2nd Survey of Schools: ICT in Education

Spain Country Report

European Commission

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Digital Single Market

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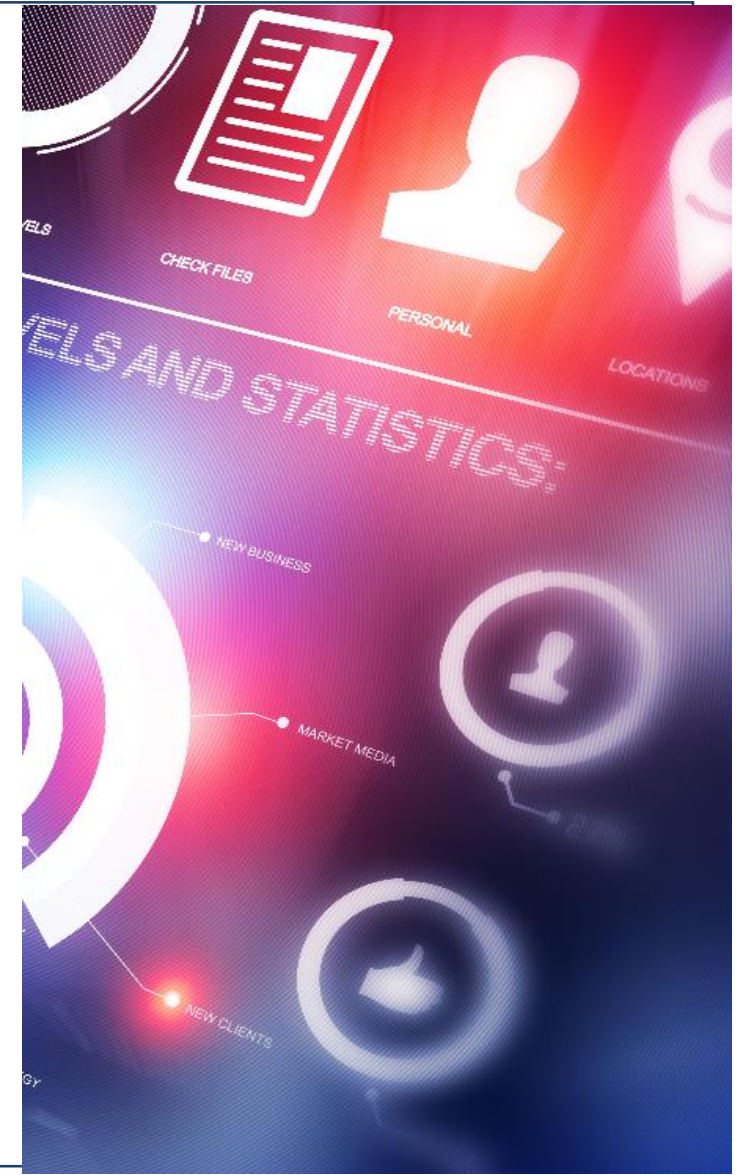
Spain

Country report on ICT in Education

Objectives of the 2nd Survey of Schools

Objective 1: Benchmark progress of ICT in schools by surveying head teachers, teachers, students and parents covering the EU28, Norway, Iceland and Turkey

- Full report covering all countries: European Commission (2019). 2nd Survey of Schools: ICT in Education – Objective 1: Benchmark progress in ICT in schools. Luxembourg: European Commission. doi: 10.2759/23401.
- Country-specific reports

Objective 2: Development of a model for a 'highly equipped and connected classroom' (HECC) and estimation of the overall costs to equip and connect an average EU classroom with advanced components of the HECC model

- Full report: European Commission (2019). 2nd Survey of Schools: ICT in Education – Objective 2: Model for a 'highly equipped and connected classroom'. Luxembourg: European Commission. doi: 10.2759/831325.

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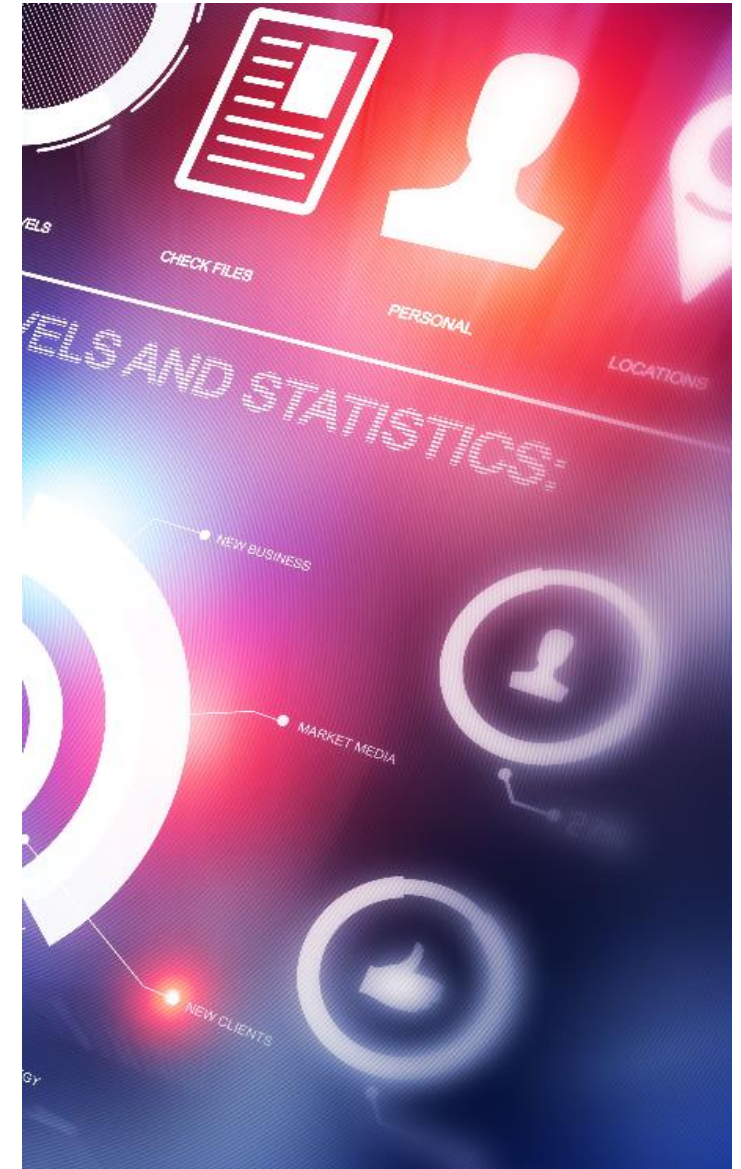
Benchmark progress in ICT: background

EU 28 + Iceland, Norway, Turkey

Target population:
- Schools (400 schools per country)
- Interviews with: head teachers, class teachers, students and parents

Methodology:
- Online questionnaire 15 minutes (parent survey) to 28 minutes (head teacher survey)

Sampling: class selection

Objective: Within one school, survey one teacher from ISCED level 1, and 3 teachers from a range of subjects from ISCED levels 2 and 3

| School is randomly selected | → | School head teacher receives an invitation email asking school to participate | → | School head teacher completes registration survey + provides school coordinator contact details | → | School coordinator receives invitation email to provide information on each relevant class | → | Class selection through automated system, selected teachers are sent invitation email | → | Unique student and parent links and passwords distributed in selected classes |

Key fieldwork statistics for Spain

3,443
Number of schools invited for the survey

58
Completed ISCED 1 teacher interviews

271
Completed ISCED 3 teacher interviews

3,032
Completed student interviews

309
Completed head teachers interviews

187
Completed ISCED 2 teacher interviews

700
Completed parent interviews

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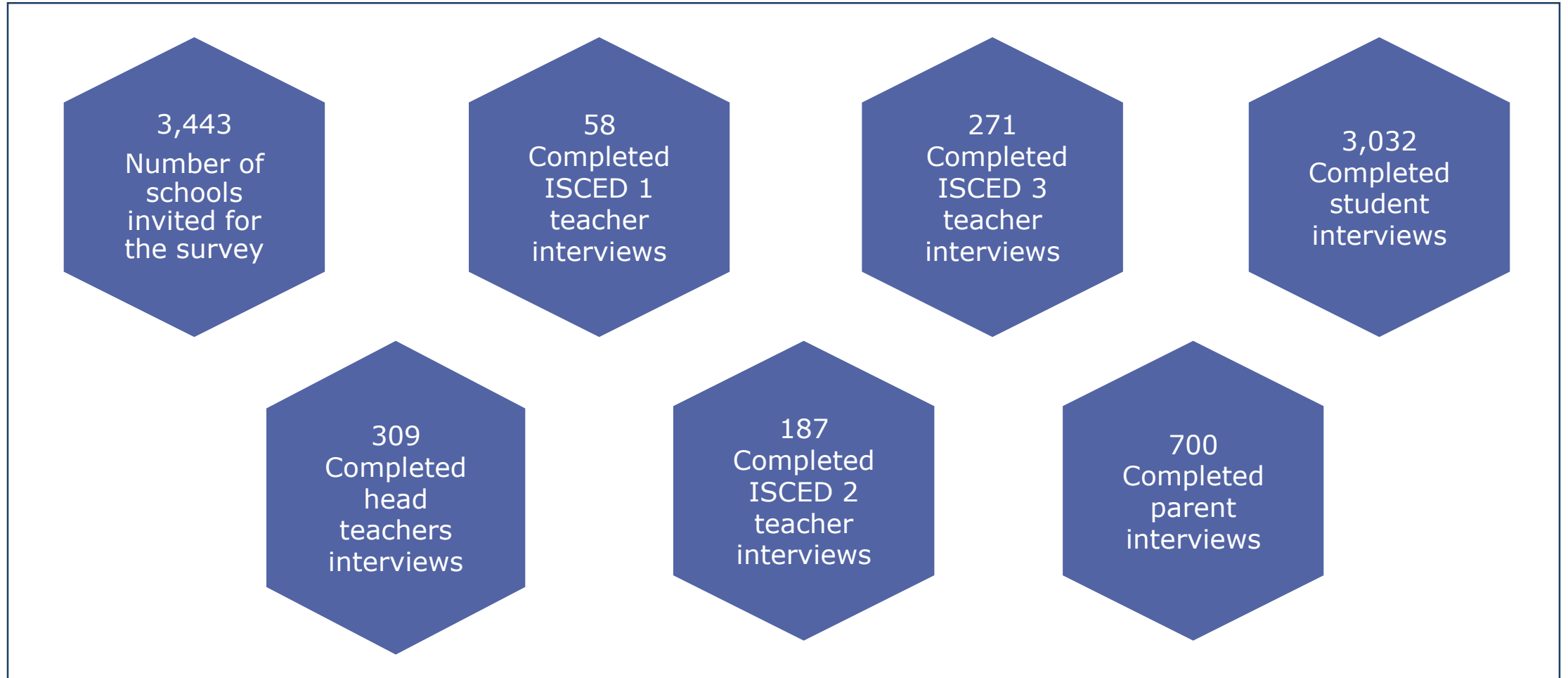
Overview of graphs*	Comments
1. Share of digitally equipped and connected schools	
2. Schools' Internet speed	
3. Share of students who use a computer at school on a weekly basis	
4. Own equipment used for learning	
5. Share of digitally supportive schools	
6. Students' confidence in their digital competence	
7. Coding/ programming activities of female vs. male students	
8. Teachers' confidence in their digital competence	
9. Type of training of teachers	
10. Parents' confidence in teaching child to use Internet safely and responsibly	

*The above overview presents the standardised structure that has been used for all country fiches produced in the course of this 2nd Survey of Schools: ICT in education. Data for each specific country is only shown if sufficient responses were provided for this particular question. For more information regarding the inclusion criteria applied please refer to the last page of this country report and the full technical report: European Commission (2019). 2nd Survey of Schools: ICT in Education – Technical Report. Luxembourg: European Commission. doi: 10.2759/035445.

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1. Share of digitally equipped and connected schools

Digitally equipped and connected schools
(All ISCED levels, in % of students, ES and EU level, 2017-18)

ISCED level		Highly	Partially
ISCED 1	ES	47%	53%
	EU	35%	65%
ISCED 2	ES	79%	21%
	EU	52%	48%
ISCED 3	ES	78%	22%
	EU	72%	28%

■ Highly digitally equipped and connected schools
■ Partially digitally equipped and connected schools
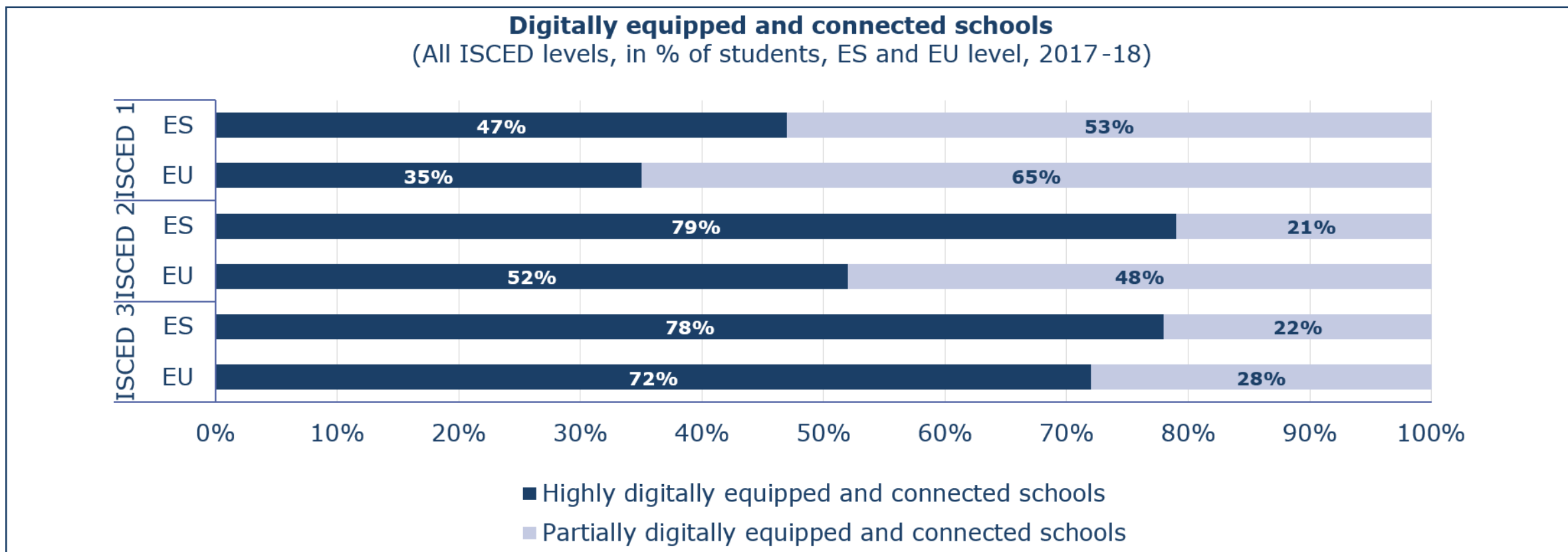
Key Findings

- Highly digitally equipped and connected schools have (among other features) a high provision of digital equipment (laptops, computers, cameras, whiteboards) per number of students and a high broadband speed
- Compared to the European average there are more highly digitally equipped and connected schools at all ISCED levels

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2. Schools' Internet speed

Schools' Internet speed
(All ISCED levels, in % of students, ES and EU level, 2017-18)

		<2mbps	2-5mbps	5-10mbps	10-30mbps	30-100 mbps	>100mbps
ISCED 1	ES	4%	11%	10%	11%	30%	34%
	EU	12%	11%	14%	30%	22%	11%
ISCED 2	ES	2% 3%		7%	13%	30%	45%
	EU	4%	11%	16%	22%	30%	17%
ISCED 3	ES	1% 3%		13%	9%	26%	49%
	EU	1% 3%		9%	19%	50%	18%
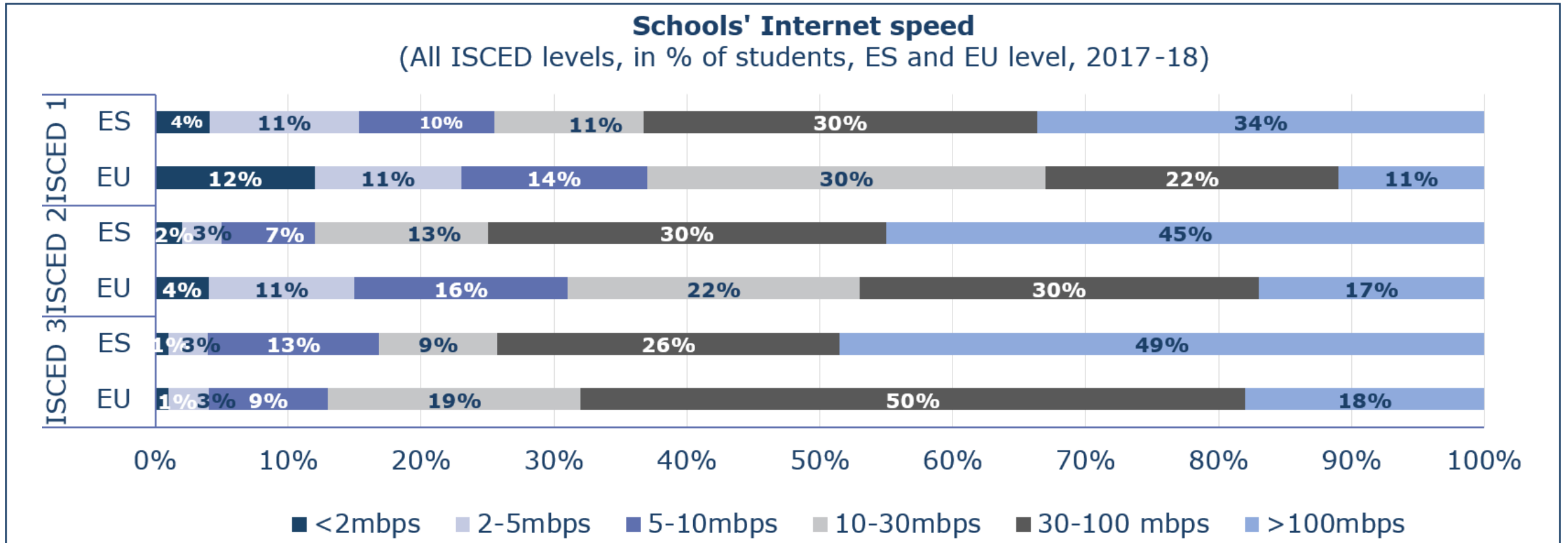
Key Findings

- High-speed connectivity above 100 mbps: higher share at all ISCED levels, compared to the European average

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3. Share of students who use a computer at school on a weekly basis

Students who use a computer (desktop/laptop/notebook) at school for learning purposes - At least once a week
(ISCED 2 and 3, in % of students, ES and EU level, 2017-18)

ISCED 2
- ES: 49%
- EU: 52%
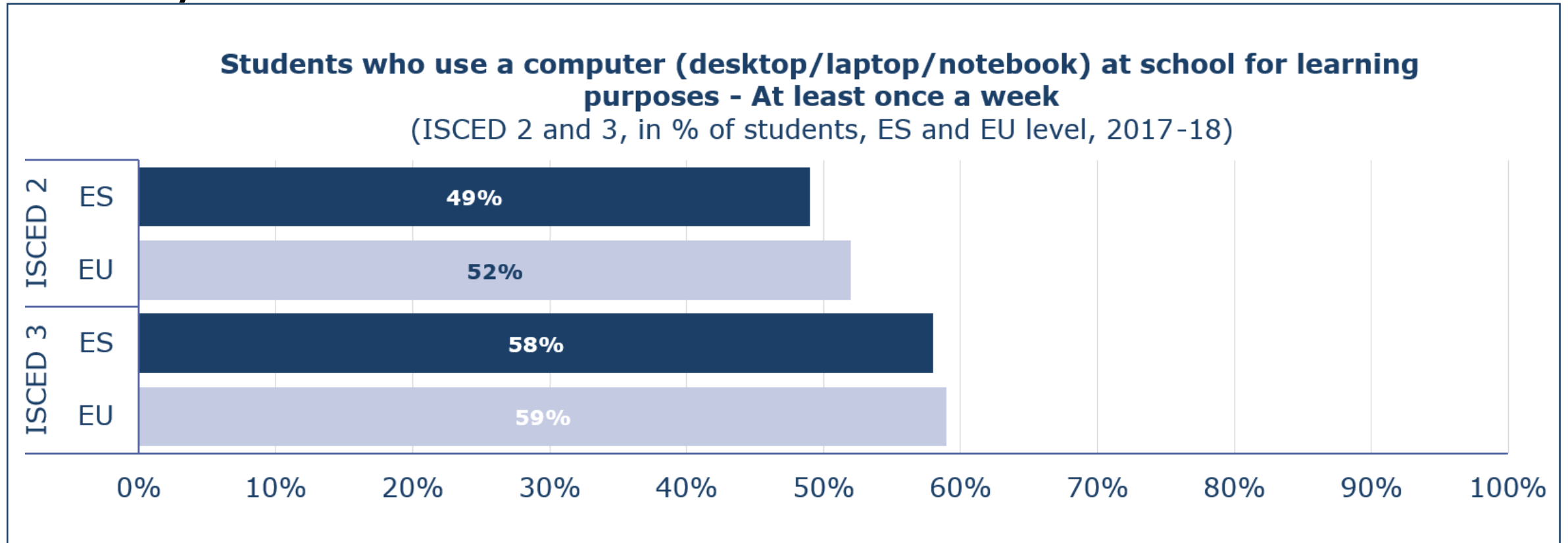
ISCED 3
- ES: 58%
- EU: 59%

Key Findings

- Slightly lower share at ISCED levels 2 and 3, compared to the European average

4. Own equipment used for learning

Students who use an own equipment for learning purposes during lessons - At least once a week

(ISCED 2 and 3, in % of students, ES and EU level, 2017-18)

		Own tablet	Own laptop	Own smartphone
ISCED 2	ES	5%	16%	22%
ISCED 2	EU	8%	12%	30%
ISCED 3	ES	5%	11%	44%
ISCED 3	EU	8%	15%	53%
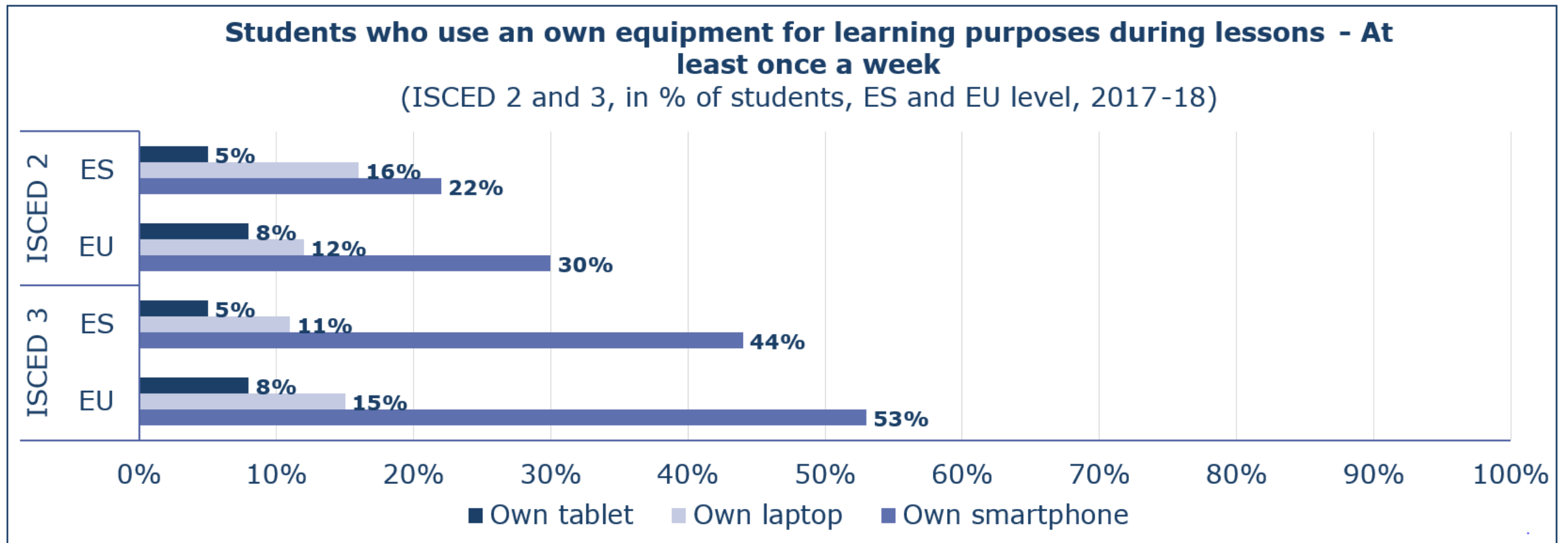
Key Findings

• Lower share in Spain at ISCED levels 2 and 3 – except for use of an own laptop (ISCED 2), compared to the European average

5. Share of digitally supportive schools

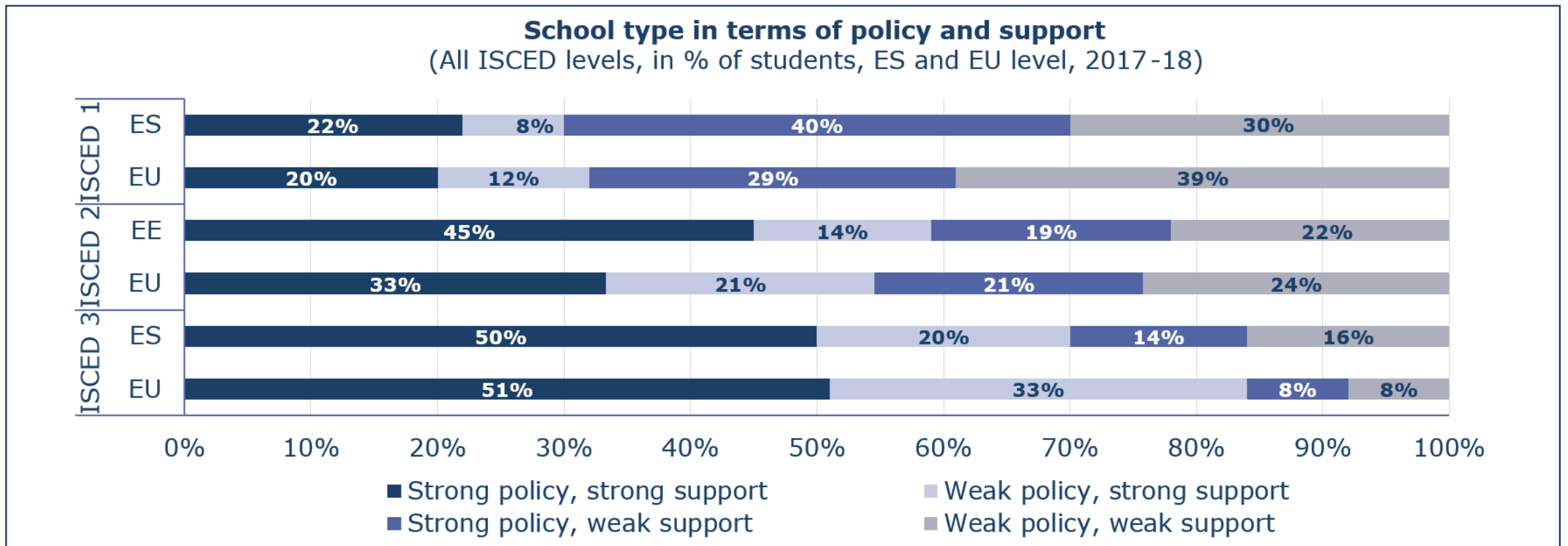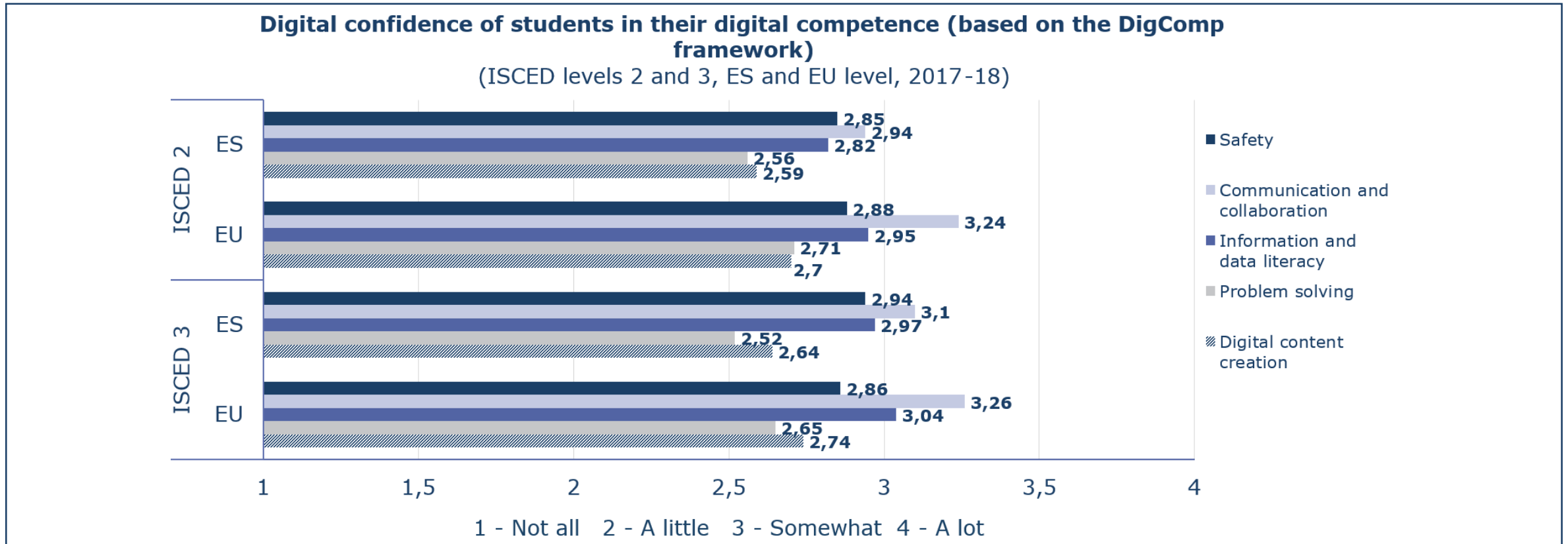**School type in terms of policy and support**
(All ISCED levels, in % of students, ES and EU level, 2017-18)

		Strong policy, strong support	Weak policy, strong support	Strong policy, weak support	Weak policy, weak support
ISCED 1	ES	22%	8%	40%	30%
	EU	20%	12%	29%	39%
ISCED 2	EE	45%	14%	19%	22%
	EU	33%	21%	21%	24%
ISCED 3	ES	50%	20%	14%	16%
	EU	51%	33%	8%	8%

Legend:
- Strong policy, strong support
- Weak policy, strong support
- Strong policy, weak support
- Weak policy, weak support

Key Findings

- Schools with a strong policy, strong support have (among other features) existing school strategies in place to use digital technologies in teaching and learning and strongly promote teachers' professional development

- Strong policy, strong support: Slightly lower share in Spain at ISCED level 3, but higher share at ISCED levels 1 and 2, compared to the European average
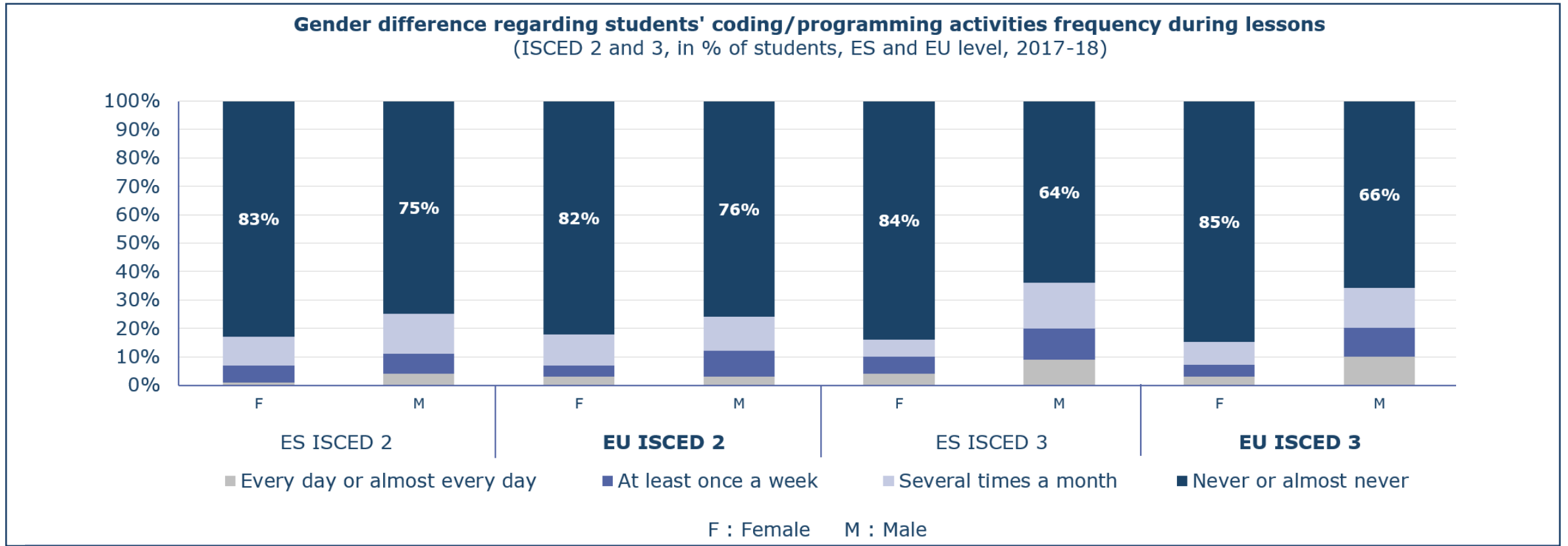
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6. Students' confidence in their digital competence

Digital confidence of students in their digital competence (based on the DigComp framework)
(ISCED levels 2 and 3, ES and EU level, 2017-18)

ISCED 2 — ES:
- Safety: 2,85
- Communication and collaboration: 2,94
- Information and data literacy: 2,82
- Problem solving: 2,56
- Digital content creation: 2,59

ISCED 2 — EU:
- Safety: 2,88
- Communication and collaboration: 3,24
- Information and data literacy: 2,95
- Problem solving: 2,71
- Digital content creation: 2,7

ISCED 3 — ES:
- Safety: 2,94
- Communication and collaboration: 3,1
- Information and data literacy: 2,97
- Problem solving: 2,52
- Digital content creation: 2,64

ISCED 3 — EU:
- Safety: 2,86
- Communication and collaboration: 3,26
- Information and data literacy: 3,04
- Problem solving: 2,65
- Digital content creation: 2,74

Legend:
- Safety
- Communication and collaboration
- Information and data literacy
- Problem solving
- Digital content creation

1 - Not all   2 - A little   3 - Somewhat   4 - A lot

Key Findings

- Digital competence is defined according to the DigComp framework, detailed on slide 17
- Slightly lower confidence of students in Spain at ISCED levels 2 and 3 in all digital competence areas – except in communication and collaboration, compared to the European average
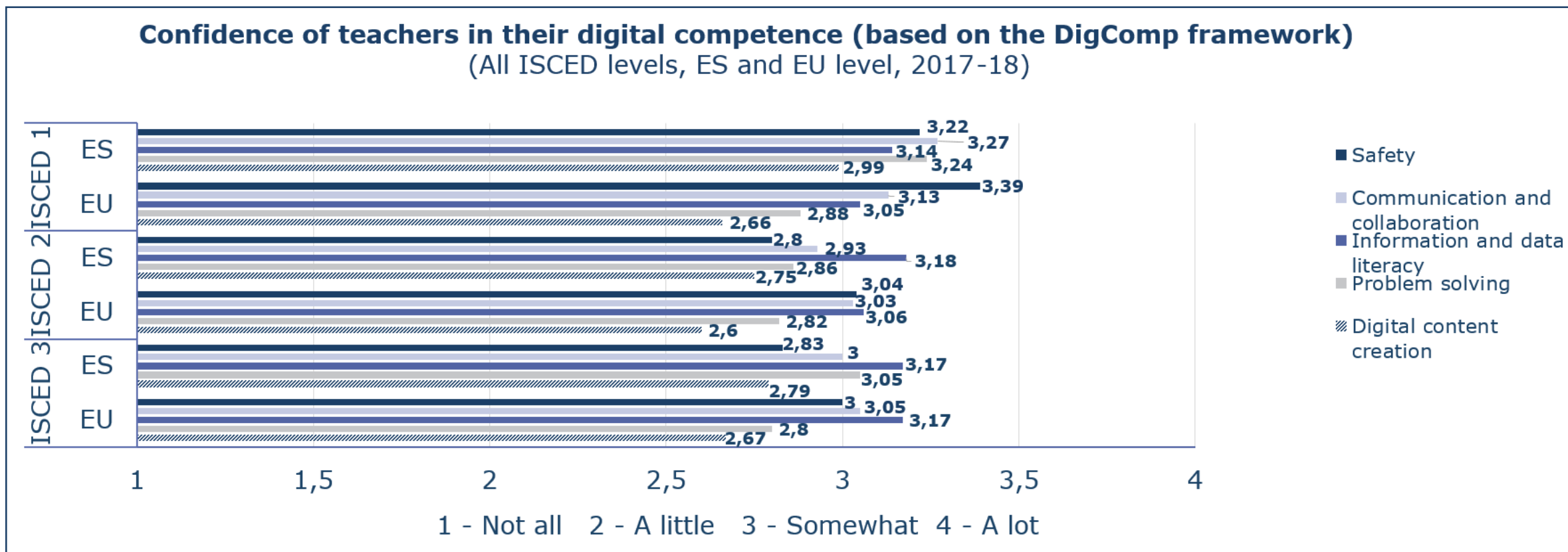
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7. Coding/ programming activities of female vs. male students

Gender difference regarding students' coding/programming activities frequency during lessons
(ISCED 2 and 3, in % of students, ES and EU level, 2017-18)

	F	M	F	M	F	M	F	M
	83%	75%	82%	76%	84%	64%	85%	66%
	ES ISCED 2		EU ISCED 2		ES ISCED 3		EU ISCED 3	

■ Every day or almost every day   ■ At least once a week   ■ Several times a month   ■ Never or almost never

F : Female   M : Male

Key Findings

- Female students less frequently engage in coding/programming compared to male students at ISCED levels 2 and 3

- At ISCED level 2, there is a slightly higher share of female students and a slightly lower share of male students, who never or almost never code and program apps or programs in Spain, compared to the European average

- At ISCED level 3, there is a slightly lower share of female and male students, who never or almost never code and program apps or programs in Spain, compared to the European average
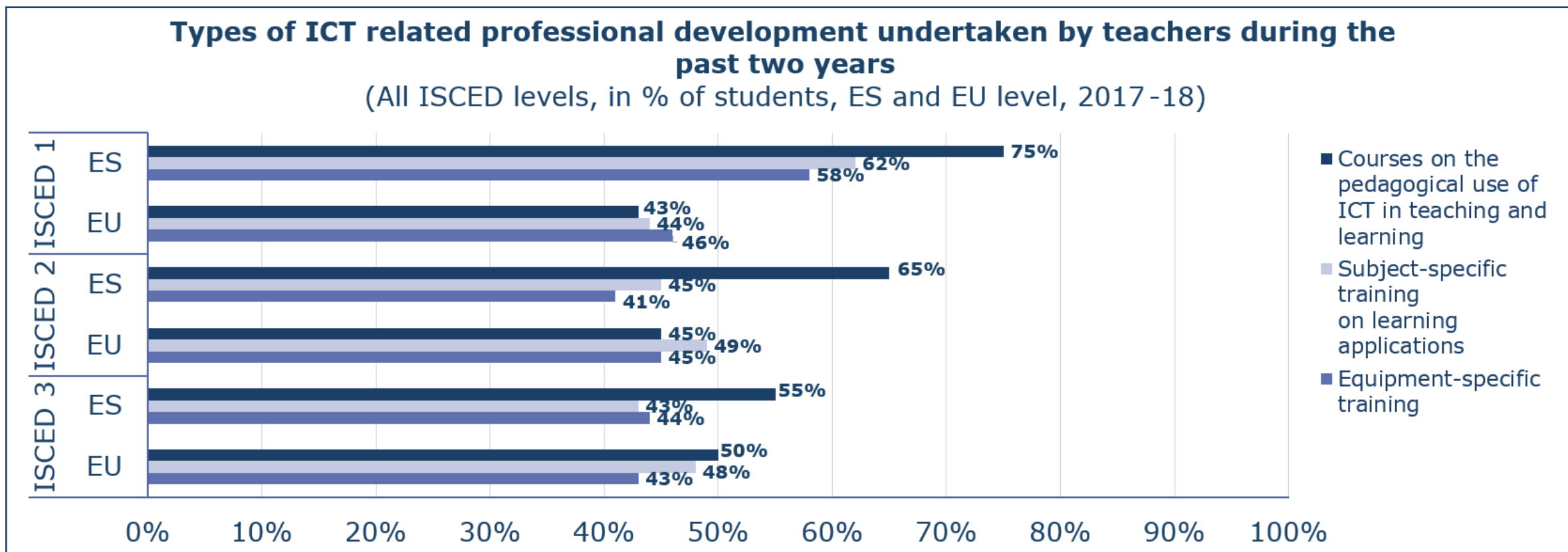
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8. Teachers' confidence in their digital competence

Confidence of teachers in their digital competence (based on the DigComp framework)
(All ISCED levels, ES and EU level, 2017-18)

Legend:
- Safety
- Communication and collaboration
- Information and data literacy
- Problem solving
- Digital content creation

ISCED 1
- ES: 3,22 / 3,27 / 3,14 / 3,24 / 2,99
- EU: 3,39 / 3,13 / 3,05 / 2,88 / 2,66

ISCED 2
- ES: 2,8 / 2,93 / 3,18 / 2,86 / 2,75
- EU: 3,04 / 3,03 / 3,06 / 2,82 / 2,6

ISCED 3
- ES: 2,83 / 3 / 3,17 / 3,05 / 2,79
- EU: 3 / 3,05 / 3,17 / 2,8 / 2,67

1 - Not all   2 - A little   3 - Somewhat   4 - A lot

Key Findings

- Digital competence is defined according to the DigComp framework, detailed on slide 17

- Higher confidence of teachers in Spain at ISCED levels 1 in all digital competence areas – except in safety and communication and collaboration (ISCED 2 and 3), compared to the European average
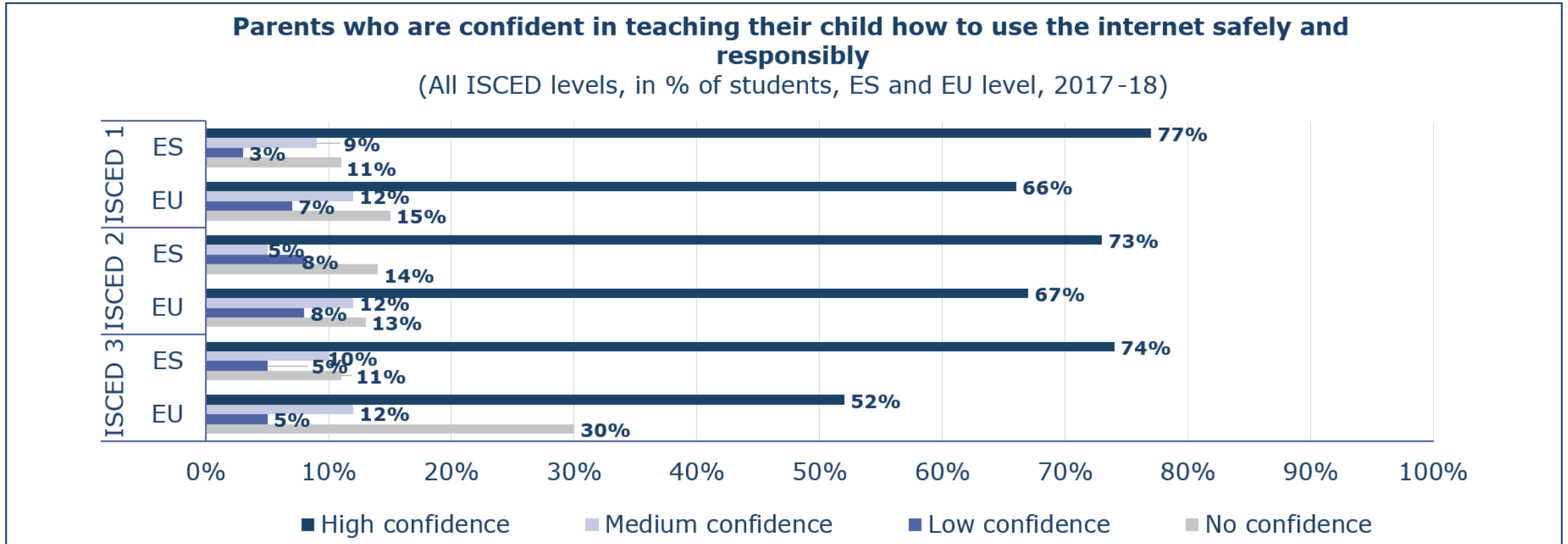
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9. Type of training of teachers

Types of ICT related professional development undertaken by teachers during the past two years
(All ISCED levels, in % of students, ES and EU level, 2017-18)

	Courses on the pedagogical use of ICT in teaching and learning	Subject-specific training on learning applications	Equipment-specific training
ISCED 1 — ES	75%	62%	58%
ISCED 1 — EU	43%	44%	46%
ISCED 2 — ES	65%	45%	41%
ISCED 2 — EU	45%	49%	45%
ISCED 3 — ES	55%	43%	44%
ISCED 3 — EU	50%	48%	43%

Key Findings

- Higher share in Spain at ISCED level 1, compared to the European average
- Lower share in Spain at ISCED levels 2 and 3 – except in courses on the pedagogical use of ICT in teaching and learning, compared to the European average

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10. Parents' confidence in teaching child to use Internet safely and responsibly

Parents who are confident in teaching their child how to use the internet safely and responsibly
(All ISCED levels, in % of students, ES and EU level, 2017-18)

ISCED 1
- ES: 77%, 9%, 3%, 11%
- EU: 66%, 12%, 7%, 15%

ISCED 2
- ES: 73%, 5%, 8%, 14%
- EU: 67%, 12%, 8%, 13%

ISCED 3
- ES: 74%, 10%, 5%, 11%
- EU: 52%, 12%, 5%, 30%

■ High confidence   ■ Medium confidence   ■ Low confidence   ■ No confidence

Key Findings

- The share of parents in Spain who feel "highly confident" in teaching their child to use the Internet safely and responsibly is higher at all ISCED levels compared to the European average

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DigComp Framework

The **Digital Competence Framework for Citizens** (DigComp), which was created by the European Commission, Joint Research Centre on behalf of DG EAC and EMPL, is used to match several questions on teachers' and students' confidence from the survey with the five competence areas of the DigComp framework.

Competence areas dimension 1	Competences dimension 2
Information and data literacy	• Searching, evaluating, managing data, information and digital content
Communication and collaboration	• Interacting, sharing, engaging, collaborating through digital technologies • Managing digital identity
Digital content creation	• Developing digital content, programming • Understanding Copyright and licences
Safety	• Protecting devices, personal data and privacy and well-being
Problem solving	• Solving technical problems • Identifying needs and technological responses and digital competence gaps

Technical notes

- For certain ISCED levels within countries, the number of achieved interviews was too low to use the data for analytical purposes

- Findings from sample sizes that are too small would be meaningless, and as such, these results had to be eliminated from the final dataset

- The minimum threshold to process the data for each target group was at least n=30 participating schools per country and ISCED level (or 10% of the universe for smaller countries)

- Quality data checks at question level were additionally performed to guarantee at least n=30 valid data entries (relevant e.g. when a lot of don't know answers were given)

- For more information please refer to the technical report: European Commission (2019). 2nd Survey of Schools: ICT in Education – Technical Report. Luxembourg: European Commission. doi: 10.2759/035445.