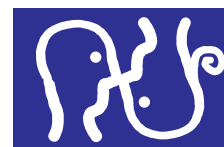# Study of the Impact of the eTwinning Programme

on School Education in Slovenia

eTwinning

CMEPIUS
Centre of the Republic
of Slovenia for Mobility
and European
Educational and
Training Programmes

Study of the Impact of the eTwinning Programme on School Education in Slovenia

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Introduction

eTwinning is one of the largest e-communities of European schools.

With the eTwinning action we succeeded in building one of the largest e-communities of European schools. The Ministry of Education, Science and Sport has been systematically supporting the action together with the Centre of the Republic of Slovenia for Mobility and European Educational and Training Programmes (CMEPIUS), which is also the national support service for the eTwinning action in Slovenia.

The eTwinning action is closely related to the application of new technologies since it is based on an online platform and numerous collaboration and exchange tools. The teachers can thus develop new approaches and teaching strategies within a classroom that is no longer physically limited by four walls, while improving the activity of children during the co-creation of their own competences and competences of their peers. It is important that the eTwinning action also became a constant feature of the schools' annual work plans; the school managements have identified eTwinning as a tool for improving efficiency and quality of the education process within and outside of the curriculum.

Below are the findings of the Study of the Impact of the eTwinning Programme on School Education in Slovenia, which will serve as the basis for the future planning of activities by the Ministry, CMEPIUS and schools. Moreover, the study reports on significant findings of teachers - project coordinators on numerous positive effects of the project activities. The eTwinning programme primarily targets teachers and pupils. It is focused on the contacts of teachers and pupils with foreign countries, as well as creativity and motivation of pupils, their self-esteem, interest in foreign languages and new knowledge, respect for diversity and cultural awareness in connection with the use of ICT. Other impacts on the work of teachers worth mentioning include the use of cooperative learning in class, use of diverse teaching methods and integration of pupils in the decision-making process regarding the course of learning. The eTwinning projects also have a significant impact on the development of computer skills of teachers and pupils.

Without eTwinning such massive cooperation between European schools would not be possible, which is a confirmation that the action is a step in the right direction. However, this further implies the responsibility of the Ministry and CMEPIUS for further consistent development of the action, as well as the responsibility of school managements and teachers to provide their pupils with this possibility for the development of their skills.

Janez Čač and Bortu Čampelj MA

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What is eTwinning?

eTwinning is an initiative of the Erasmus+ programme.

eTwinning is an initiative of the Erasmus+ programme co-ordinated by the European Schoolnet on behalf of the European Commission. The ministers responsible for education in each of the participating countries have appointed an organisation responsible for the national implementation of the action. The role of the national support service in Slovenia has been assigned to CMEPIUS.

The eTwinning initiative is intended for teaching staff (teachers from all disciplines, preschool teachers, head-masters, school librarians, etc), who are well aware of the significance of integrating project collaboration supported by modern technologies in preschools, primary and secondary schools.

The eTwinning platform (www.etwinning.net) enables communication, collaboration, project development and virtual exchange between the participants, and the support, tools and services, which facilitate the formation of short-term and long-term partnerships without major administrative obligations and formalities.

Moreover, eTwinning provides for professional and in-service training of teachers and professional staff. The action offers the possibility for participation in both physical and virtual workshops, organised by the national support services, the central support service or the European School-net. The physical attendance of workshops and seminars in the home country as well as abroad is co-funded by the eTwinning National Support Service.

Project collaboration undoubtedly motivates pupils in a way, which the traditional teaching approaches cannot provide. Through project learning pupils learn how to assume an active role in the organisation and implementation of projects, as well as in monitoring and recording of project results. Collaboration with peers from other countries represents a large responsibility and challenge, while the international experience reveals the links among subjects and provides pupils with the needed self-esteem for future learning and studies.

3

eTwinning in numbers

300.000	teachers from all over Europe
2.000	Slovenian preschool/school teachers
539	Slovenian organisations

Today, the platform connects over 300,000 teachers from all over Europe, as well as other countries. The Slovenian National Support Service is happy to report that the number of Slovenian teachers and schools which joined the eTwinning community is increasing, as shown by the following data. In the ten years of operation slightly less than **2,000 Slovenian preschool/school teachers** (324,045 at the EU level) and **539 Slovenian organisations** (preschools, primary and secondary schools (144,452 at the EU level) registered on the portal, while over **1,600 Slovenian coordinated and partner projects** have been approved (136,559 at the EU level). According to data on admission in the 2015/2016 school year there are 1,115 public and private preschools with branches, 451 public and private primary schools, and 182 public and private secondary schools currently in Slovenia (source: https://krka1.mss.edus.si/registriweb/Default.aspx, 28 September 2015). Of these approximately 38 Slovenian preschools (3% of all Slovenian preschools), 350 primary schools (77% of all Slovenian primary schools), 130 secondary schools (71% of all Slovenian secondary schools) and 21 other organisations (e.g. music schools, residence halls for pupils, institutes, etc) participate in eTwinning.

4

What is the Lifelong Learning Programme (LLP)?

The objectives of the LLP highlight the management and operation of the organisation staff, teaching methods and teachers' competences and the quality of knowledge, which the pupils acquire from schools.

The Lifelong Learning Programme was the programme of the European Union in the field of education and training during the 2007-2013 period. The aim of the programme was to contribute to the development of advanced knowledge-based society with sustainable economic development, more and better jobs and a greater social cohesion for ensuring the protection of the environment for future generations. LLP supported exchange, collaboration and mobility among the European education and training systems with the aim to become a global quality reference.

The objectives of the LLP (and its Comenius and Leonardo da Vinci sub-programmes), which correspond to the objectives laid down in documents on the modernisation of education highlight the management and operation of the organisation staff, teaching methods and teachers' competences and the quality of knowledge, which the pupils acquire from schools. The aim of the programme was to use mobility as well as bilateral and multilateral school partnerships for the integration of the European dimension in education and to contribute to the development of the key competences and skills of the entire school environment.

5

Impact analysis

What changes brings participation in eTwinning projects to schools?

The aim of the study of the impact of the eTwinning programme on school education was to examine the impact and effects of the eTwinning programme on schools, i.e. operation of organisations, work of teachers and pupils. We were also interested in comparing the results with the study of the impact of the Lifelong Learning programme on primary and secondary education since this is of key importance for the promotion of the programme; especially due to the high rate of schools interested in international cooperation and the low rate of schools' success in the acquisition of co-funding of Erasmus+ projects. The results of the study are interpreted according to the assessment of impact of cooperation in the activities of the eTwinning programme by teachers – coordinators.

5. 1. Methodology and target population

The research was conducted between 9 March 2015 and 1 April 2015. The data was gathered with a survey consisting of the introduction and main part. In the introduction we surveyed respondents on the main characteristics of their organisations, while the main part of the questionnaire was dedicated to the impact of the eTwinning programme on various operational aspects of their relevant organisation, as well as on various competences of teachers and pupils. We applied the survey which was designed for the research on the Impact of the Lifelong Learning Programme on primary and secondary education with respect to national priorities, conducted in 2013 by CMEPIUS in collaboration with Sonja Sentočnik, PhD. For the purpose of research on the impact of the eTwinning programme we excluded two irrelevant statements from the questionnaire. However, the main part of the questionnaire remains unchanged and provides for the comparison of both programmes.

The questionnaire in the form of an online survey was sent to 667 email addresses of teachers and/or members of other teaching staff who participated in at least one eTwinning project since 2005. We received 109 completed surveys, which constitutes a 16% response rate.

The gathered data has been processed with the SPSS software. We calculated the main descriptive statistical indicators (frequency, average values, standard deviation) and comparative indicators (a comparison of average value from both programmes; eTwinning and LLP). The statistical significance of the average values was compared with the relevant t-tests and the significance level of 0.05 (sig. < 0.05). In other words, when the absolute T-value is greater than 1.96, we can extrapolate the results over the entire population with a 5% risk.

The respondents assessed the impact of specific activities with a five-level grading scale with the following values: -2 = high (long term) negative impact; -1 = low (short term) negative impact; 0 = the project had no impact; 1 = low (short term) positive impact; 2 = high (long term) positive impact.

Below you will find the general information and data by specific topic.

5. 2. Main characteristics of organisations[1]

Figure 1: Respondent's position
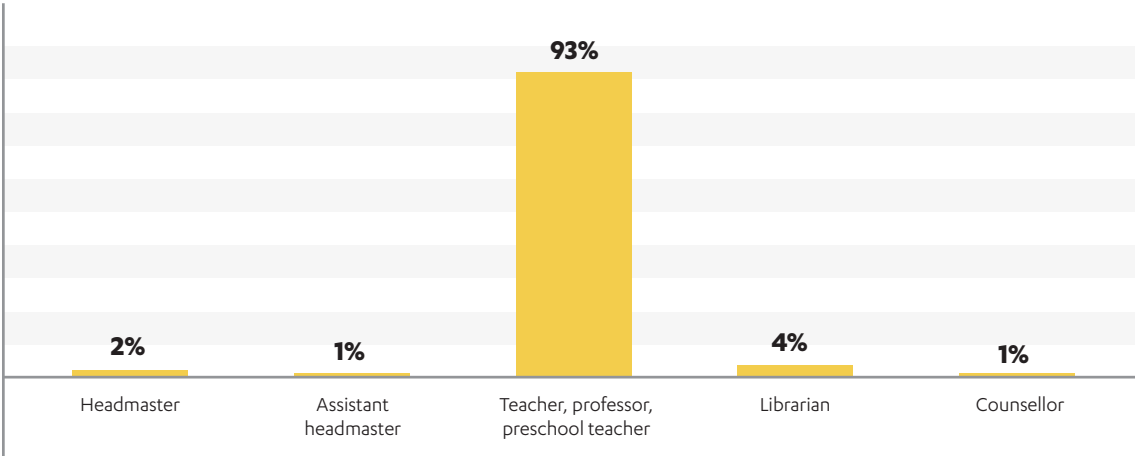
The survey was completed by 109 coordinators of eTwinning projects. A large majority (93%) work as preschool, primary or secondary school teachers, while the remaining 7% work as headmasters, assistant headmasters, librarians or counsellors.

Figure 2: Role in the eTwinning projects
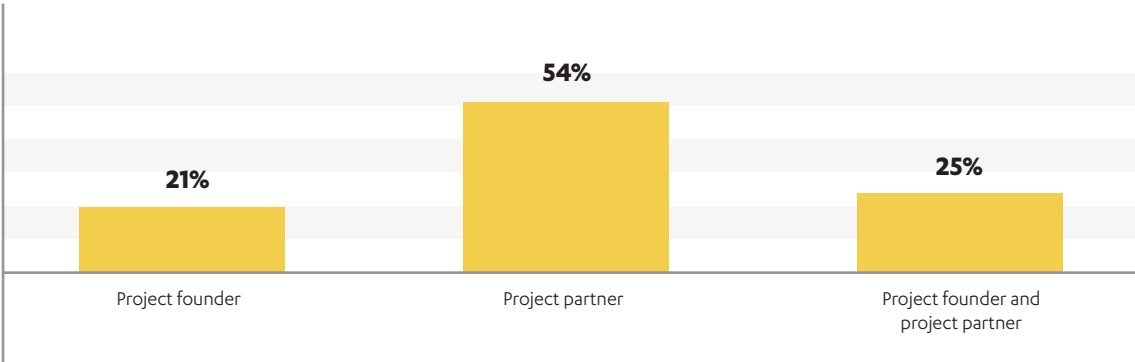
In the past the majority (54%) of respondents participated in the eTwinning projects as partners, 21% as founders, while 25% participated as both partners and founders.

[1] The data refers to respondents who provided responses for the eTwinning programme.

Figure 3: Type of organisation

71%

26%

4%

Preschool

Primary school
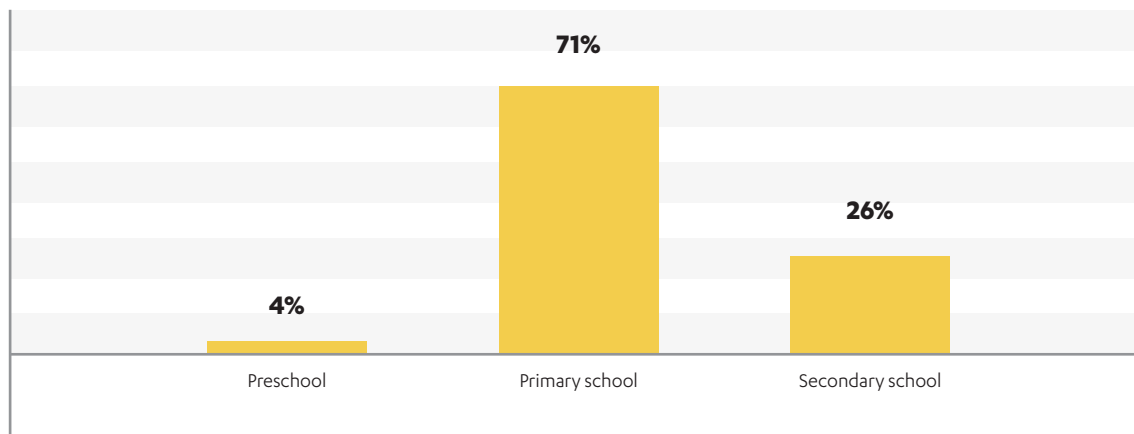
Secondary school

71% of respondents work at primary schools, 26% at secondary schools and 4% at preschools.

Figure 4: Environment of the organisation

57%

43%

Urban area
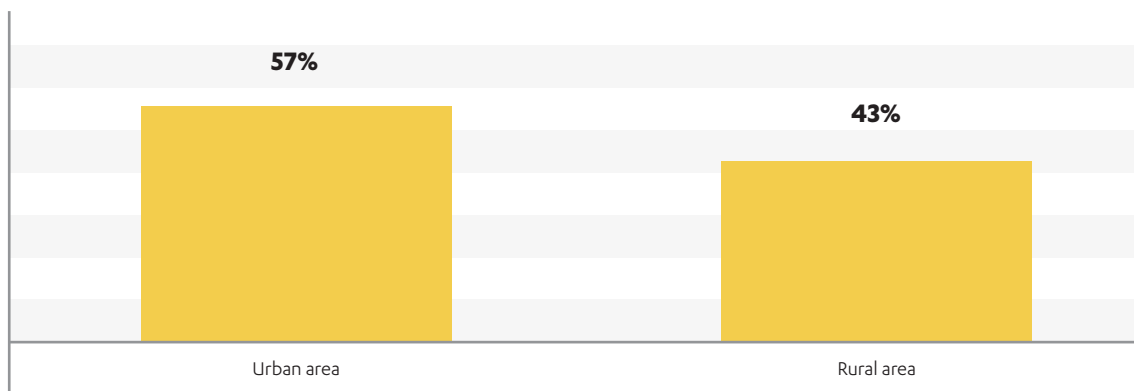
Rural area

57% of respondents come from organisations located in urban areas and 43% from organisations located in rural areas.

Figure 5: Number of enrolled children/pupils at the organisation
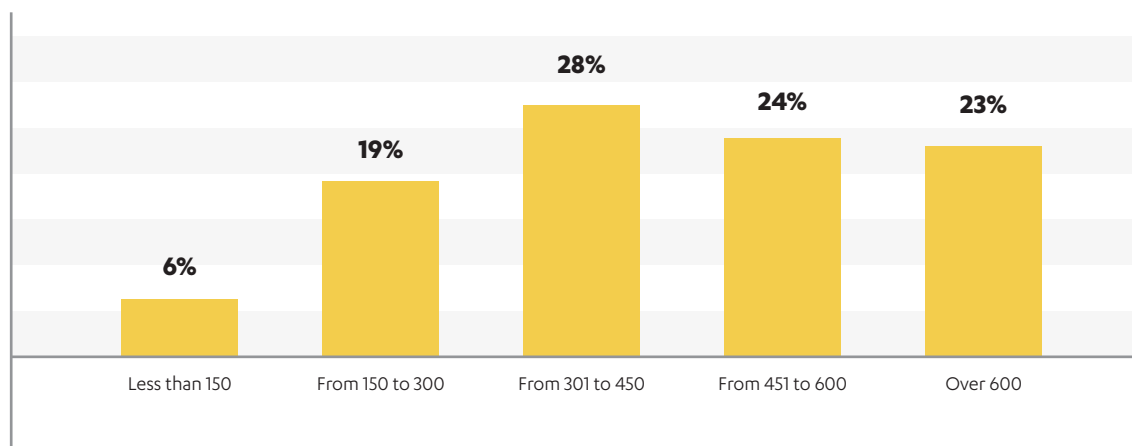
The largest share of respondents (28%) works at organisations with 301 to 450 enrolled children/pupils. A quarter of respondents works at organisations with less than 300 enrolled children/pupils, and slightly less than a half (47%) comes from organisations with over 450 enrolled children/pupils.

Figure 6: The number of eTwinning projects in which the organisation participated or continues to participate
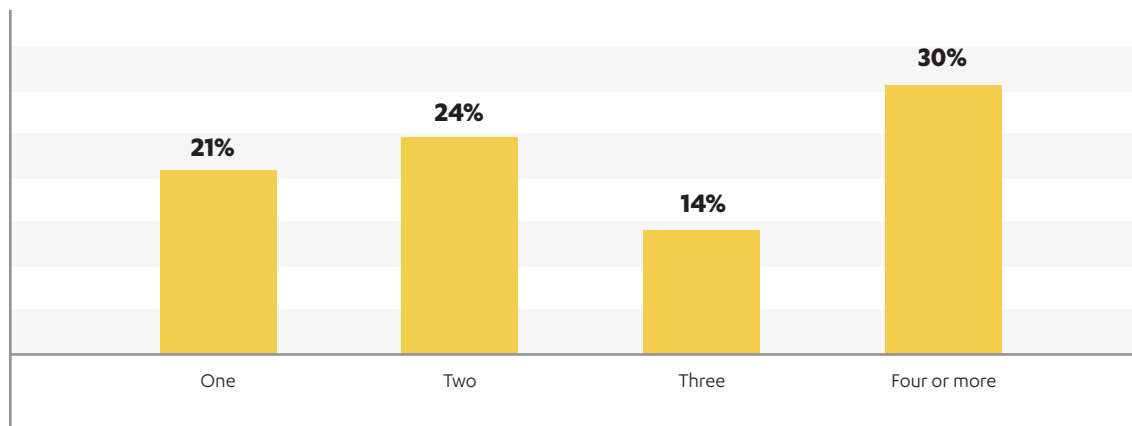
Slightly less than a third (30%) of organisations has participated in four or more eTwinning projects. 21% of organisations participated in one project and 24% participated in two. The lowest share (14%) of respondents stated that their organisations participated in three eTwinning projects.

Figure 7: What was the average duration of the eTwinning project?

Up to a week	From 1 week to 1 month	From 1 month to 6 months	From 6 months to 1 year	From 1 to 2 years	Over 2 years
5%	4%	26%	43%	16%	5%
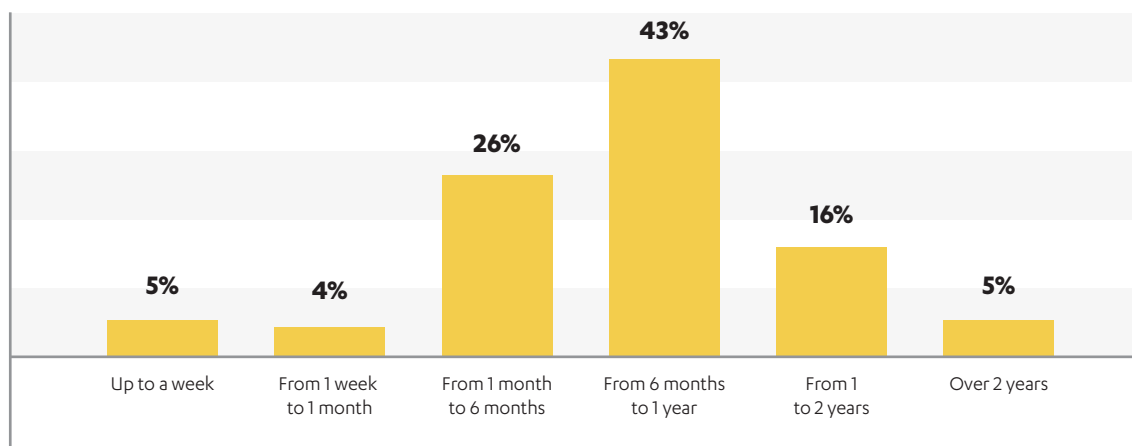
A good third of respondents (35%) stated that the average project duration was less than 6 months, while the highest share of respondents (43%) stated that the average duration of their projects was from 6 months to 1 year. 21% of respondents stated that the average duration of their project(s) was over a year.

Figure 8: When did your organisation finalise the last eTwinning project?

In 2010 or earlier	In 2011	In 2012	In 2013	In 2014	Ongoing projects
11%	3%	7%	17%	18%	44%
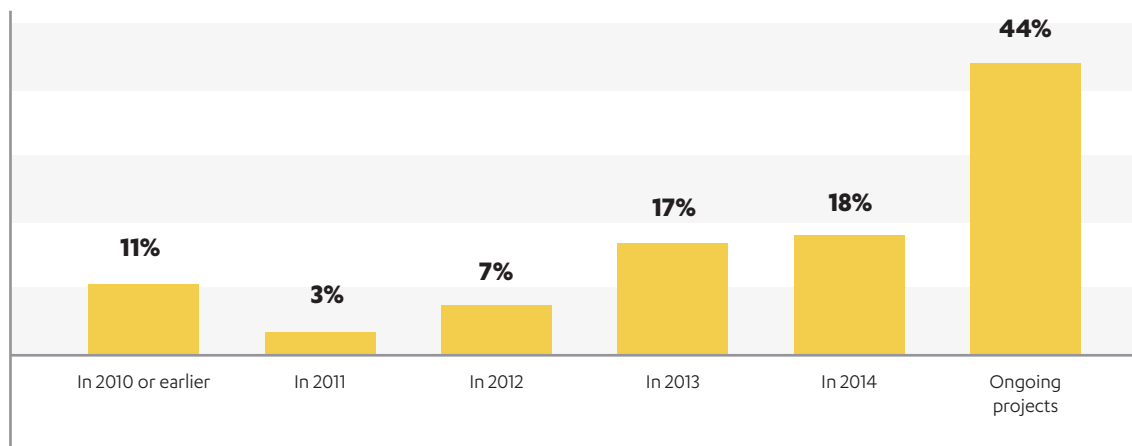
Slightly less than a half of respondents (44%) are still active in the eTwinning projects and are currently implementing at least one project. The remaining 54% are currently not implementing any eTwinning projects.

Figure 9: Besides the eTwinning projects did they also participate in the LLP or Erasmus+ programmes?
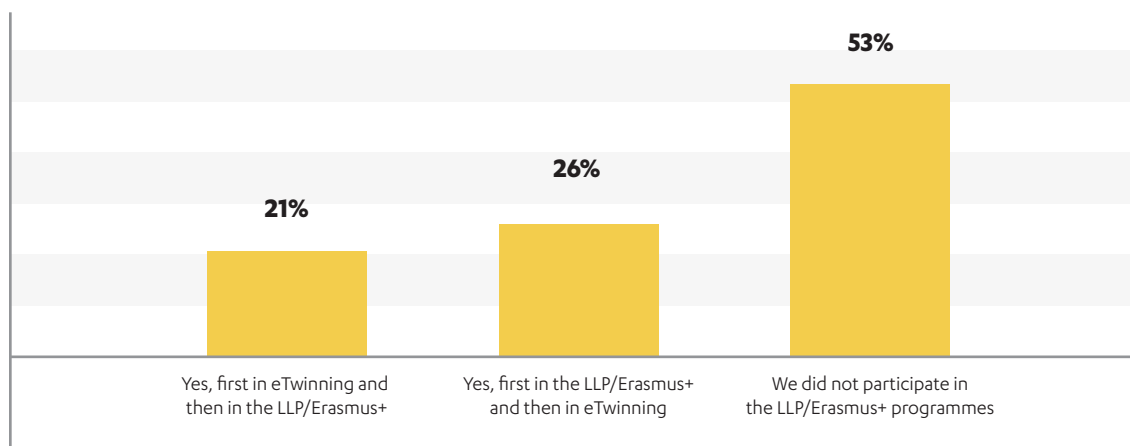
Figure 10: If yes, in which actions?
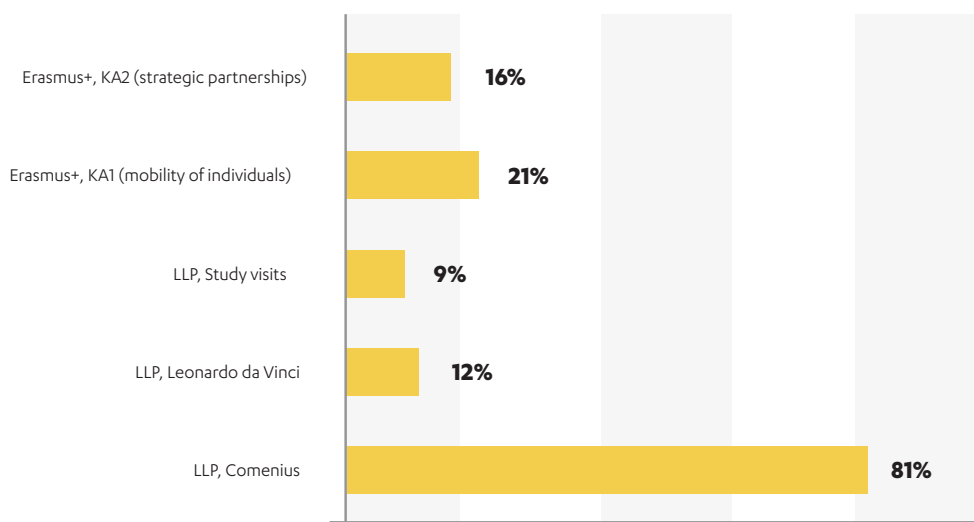
Roughly a half of respondents (47%) also participated or continue to participate in the LLP/Erasmus+ programme, of which 21% first participated in the eTwinning programme and then in the LLP/Erasmus+, while 26 % participated in the LLP/Erasmus+ first. The highest share of respondents (81%) participated in the Comenius programme and 53% of respondents did not participate in the LLP/Erasmus+ programme.

6

Impact of the eTwinning programme on the participating organisations and comparison with the LLP

The impact of the eTwinning programme is comparable with the impact of the LLP programme on the work of teachers and pupils.

Below we present the results of the study within three sections: Impact on the organisation, impact on the work of teachers and impact on pupils.

6. 1. Impact on the organisation

Teachers – coordinators of the eTwinning programme rated the criteria for the impact of the cooperation in the projects on the operation of the organisation. The impact was rated with a five-level grading scale and grades from -2 (= high (long-term) negative impact) to +2 (= high (long-term) positive impact). The results are shown in the figures and tables below.

The respondents, who rated the impact of the eTwinning programme projects in all listed fields, assessed the impact of projects on the organisation slightly lower than the respondents from the LLP programme. With 12 out of 19 claims these differences are statistically significant. The largest differences were observed in the grades awarded for the reputation of the preschool/school in the environment and in areas, which require the participation of the headmaster (i.e. cooperation of teachers/preschool teachers with the headmaster, headmaster's support to teachers and headmaster's awareness of teachers' work).

Although the headmaster's participation is not obligatory for the implementation of an eTwinning project it can, however, contribute to the impact of the project on the organisation. This is shown by the increasing average grades for criteria among schools, which have already participated in the eTwinning programme, compare to schools, which have participated in both programmes or in the LLP programme.

Teachers/preschool teachers who participated in both eTwinning and LLP programme graded the two criteria – reputation of the preschool/school in the environment and readiness of the staff to participate in new projects – significantly higher than those, who participated in the eTwinning programme only. With other criteria the differences in grades are not statistically significant.

With both programmes the average grades are positive (the lowest grades range from 0.48 to 0.50), meaning that on average the respondents assess that all the listed areas had a positive impact on the operation of the organisation.

Figure 11: Comparison of average grades for the impact of the eTwinning and LLP programmes on the organisation

	eTwinning	LLP
Contacts of preschool/school teachers with foreign preschool/school teachers	1,48	1,69
Contacts of children/pupils with foreign children/pupils	1,43	1,56
Use of ICT at the preschool/school	1,29	1,32
Provision of additional activities for children/pupils	1,23	1,35
Work and coordination among preschool/school teachers (project work, inter-curricular links)	1,23	1,45
Staff foreign language communication skills	1,23	1,47
Friendliness among staff	1,12	1,31
Headmaster's awareness of preschool/school teachers' work	1,07	1,46
Openness of the preschool/school towards the local and broader community	1,02	1,39
Headmaster's support to preschool/school teachers	1,01	1,58
Staff dedication to common objectives	1,00	1,29
Readiness of staff to establish contact with preschools/schools from abroad	1,00	1,32
Preschool's/School's reputation in the environment	0,99	1,58
Dialogue among staff	0,98	1,17
Cooperation of preschool/school teachers with the headmaster	0,82	1,35
Provision of the compulsory programme at the preschool/school	0,80	0,98
Readiness of staff to participate in new projects	0,79	1,21
Cooperation with children's/pupils' parents	0,74	1,12
Cooperation with other Slovenian preschools/schools	0,48	0,50

eTwinning   LLP

Table 1: Comparison of average grades for the impact of the eTwinning and LLP programmes on the organisation

	eTwinning			LLP			T-test	
	Mean	N	Std. Deviation	Mean	N	Std. Deviation	T	sig.
Contacts of preschool/school teachers with foreign preschool/school teachers	1,48	82	,741	1,69	170	,544	-2,379	,019
Contacts of children/pupils with foreign children/pupils	1,43	82	,609	1,56	170	,643	-1,552	,122
Use of ICT at the preschool /school	1,29	82	,793	1,32	170	,733	-,247	,805
Provision of additional activities for children/pupils	1,23	81	,729	1,35	170	,637	-1,248	,213
Work and coordination among preschool/ school teachers (project work, inter-curricular links)	1,23	82	,742	1,47	170	,617	-2,691	,008
Staff foreign language communication skills	1,23	82	,775	1,45	170	,635	-2,408	,017
Culture of collegiality among staff	1,12	82	,837	1,31	170	,816	-1,716	,087
Headmaster's awareness of preschool/school teachers' work	1,07	83	,762	1,46	170	,645	-4,277	,000
Openness of the preschool/school towards the local and broader community	1,02	81	,836	1,39	170	,716	-3,616	,000
Headmaster's support to preschool/school teachers	1,01	83	,930	1,58	170	,711	-4,927	,000
Staff dedication to common objectives	1,00	82	,754	1,29	170	,735	-2,952	,003
Readiness of staff to establish contact with preschools/schools abroad	1,00	82	,846	1,32	170	,700	-3,148	,002
Preschool's/school's reputation in the environment	0,99	81	,873	1,58	170	,552	-5,563	,000
Dialogue among staff	0,98	82	,753	1,17	170	,807	-1,836	,068
Cooperation of preschool/school teachers with the headmaster	0,82	83	,843	1,35	170	,717	-5,241	,000
Provision of the compulsory programme at the preschool/school	0,80	82	,728	0,98	170	,773	-1,740	,083
Readiness of staff to participate in new projects	0,79	81	,847	1,21	170	,856	-3,610	,000
Cooperation with children's/pupils' parents	0,74	82	,829	1,12	170	,707	-3,569	,000
Cooperation with other Slovenian preschools /schools	0,48	82	,707	0,50	170	,715	-,255	,799

Figure 12: The criteria with the highest grades - eTwinning

5 criteria on which the eTwinning projects had the highest impact

Criterion	Value
Contacts of preschool/school teachers with foreign preschool/school teachers	1,48
Contacts of children/pupils with foreign children/pupils	1,43
Use of ICT at the preschool/school	1,29
Provision of additional activities for children/pupils	1,23
Work and coordination among preschool/school teachers (project work, inter-curricular links)	1,23

At the organisational level the eTwinning projects had the highest impact on the contacts of preschool/school teachers with foreign preschool/school teachers. This criterion also received the highest grades in the LLP. Second are contacts of children/pupils with foreign children/pupils, followed by the use of ICT at the preschool/school, provision of additional activities for children/pupils and work and coordination among preschool/school teachers. The impact on the use of ICT at the preschool/school was ranked the third most important criteria among eTwinners while it ranked twelfth within the LLP.

Figure 13: The criteria with the highest grades - LLP

5 criteria on which the LLP projects had the highest impact

Criterion	Value
Contacts of preschool/school teachers with foreign preschool/school teachers	1,69
Headmaster's support to preschool/school teachers	1,58
Preschool's/school's reputation in the environment	1,58
Contacts of children/pupils with foreign children/pupils	1,56
Staff foreign language communication skills	1,47
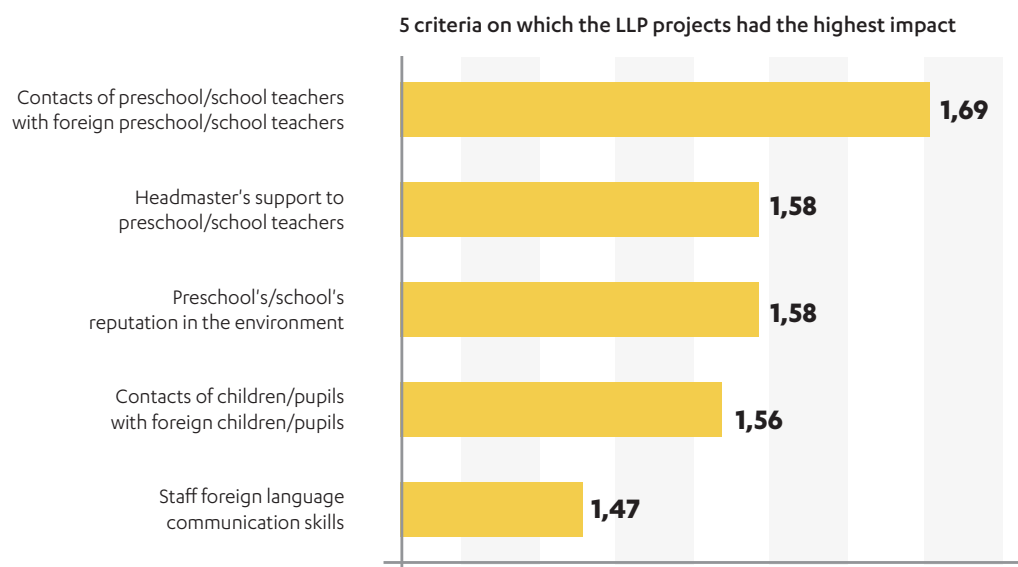
The LLP projects also had the highest impact on the contacts of preschool/school teachers with foreign preschool/school teachers. Second was the headmaster's support to preschool/school teachers, followed by the preschool's/

school's reputation in the environment; contacts of children/pupils with foreign children/pupils; and staff foreign language communication skills.

Table 2 shows all criteria of impact of the eTwinning projects on the organisation, distributed by average grade, and listed from the highest to the lowest impact. The last column contains the information on the rank of the relevant criterion in LLP projects.

Two criteria are placed among the top five in both eTwinning and LLP. These criteria are the contacts of preschool/school teachers with foreign preschool/school teachers (ranked 1 in both programmes) and the contacts of children/pupils with foreign children/pupils (second in eTwinning and fourth in LLP). The criteria use of ICT at preschool/school and provision of additional activities for children/pupils were both ranked significantly higher in the eTwinning programme.

Table 2: Impact of eTwinning projects (from the highest to the lowest impact) and comparison with the LLP

	Rank in eTwinning	Programme						Rank in LLP
		eTwinning			LLP			
		Mean	N	Std. Deviation	Mean	N	Std. Deviation	
Contacts of preschool/school teachers with foreign preschool/school teachers	1	1,48	82	,741	1,69	170	,544	1
Contacts of children/pupils with foreign children/pupils	2	1,43	82	,609	1,56	170	,643	4
Use of ICT at the preschool/school	3	1,29	82	,793	1,32	170	,733	12
Provision of additional activities for children/pupils	4	1,23	81	,729	1,35	170	,637	10
Work and coordination among preschool/school teachers (project work, inter-curricular links)	5	1,23	82	,775	1,45	170	,635	7
Staff foreign language communication skills	6	1,23	82	,742	1,47	170	,617	5
Culture of collegiality among staff	7	1,12	82	,837	1,31	170	,816	13
Headmaster's awareness of preschool/school teachers' work	8	1,07	83	,762	1,46	170	,645	6
Openness of the preschool/school towards the local and broader community	9	1,02	81	,836	1,39	170	,716	8
Headmaster's support to preschool/school teachers	10	1,01	83	,930	1,58	170	,711	2
Staff dedication to common objectives	11	1,00	82	,754	1,29	170	,735	14
Readiness of staff to establish contact with preschools/schools from abroad	12	1,00	82	,846	1,32	170	,700	11
Preschool's/School's reputation in the environment	13	0,99	81	,873	1,58	170	,552	3
Dialogue among staff	14	0,98	82	,753	1,17	170	,807	16
Cooperation of preschool/school teachers with the headmaster	15	0,82	83	,843	1,35	170	,717	9
Provision of the compulsory programme at the preschool/school	16	0,80	82	,728	0,98	170	,773	18
Readiness of staff to participate in new projects	17	0,79	81	,847	1,21	170	,856	15
Cooperation with children's/pupils' parents	18	0,74	82	,829	1,12	170	,707	17
Cooperation with other Slovenian preschools/schools	19	0,48	82	,707	0,50	170	,715	19

Note: Blue means that a specific criterion ranks higher in the eTwinning programme; Yellow means that the criterion ranks the same in both programmes; and red means that the criterion is ranked higher in the LLP.

Figure 14: High (long-term) positive impact on the operation of the organisation

	eTwinning	LLP
Contacts of preschool/school teachers with foreign preschool/school teachers	59%	74%
Contacts of children/pupils with foreign children/pupils	48%	64%
Work and coordination among preschool/school teachers (project work, inter-curricular links)	43%	53%
Staff foreign language communication skills	41%	54%
Headmaster's support to preschool teachers/teachers	39%	68%
Openness of the preschool/school towards the local and broader community	35%	52%
Preschool's/school's reputation in the environment	33%	61%
Headmaster's awareness of preschool/school teachers' work	33%	55%

The figure shows the frequency of responses where the share of respondents who detected a high (long term) positive impact (= value 2) exceeds 50%.

With eTwinning projects there is only one such field – contacts of preschool/school teachers with foreign preschool/school teachers, where 59% of respondents detected a high (long term) positive impact on the organisation. With LLP there are 8 such criteria, however, the highest impact was also observed on the contacts of preschool/school teachers with foreign preschool/school teachers (same as with eTwinning projects).

Figure 15: Positive impact on the operation of organisation

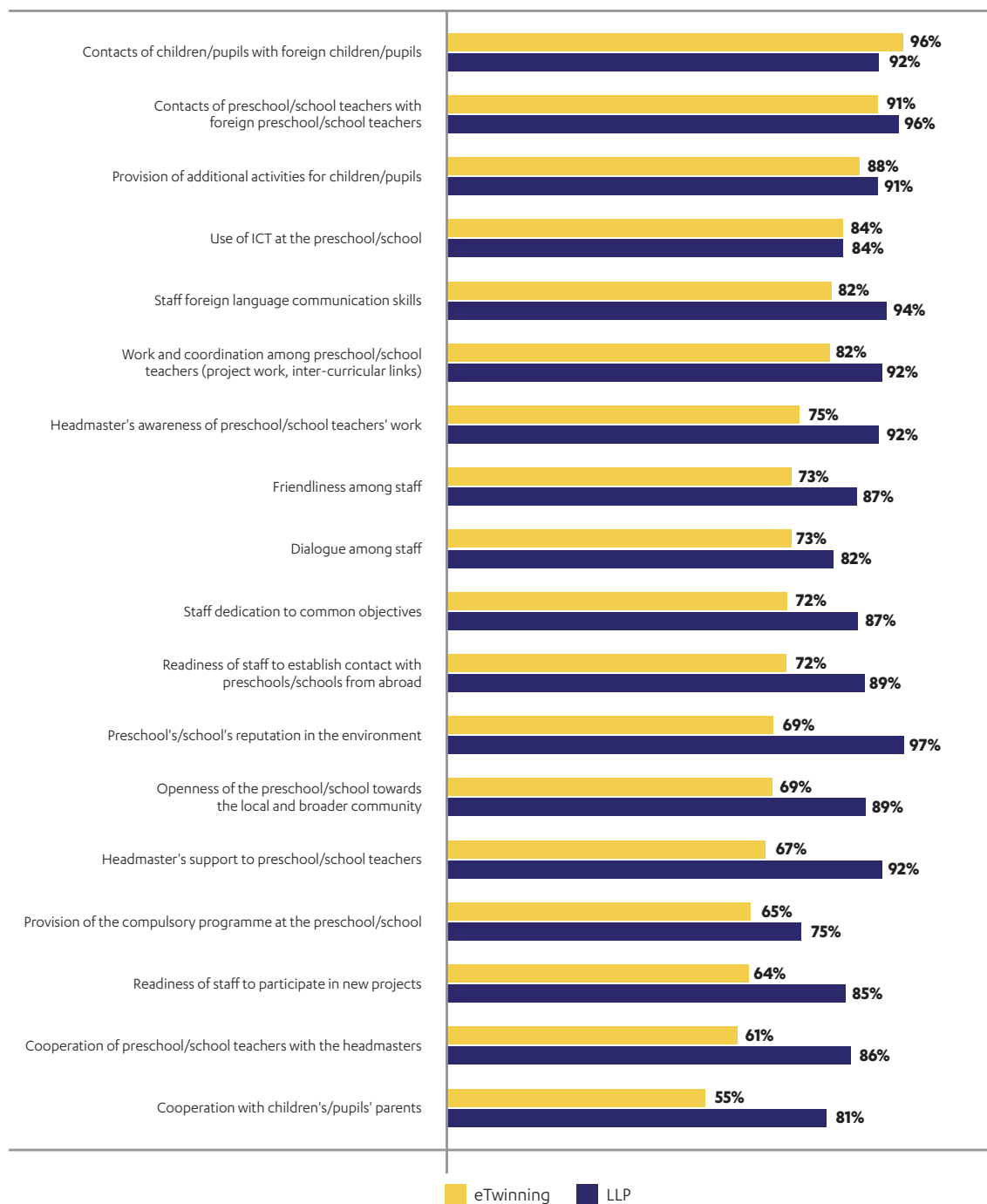| Category	eTwinning	LLP
Contacts of children/pupils with foreign children/pupils	96%	92%
Contacts of preschool/school teachers with foreign preschool/school teachers	91%	96%
Provision of additional activities for children/pupils	88%	91%
Use of ICT at the preschool/school	84%	84%
Staff foreign language communication skills	82%	94%
Work and coordination among preschool/school teachers (project work, inter-curricular links)	82%	92%
Headmaster's awareness of preschool/school teachers' work	75%	92%
Friendliness among staff	73%	87%
Dialogue among staff	73%	82%
Staff dedication to common objectives	72%	87%
Readiness of staff to establish contact with preschools/schools from abroad	72%	89%
Preschool's/school's reputation in the environment	69%	97%
Openness of the preschool/school towards the local and broader community	69%	89%
Headmaster's support to preschool/school teachers	67%	92%
Provision of the compulsory programme at the preschool/school	65%	75%
Readiness of staff to participate in new projects	64%	85%
Cooperation of preschool/school teachers with the headmasters	61%	86%
Cooperation with children's/pupils' parents	55%	81%

eTwinning   LLP

The figure shows the frequency of answers where the share of respondents who observed a (high or low) positive impact (= value 1 or 2) exceeds 50%. There are 18 out of the total 19 criteria which meet this requirement. The only field where less than 50% of respondents (from both eTwinning and LLP programmes) observed a positive impact is the cooperation with other Slovenian preschools/schools.

Since the beginning of the implementation of the eTwinning programme Slovenian schools can participate in the same eTwinning projects, as opposed to the LLP, where the cooperation among Slovenian schools in the same projects was limited. Due to the low frequency of responses with respect to this criterion we believe that the eTwinning project coordinators are not adequately familiar with the possibility of collaboration of several Slovenian schools in the same project (according to our information there are only 17% of such projects).

According to respondents the eTwinning projects had the highest impact on the contacts of children/pupils with foreign children/pupils and contacts of preschool/school teachers with foreign preschool/school teachers – with both criteria over 90% of respondents assessed that the projects has a positive impact. On the other hand the LLP projects had the highest impact on the preschool's/school's reputation in the environment (97%).

6. 2. Impact on teachers

Teachers – coordinators of the eTwinning programme assessed the criteria for the impact of project participation on teachers. The impact was rated with a five-level grading scale and grades from -2 (= high (long-term) negative impact) to +2 (= high (long-term) positive impact). The results are shown in the figures and tables below.

When assessing the impact of eTwinning and LLP projects on the work of teachers the average awarded grades for 8 criteria were higher for eTwinning projects, while the grades for 18 criteria were higher for LLP. The average grade for one criterion was the same for both programmes. The highest graded criteria include the use of cooperative learning in class, use of diverse teaching methods, development of computer skills, and integration of pupils in the decision-making process regarding the course of learning. Coordinators of the LLP and eTwinning projects awarded the same average grade for the criter-

ion awareness about new forms and methods of teaching, while eTwinners awarded higher average grades for training of teachers for the use of new forms and methods of teaching. All of this points to the increasing use of new methods and interest in gaining new knowledge for their application during classes.

With 8 of 27 criteria we observed statistically significant differences to the advantage of LLP projects. The highest differences were observed in the assessment of project impact on the knowledge and understanding of education systems in partner countries; and the awareness of European cultural and moral values, as well as the awareness of teachers of common European heritage.

All criteria were assessed with an average grade above 0, i.e. respondents assess that the eTwinning and LLP projects have a positive impact on the work of teachers.

Figure 16: Comparison of average grades for the impact of eTwinning and LLP projects on teachers

	eTwinning	LLP
Motivation of teachers for introduction of change and new methods in teaching	1,29	1,24
Use of new tools and materials	1,29	1,44
Relationship between teachers and pupils	1,27	1,41
Implementation of inter-curricular links	1,26	1,36
Knowledge and understanding of education systems in partner countries	1,25	1,58
Use of cooperative learning in class	1,25	1,12
Use of diverse teaching forms and methods	1,23	1,18
Training of teachers for the use of ICT	1,21	1,04
Foreign language training of teachers	1,21	1,27
Awareness about new forms and methods of teaching	1,17	1,17
Awareness of European cultural and moral values	1,17	1,47
Knowledge of foreign education environments	1,16	1,42
Training of teachers for the use of new methods and forms of teaching	1,15	0,97
Awareness of teachers of common European heritage	1,13	1,44
Cooperation and coordination among teachers (project work, inter-curricular links)	1,11	1,35
Teachers' dedication for a democratic dialogue with pupils	1,04	1,11
Integration of pupils in the decision-making process regarding the course of learning	1,03	0,92
Promotion of individual work in class	0,92	0,96
Knowledge of European institutions and their operation	0,87	1,17
Ability of teachers to teach special needs pupils	0,41	0,49
Teachers' workload	0,20	0,06

eTwinning   LLP

Table 3: Comparison of average grades for the impact of eTwinning and LLP projects on teachers

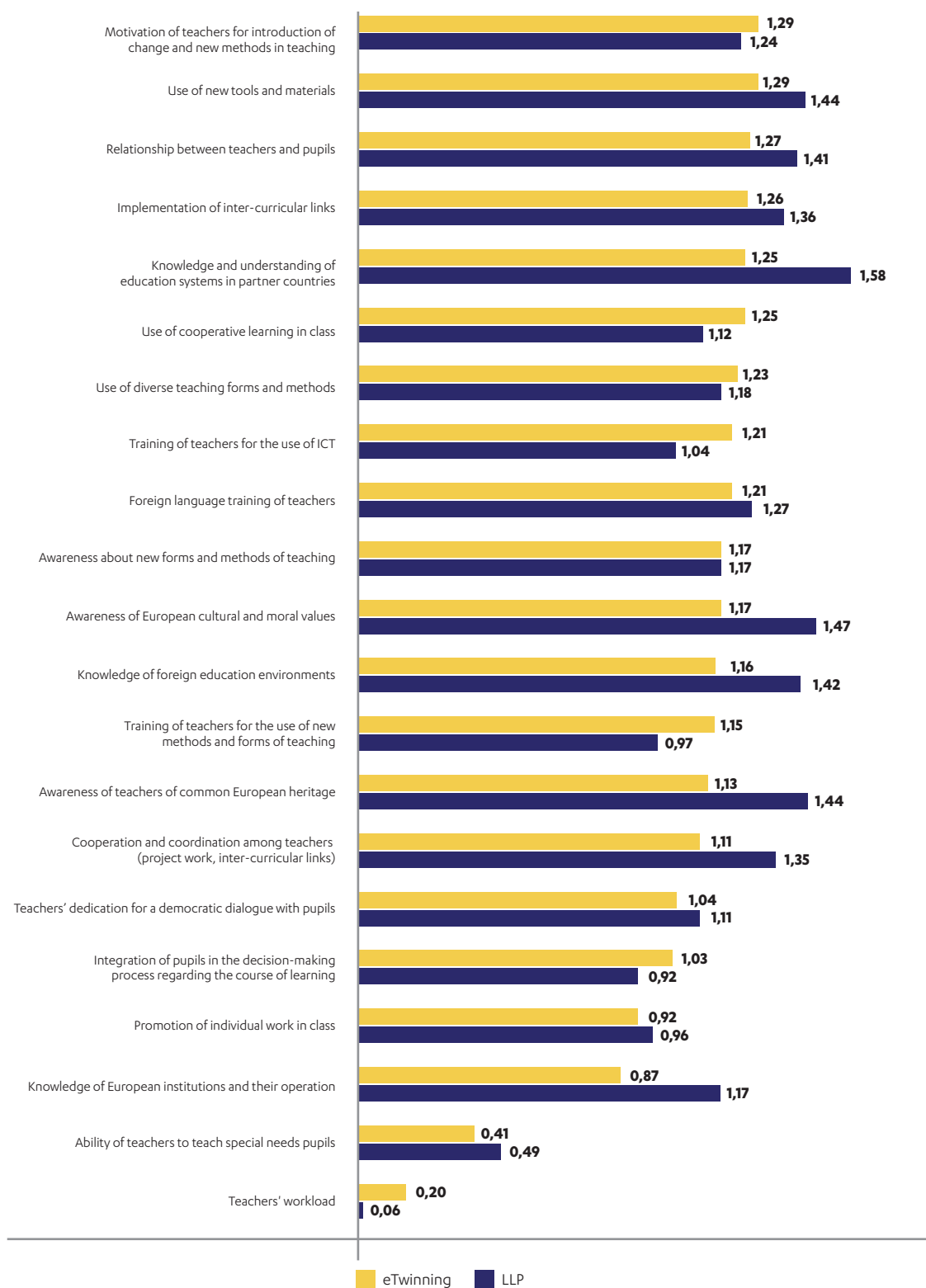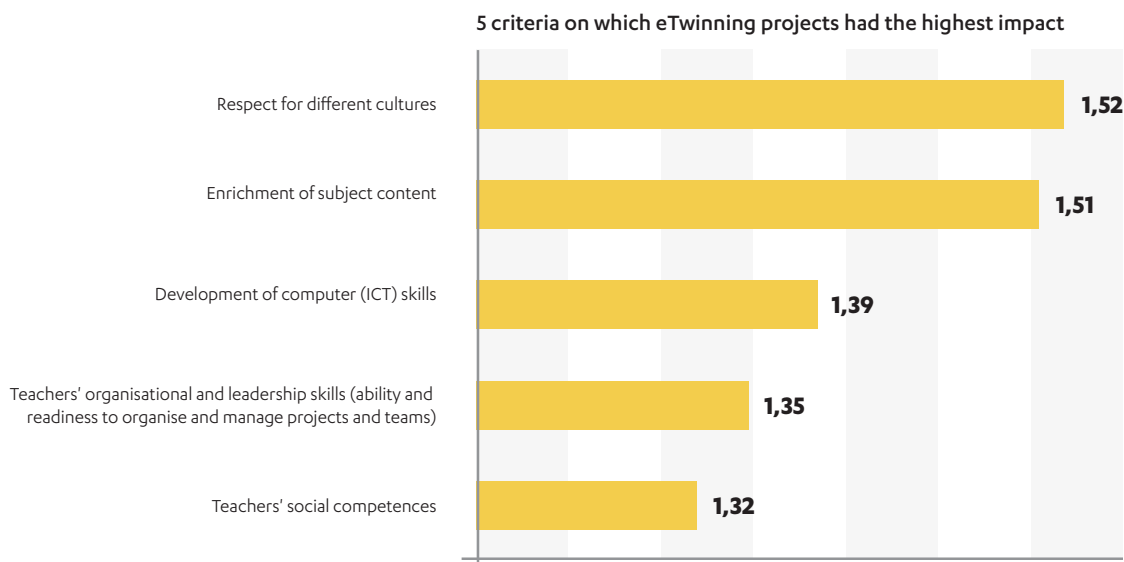|	eTwinning			LLP			t-test	
	Mean	N	Std. Deviation	Mean	N	Std. Deviation	t	sig.
Respect for different cultures	1,52	75	,578	1,74	170	,481	-2,823	,006
Enrichment of subject content	1,51	75	,578	1,54	170	,587	-,426	,670
Development of computer (ICT) skills	1,39	75	,769	1,26	170	,750	1,164	,246
Teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams)	1,35	75	,744	1,56	170	,614	-2,225	,028
Teachers' social competencies	1,32	75	,661	1,44	170	,670	-1,247	,214
Inclusion of own cultural heritage in teaching	1,32	75	,701	1,38	170	,671	-,661	,509
Motivation of teachers for introduction of change and new methods in teaching	1,29	76	,689	1,44	170	,554	-1,766	,079
Use of new learning tools and resources	1,29	75	,693	1,24	170	,655	,628	,531
Relationship between teachers and pupils	1,27	75	,684	1,41	170	,717	-1,419	,157
Implementation of inter-curricular links	1,26	76	,719	1,36	170	,659	-1,086	,279
Knowledge and understanding of education systems in partner countries	1,25	76	,695	1,12	170	,715	1,293	,197
Use of cooperative learning in class	1,25	75	,755	1,58	170	,563	-3,322	,001
Use of diverse teaching forms and methods	1,23	75	,669	1,18	170	,708	,520	,604
Training of teachers for the use of ICT	1,21	75	,776	1,04	170	,849	1,552	,122
Foreign language training of teachers	1,21	75	,776	1,27	170	,775	-,533	,595
Awareness about new forms and methods of teaching	1,17	75	,724	1,17	170	,738	,027	,978
Awareness of European cultural and moral values	1,17	75	,705	1,47	170	,663	-3,171	,002
Knowledge of foreign education environments	1,16	75	,754	1,42	170	,641	-2,805	,005
Training of teachers for the use of new methods and forms of teaching	1,15	75	,748	0,97	170	,757	1,684	,093
Awareness of teachers of common European heritage	1,13	75	,811	1,44	170	,696	-3,029	,003
Cooperation and coordination of teachers (project work, inter-curricular links)	1,11	75	,798	1,35	170	,673	-2,431	,016
Teachers' dedication for a democratic dialogue with pupils	1,04	75	,761	1,11	170	,773	-,673	,502
Integration of pupils in the decision-making process regarding the course of learning	1,03	75	,771	0,92	170	,725	1,064	,288
Promotion of individual work in class	0,92	76	,762	0,96	170	,753	-,419	,676
Knowledge of European institutions and their operation	0,87	75	,935	1,17	170	,705	-2,517	,013
Ability of teachers to teach special needs pupils	0,41	75	,617	0,49	170	,763	-,812	,418
Teachers' workload	0,20	75	1,219	0,06	170	1,197	,811	,418

Figure 17: Criteria with the highest average grades - eTwinning

5 criteria on which eTwinning projects had the highest impact

Criterion	Value
Respect for different cultures	1,52
Enrichment of subject content	1,51
Development of computer (ICT) skills	1,39
Teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams)	1,35
Teachers' social competences	1,32

At the level of teachers eTwinning projects had the highest impact on the respect for different cultures and enrichment of subject content. Third was the development of computer (ICT) skills, followed by teachers' organisational and leadership skills and the teachers' social competences.

Figure 18: Criteria with the highest average grades - LLP

5 criteria on which LPP projects had the highest impact

Criterion	Value
Respect for different cultures	1,74
Knowledge and understanding of education systems in partner countries	1,58
Teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams)	1,56
Enrichment of subject content	1,54
Awareness of European cultural and moral values	1,47

LLP projects also have the highest impact on respect for different cultures. Other important criteria, which are also among the top 5 criteria in the eTwinning programme are teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams) and enrichment of subject content, while the top criteria in LLP also include knowledge and understanding of education systems in partner countries and awareness of European cultural and moral values.

Regardless of the difference in the implementation mechanism, both the participation in eTwinning as well as LLP programme contributed to the development of teachers' organisational skills to the same extent.

Table 4: Impact of eTwinning projects on teachers (from criteria with the highest impact to criteria with the lowest impact) and comparison with the LLP

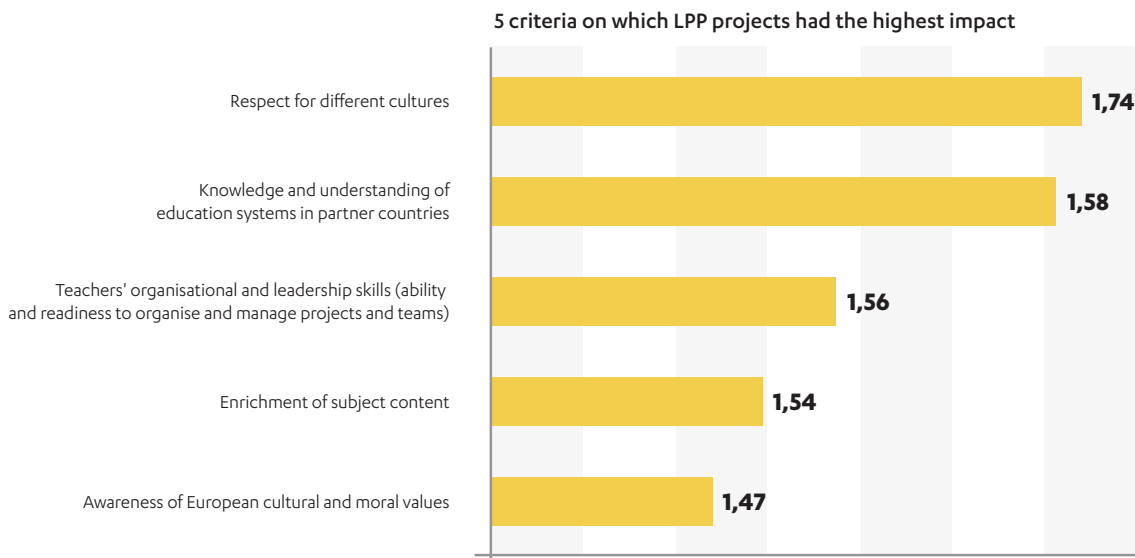| | Ranking in eTwinning | Programme | | | | | | t-test | | Rank in LLP |
| | | eTwinning | | | LLP | | | | | |
		Mean	N	Std. Deviation	Mean	N	Std. Deviation	t	sig.	
Respect for different cultures	1	1,52	75	,578	1,74	170	,481	-2,823	,006	1
Enrichment of subject content	2	1,51	75	,578	1,54	170	,587	-,426	,670	4
Development of computer (ICT) skills	3	1,39	75	,769	1,26	170	,750	1,164	,246	15
Teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams)	4	1,35	75	,744	1,56	170	,614	-2,225	,028	3
Teachers' social competencies	5	1,32	75	,701	1,38	170	,671	-,661	,509	11
Inclusion of own cultural heritage in teaching	6	1,32	75	,661	1,44	170	,670	-1,247	,214	8
Motivation of teachers for introduction of change and new methods in teaching	7	1,29	75	,693	1,24	170	,655	,628	,531	16
Use of new learning tools and resources	8	1,29	76	,689	1,44	170	,554	-1,766	,079	7
Relationship between teachers and pupils	9	1,27	75	,684	1,41	170	,717	-1,419	,157	10
Implementation of inter-curricular links	10	1,26	76	,719	1,36	170	,659	-1,086	,279	12
Knowledge and understanding of education systems in partner countries	11	1,25	75	,755	1,58	170	,563	-3,322	,001	2
Use of cooperative learning in class	12	1,25	76	,695	1,12	170	,715	1,293	,197	20
Use of diverse teaching forms and methods	13	1,23	75	,669	1,18	170	,708	,520	,604	17
Training of teachers for the use of ICT	14	1,21	75	,776	1,04	170	,849	1,552	,122	22
Foreign language training of teachers	15	1,21	75	,776	1,27	170	,775	-,533	,595	14
Awareness about new forms and methods of teaching	16	1,17	75	,724	1,17	170	,738	,027	,978	19
Awareness of European cultural and moral values	17	1,17	75	,705	1,47	170	,663	-3,171	,002	5
Knowledge of foreign education environments	18	1,16	75	,754	1,42	170	,641	-2,805	,005	9
Training of teachers for the use of new methods and forms of teaching	19	1,15	75	,748	0,97	170	,757	1,684	,093	23
Awareness of teachers of common European heritage	20	1,13	75	,811	1,44	170	,696	-3,029	,003	6
Cooperation and coordination of teachers (project work, inter-curricular links)	21	1,11	75	,798	1,35	170	,673	-2,431	,016	13
Teachers' dedication for a democratic dialogue with pupils	22	1,04	75	,761	1,11	170	,773	-,673	,502	21
Integration of pupils in the decision-making process regarding the course of learning	23	1,03	75	,771	0,92	170	,725	1,064	,288	25
Promotion of individual work in class	24	0,92	76	,762	0,96	170	,753	-,419	,676	24
Knowledge of European institutions and their operation	25	0,87	75	,935	1,17	170	,705	-2,517	,013	18
Ability of teachers to teach special needs pupils	26	0,41	75	,617	0,49	170	,763	-,812	,418	26
Teachers' workload	27	0,20	75	1,219	0,06	170	1,197	,811	,418	27

Note: Blue means that a specific criterion ranks higher in the eTwinning programme; Yellow means that the criterion ranks the same in both programmes; and red means that the criterion is ranked higher in the LLP.

Table 4 shows the criteria of impact of the eTwinning projects on the work of teachers, sorted by average grade, from the criteria on which the projects had the highest impact to projects on which the projects had the lowest impact. The last column contains the information on the rank of the same criteria with respect to LLP projects.

Three criteria are placed among the top 5 in both eTwinning and LLP. These criteria are: respect for different cultures (ranked first in both programmes) and enrichment of subject content (ranked second in eTwinning and fourth in LLP) and organisational skills of teachers (ranked fourth in eTwinning and third in LLP).

The criteria which were ranked significantly higher in the eTwinning programme compared to LLP, include the development of ICT skills, teachers' social competences and motivation of teachers for introduction of change and new methods in teaching. The main reason for this lies with the fact that teachers with lower ICT skills participate in eTwinning, therefore the development of these competences is more significant. To the high percentage, also other possibilities from the eTwinning platform contribute, not only cooperation in projects. Due to the distance between partners, coordinators of eTwinning projects need to be more engaged in the establishment of contacts with partner schools. While the third criteria can be explained with the fact that due to the simplicity of the project implementation mechanism the participant can direct more attention to the use of innovative practices in the teaching process and the mission of eTwinning, i.e. to become a tool to enrich classes in the light of 21st century teaching.

Figure 19: High (long-term) positive impact on the work of teachers
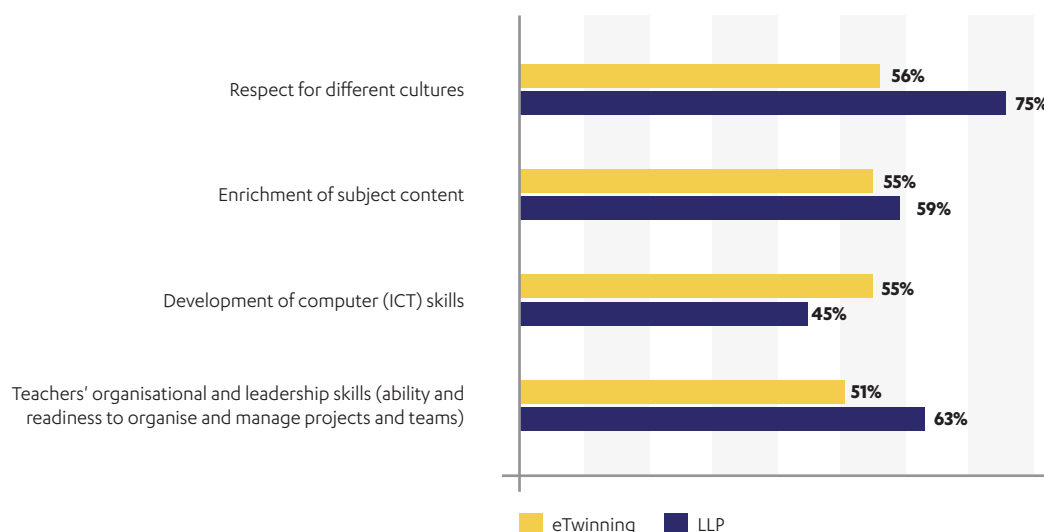
The figure shows the frequency of answers where the share of respondent, who detected a high (long term) positive impact (= value 2), exceeds 50%.

With eTwinning projects there are four such criteria, while the highest long term positive impact was detected with respect for different cultures (56%). The situation is the same with respect to LLP where the highest share of respondents also detected the highest long term positive impact on the respect for different cultures, while there are a total of nine criteria where the share of »high (long term) positive effect« responses exceeds 50%.

Figure 20: Positive impact on the work of teachers

Category	Yellow	Blue
Enrichment of subject content	96%	95%
Respect for different cultures	96%	98
Use of new learning tools and materials	89%	97%
Inclusion of own cultural heritage in teaching	89%	90%
Motivation of teachers for introduction of change and new methods in teaching	89%	88%
Implementation of inter-curricular links	87%	90%
Use of diverse teaching forms and methods	87%	82%
Teachers' social competences	87%	89%
Relationship between teachers and pupils	87%	88%
Knowledge and understanding of education systems in partner countries	87%	96%
Use of cooperative learning in class	86%	80%
Development of computer (ICT) skills	85%	82%
Teachers' organisational and leadership skills (ability and readiness to organise and manage projects and teams)	84%	94%
Awareness of European cultural and moral values	83%	91%
Cooperation and coordination among teachers (project work, inter-curricular links)	81%	89%
Awareness about new forms and methods of teaching	81%	81%
Knowledge of foreign education environments	81%	92%
Training of teachers for the use of ICT	79%	69%
Foreign language training of teachers	79%	80%
Training of teachers for the use of new methods and forms of teaching	79%	71%
Awareness of teachers of common European heritage	79%	88%

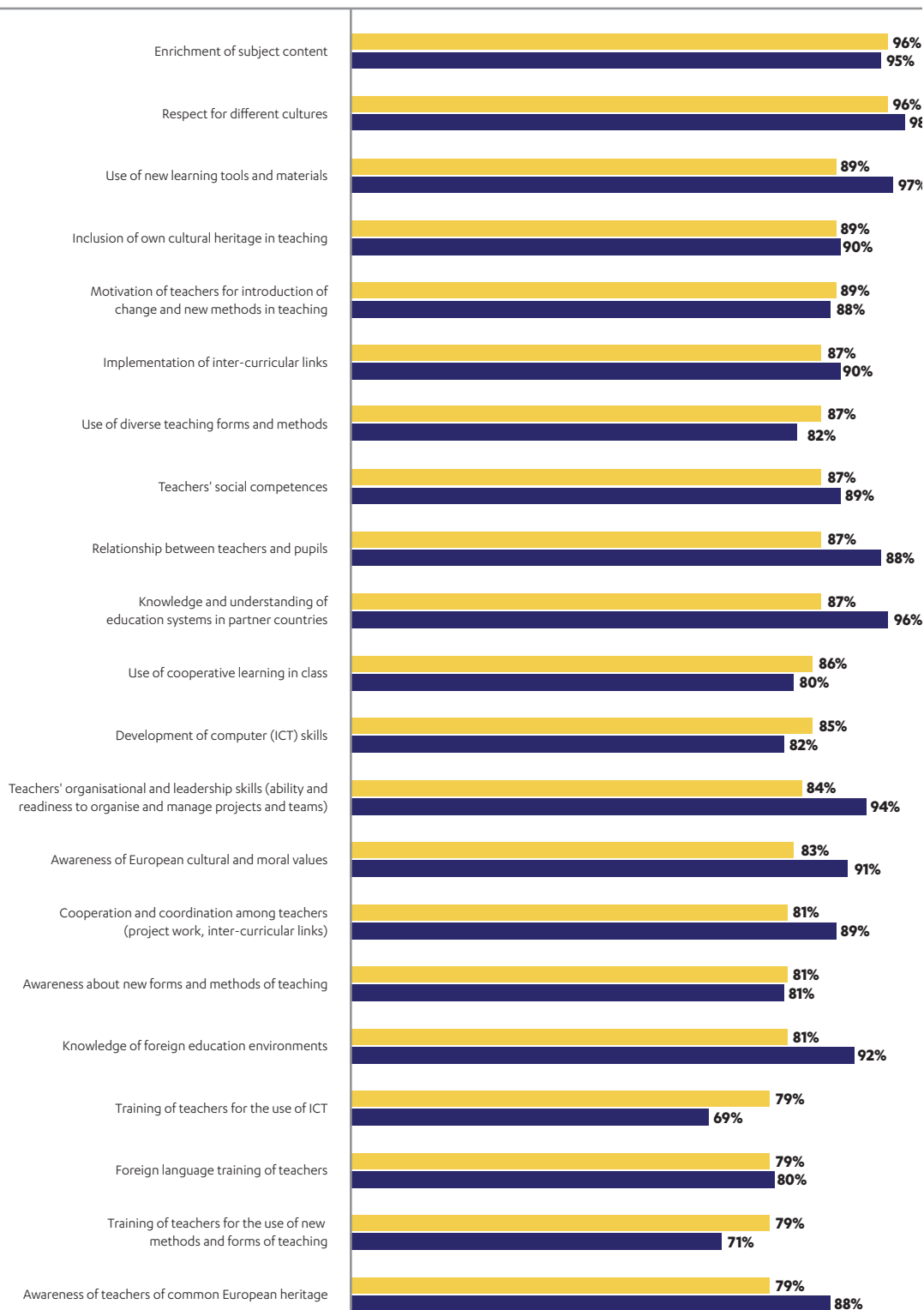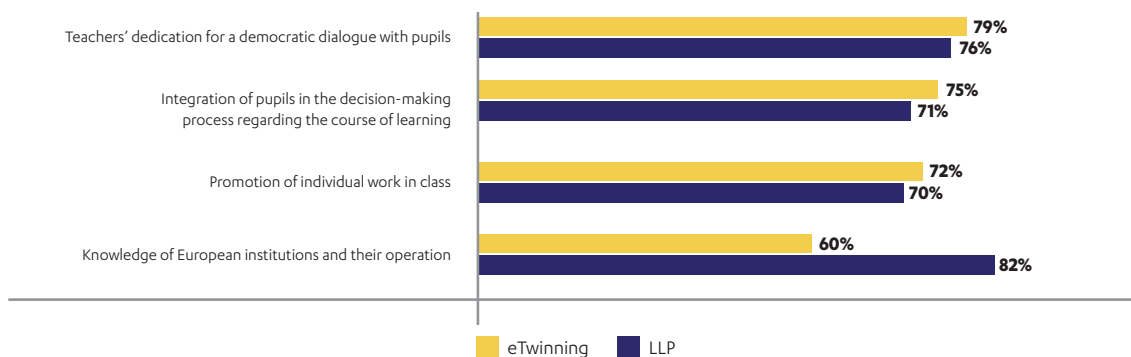|	
Teachers' dedication for a democratic dialogue with pupils	79% / 76%
Integration of pupils in the decision-making process regarding the course of learning	75% / 71%
Promotion of individual work in class	72% / 70%
Knowledge of European institutions and their operation	60% / 82%

■ eTwinning ■ LLP

The figure shows the frequency of answers where the respondents, who detected a (high or low) positive impact (= value 1 or 2) exceeds 50%. There are a total of 25 (out of 27) such criteria. The criteria where less than 50% of respondents (in both eTwinning and LLP) detected a positive impact are teachers' workload and the ability of teachers to teach special needs pupils.

According to respondents eTwinning projects had the highest impact on the enrichment of subject content and respect for different cultures. For both criteria 96% of respondents detected a positive impact. LLP projects had the highest impact on the respect for different cultures (98%) and the use of new learning tools and resources (97%).

6. 3. Impact on pupils

Teachers – coordinators of the eTwinning programme graded the criteria of impact of participation in the project on pupils. The impact was rated with a five-level grading scale and grades from -2 (= high (long-term) negative impact) to +2 (= high (long-term) positive impact). The results are shown in the figures and tables below.

When assessing the impact of eTwinning and LLP projects on pupils the awarded average grades for 3 criteria were higher for eTwinning projects, while the awarded average grades for LLP projects were higher for 14 criteria. With 8 of

17 criteria we observed statistically significant differences (all to the advantage of LLP projects). The most significant differences were observed in the assessment of project impact on the awareness and knowledge of different cultures and respect for diversity.

All criteria were awarded an average grade above 0, which means that the respondents believe that eTwinning and LLP projects have a positive impact on pupils.

Figure 21: Comparison of the average grades awarded for the impact of eTwinning and LLP programmes on pupils

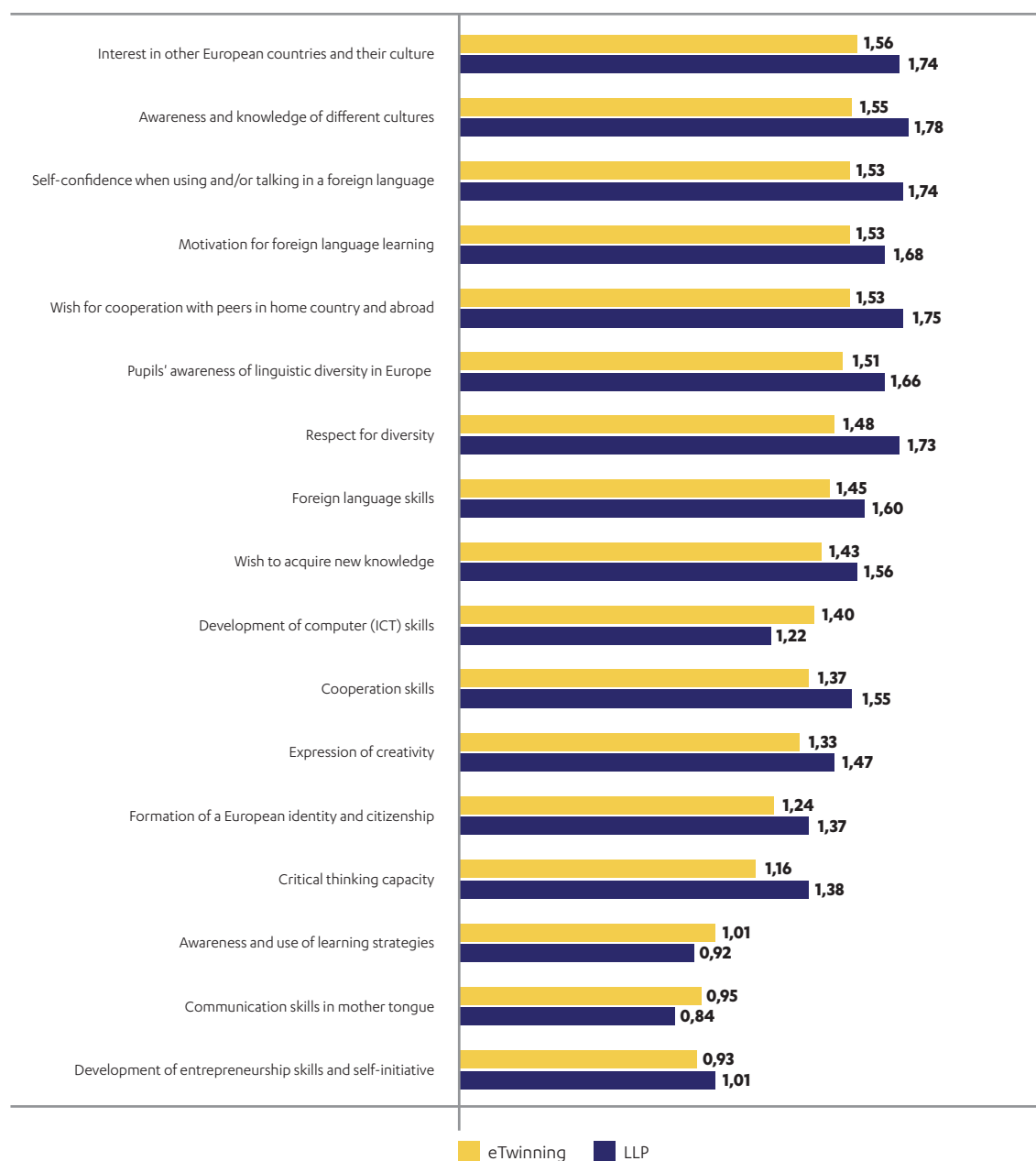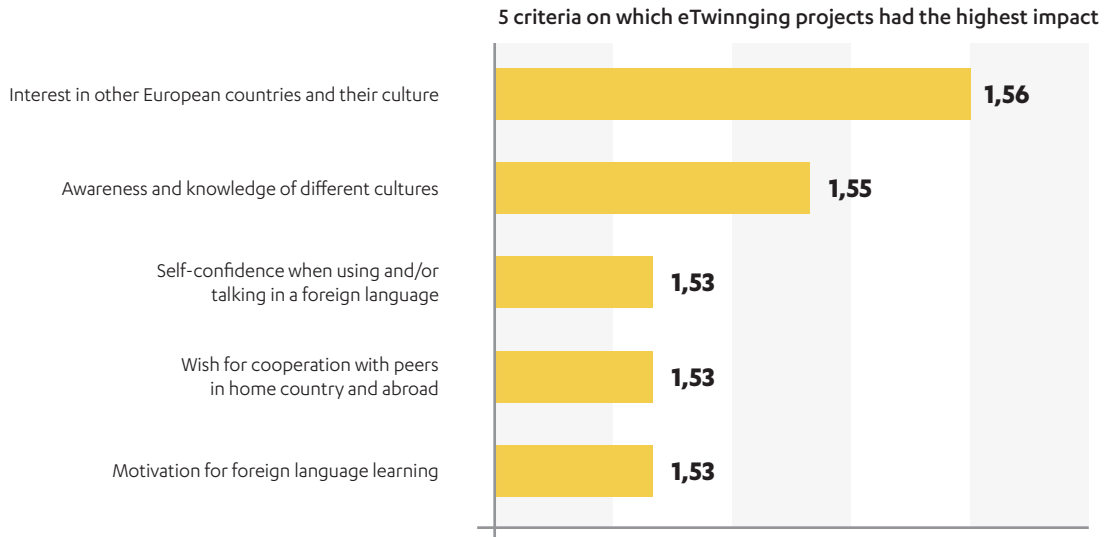|	eTwinning	LLP
Interest in other European countries and their culture	1,56	1,74
Awareness and knowledge of different cultures	1,55	1,78
Self-confidence when using and/or talking in a foreign language	1,53	1,74
Motivation for foreign language learning	1,53	1,68
Wish for cooperation with peers in home country and abroad	1,53	1,75
Pupils' awareness of linguistic diversity in Europe	1,51	1,66
Respect for diversity	1,48	1,73
Foreign language skills	1,45	1,60
Wish to acquire new knowledge	1,43	1,56
Development of computer (ICT) skills	1,40	1,22
Cooperation skills	1,37	1,55
Expression of creativity	1,33	1,47
Formation of a European identity and citizenship	1,24	1,37
Critical thinking capacity	1,16	1,38
Awareness and use of learning strategies	1,01	0,92
Communication skills in mother tongue	0,95	0,84
Development of entrepreneurship skills and self-initiative	0,93	1,01

eTwinning   LLP

Table 5: Comparison of average grades awarded for the impact of eTwinning and LLP projects on pupils

	eTwinning			LLP			t-test	
	Mean	N	Std. Deviation	Mean	N	Std. Deviation	t	sig.
Interest in other European countries and their culture	1,56	75	,526	1,74	170	,468	-2,484	,014
Awareness and knowledge of different cultures	1,55	75	,599	1,78	170	,445	-2,978	,004
Self-confidence when using and/or talking in a foreign language	1,53	75	,664	1,68	170	,572	-1,620	,108
Motivation for foreign language learning	1,53	75	,600	1,74	170	,547	-2,565	,011
Wish for cooperation with peers in home country and abroad	1,53	75	,664	1,75	170	,475	-2,517	,013
Pupils' awareness of linguistic diversity in Europe	1,51	75	,578	1,66	170	,543	-2,008	,047
Respect for diversity	1,48	75	,665	1,73	170	,496	-2,911	,004
Foreign language skills	1,45	75	,684	1,60	170	,590	-1,612	,109
Wish to acquire new knowledge	1,43	75	,640	1,56	170	,595	-1,635	,103
Development of computer (ICT) skills	1,40	75	,658	1,22	170	,757	1,806	,072
Cooperation skills	1,37	75	,632	1,55	170	,566	-2,136	,034
Expression of creativity	1,33	75	,684	1,47	170	,645	-1,506	,133
Formation of a European identity and citizenship	1,24	75	,694	1,37	170	,669	-1,392	,165
Critical thinking capacity	1,16	76	,731	1,38	170	,688	-2,259	,025
Awareness and use of learning strategies	1,01	75	,707	0,92	170	,780	,945	,346
Communication skills in mother tongue	0,95	75	,733	0,84	170	,802	1,008	,315
Development of entrepreneurial skills and self-initiative	0,93	75	,741	1,01	170	,784	-,733	,464

Figure 22: Criteria with the highest average grades - eTwinning

5 criteria on which eTwinnging projects had the highest impact

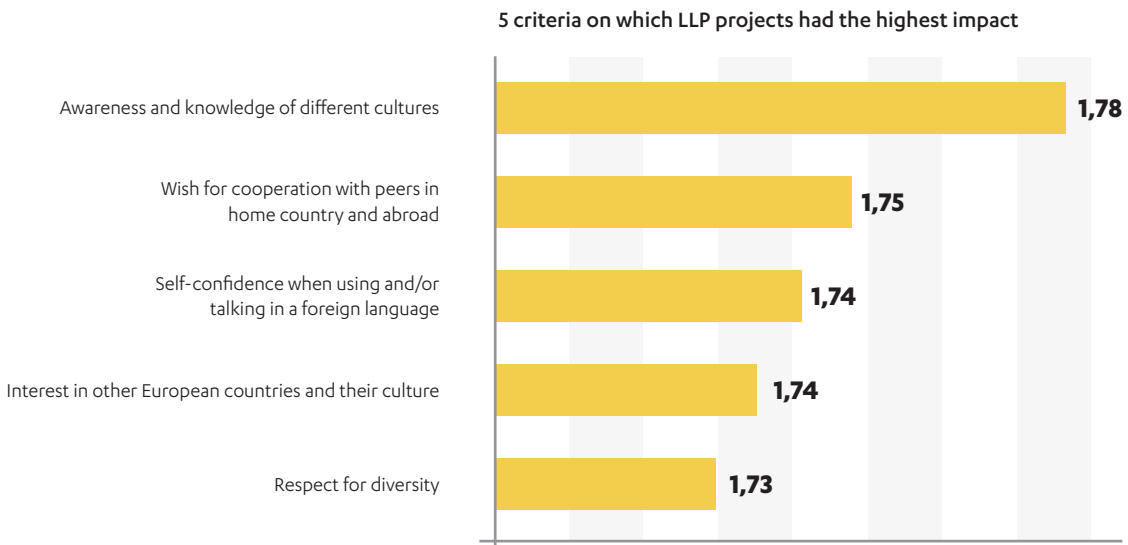| Criteria	Grade
Interest in other European countries and their culture	1,56
Awareness and knowledge of different cultures	1,55
Self-confidence when using and/or talking in a foreign language	1,53
Wish for cooperation with peers in home country and abroad	1,53
Motivation for foreign language learning	1,53

With respect to pupils eTwinning projects had the largest impact on the interest in other European countries and their culture and pupils' awareness and knowledge of different cultures. Third average grade (same for three criteria) was awarded to self-confidence when using and/or talking in a foreign language, wish for cooperation with peers in home country and abroad, and motivation for foreign language learning. The motivation for foreign language learning was ranked third in eTwinning and only sixth in the LLP, although the average grade for the criteria in LLP is slightly higher compared to eTwinning.

The most significant differences in the average grades of the eTwinning and LLP programmes were observed with criteria, which we believe require personal contact with peers, e.g. awareness and knowledge of different cultures and respect for diversity.

Figure 23: Criteria with the highest grades - LLP

5 criteria on which LLP projects had the highest impact

Criteria	Grade
Awareness and knowledge of different cultures	1,78
Wish for cooperation with peers in home country and abroad	1,75
Self-confidence when using and/or talking in a foreign language	1,74
Interest in other European countries and their culture	1,74
Respect for diversity	1,73

LLP projects had the highest impact on pupils' awareness and knowledge of different cultures, followed by their wish for cooperation with peers in home country and abroad, self-confidence when using and/or talking in a foreign language, interest in other European countries and their culture, and respect for diversity.

Table 6 shows all criteria of impact of the eTwinning projects on pupils, sorted by average grade, and listed from the highest to the lowest impact. The last column contains the information on the rank of the relevant criterion in LLP projects.

Four criteria are ranked among the top 5 criteria in both the eTwinning programme and LLP. Contrary to criteria regarding the impact on organisation and teachers different top criterion was observed in each programme with respect to the impact on pupils. However, overall grades awarded for these criteria in both programmes are the most similar.

Table 6: Impact of eTwinning projects on pupils (from the criteria with the highest impact to the criteria with the lowest impact) and comparison with LLP

| | Rankin in eTwinning | Programme | | | | | | t-test | | Rank in LLP |
| | | eTwinning | | | LLP | | | | | |
		Mean	N	Std. Deviation	Mean	N	Std. Deviation	t	sig.	
Interest in other European countries and their culture	1	1,56	75	,526	1,74	170	,468	-2,484	,014	4
Awareness and knowledge of different cultures	2	1,55	75	,599	1,78	170	,445	-2,978	,004	1
Self-confidence when using and/or talking in a foreign language	3	1,53	75	,600	1,74	170	,547	-2,565	,011	3
Motivation for foreign language learning	4	1,53	75	,664	1,68	170	,572	-1,620	,108	6
Wish for cooperation with peers in home country and abroad	5	1,53	75	,664	1,75	170	,475	-2,517	,013	2
Pupils' awareness of linguistic diversity in Europe	6	1,51	75	,578	1,66	170	,543	-2,008	,047	7
Respect for diversity	7	1,48	75	,665	1,73	170	,496	-2,911	,004	5
Foreign language skills	8	1,45	75	,684	1,60	170	,590	-1,612	,109	8
Wish to acquire new knowledge	9	1,43	75	,640	1,56	170	,595	-1,635	,103	9
Development of computer (ICT) skills	10	1,40	75	,658	1,22	170	,757	1,806	,072	14
Cooperation skills	11	1,37	75	,632	1,55	170	,566	-2,136	,034	10
Expression of creativity	12	1,33	75	,684	1,47	170	,645	-1,506	,133	11
Formation of a European identity and citizenship	13	1,24	75	,694	1,37	170	,669	-1,392	,165	13
Critical thinking capacity	14	1,16	76	,731	1,38	170	,688	-2,259	,025	12
Awareness and use of learning strategies	15	1,01	75	,707	0,92	170	,780	,945	,346	16
Communication skills in mother tongue	16	0,95	75	,733	0,84	170	,802	1,008	,315	17
Development of entrepreneurial skills and self-initiative	17	0,93	75	,741	1,01	170	,784	-,733	,464	15

Note: Blue means that a specific criterion ranks higher in the eTwinning programme; Yellow means that the criterion ranks the same in both programmes; and red means that the criterion is ranked higher in the LLP.

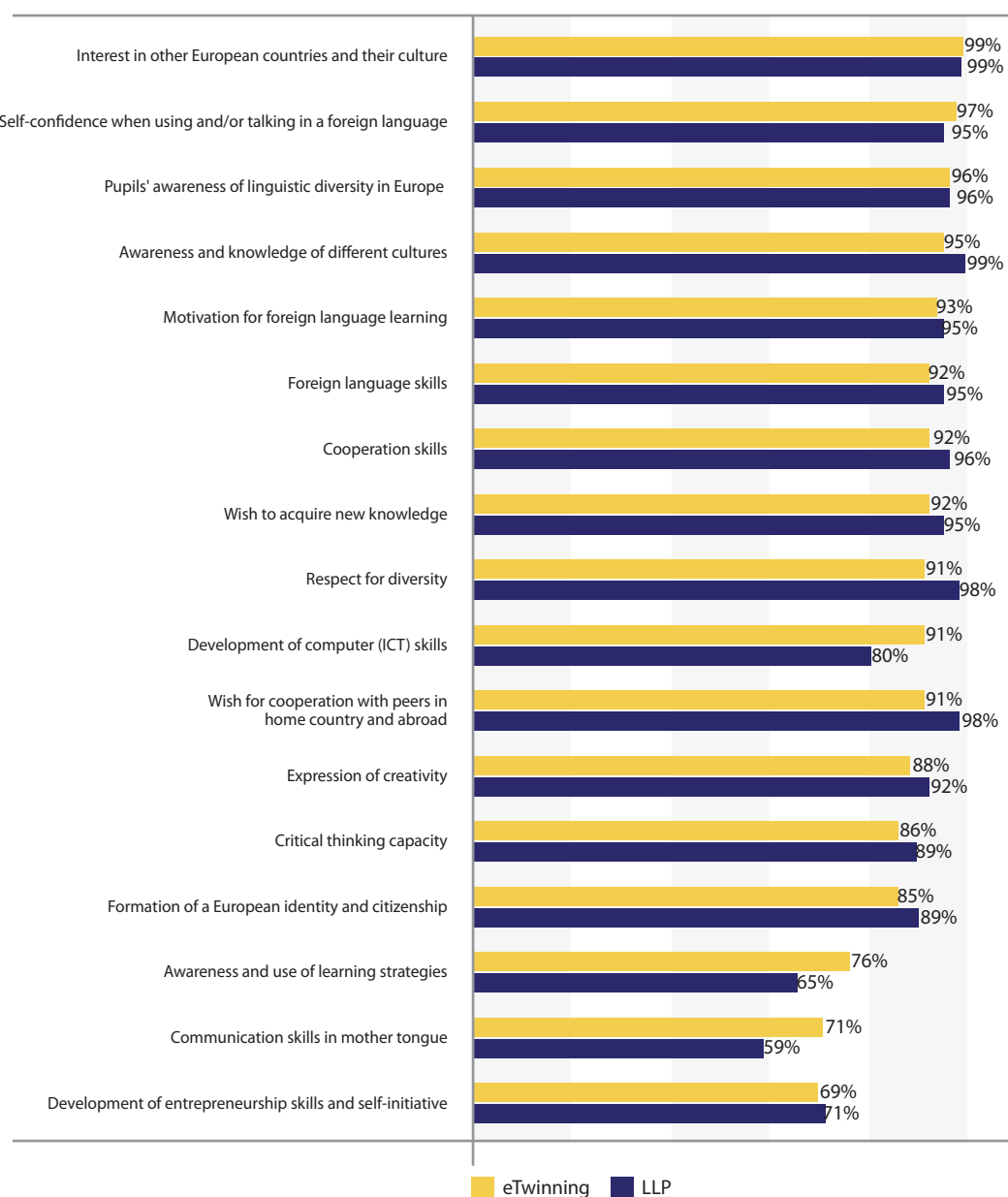*Figure 24: High (long-term) positive impact on pupils*
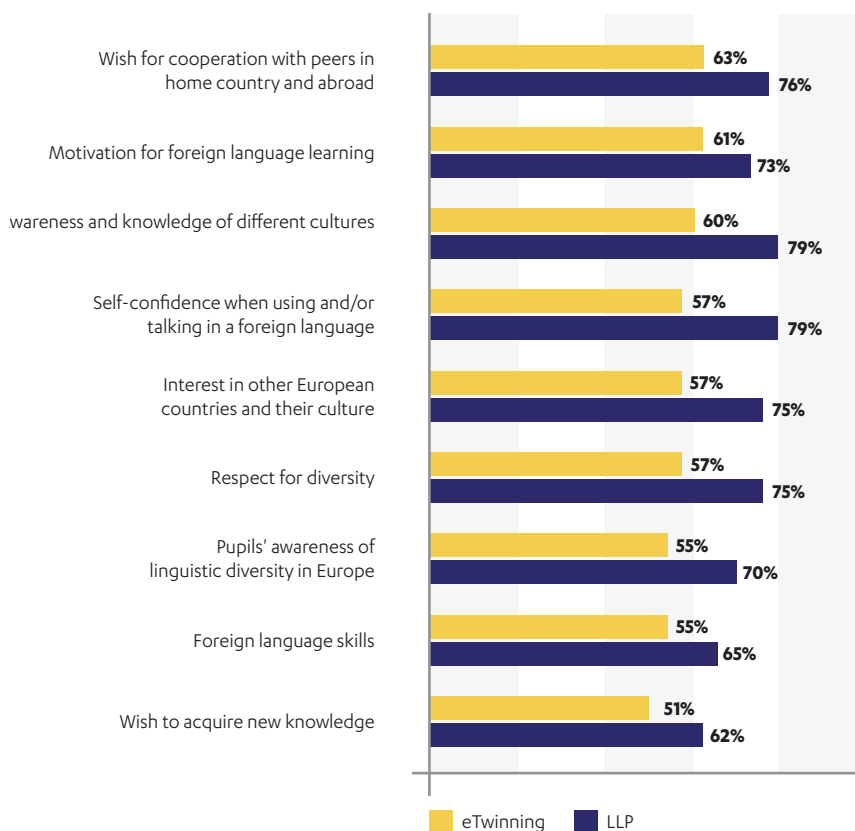
The figure shows the frequency of answers for which the share of respondents, who detected a high (long term) positive impact (= value 2), exceeds 50%.

With eTwinning projects there are nine such criteria, while the highest grades were awarded to the wish for cooperation with peers in home country and abroad (63%). In LLP projects the most significant grades for long term positive impact were awarded to the awareness and knowledge of different cultures (79%) and the self-confidence when using or speaking in a foreign language (also 79%), while there are a total of 11 criteria, where high positive impact grades exceed 50%.

Figure 25: Positive impact on pupils

Criterion	eTwinning	LLP
Interest in other European countries and their culture	99%	99%
Self-confidence when using and/or talking in a foreign language	97%	95%
Pupils' awareness of linguistic diversity in Europe	96%	96%
Awareness and knowledge of different cultures	95%	99%
Motivation for foreign language learning	93%	95%
Foreign language skills	92%	95%
Cooperation skills	92%	96%
Wish to acquire new knowledge	92%	95%
Respect for diversity	91%	98%
Development of computer (ICT) skills	91%	80%
Wish for cooperation with peers in home country and abroad	91%	98%
Expression of creativity	88%	92%
Critical thinking capacity	86%	89%
Formation of a European identity and citizenship	85%	89%
Awareness and use of learning strategies	76%	65%
Communication skills in mother tongue	71%	59%
Development of entrepreneurship skills and self-initiative	69%	71%

eTwinning ■ LLP

The image shows the frequency of answers for criteria where the share of respondents who detected a (high or low) positive impact (= value 1 or 2) exceeds 50%. There are a total of 17 such criteria.

For two criteria a total of 99% of respondents detected a positive impact; i.e. interest in other European countries and their culture (both eTwinning and LLP) and respect for different cultures (LLP).

7

Interpretation of findings and conclusions

The observed benefits of the eTwinning programme include the integration of eTwinning projects in the education process, as well as involvement of pupils in the preparation and implementation of eTwinning projects.

In the study of the impact of the eTwinning programme on school education all criteria received positive grades (average grade above zero) in all three examined groups (impact on organisation, impact on teachers and impact on pupils).

The results of the study have shown that the impact of eTwinning projects on teachers and pupils is absolutely comparable with the impact of the LLP programme. Due to the complexity of LLP projects (duration, rules of implementation, financial rules, etc) compared to eTwinning projects we can claim that the impact of parti-

cipation of pupils and teachers is greater in the eTwinning programme. This especially refers to the integration of eTwinning project in the education process, as well as involvement of pupils in the preparation and implementation of eTwinning projects.

The most significant differences between the impact of eTwinning and LLP programmes has been observed with the impact on the organisation. If the organisation had strategically integrated and actively included the organisational management in the project, the impact on the organisation could have increased.

7. 1. Impact on the organisation

The respondents believe that the eTwinning programme has a greater impact on the contacts of preschool/school teachers with foreign preschool/school teachers, as well as contacts of pupils with foreign pupils, which can be explained by the aim of the establishment of the eTwinning programme. The programme was and still is actually intended for teachers to exchange good practices. On the other hand the impact on pupils can be explained by the actual integration and participation of pupils in the planning and implementation of project activities.

The largest discrepancies between the LLP and eTwinning programme has been observed mainly with respect to criteria, which involve the cooperation/connections with the headmaster. The implementation of eTwinning projects does not require participation/involvement of the headmaster, however, the management's participation can contribute to the impact of the project on the organisation. The statement is reflected by the increasing average grades for criteria between schools which participated in the eTwinning programme only (low), compared to schools which participated in both programmes or in the LLP programme only (high).

Compared to the impact on teachers and the impact on pupils, the impact on the organisation is significantly higher in the LLP programme in comparison with the eTwinning programme – the greatest observed differences in the average grades for the defined criteria are noticed. However, a greater dispersion of answers with respect to the eTwinning programme shows that the teachers are not united in their opinion as much as teachers assessing the impact of the LLP programme, and that the level of impact also varies from one organisation to another. The data shows that the projects, which last over a year, have a greater impact on the organisation as shorter projects. This is a statistically significant finding. With other examined criteria such a trend has not been identified (primary/secondary school, urban/rural areas, size of school, participation in several projects.

7. 2. Impact on the work of teachers

eTwinning projects contribute the most to the respect for different cultures and enrichment of subject content as well as development of computer skills. The criteria with higher grades for the impact of the eTwinning programme on the work of teachers also include the use of cooperative learning in class, use of diverse teaching methods and integration of pupils in the decision-making process regarding the course of learning. The coordinators of LLP and eTwinning projects awarded the same average grade for the following criterion: awareness of new forms and methods of teaching. On the other hand, coordinators of eTwinning projects awarded higher average grades for the criterion training of teachers for the use of new methods and forms of teaching. This points to the increasing use of new methods, as well as a growing interest to acquire new knowledge for their use in class.

7. 3. Impact on pupils

The eTwinning projects have the greatest impact on pupils, which is in line with the aim of the eTwinning programme; i.e. that the pupils help to co-create projects with their ideas and thus actively contribute to project work.

The average grades for the impact of eTwinning projects on pupils are only slightly different from the average grades in the LLP programme, which confirms the significant impact of the eTwinning programme on pupils.

The eTwinning projects had the greatest impact on the interest for other European countries and their culture, as well as awareness and knowledge of different cultures. Moreover, other criteria with high grades include the criteria linked to the non-cognitive aspects of learning (e.g. motivation for foreign language learning, self-confidence when using and/or talking in a foreign language, wish for cooperation, etc).

Compared to LLP higher average grades were also observed with the criteria: development of computer (ICT) skills, awareness and use of learning strategies, and communication skills in mother tongue.