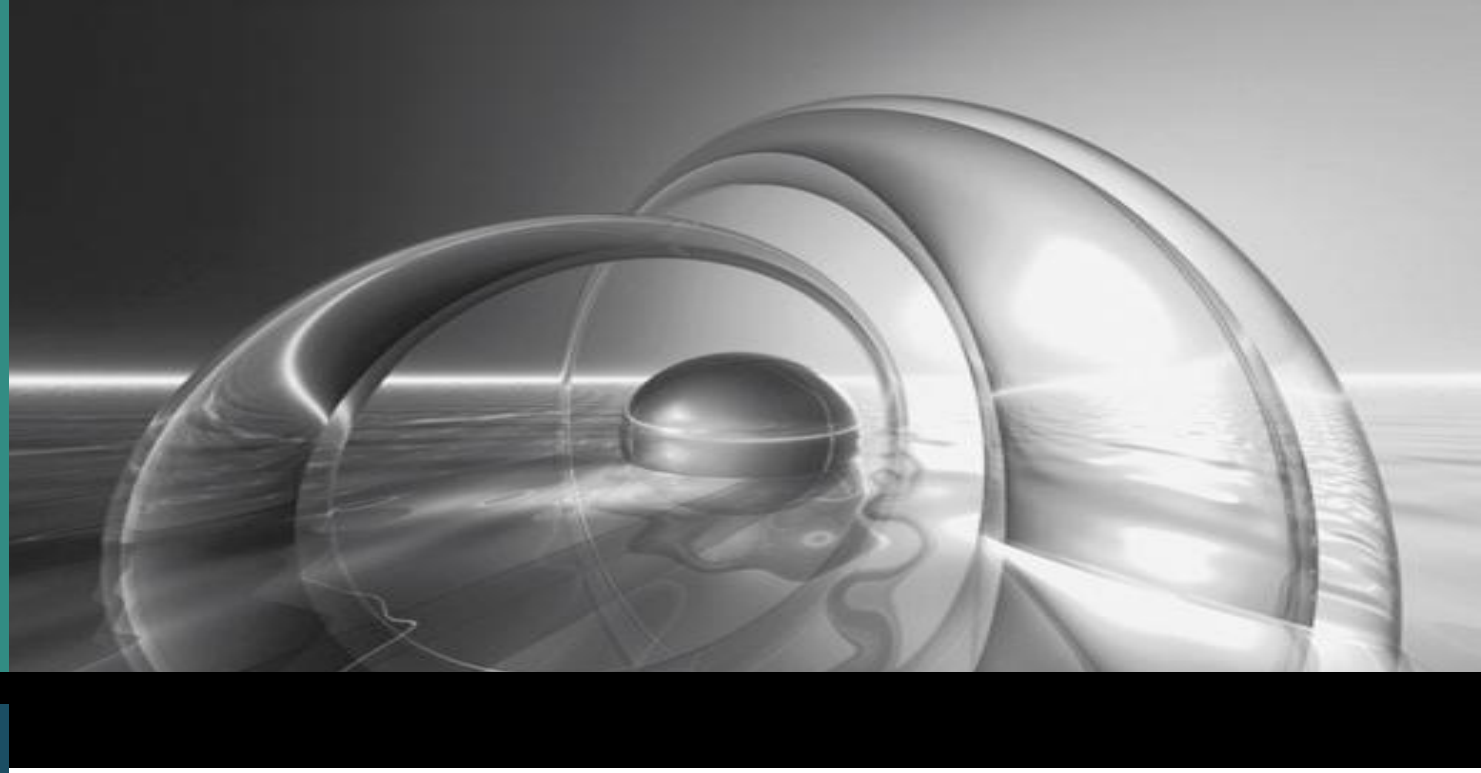

International Computer and Information Literacy Study (ICILS) Russia

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National Training Foundation

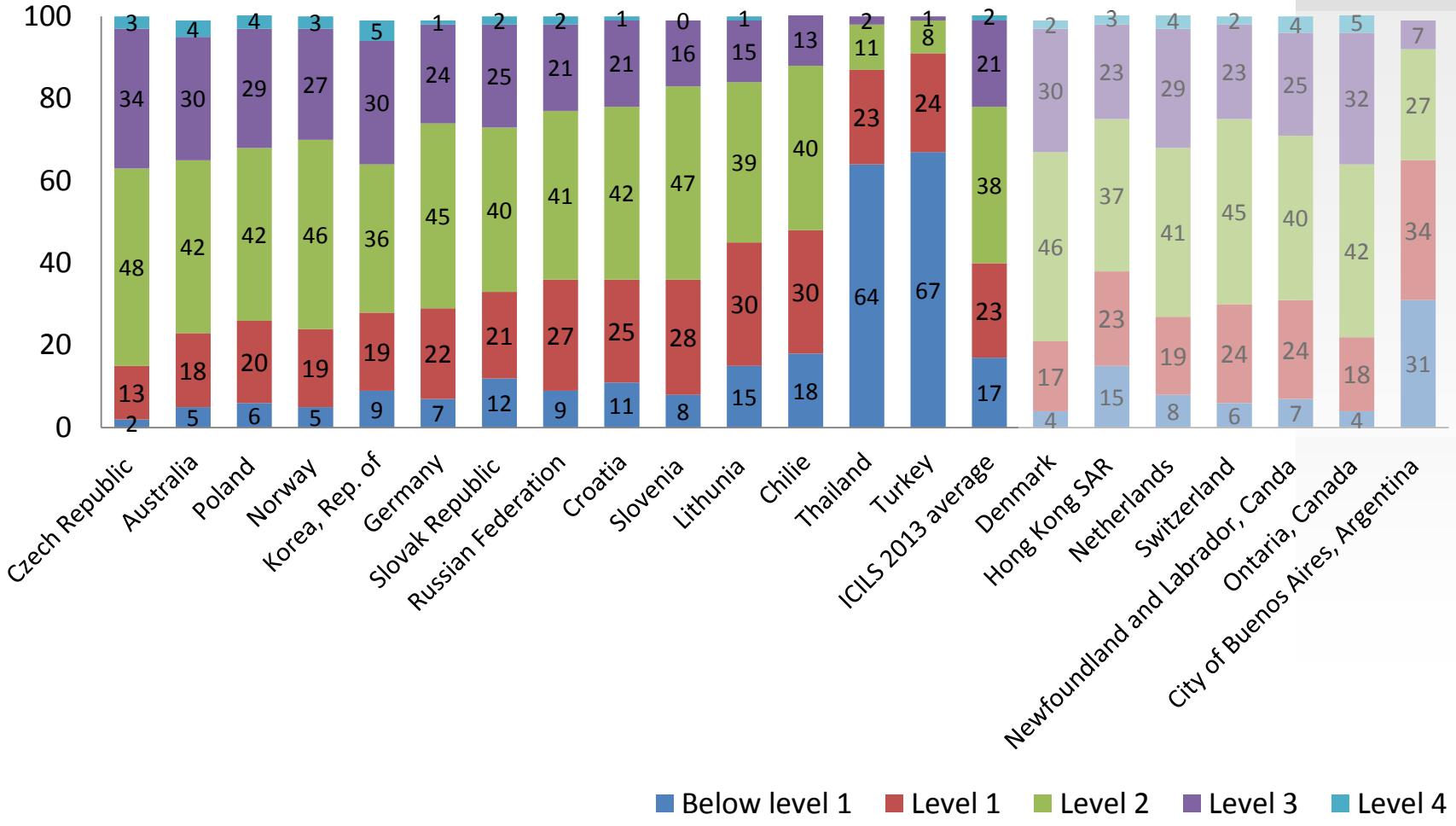
ICILS: Main Survey. Features.

208 schools from 43 regions, 7300 persons

The tests results from remote regions stored on memory sticks were delivered to Moscow by tractors, airplanes, trains

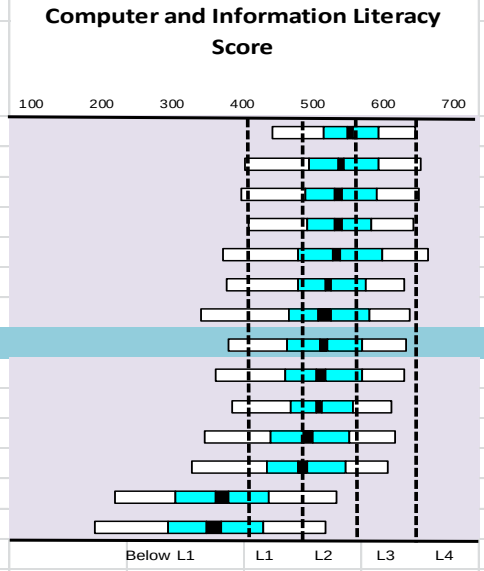
3907 students 8 grade
2995 teachers
208 principals
208 ICT coordinators

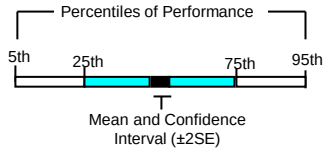
Proficiency levels



Country averages for CIL, years of schooling, average age, ICT Index, student-computer ratios and percentile graph

Country	Years of Schooling	Average Age	Computer and Information Literacy Score	Average CIL score	ICT Development Index Score (and Country Rank)	Student - computer ratios
Czech Republic	8	14,3		553 (2,1) ▲	6.40 (34)	10 (0,3)
Australia	8	14,0		542 (2,3) ▲	7.90 (11)	3 (0,3)
Poland	8	14,8		537 (2,4) ▲	6.31 (37)	10 (0,5)
Norway (Grade 9)[1]	9	14,8		537 (2,4) ▲	8.13 (6)	2 (0,1)
Korea, Rep. of	8	14,2		536 (2,7) ▲	8.57 (1)	20 (2,3)
Germany†	8	14,5		523 (2,4) ▲	7.46 (19)	11 (0,8)
Slovak Republic	8	14,3		517 (4,6) ▲	6.05 (43)	9 (0,5)
Russian Federation[2]	8	15,2		516 (2,8) ▲	6.19 (40)	17 (1,0)
Croatia	8	14,6		512 (2,9) ▲	6.31 (38)	26 (0,8)
Slovenia	8	13,8		511 (2,2) ▲	6.76 (28)	15 (0,5)
Lithuania	8	14,7		494 (3,6)	5.88 (44)	13 (0,7)
Chile	8	14,2		487 (3,1) ▼	5.46 (51)	22 (4,7)
Thailand[2]	8	13,9		373 (4,7) ▼	3.54 (95)	14 (0,9)
Turkey	8	14,1		361 (5,0) ▼	4.64 (69)	80 (16,0)
Countries not meeting sampling requirements						
Denmark	8	15,1		542 (3,5)	8.35 (4)	4 (0,4)
Hong Kong SAR	8	14,1		509 (7,4)	7.92 (10)	8 (0,8)
Netherlands	8	14,3		535 (4,7)	8.00 (7)	5 (0,8)
Switzerland	8	14,7		526 (4,6)	7.78 (13)	7 (0,6)
Benchmarking participants						
Newfoundland and Labrador, Canad	8	13,8		528 (2,8)	7.38 (20)[3]	6 (0,0)
Ontario, Canada	8	13,8		547 (3,2)	7.38 (20)[3]	6 (0,3)
Benchmarking participants not meeting sampling requirements						
City of Buenos Aires, Argentina	8	14,2		450 (8,6)	5.36 (53)[4]	33 (9,4)





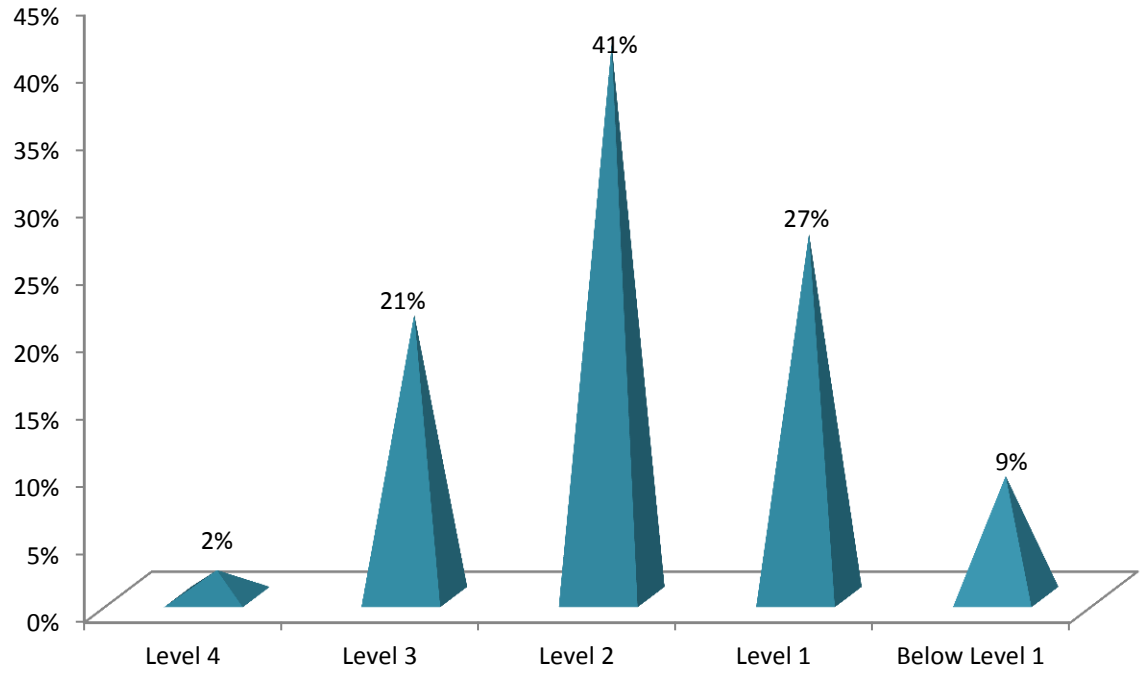
▲	Achievement significantly higher than ICILS 2013
▼	Achievement significantly lower than ICILS 2013

Some results. Russian

36% of the Russian students demonstrated low levels of CIL proficiency (level 1 or lower).

2% students demonstrated Level 4.

62% - Level 2 and Level 3



National programs on informatization of the Russian education system

National policies on ICT use in education (at national and regional levels) exist in 18 out of 21 countries

Russia

- Informatization of the education system 2006-2008
- Project on educational resources (Development of innovative digital educational resources) 2011 - 2012

Informatization project results

- The Unified collection of digital educational resources, which contains more than 60 thousand items, has been created
- About 10 thousand subscribers make use of the resources daily
- 20 educational network communities have been supported
- More than 2500 students of teacher training universities have been taught on new programs
- 249 centres in pilot regions and 156 centres in regions have been created and received grants
- 135 000 teachers have been trained
- 60 competitions to support educational innovations in ICT use in teaching and learning have been held

Innovative digital resources project results

- 5000 digital educational resources have been created.
- In-service teacher trainings on using the digital educational resources have been conducted. 65 000 teachers from all Russian regions took part in these trainings.
- Approbation of interactive multimedia e-textbooks at educational institutions have been carried out .
- On-line survey of teachers, school principals, students on ICT use at school have been conducted.

The strategies and policies for supporting the use of ICT in Russian schools

Key documents that include the strategies and policies for supporting the use of ICT in school education are:

- **Federal Law "Education in the Russian Federation"**
- **Federal Program for Education Development in 2011-2015**
- **Federal Education Standards for Primary Education**
- **Federal Education Standards for Basic Secondary Education**
- **Federal Education Standards for General Secondary Education**
- **In addition, each region of the Russian Federation implements its own program for education development which includes plans on implementing the ICT use in the education system (informatization program). Some regions have a separate program for ICT implementation, for example "Digital Tatarstan"**
- **High ICT competence is an important component of a teacher's new professional standard approved in December 2013**

Digital Educational Resources Today

- **Free access for all secondary and vocational schools via Internet :**
  - **Collection of Digital Educational Resources**

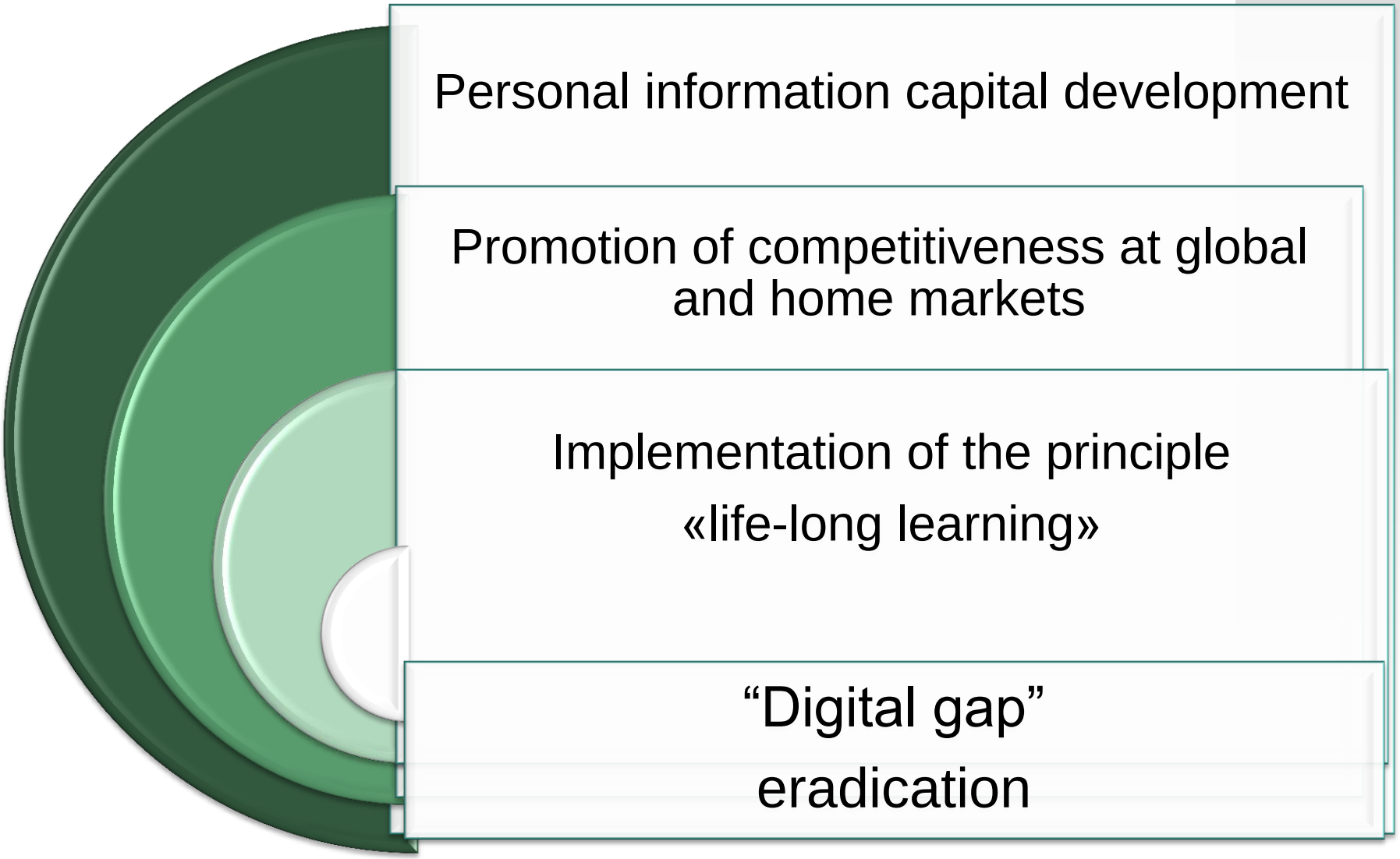
http://school-collection.edu.ru

  - **Federal Centre of Information Educational Resources**

http://fcior.edu.ru

- **Resources of 9 federal educational Internet portals**

Strategic priorities of modernization program



Situation analysis

Key results of the past projects and programs

- High level of infrastructure development (1 computer/14 students, 6/7 teachers);
- More than 90% of teachers and administrators in educational institutions received ICT training
- Infrastructure for methodology has been created (resource centres)
- Unified information and education environment is developing
- Preconditions for transferring the basic education system at a new informatization level have been created

Problems and obstacles

- Development of digitally-rich environment at schools is uneven
- Formalist approach to developing informatization programs
- Absence of systematic programs on students' e-learning with the use of distant learning technologies
- Computers are not always used effectively
- Technical limitations to use of educational resources on the Internet (bandwidth, quality of connection)
- Technical limitations at school level (absence of local networks)

Key points of informatization concept

Insufficient

- replace existing education practices to the similar ones accomplished through the Internet

Essential

- make ICT solve new pedagogical tasks
- form and develop students' ICT competence

School informatization

- not a way to develop a technological infrastructure for teaching and learning process
- resource for pedagogical innovations

ICT-competence

- general skills to work with information,
- concrete, subject-related skills
- specific skills to work and study in the digitally-rich environment

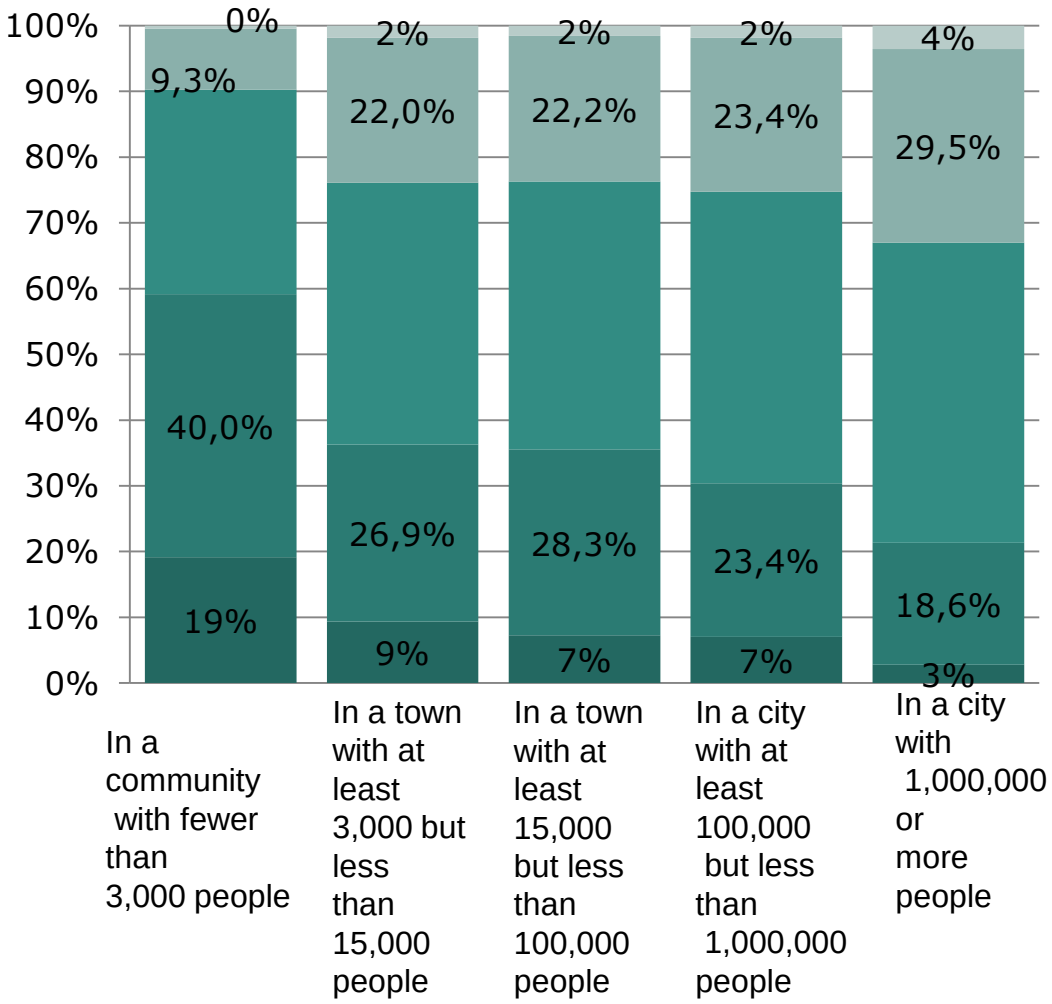
Some results – cross-country and Russian

- On average 17% of students (9% in Russia) did not achieve the 1st CIL level.
- On average only 2% of students (2% in Russia also) achieved the 4th CIL level (South Korean students demonstrated the highest result – 5%)
- Girls' CIL level is higher than boys' in all countries.

Distribution of CIL levels in Russia

	Females	Males
Below Level 1	8,3%	9,7%
Level 1	24,5%	29,5%
Level 2	43,0%	39,0%
Level 3	20,2%	21,8%
Level 4	2,1%	1,9%

Relationship of students' CIL level and their place of residence



34% of students living in large cities demonstrated the 3rd and 4th CIL levels and that is three times higher than the results of students living in rural areas (9%).

19% of students living in rural areas do not achieve the 1st CIL level. Only 3% of students living in large cities do not achieve the 1st level. (6 times difference!)

Students-computer ratio in relation to school location

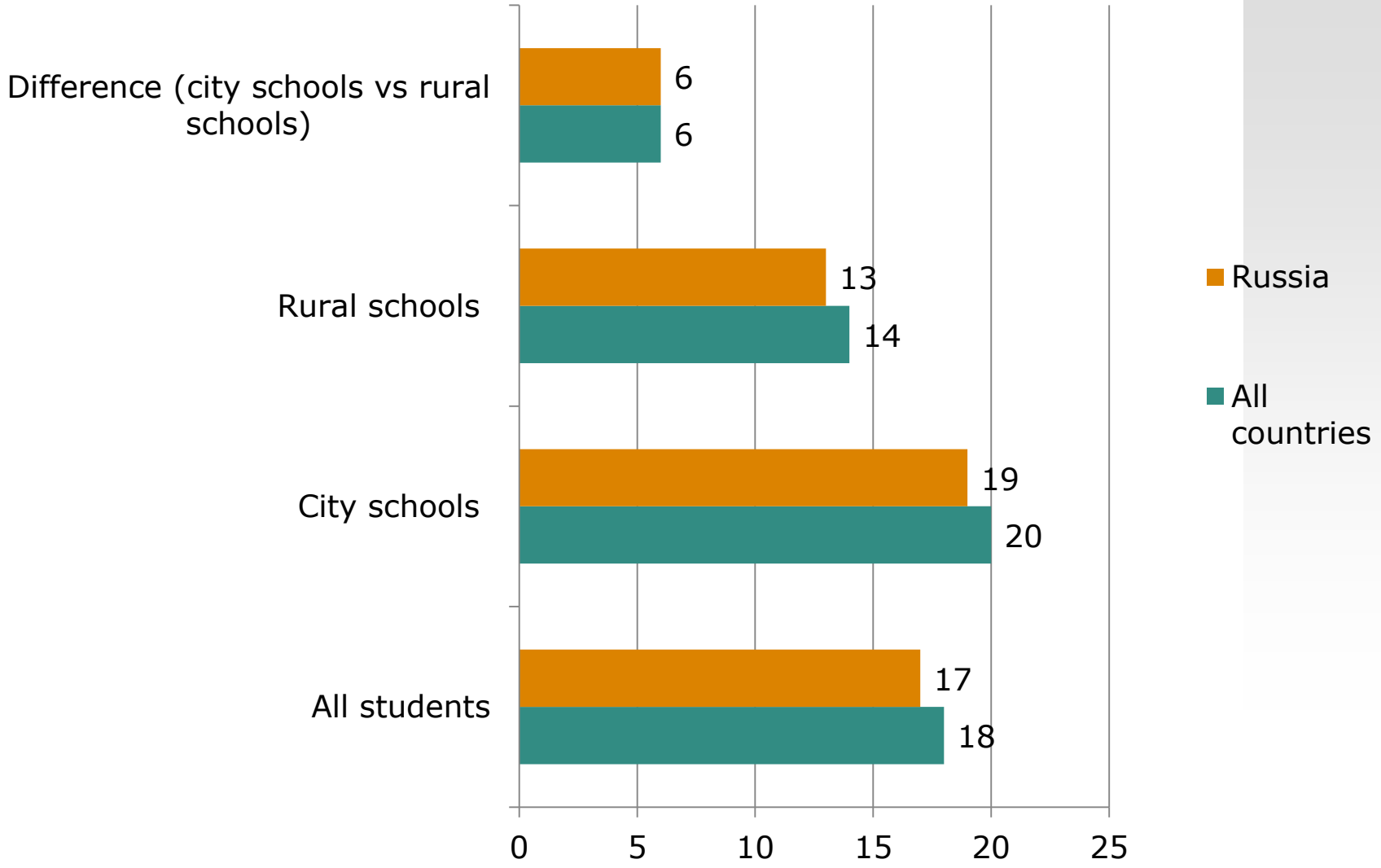
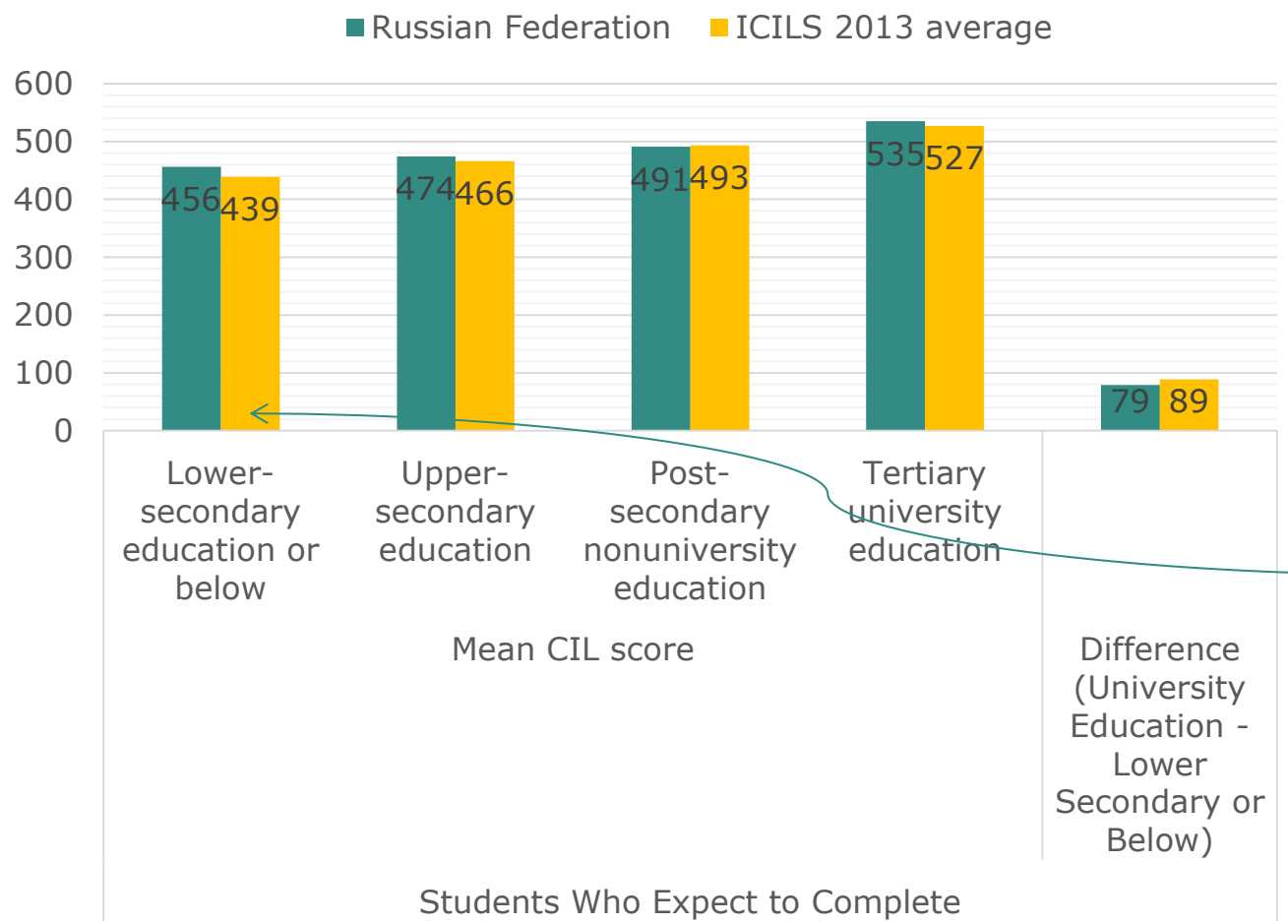
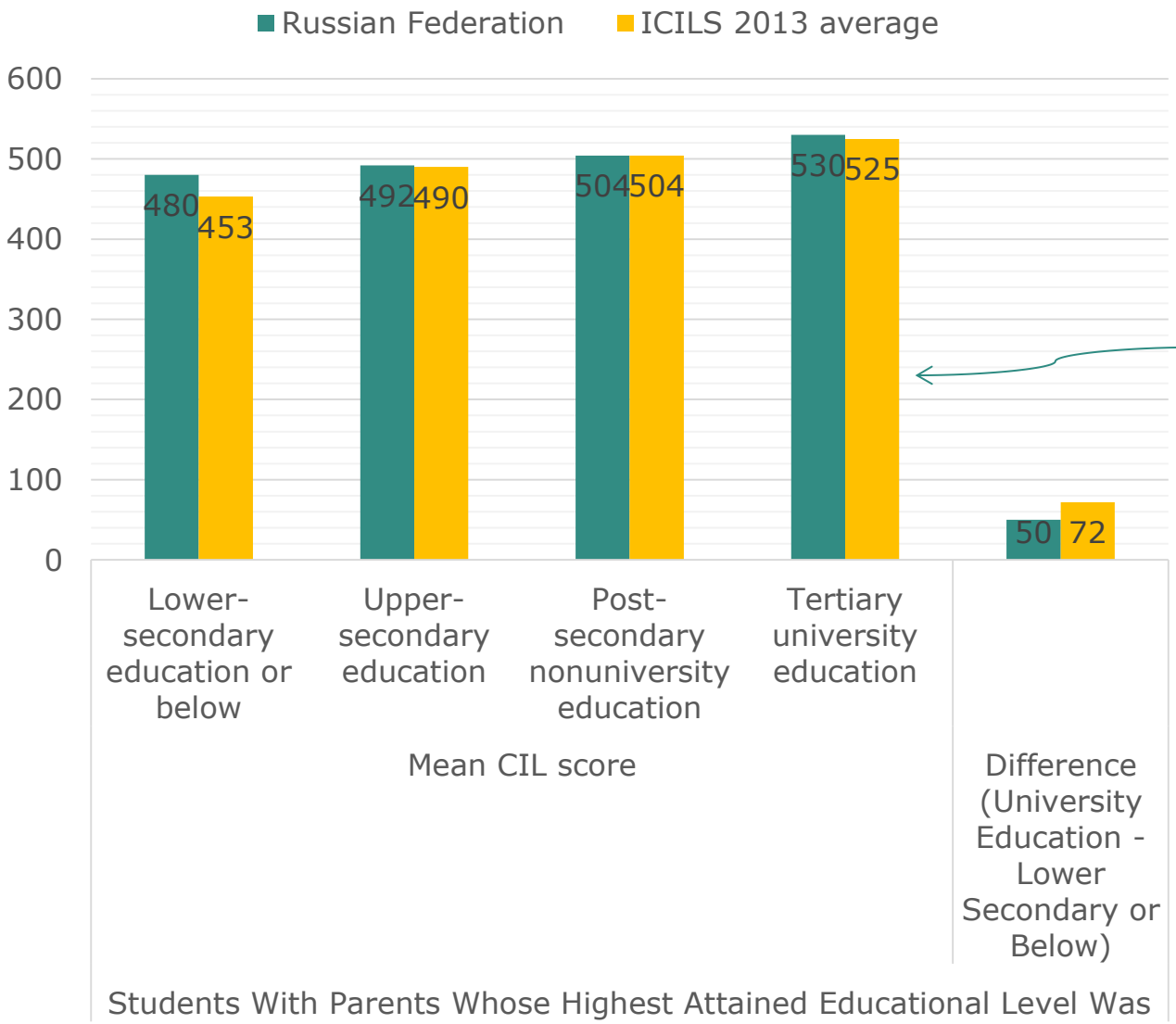


Table : National percentages and CIL score averages for students in categories of expected education



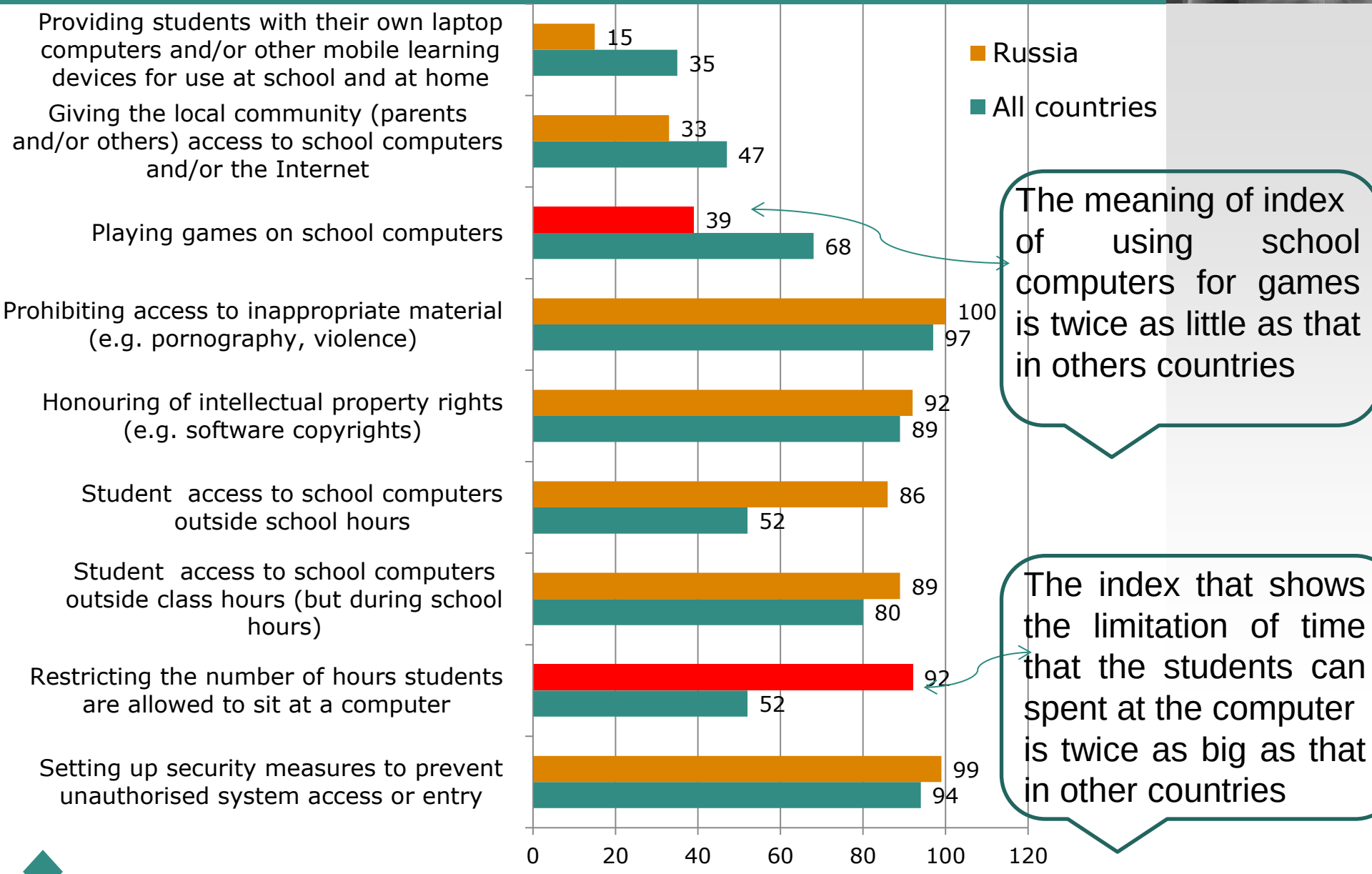
The least CIL score Is in the group of students who don't want to reach even Lower-secondary education or below

National percentages and CIL score averages for students in categories of parental educational attainment

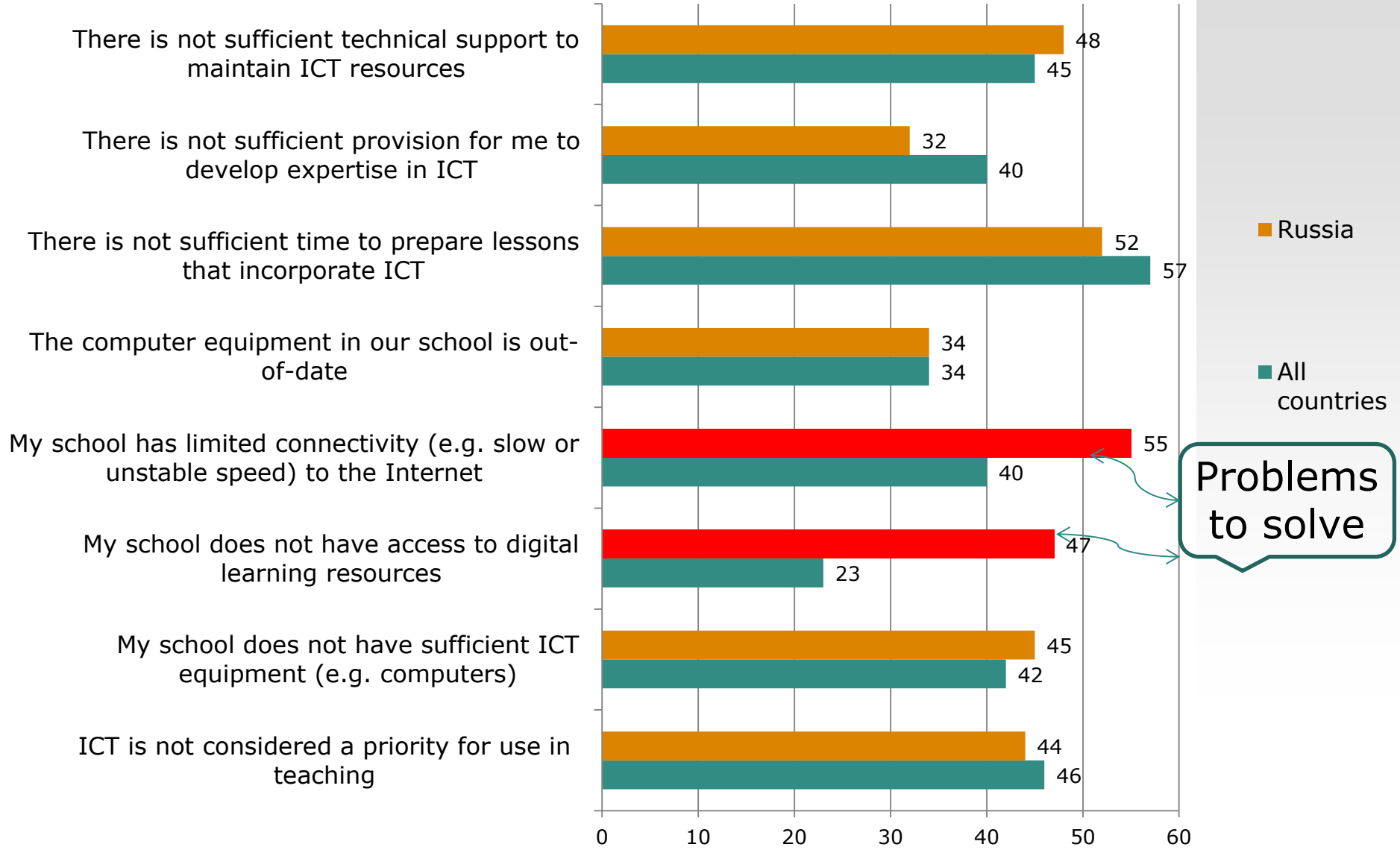


We can see that the best results are in the group of students who's parents have tertiary university education

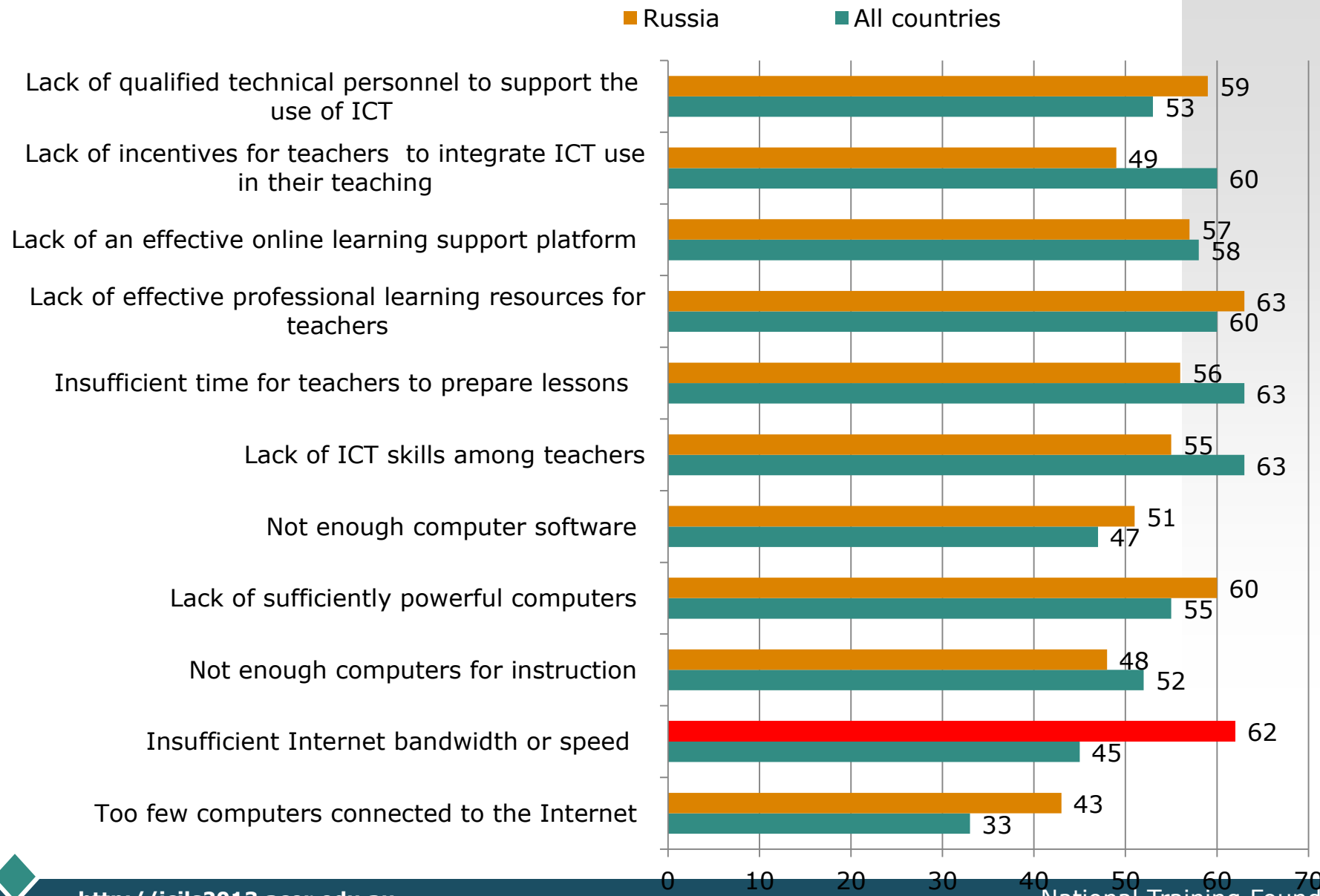
Different aspects of ICT use at school – cross-country and Russian



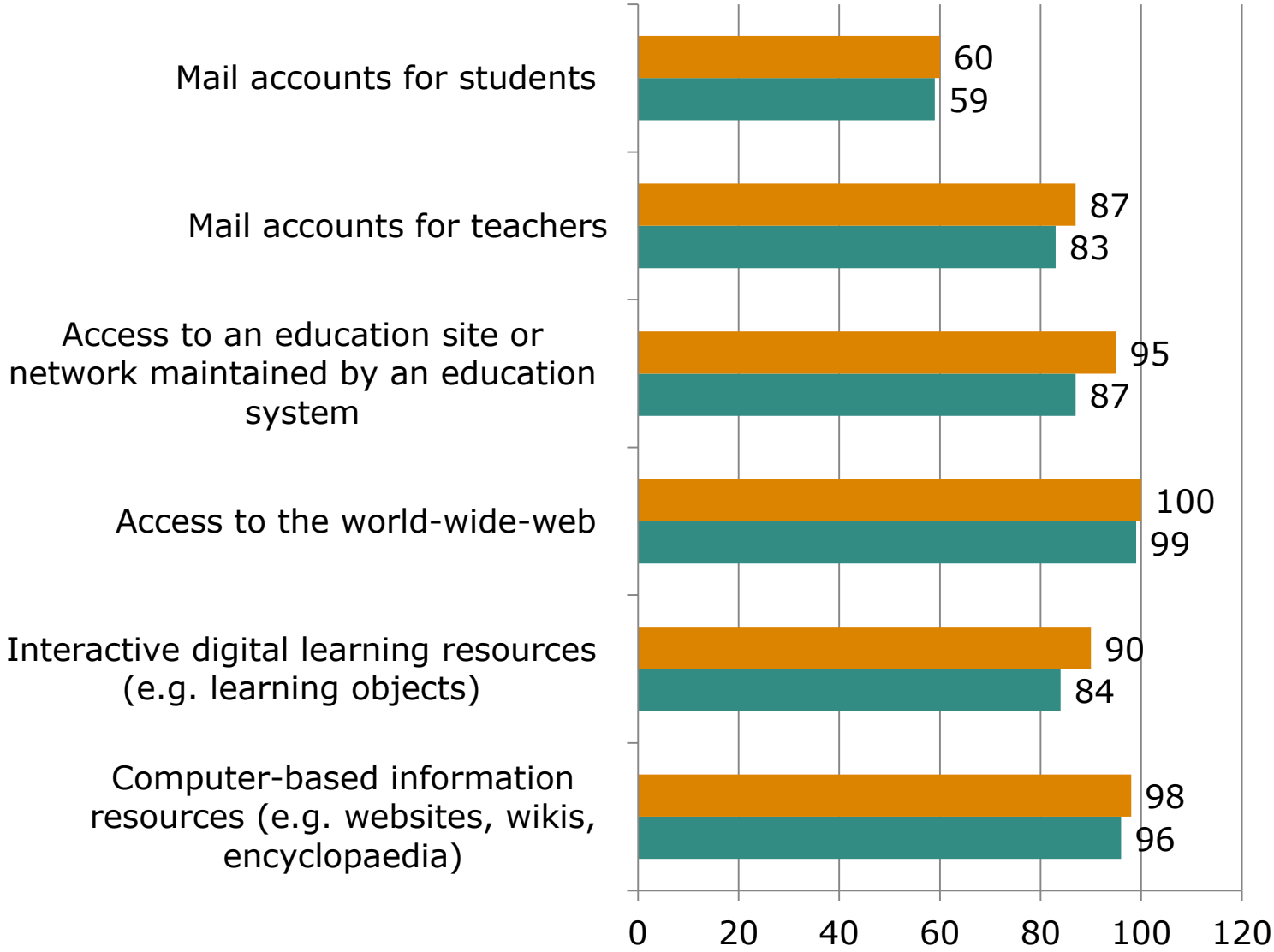
Teachers' attitudes towards ICT use at their schools – cross-country and Russian



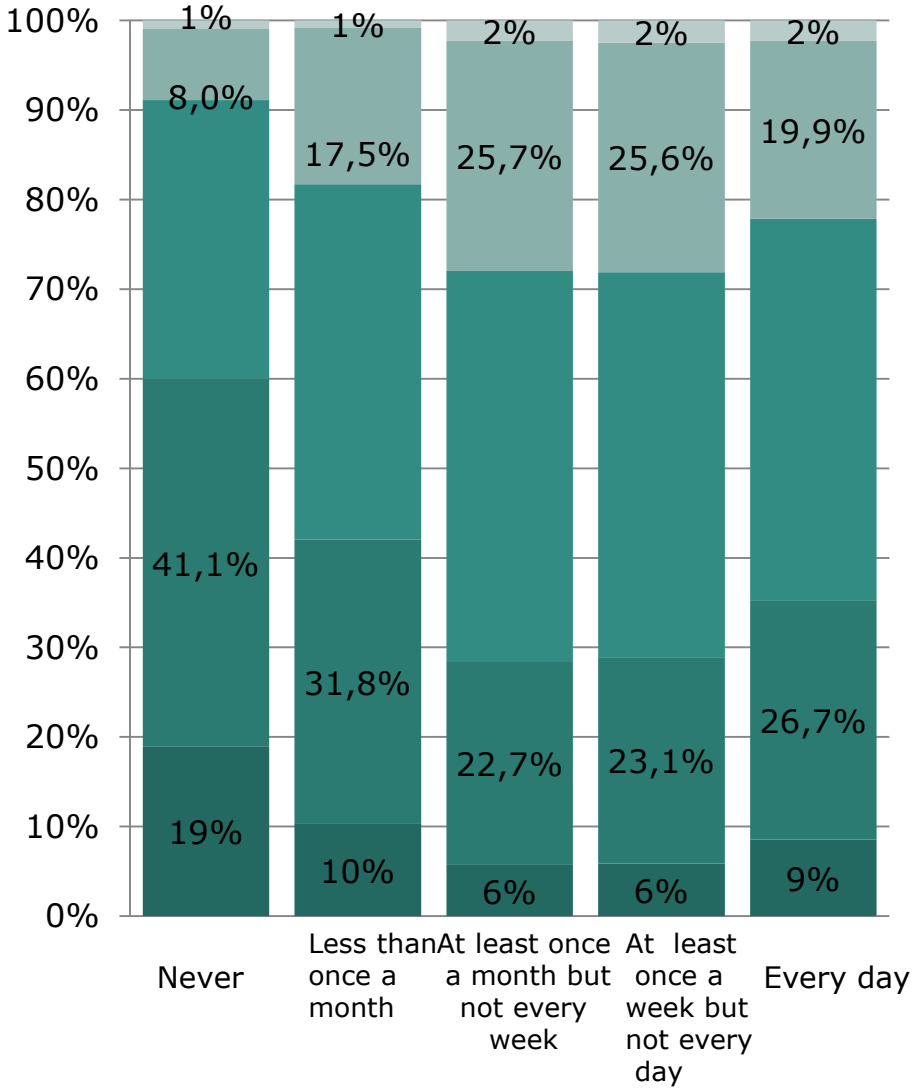
Issues of effective ICT use at schools: cross-country and Russian



Percentage of students at schools with digital resources available for teaching and learning



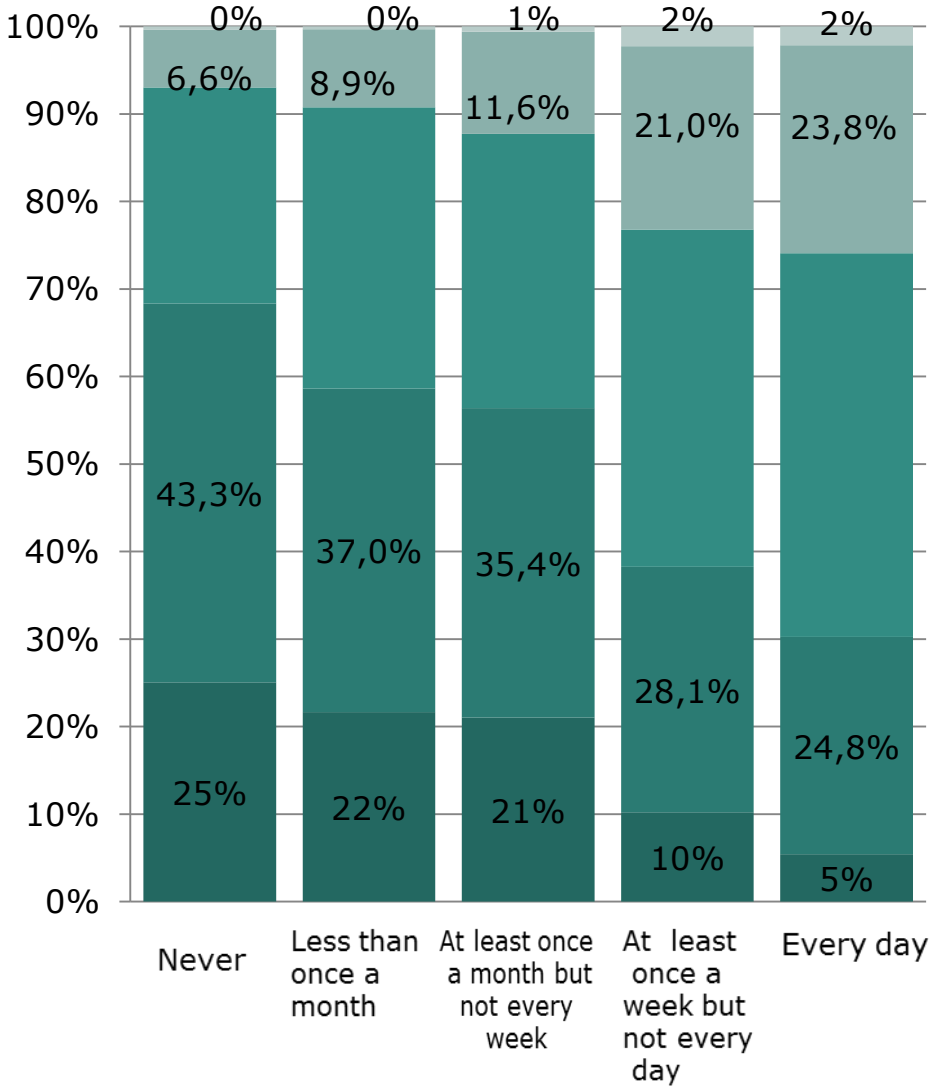
Students. Influence of producing and editing documents on CIL level



The highest percentage of students with the 3rd and 4th CIL levels is among those who produce and edit documents at least weekly – 28%,

and this percentage is lower among those students who never produce or edit documents (9%).

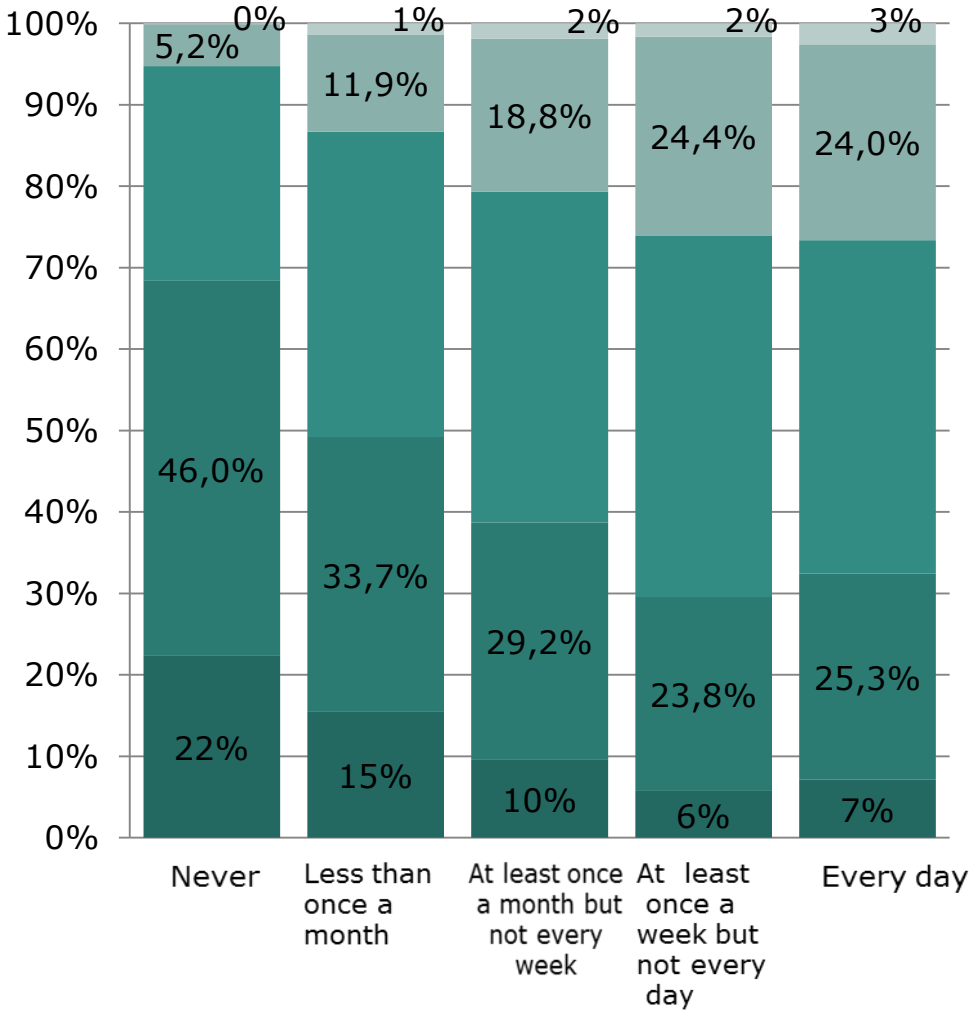
Students. Influence of communication through messages or social networks on CIL level



The percentage of students with the 1st or below 1st CIL level (30 – 38%) is lower among those who frequently use ICT for communication (from once a week to once a day),

and the percentage of pupils with the 3rd and 4th CIL levels is two times higher – 23%-26% (instead of 12%) at this group.

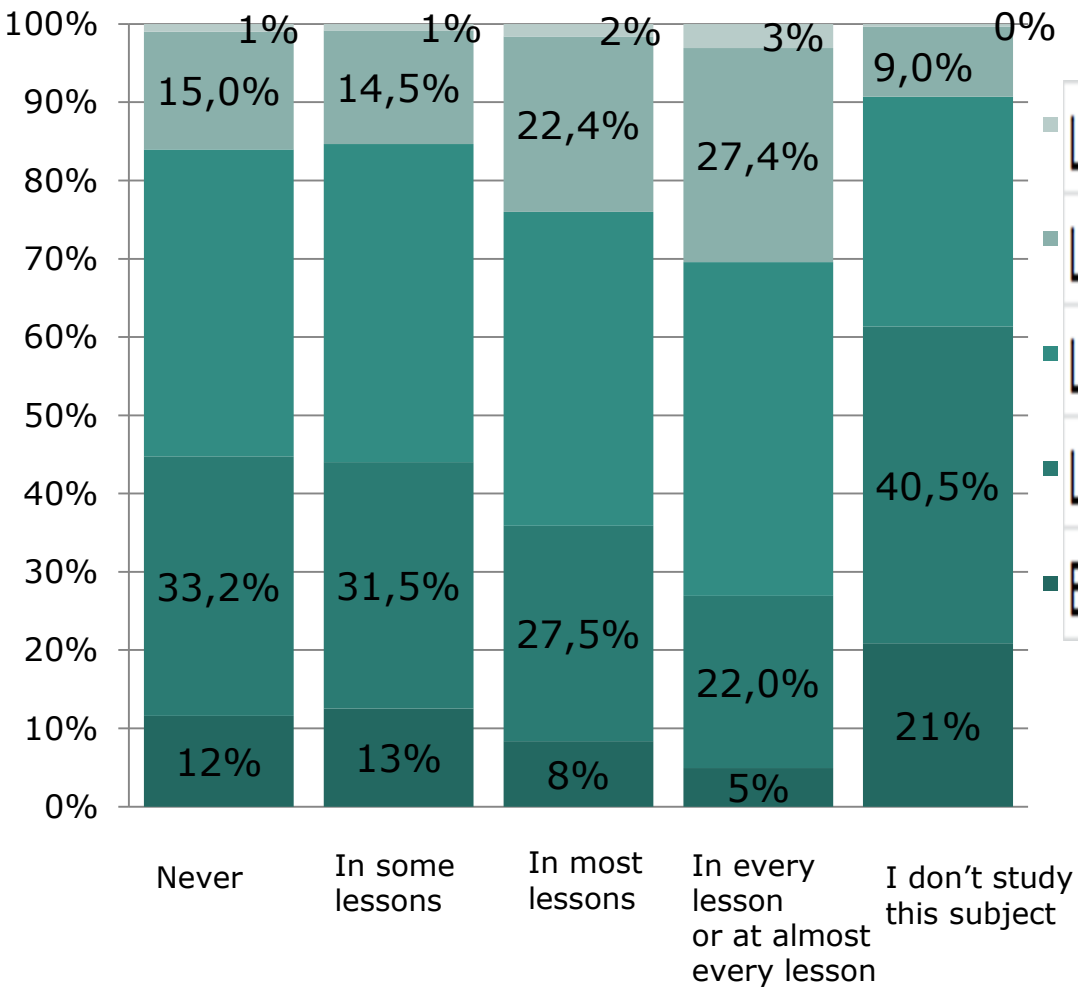
Students. Influence of frequency of computer use in various situations on CIL



The percentage of students with the 3rd and 4th CIL levels is higher at those groups where the students search for information daily or weekly (26%-27%).

The lowest percentage of students with the 3rd and 4th CIL levels is among those students who never search for information for education purposes (5%).

Students. How frequently do you use computer at the following lessons? Computer Science and ICT

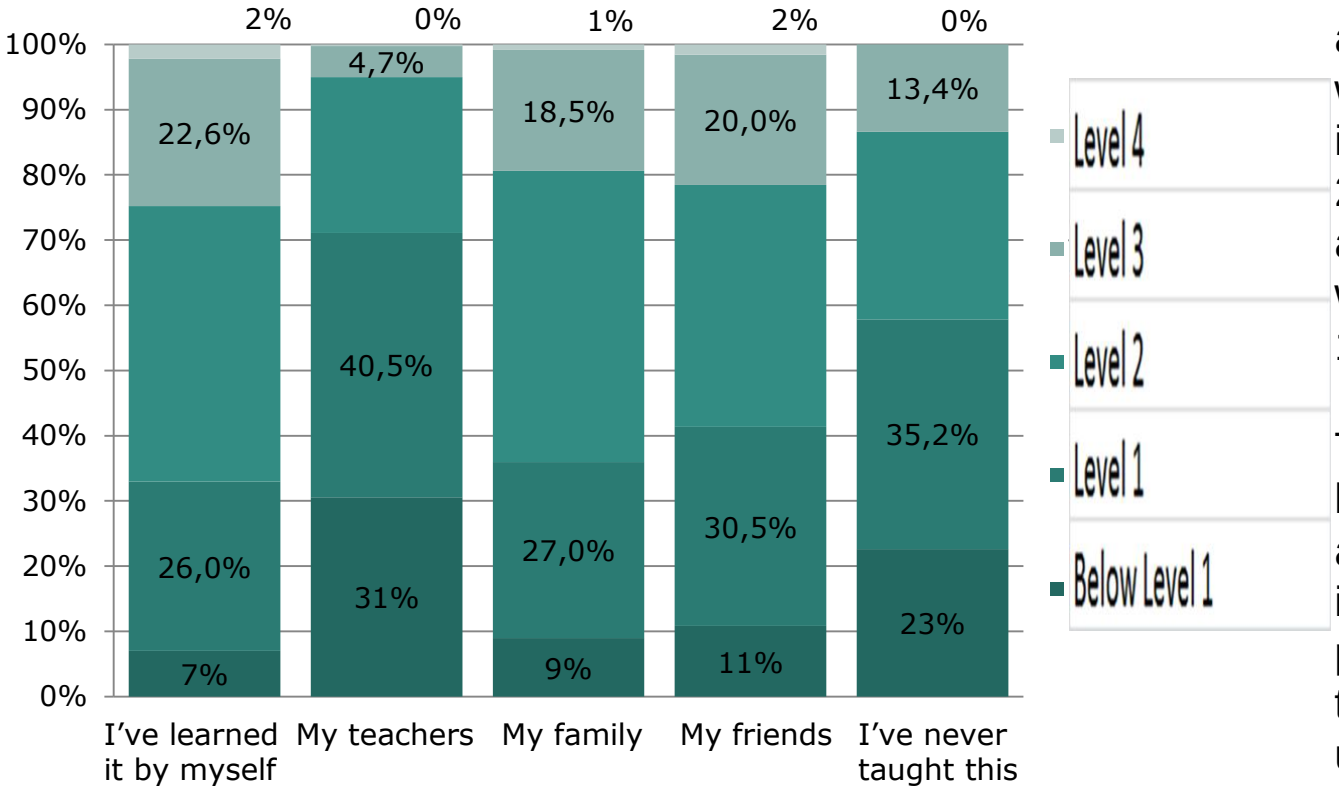


Students who never use computer or use it occasionally at ICT lessons demonstrate lower CIL levels than those who use it frequently.

The first group includes 45% of students with the 1st CIL level and the second group – 27%-36%.

The percentage of students with the advanced CIL level includes 16% and 24-30% respectively.

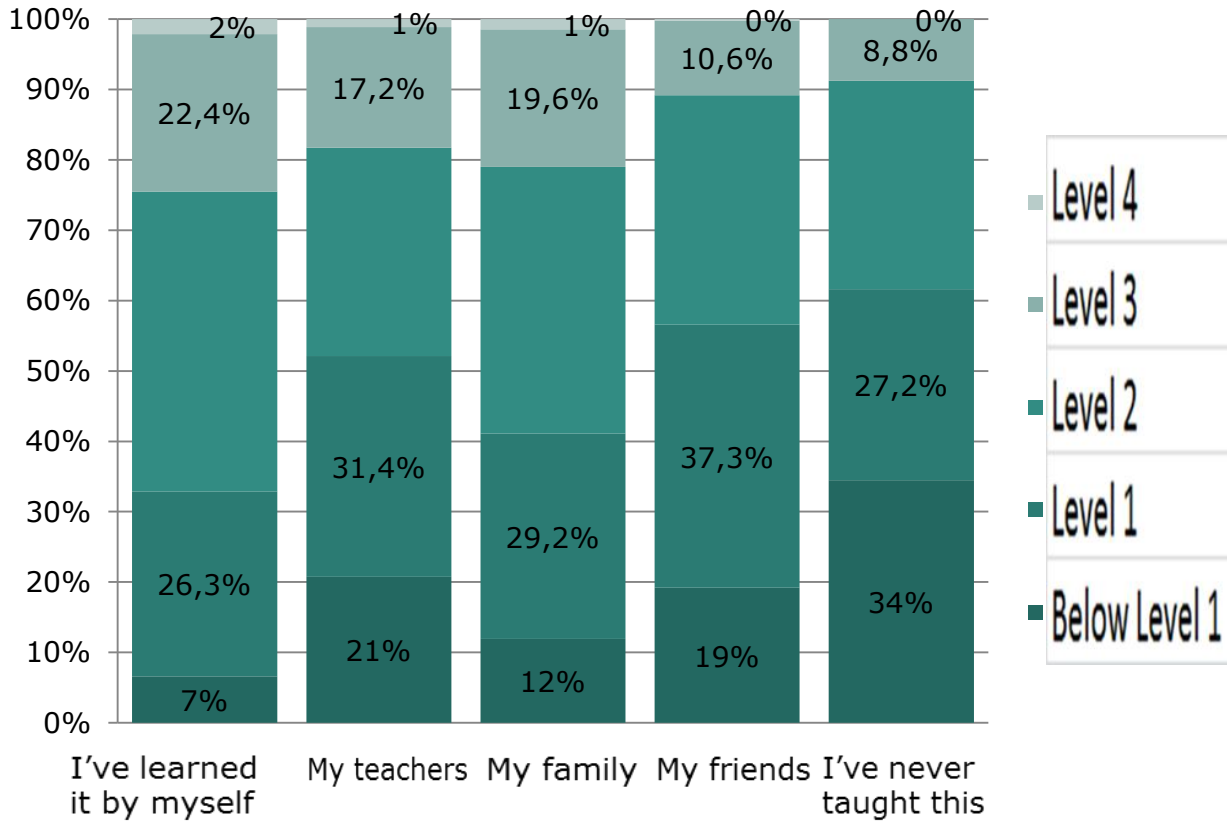
Students. Who taught you to communication via the Internet?



The highest CIL level is among those students who learnt this skill independently:
25% students with the 3rd and 4th levels and 33% - with levels higher than the 1st level.

The group with the lowest level (72% – the 1st level and below the 1st level) includes students who pointed out that teachers taught them the skill – an unexpected result.

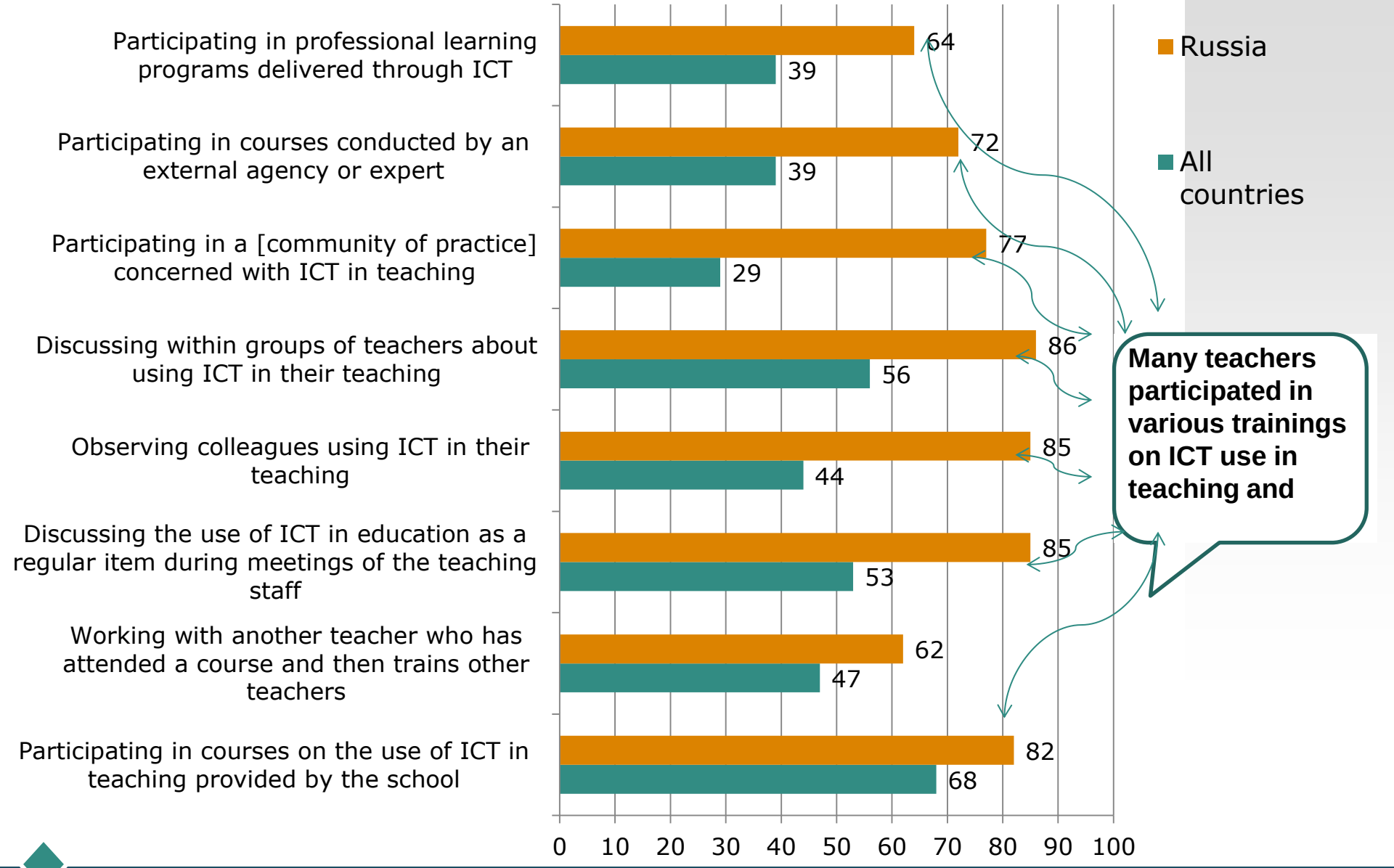
Students. Who taught you to search for information in the Internet



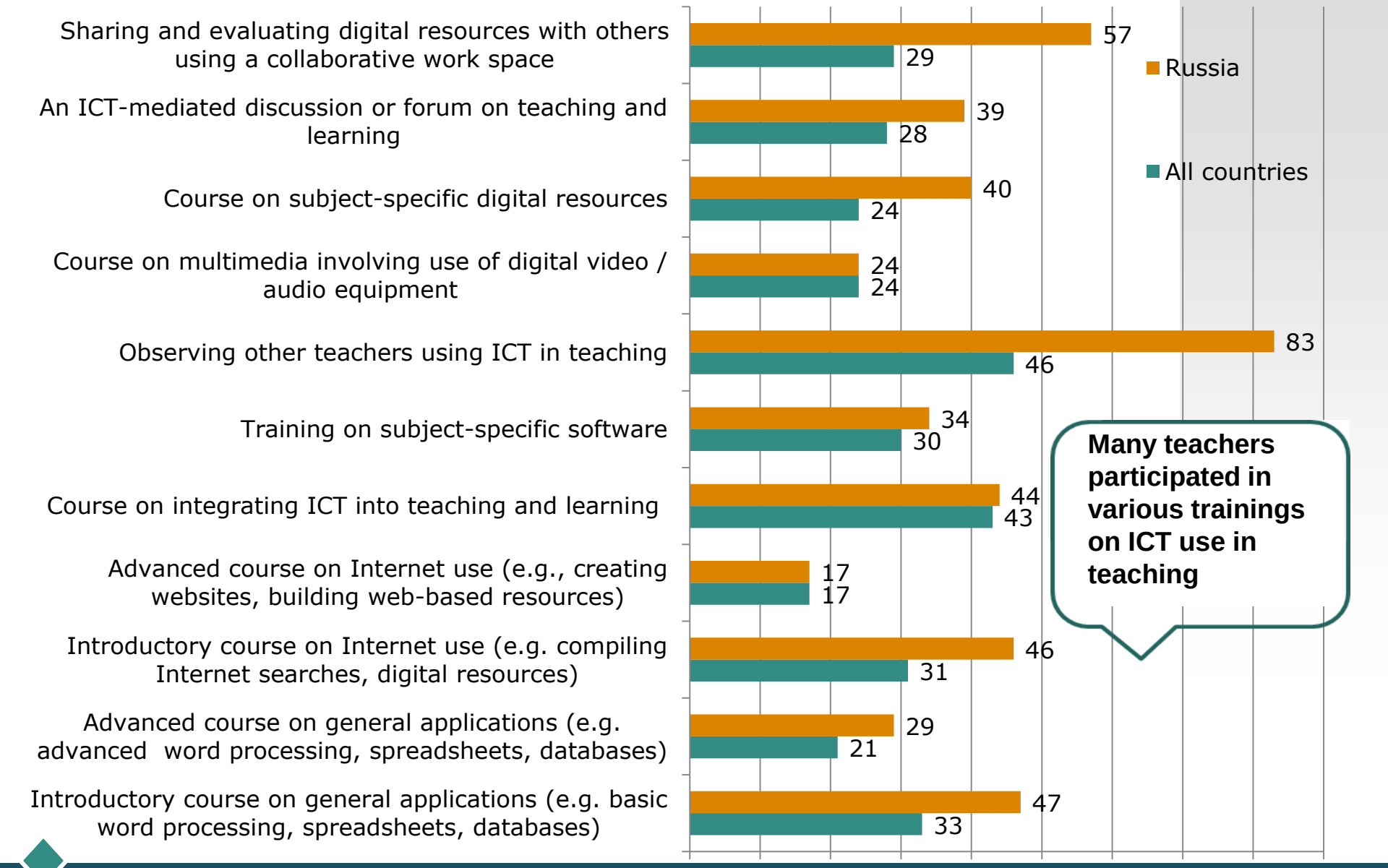
Students who acquired this skill independently demonstrated the highest CIL level: 24% of students achieved the 3rd or 4th level and 33% of students achieved the 1st and below the 1st levels.

The group with the lowest level (56% - 1 level and below 1 level) pointed out that their friends taught them this skill.

Percentage of students at schools where teachers participated in various trainings on ICT use in teaching and learning

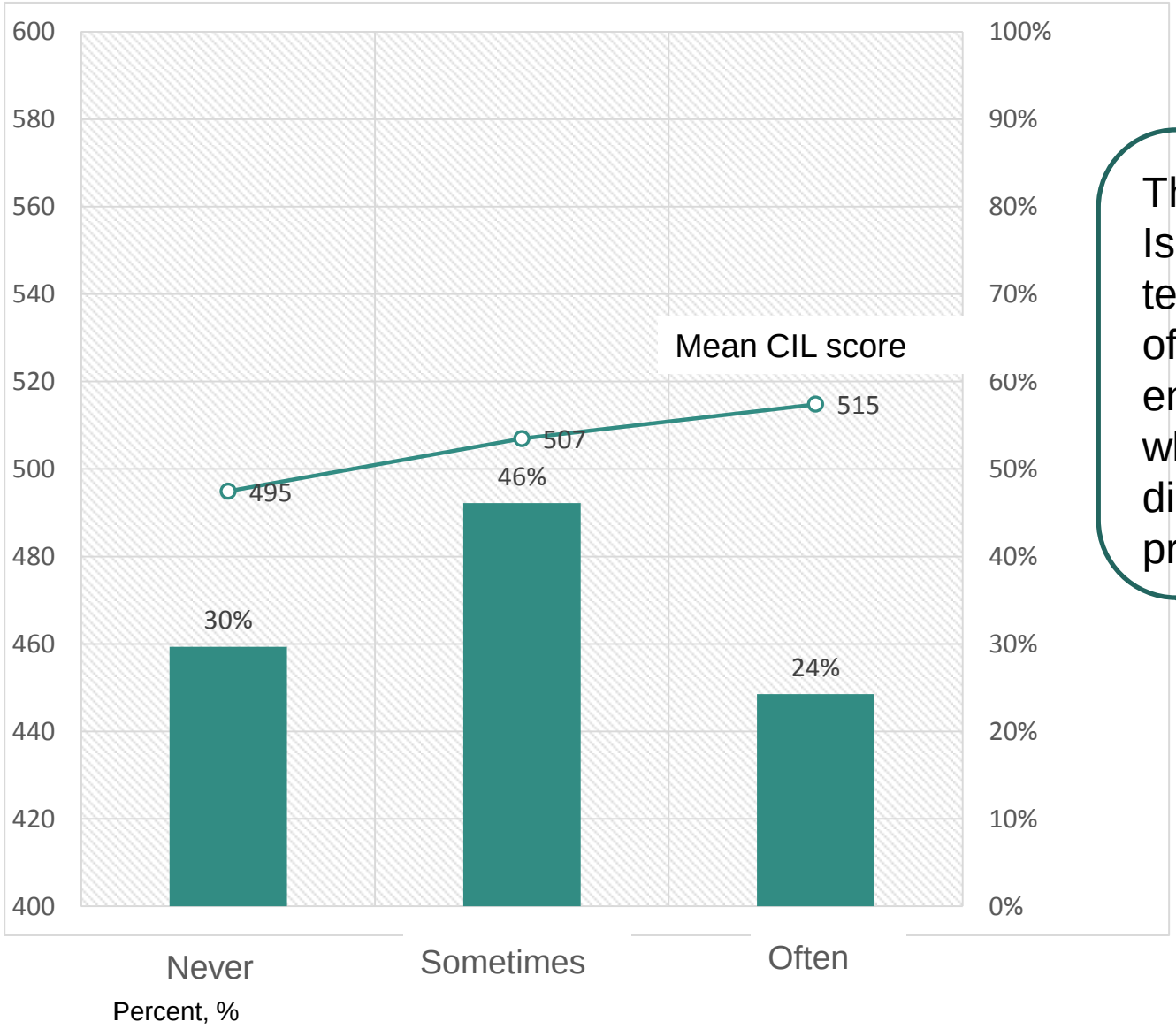


Percentage of teachers participated in trainings on ICT use in teaching and learning



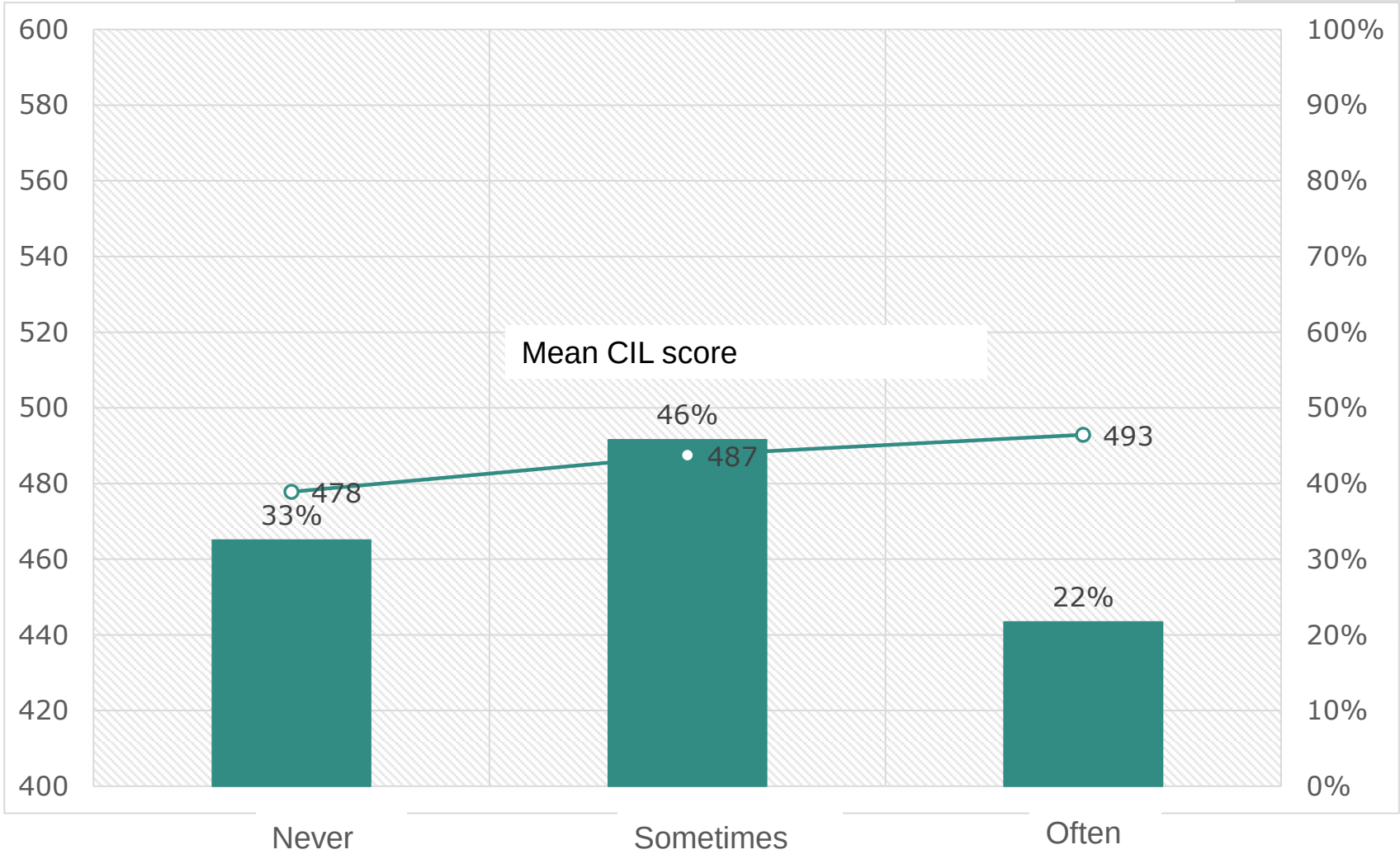
Many teachers participated in various trainings on ICT use in teaching

How often did you use ICT to enable student-led whole-class discussions and presentations when teaching your reference class? (Overall)



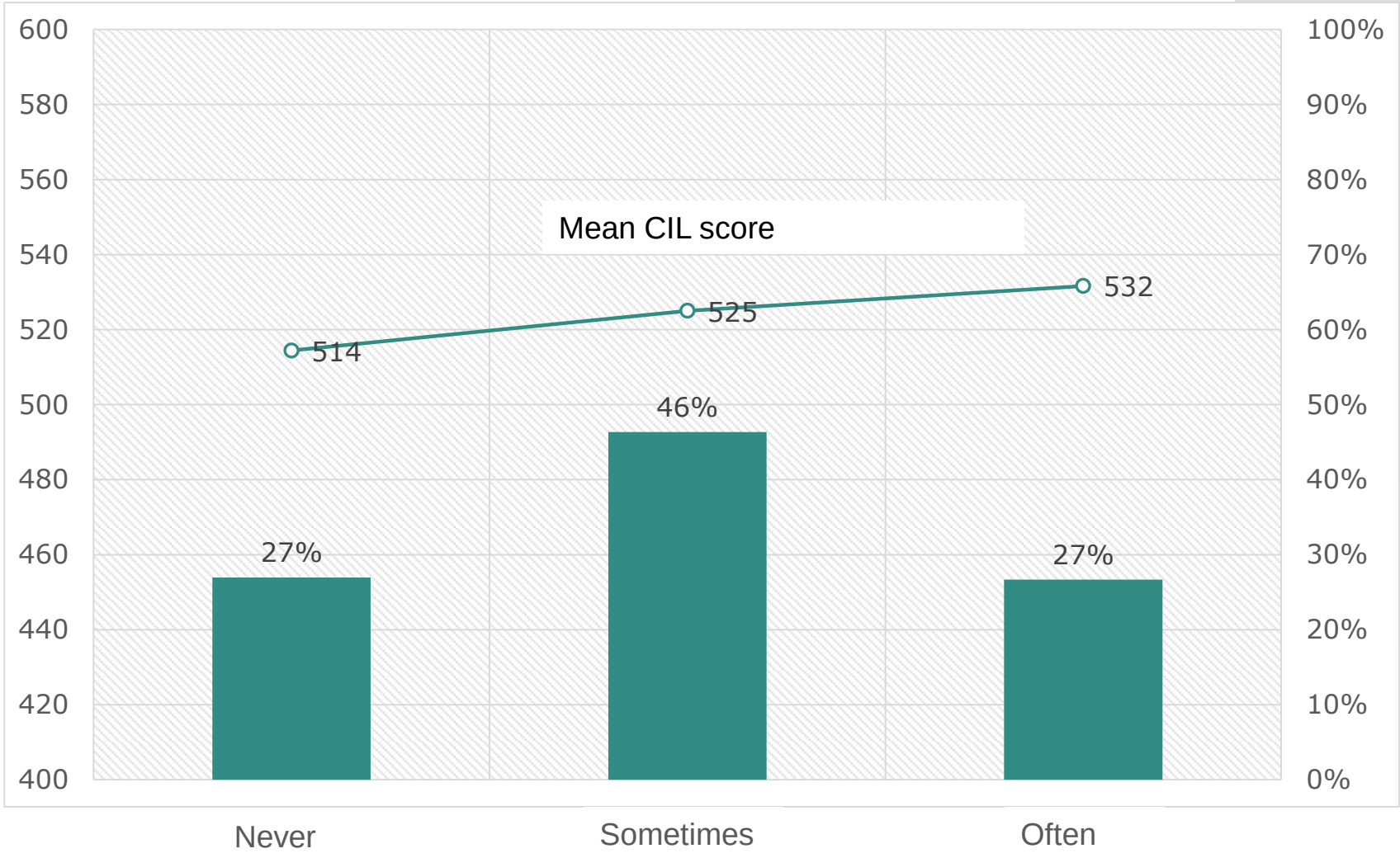
The mean CIL score Is increasing when teachers often use ICT to enable student-led whole class discussions and presentation

How often did you use ICT to enable student-led whole-class discussions and presentations when teaching your reference class? (Rural schools)



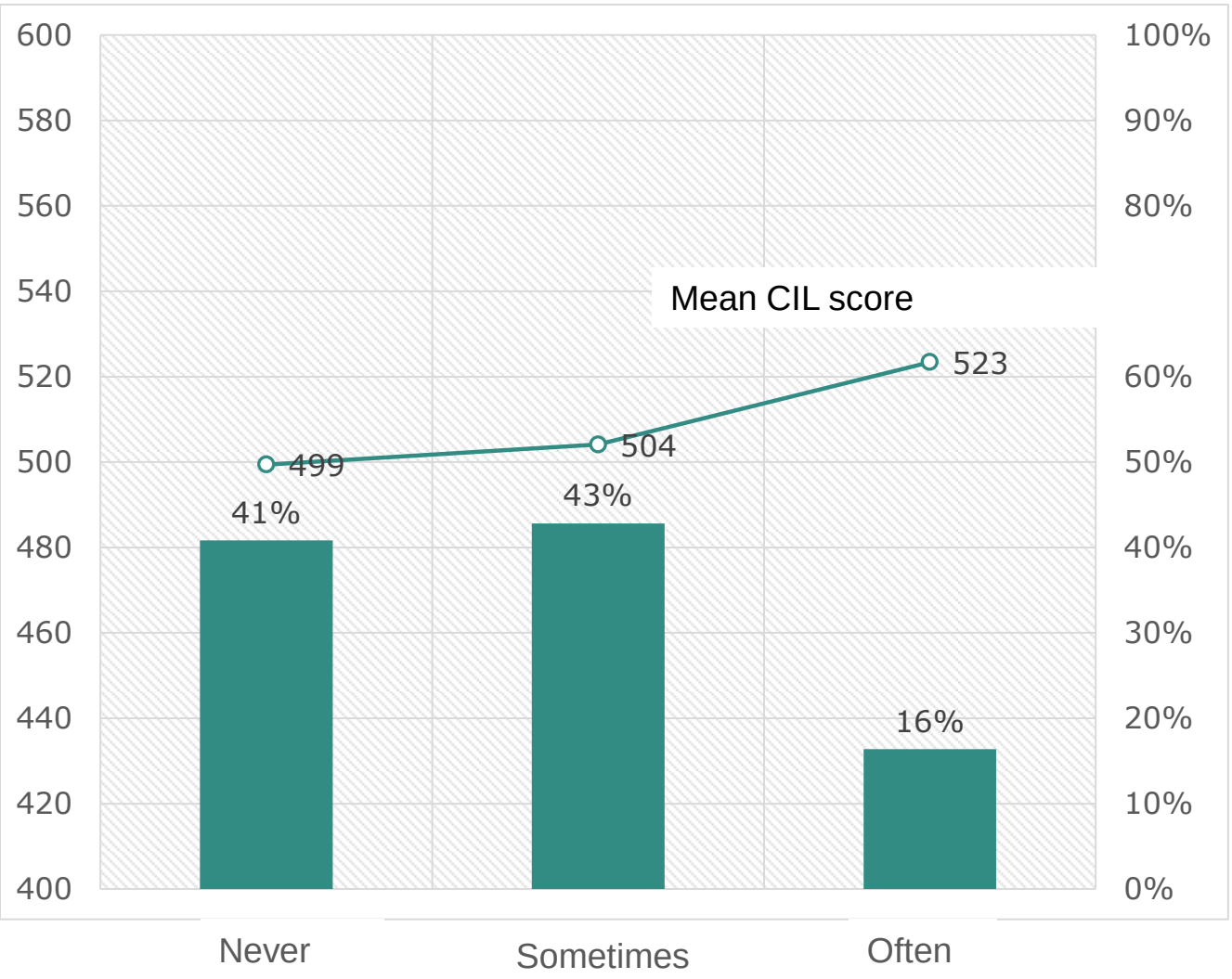
Percent, %

How often did you use ICT to enable student-led whole-class discussions and presentations when teaching your reference class? (Urban schools)



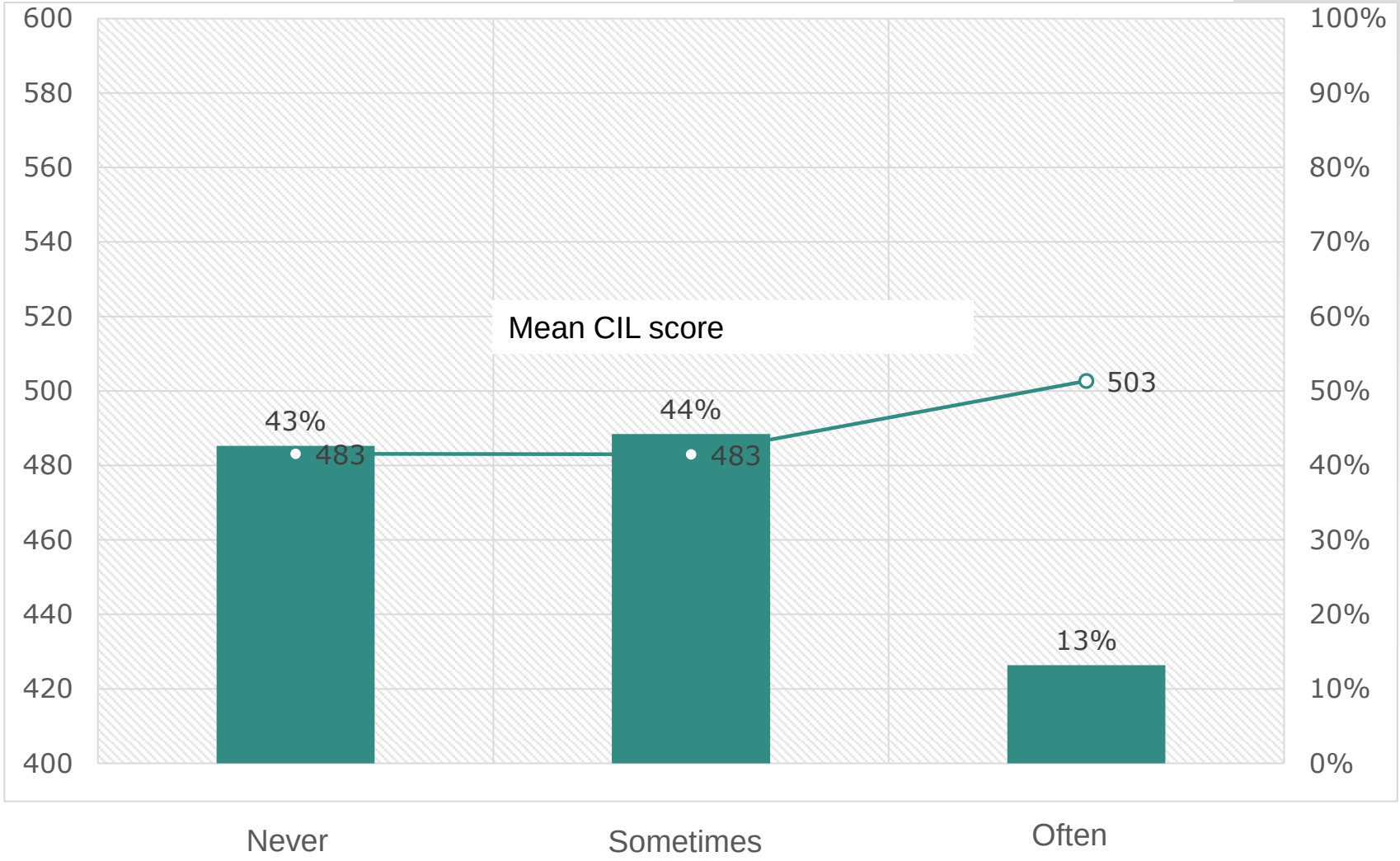
Percent, %

How often did you use ICT to provide feedback to students when teaching your reference class? (Overall)



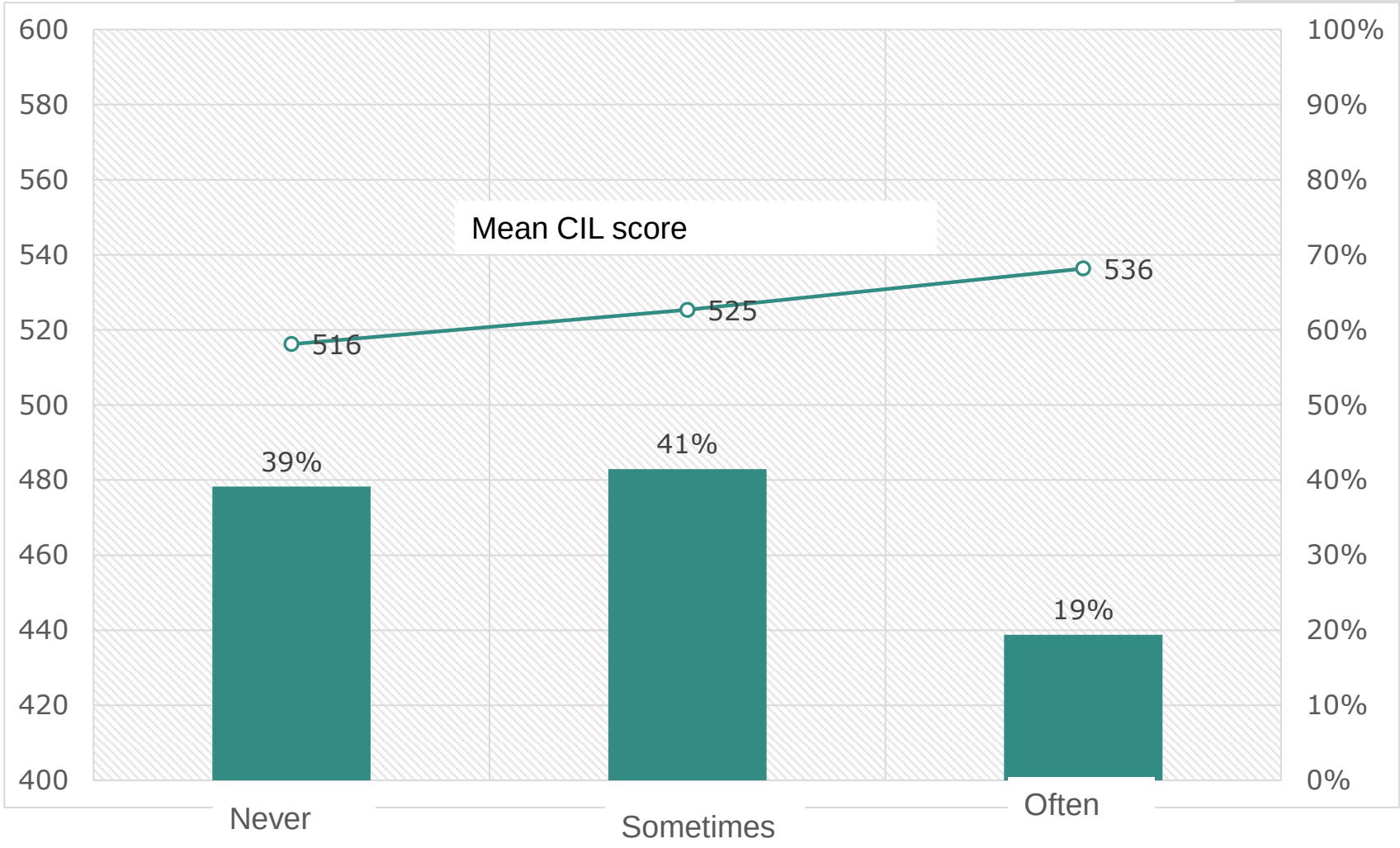
The mean CIL score
Is increasing when teachers
often use ICT to provide feedback to students

How often did you use ICT to provide feedback to students when teaching your reference class? (Rural schools)



Percent, %

How often did you use ICT to provide feedback to students when teaching your reference class? (Urban schools)



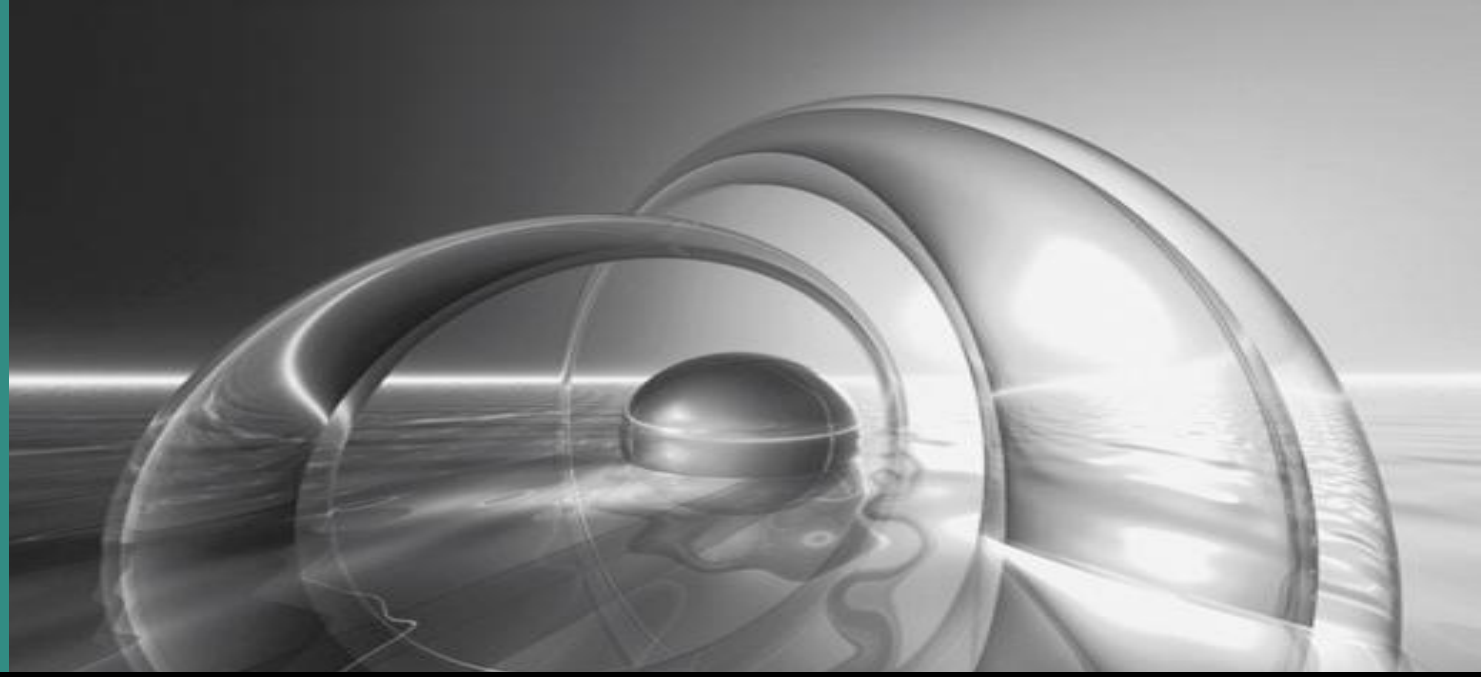
Percent, %

Next steps

Getting the database with the study results on all countries

Development of the Analytical Report draft. Expert discussion.

Replicating the Analytical Report on the 1st ISILS results



Thank you for your attention!