?

Given the date of implementation of this OPE ex-post evaluation and the time setting of the ongoing programming period 2014 - 2020, it is possible to use the acquired knowledge in the preparation of calls for proposals only to a limited extent. Most of the calls for proposals have already been announced within the ongoing Operational Programme Human Resources (OPHR) and it is not possible to influence them retrospectively. Nevertheless, it is possible to identify the changes that occurred during the preparation and implementation of the OPHR that, with their content and focus, corroborate the findings from this OPE ex-post evaluation. These changes have naturally resulted from the experience of OPE beneficiaries (from both national and demand-oriented projects) as for many of them, this was the first major experience with project management. They also reflected the current social situation and strategies on national and international level.

The priority axis 1 Education within the OPHR corresponded to a large extent with the OPE. In terms of the thematic focus, no absent areas were identified in the OPHR as the topics in both operational programmes are identical to a high extent. However, while the OPE entered directly into the educational process through interventions, the support of the OPHR focuses only beyond what has already been implemented by the state budget. An inclusive dimension is also a differing detail present in all measures of the priority axis 1 by adapting the content, forms and methods of education on all its levels. Positive elements in OPHR, also reflecting the findings of this evaluation, are more opportunities for pre-elementary education projects; a continuity of projects focused on the development of key competences, including ICT and language skills of target groups; a greater support for lifelong learning (especially for persons with a low qualification); a high support for dual education at secondary schools; a support for technically oriented study programmes at universities, and also, a higher emphasis on the interconnection of universities and research and development results with practice (with the private sector). A special emphasis on the integration of MRC members, that was implemented in the OPE through the measure 3.1, is also present in the priority axis 1 in OPHR.[30] However, it received a more significant and a more comprehensive form in the priority axes 5 and 6 which also include projects focusing on pre-elementary education of pupils from MRC and their social inclusion.

From the perspective of HEIs, the OPHR focused on DOPs to support study programmes linked to the labour market needs, with an emphasis on the inclusive education as well as capacity building in research and development and the support of mobility and practical use of research and development findings in the private sector.

In comparison to the OPE, a significant change in the field of monitoring is also the introduction of so-called cards of participants in the OPHR. This is seen as a positive step towards achieving more realistic statistics and measurements. This also implies the ability to define the needs of the target groups more appropriately in the next programming period. However, the issue of personal data protection, and the associated administrative burden and trust issues, remain a negative aspect of this change, especially for vulnerable groups who often have a negative experience with a personal data misuse for various purposes.

---

[30] The national projects focused on the support of inclusion within the project axis 1 of OPHR:
- *School open for everyone* – The Methodology and Pedagogy Centre
- *Through standardisation of guidance and prevention system to inclusion and success in the labour market* – Research Institute of Child Psychology and Pathological Psychology
- *Helping professions in children and pupils' education* – The Methodology and Pedagogy Centre

Based on the experience from the OPE, it can be stated that independent qualitative evaluations are necessary, not only after the completion of the operational programme, but on an interim basis with a priority focus on individual NPs and their ongoing progress in achieving the measure objectives. The absence of independent evaluations of NPs within the OPE should not be repeated in the following operational programmes. On the contrary, an emphasis should be placed on designing a timetable for mandatory qualitative evaluations that would help identify good practice examples and, on the other hand, avoid errors and address the shortcomings identified during the project implementation.

6.6 How (suitably) do intervention objectives correspond to the needs of the EU?

The Operational Programme Education has been designed in accordance with the regulations of the European Community (EC) on the structural funds and also with the National Strategic Reference Framework (NSRF) for 2007 - 2013 that represented a reference instrument for preparation of the programming of funds in the Slovak Republic.

When devising the objectives set by the NSRF as its priorities, the Slovak Republic relied on the objectives of economic and social cohesion, to which the ESF should contribute by supporting policies and priorities aimed at achieving full employment, improving the quality and productivity of work and promoting social inclusion and cohesion. To achieve these priorities, the OPE objectives were established in a way so that the ESF supports projects to strengthen human resources in the development of key competences necessary in the knowledge-based economy and for employability in the labour market in the whole region of the Slovak Republic. The territorial integrity has been achieved by merging the Convergence Objective and the Regional Competitiveness and Employment Objective into one operational programme.

In terms of the intervention objectives and their compliance with the EU needs, the global objective of the OPE and the main objectives of the evaluated priority axes and measures were compared to the EU needs defined in its key documents. [31]

Based on the analysis of the intervention objectives and needs defined in these key EU documents, in particular in the 2005 Lisbon Strategy and its subsequent revised 2010 version called Europe 2020, it can be concluded that the OPE objectives correspond to the needs defined by the EU to a large extent.

The global OPE objective *"Ensuring the long-term competitiveness of the Slovak Republic by adapting the education system to the knowledge-based society needs"* was fully in line with the need to build the EU as the most competitive and dynamic knowledge-based economy in the world. In an effort to include all levels and forms of education defined in the EU priorities, the OPE focused on regional, higher education and further training, including formal and non-formal education as well as informal learning. It also paid a special attention to the agenda of people with special educational needs.

The need for the creation of an European area for lifelong learning covering education from pre-school to retirement age and focusing on new basic skills of individuals that enable them to adapt to a global, ever-changing, knowledge-based society, has also been integrated into the OPE

---

[31] Key EU documents for preparation of the OPE:
- the Lisbon Strategy
- European Employment Strategy
- Working programme of the Commission „Education and vocational training 2010"
- „Recommendation of the European Parliament and Council on key competences for lifelong learning"
- Community Strategic regulations on economic, social and territorial cohesion
- The 7th Framework programme of the EC for research, technical development and demonstration activities
- Implementation of the European Youth pact for the Slovak Republic

objectives. These competences, that should facilitate the entry of individuals to the labour market, including inactive and socially disadvantaged persons, were defined in the 2006 Recommendation of the European Parliament (EP) and of the Council on key competences for lifelong learning. The focus on the development of key competences was in all evaluated OPE measures.

In order to meet the ESF key priorities such as increasing the quality of human resources, expanding access to employment and the labour market, strengthening social inclusion of disadvantaged persons, motivating economically inactive persons to enter the labour market, increasing lifelong learning, utilising ICT or fighting against discrimination, OPE interventions focused on human resources investments in the field of education through teachers' capacity building, implementation of educational activities, trainings, but also through a curricular reform and initiation of systemic changes in formal and non-formal education.

The preparation and planning of ESF-funded operational programmes took place at a time of a stable economic growth and employment in the EU. However, during the implementation phase of the programming period at the beginning of 2008, the impact of the global economic crisis was fully reflected in the European area, too. As a result of the economically unstable situation, some target groups were more affected than other, especially men and young people whose unemployment was rising rapidly at that time. Later, the crisis also affected women's employment, especially after the introduction of some measures at the national level. On the one hand, short-term incentives to support employment and access to the labour market were immediately needed. On the other hand, programmes aimed at supporting education such as the OPE were necessary as they contributed to improvement of the qualification structure of the workforce from the long-term point of view. In addition, the Slovak Republic as the only one of four EU countries, covered all eligible target groups in the 2007 - 2013 programming period from pupils, through teachers, the employed, the unemployed, young people or senior citizens, vulnerable groups to scientists and researchers.[32]

Overall, the OPE objectives at the level of priority axes, measures or the specific implemented projects adequately correspond to the EU needs. However, it should be noted that some of the EU's educational needs have only been covered marginally by the OPE, such as the improvement of pre-elementary education, science and technology competences or international mobility.[33] At the same time, it is necessary to emphasise that many educational activities, especially those connected to the labour market, were implemented within the OP Employment and Social Inclusion 2007 - 2013 that was also funded by the ESF.[34] The support of science and research was also partially fulfilled through OPE projects (emphasis was placed on the support of human resources and cooperation with the private sector and foreign science and research centres) as concurrently, there were projects implemented through the OP Research and Development. These projects appropriately complemented the OPE by supporting technical infrastructure and the transfer of knowledge and technologies of science and research into practice.

6.7 To what degree is the intervention coherent with the wider EU policy?

An important agenda in the development of reference frameworks, strategies and operational programmes is the coordination of all relevant national and EU policies, especially the sectoral ones so that they complement and link with each other with the aim to promote economic growth.

In the OPE preparation, the Slovak Republic fully respected the nine principles of planning and implementation of EU funds support: complementarity, coherence, coordination, compliance,

---

[32] ESF 2007 - 2013 Ex-post evaluation investment in human capital Volume I (Table 5, p.25) Online: https://op.europa.eu/sk/publication-detail/-/publication/6ffc4ebe-9ad0-11e6-868c-01aa75ed71a1/language-sk/format-PDF/source-search

[33] Modernisation and making the system of support of research and development more effective as well as improvement of the infrastructure of HEIs were the main objectives of the Operational Programme Research and Development 2007 - 2013

[34] These thematic areas were combined in the Operational Programme Human Resources in the programming period 2014 - 2020

proportionality, men and women equality and non-discrimination; sustainable development and focus of the funds on the Lisbon Strategy priorities.[35]

The evaluated intervention focused on economic, social and territorial cohesion in the broader context and in line with the Lisbon Strategy and the Europe 2020 strategy priorities, the Community Strategic Guidelines for Economic, Social and Territorial Cohesion, the Gothenburg Strategy, the European Employment Strategy and the EU Sustainable Development Strategy. It also focused on elimination of regional disparities, on social inclusion, non-discrimination, the promotion of gender equality and sustainable economic growth. In this regard, the choice of the thematic and territorial focus of OPE projects proved to be suitable for the implementation of structural changes and for the support of regional development of the Slovak Republic that are necessary to achieve synergies with broader EU policies.

In the light of the wider EU policy, as defined in its founding charters and key documents building on the values of tolerance, justice, solidarity and non-discrimination, with the aim to achieve sustainable development, it can be concluded that the intervention is adequately coherent with the wider EU policy, foremost with regard to social inclusion, the elimination of regional disparities, non-discrimination and the promotion of sustainable economic growth through the improvement of the quality of human resources by developing their key competences.

---

[35] European Commission, Cohesion Policy 2007 - 2013 Comments and official texts, 2007. Online:https://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2007/publications/guide2007_sk.pdf

7. Conclusions and recommendations

OP Education was the first full seven-year operational programme in education after the accession of the Slovak Republic to the EU. To certain extent it is therefore necessary to view its preparation and implementation as a pilot programme that has tested various forms of intervention and absorption capacity of the whole education sector.

The implementation of OP Education was timely bound with the adoption of the school act which has significantly contributed to the practical reform implementation in the sector of regional schools. At the same time, it supported further systemic changes that started to be introduced during its implementation. Inclusive education in primary schools, the development of the National system of qualifications and raising the quality of university education represent the most important ones.

The key contribution of OP Education was an opportunity to raise qualifications of school personnel on all levels through numerous training and self-education activities. This also had a financial effect thanks to a credit system of continuous learning.

Pupils and students experienced the effects of OPE projects through new learning resources, teaching methods, modern material provision and technical and ICT equipment that were started to be used in the process of teaching and learning. They also had an opportunity to participate in supplementary activities such as field trips and internships. OPE also enabled training of some specific target groups that had not been directly supported before (senior citizens, teaching and specialised staff, youth workers).

Considering the fact that the ex-post evaluation took place approximately five years after the programme's end, its most significant impact has been demonstrated in the nationwide initiation of qualitative shifts in education through the human resource development. Tens of thousands of teachers have been directly involved in this process not only as participants of training provided through centrally managed national projects but as active project team members of individual demand-oriented projects. Many of them have utilised the acquired teaching, computer, language, project or specialist skills and knowledge in the teaching process as well as in subsequent projects or activities they became involved in within their organisation. At the same time, transferability of these skills and knowledge contributes to sustainability which means that although certain project outputs might be outdated (for instance teaching resources), the acquired competences remain in use.

Specific project outputs such as teaching and learning resources, ICT equipment, websites or further training generally have a limited lifespan and their sustainability has been managed by beneficiaries formally rather than in practice. In terms of the main asset of OPE in raising qualifications of teachers and other target groups, the outputs have been perceived as tools or instruments leading to increasing of specialist capacity rather than as definite tools with a long-lasting value. Therefore, the long-term sustainability has been achieved in those instances that have managed to instigate certain processes, change attitudes or needs irrespective of whether their changes were intended nationwide or within a specific organisation only.

Another effect of OPE in the whole sector of education has been strengthening the beneficiaries' capacity to implement complex projects including small primary schools as well as large institutions managed centrally by MESRS SR such as the Slovak Centre of Scientific and Technical Information.

It can be concluded that OPE has been implemented in line with wider EU policies as well as ESF principles in the programming period 2007 – 2013. The experience from its implementation was to some extent used in the development of the Operational Programme Human Resources 2014 – 2020 which is currently in the last third of the implementation phase. As this ex-post evaluation coincides with programming of interventions for 2021 – 2027, it is possible to consider the recommendations from OPE for the new programming period.

The key shortcomings and related recommendations based on this ex-post evaluation are listed below:

1. Some specific objectives of OPE have not been sufficiently addressed by the implemented projects and as a result have not been sufficiently achieved. The authors of the operational programme and individual calls for proposals should therefore **probe specific objectives with prospective beneficiaries and their inclination as to their achievement**. Should there be an indication that the given need of a target group is non-existent or not widely known it is required to assign capacity and financial resources to an appropriate information campaign to raise awareness and interest among target groups/ prospective beneficiaries.

2. OPE has supported a wide scale of pilot as well as traditional interventions; however, **some types of potentially beneficial activities have remained outside its interest**, for example support of alternative/ innovative models of primary and secondary schools, international mobility of university students and teachers, support of exceptionally talented pupils and students, volunteering support as well as wider support of the pre-primary education. On the system level, a potential beneficial activity might be the development and long-term support of a reform platform for all levels of education as well as support of collection and publication of analytical and statistical information on the state of education in Slovakia.

3. The operational programme should support additional financial remuneration of all individuals involved in its projects, especially of teaching staff. This has not been universally adhered to within OPE and its demand-oriented projects and some applicants did not include adequate personnel costs in the project budget. Each call for proposals should therefore **clearly specify the rules of remuneration of the teachers involved** regarding activities which are beyond their typical work duties. In addition, rules should be defined for remuneration of doctorands as they have a student status.

4. For most NPs within OPE there is no reliable qualitative information available regarding target groups or outcomes and impacts that individual NPs have facilitated. Thus, it is required to **systematically introduce external evaluations of all NPs**, ideally in two intervals: half-way through the project implementation when it is still possible to modify it and approximately six months after the project activities have ended when accurate impacts (quantitative and qualitative) can be measured.

5. The mirrored projects for the Bratislava Region and for other regions of the Slovak Republic were set up identically. ICT acquisition was the only exemption as it was not sanctioned for Bratislava schools which had a demotivating effect on Bratislava teachers. For any future interventions it is therefore recommended to **ensure the same terms and conditions for all regions of the Slovak Republic**.