

21st Century Teachers

How the societal and technological demands of the 21st Century are changing the way we learn and teach.

A teachers' survey of the Vodafone Foundation in eleven European countries

Global report

Ipsos
July 2022



Vodafone
Foundation



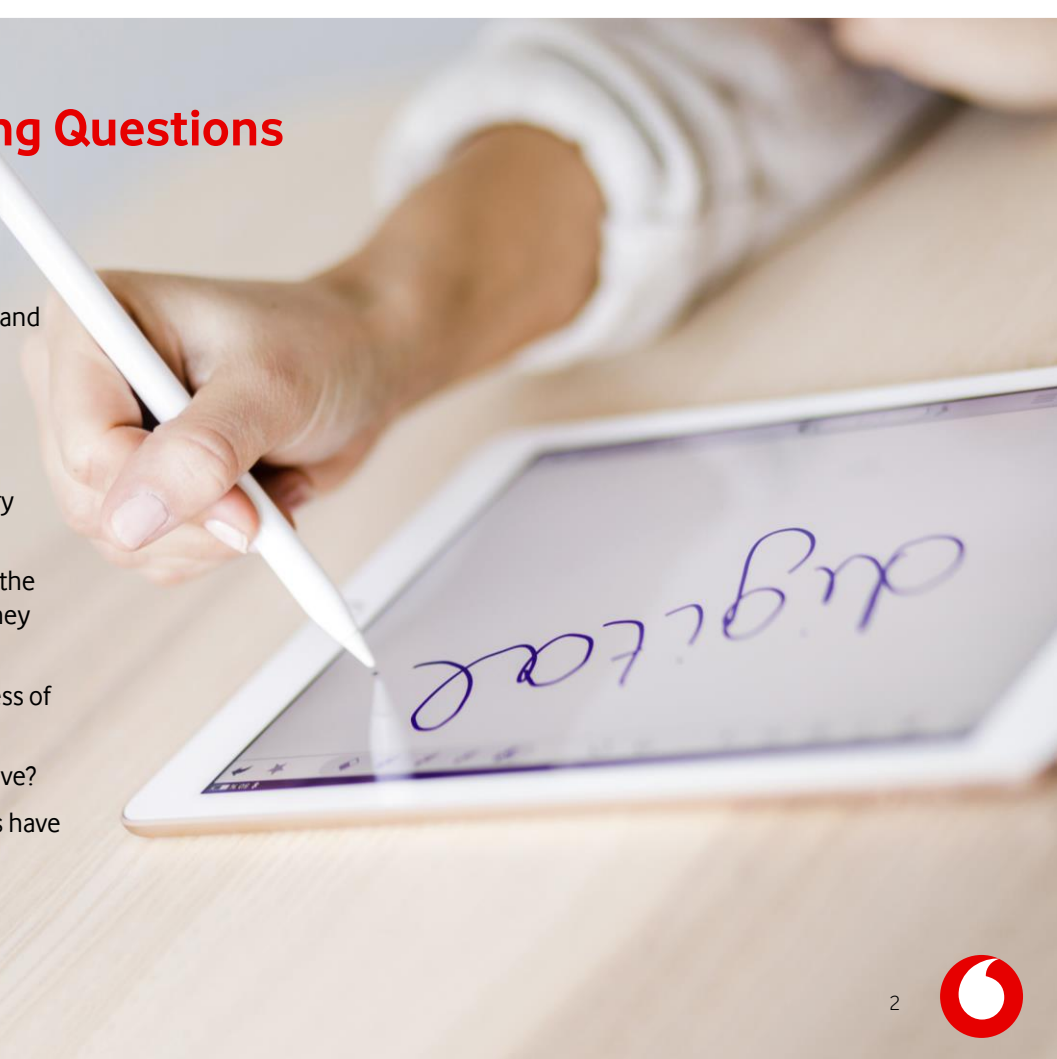
Purpose of the study and overarching Questions

Purpose of the study:

Teachers are asked about their perception on the 21st century school. Therefore, all results represent the opinion/perception of the teachers and are not based in objective measurements of the schools' situation. Nevertheless, teachers can of course have a valid view of their schools.

Questions:

- > How are the societal and technological demands of the 21st Century changing the way we learn and teach?
- > Are schools across Europe preparing students for the challenges of the 21st Century? What competencies do they focus on? How well do they foster 21st Century skills?
- > How does the use of technology in the classroom change the process of learning? How does it alter the process of teaching?
- > What vision of 21st century pedagogy do teachers across Europe have?
- > How does digital education change the self-understanding teachers have of their role as educators?
- > How prepared are teachers across Europe for this transformation? What support do they need?



Main Takeaways

- > **Teachers** are generally positive about the use of digital technology in the classroom and confident in their ability to use digital technology in their teaching.
- > **Today**, only 20% of the schools in the countries surveyed provide high-quality digital infrastructure! However, differences between countries are considerable.
- > **Much to do:** About 20% of teachers say they are not at all competent in using digital technology in the classroom.
- > **Training is needed:** In-person trainings seem to have the strongest potential in supporting teachers in most countries (especially in Albania, Turkey, Germany). But there are countries with significantly different preferences – in Hungary and Portugal a majority prefers online-trainings.
- > **Differentiating factors:** The dominant differentiating factor across most topics are the countries rather than the school types. From this perspective measurements for specific school forms are not needed in most countries. This should make it easier to address the schools' and teachers' needs.



Summary (1/2)

Teachers' attitudes on the relevance of certain skills for kids in the 21st Century (Chapter 1)

- > Communication, digital literacy and creative problem solving are considered to be key skills.
- > There is consensus between teachers that schools are responsible to foster these and further competencies, though they are concerned about schools' capabilities in doing so.

Potentials and risks digital technology holds for teaching and learning (Chapter 2)

- > Helping pupils acquiring skills for the age of digitalization and enabling students to access better sources of information are seen as the biggest potentials of digital technology.
- > Concerns relate to increased exposure to misinformation and the weakening of traditional skills.

Teachers' digital teaching skills (Chapter 3)

- > Solid IT-skill levels (Experts and Explorers) are the dominating skill profiles of teachers in Europe. However, about 20% of teachers are not competent at all in using digital technology in the classroom.
- > Southern European teachers have better skills than do teachers in other European countries.

Perception of teachers' current and future role in the classroom (Chapter 4)

- > Teachers do not expect fundamental changes in the relevance of certain roles of teachers.
- > The teacher's role as a conveyor of knowledge is most often ranked as the most important role for now and in the future. However, its relevance is expected to decline slightly over time. As a result, no role will fully dominate all other roles in the future, but all roles are expected to be of importance.



Summary (2/2)

Atmosphere and IT infrastructure at schools (Chapter 5)

- > Although about four in five European teachers say their school and colleagues create a working environment that is rather supportive of digital teaching, the quality of schools' IT infrastructure is rated as being mediocre. Only about 20% of schools provide high-quality infrastructure.

Teachers' attitudes on education policy measures (Chapter 6)

- > 78% of European teachers complain that national governments' expectations towards digital teaching are higher than what can be realistically achieved.
- > While teachers are critical towards current national governments' education policies, they show positive attitudes towards European-wide policies, standards and exchange on digital education.

Teacher training on the use of digital technology in the classroom (Chapter 7)

- > More than two thirds of European teachers have attended official trainings on the use of digital technology in the classroom.
- > Most official trainings attended by teachers in Europe are optional rather than compulsory.
- > Most formal courses are organized by schools or governmental training institutions, while private training institutions and foundations play a minor role.
- > Informal trainings are less popular than formal trainings, but they still are a frequently used source for many teachers to improve their digital teaching skills.
- > However, informal trainings mainly reach those who possess already good digital teaching skills, while they fail to attract those who would profit the most from such trainings, i.e., those with low skill levels.



Methodological Remarks

- > The survey was conducted in **11 countries**: Albania, Germany, United Kingdom, Greece, Hungary, Italy, the Netherlands, Portugal, Romania, Spain, and Turkey.
- > To give the reader some orientation, we provide a **benchmarks** for results on a general level (not in splits). The benchmark (global) shows the aggregated results of all 11 countries.
- > **Response options** „don't know” and “prefer not to answer” are not considered by the calculation of the results.
- > In the questionnaire we deployed different **rating scales**. There are 4-point scales and 5-point scales. Reported will be “Top-2 Boxes” in % of all respondents (see Image 1).
- > Some questions are analysed by comparing different **quality levels of IT equipment** in the schools. To do so we first calculated an index consisting of 5 questions (Q11_1-5). This index was used to distinguish three groups reflecting 3 levels (see Image 2). Cases with invalid answers on any of the items were deleted listwise.
- > Some questions are analyzed by comparing different **skill levels of teachers when using digital media in the classroom**. These levels refer to the 5 statements of Q6 from which the most applicable should be chosen. Statement Q6_1 = traditional; Q6_2 = beginner; Q6_3 = explorer; Q6_4 = expert; Q6_5 = leader). For a description of the skill levels see page 34.

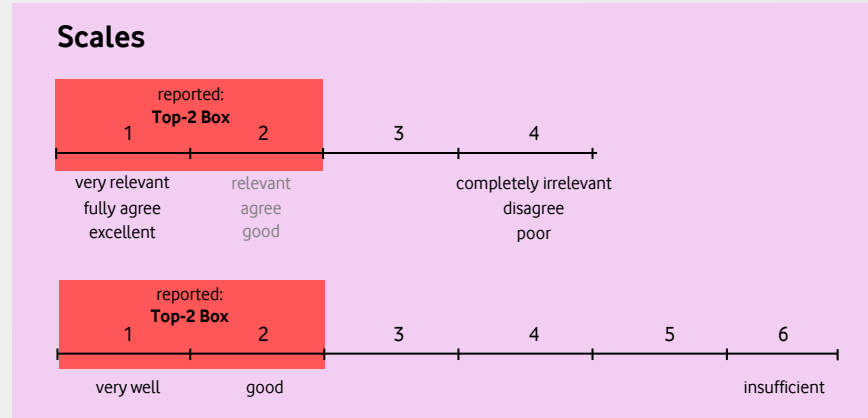


Image 1

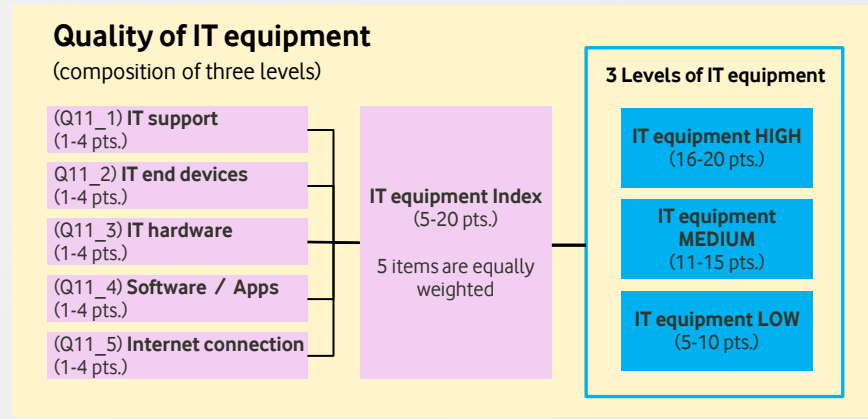


Image 2



Project Design



TARGET GROUP

Teachers:

- Primary school
- Lower secondary
- Upper secondary



AGENCY

Ipsos Germany



FIELD WORK

May 4th – June 16th



TOTAL # OF INTERVIEWS

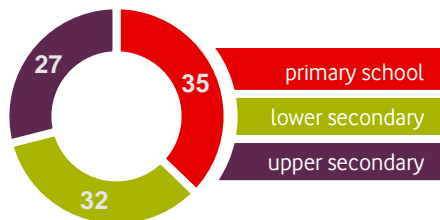
3,082

Country	Field work method	No. of interviews
Albania	Multi Mode (phone, F2F, online)	300
Germany	face to face	317
Greece	phone	302
Hungary	online	101
Italy	phone	300
Netherlands	online	260
Portugal	online	300
Romania	face to face	302
Spain	online	300
Turkey	phone	300
UK	online	300
total		3.082

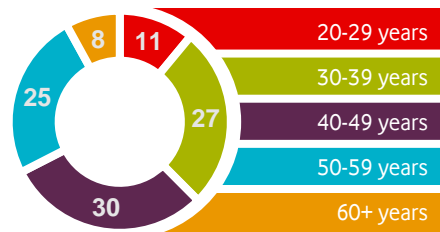
Demography

in percent

Education Level

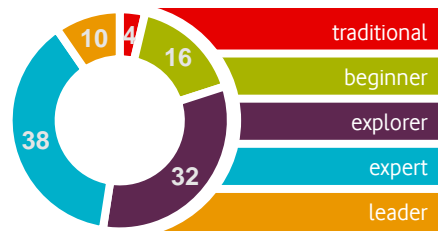


Age of teachers



Base: All participants n=3082

Skill level when using digital media in the classroom



Quality of IT infrastructure



Calculated variable based on q11.
For further information please see page 4



- > Teachers from **all three education levels** are **represented** approximately **equally**.
- > **Different age groups** of teachers are **covered** in the survey, though most are middle-aged.
- > The **level of digital skills** of teachers surveyed is **good** with only few traditionalists and beginners.
- > The **IT infrastructure** of teachers' schools is **poor** with **more often low** rather than **high quality**.



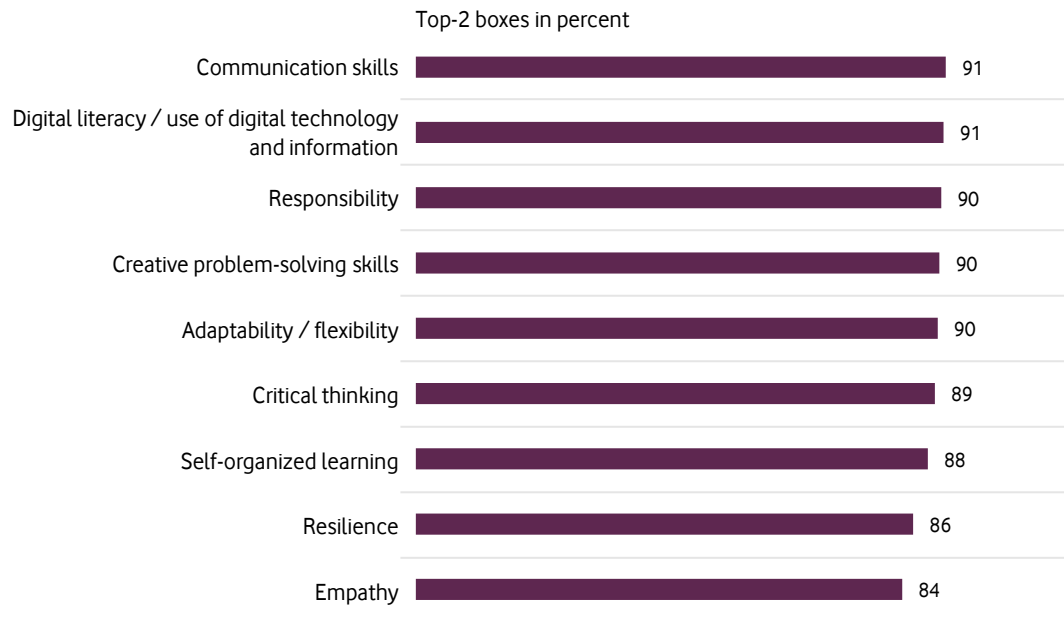
Attitudes of teachers: 21st Century Skills

01



Overall

Relevance of competencies and personal characteristics to strive in a digital society



- > For European teachers, the **most relevant competencies** to strive in a digital society of the 21st century are **communication skills** and **digital literacy**. Both skills are **rated as relevant by 91%** of European teachers.
- > In addition, **nine in ten attribute high relevance** to competencies such as **responsibility, creative problem-solving skills** and **adaptability**.
- > In contrast, **empathy** is considered the **least important** competence. Nevertheless, it is **still** interpreted as being **relevant by 84%** of European teachers.
- > Overall, more **than four in five** teachers **attribute relevance to all competencies** asked. This may indicate that **striving in a digital future** does not simply **demand** a few “super skills” but rather a more general approach that **fosters** the **whole spectrum** of technical, emotional and social **skills**.

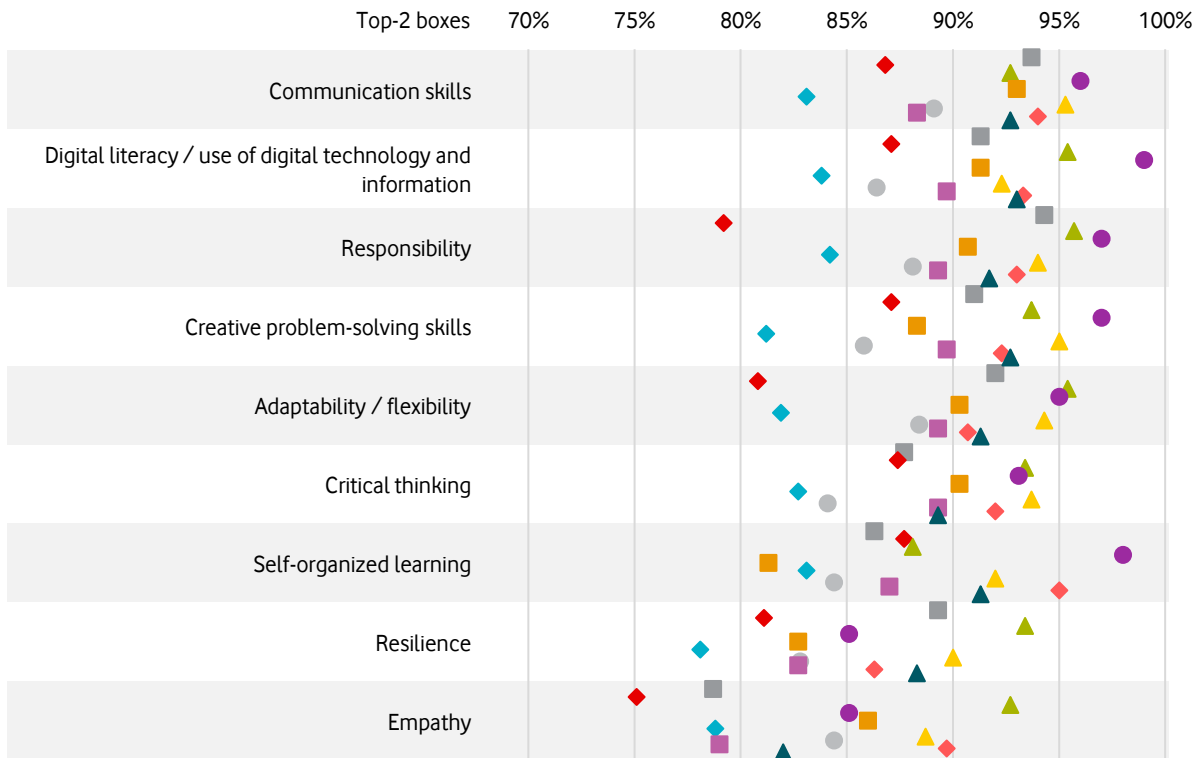
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 1: "How relevant do you consider the following competence and personal characteristics in order to strive in a digital society?"; scale: 1=very relevant to 4=completely irrelevant.



Countries

Relevance of competencies and personal characteristics to strive in a digital society



- > Teachers from different **European countries differ considerably** in their **assessment** of the **relevance** of certain **competencies**.
- > Teachers from **Germany** and the **Netherlands** tend to attribute the **lowest relevance** to all **competencies**, while those from **Hungary** and **Greece** attribute the **highest relevance** to most **competencies**.
- > However, **despite** these **differences**, at least **three in four teachers in each country attribute high relevance** to each competence. This implies again the need to teach the whole spectrum of skills rather than one digital “super skill”.



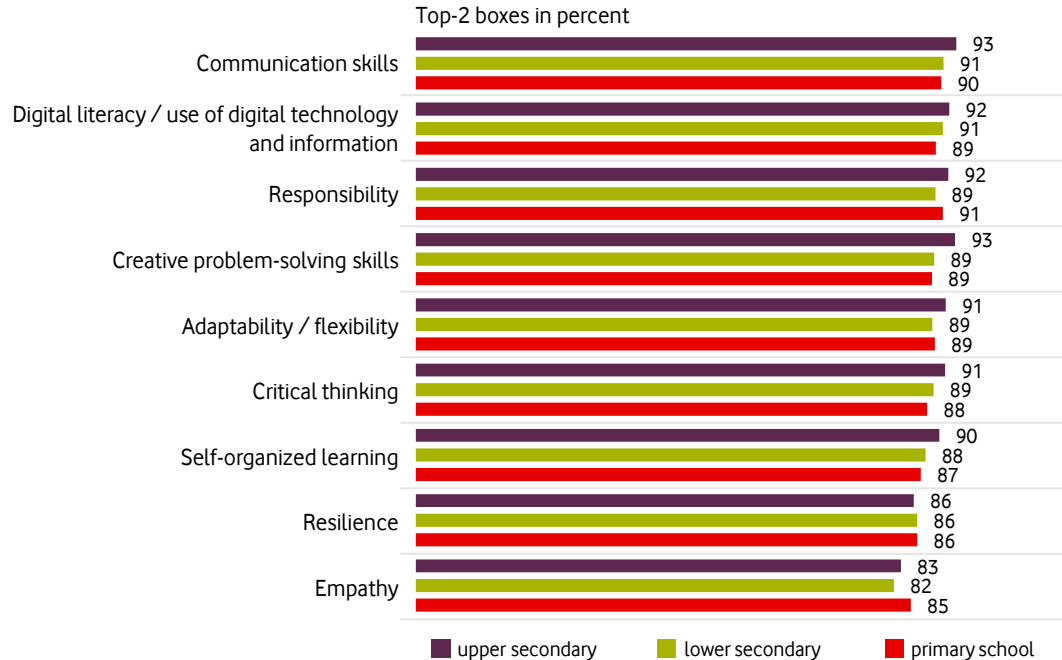
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 1: "How relevant do you consider the following competence and personal characteristics in order to strive in a digital society?"; scale: 1=very relevant to 4= completely irrelevant.



Education level

Relevance of competencies and personal characteristics to strive in a digital society



Base: All participants n=3082; calculated without don't know / prefer not to answer.

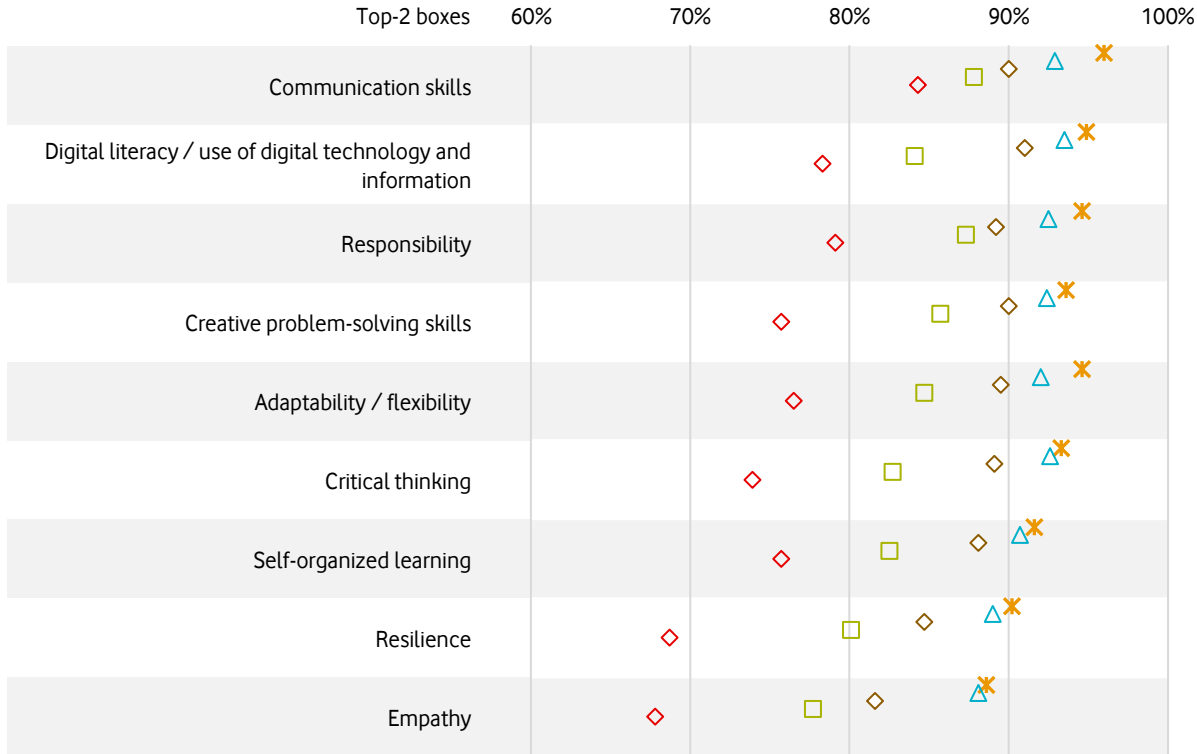
Question 1: "How relevant do you consider the following competence and personal characteristics in order to strive in a digital society?"; scale: 1= very relevant to 4= completely irrelevant

- > **Variations** in relevance attributed to certain competencies are **limited between** teachers working at different **education levels**.
- > Teachers from **upper secondary schools** **attribute slightly greater relevance** to most competencies **than** do their **peers** working at **other education levels**. This is the case for **communication skills, digital literacy, creative problem-solving, critical thinking** and **self-organized learning**. However, the vast **majority** of teachers in **primary and lower secondary schools** **likewise emphasize** the **relevance** of these skills.
- > These **limited differences underline** that **all competencies** are considered **important** regardless of the pupils' age. That is, European teachers emphasize the relevance of a **broad education of skills** that should be taught **throughout pupils' educational career**.



Skill level

Relevance of competencies and personal characteristics to strive in a digital society



- > While differences are limited between education levels, there are **disparities in relevance attribution depending on teachers' digital teaching skill level.**
- > In a quasi-linear relationship, attributions of **relevance increase** for all competencies **with increasing level of teachers' digital skills.**
- > This indicates that **teachers with lower digital skills overlook the relevance** that certain competencies will have for the future of their pupils. Thus, it may be relevant for **further education programs to start with changing teachers' mind** regarding what will be important in the future.

✖ Leader △ Expert ◇ Explorer
□ Beginner ◇ Traditional

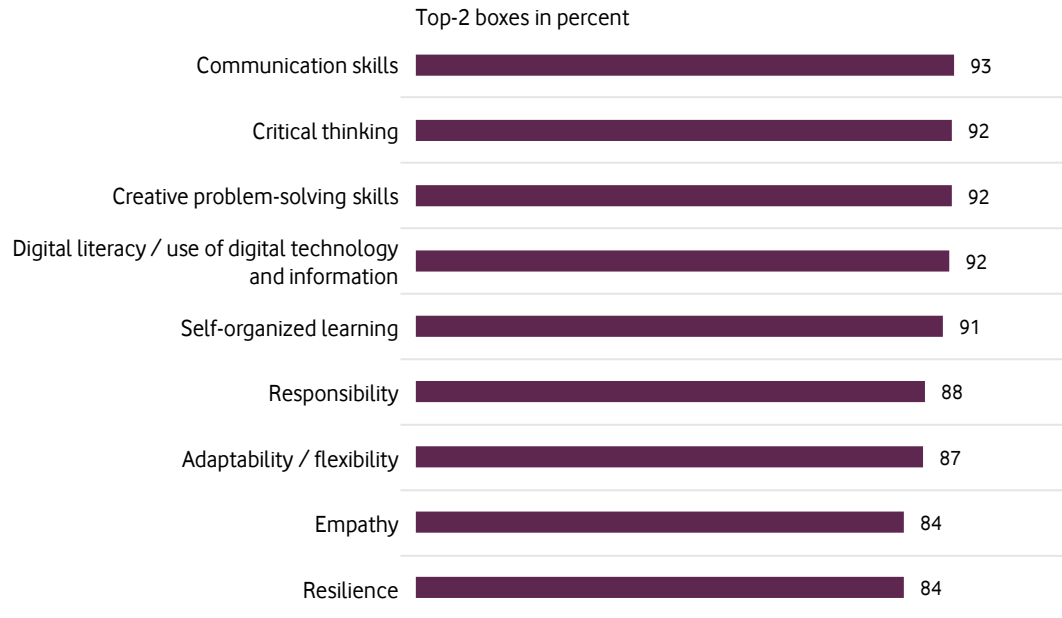
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 1: "How relevant do you consider the following competence and personal characteristics in order to strive in a digital society?"; scale: 1=very relevant to 4= completely irrelevant.



Overall

Responsibility of schools to promote the following competencies to students



Base: All participants n=3082; calculated without don't know / prefer not to answer.

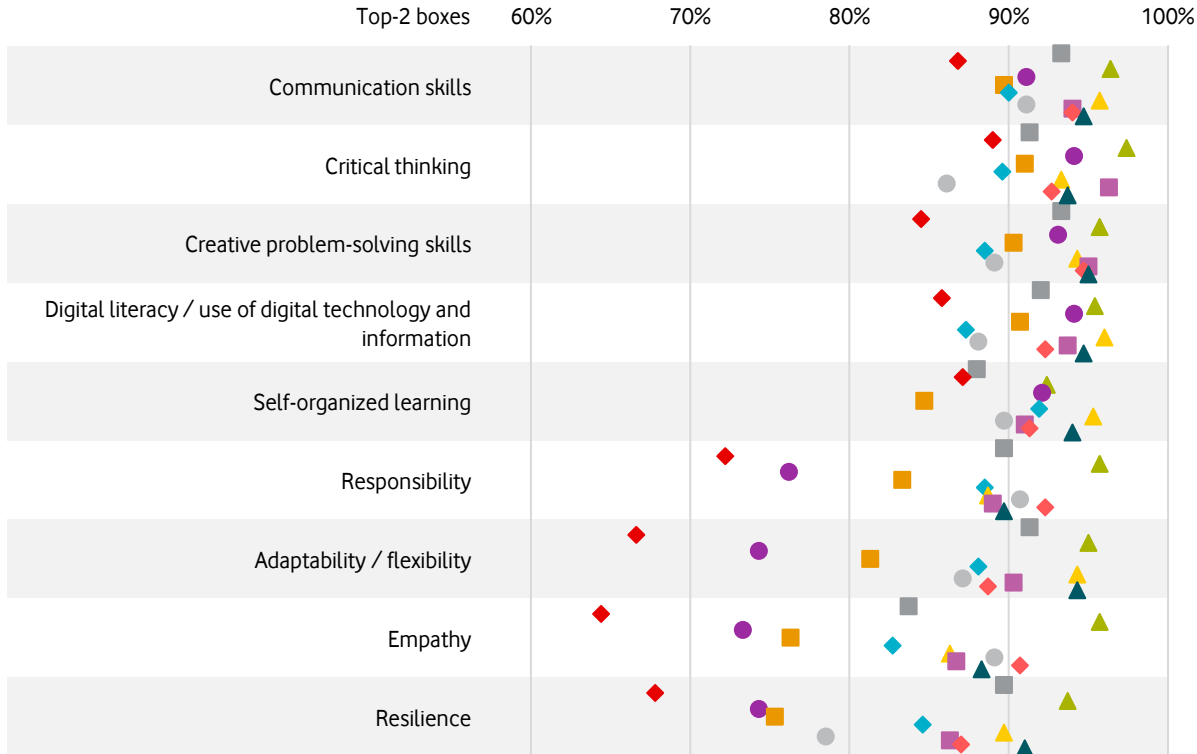
Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree

- > **Enhancing** students' **communication skills** is **most often** regarded as a **responsibility of schools** with 93%.
- > In addition, more than **nine in ten** teachers see **schools** being **responsible** in fostering **critical thinking, creative problem-solving, digital literacy** and **self-organized learning**.
- > Except for communication skills, teachers attribute **slightly lower responsibility to schools to promote social and emotional competencies** such as responsibility, adaptability, empathy and resilience. **Nevertheless**, more than **four in five** teachers across Europe say it is the **responsibility of schools** to foster these skills as well.
- > Overall, these results indicate once again that **teachers prefer a holistic approach to education** that fosters a broad set of skills in **institutionalized school settings**.



Countries

Responsibility of schools to promote the following competencies to students



- > Across countries, there is strong **consensus among European teachers** that **schools are responsible** to promote competencies such as **communication skills, critical thinking, creative problem-solving, digital literacy and self-organized learning**.
- > In contrast, there are clear **cultural differences** regarding **schools' responsibility** to foster **social and emotional skills** such as responsibility, adaptability, empathy and resilience. Here, teachers from Germany, Hungary and Italy attribute remarkably less responsibility to schools than those in Greece, for example.



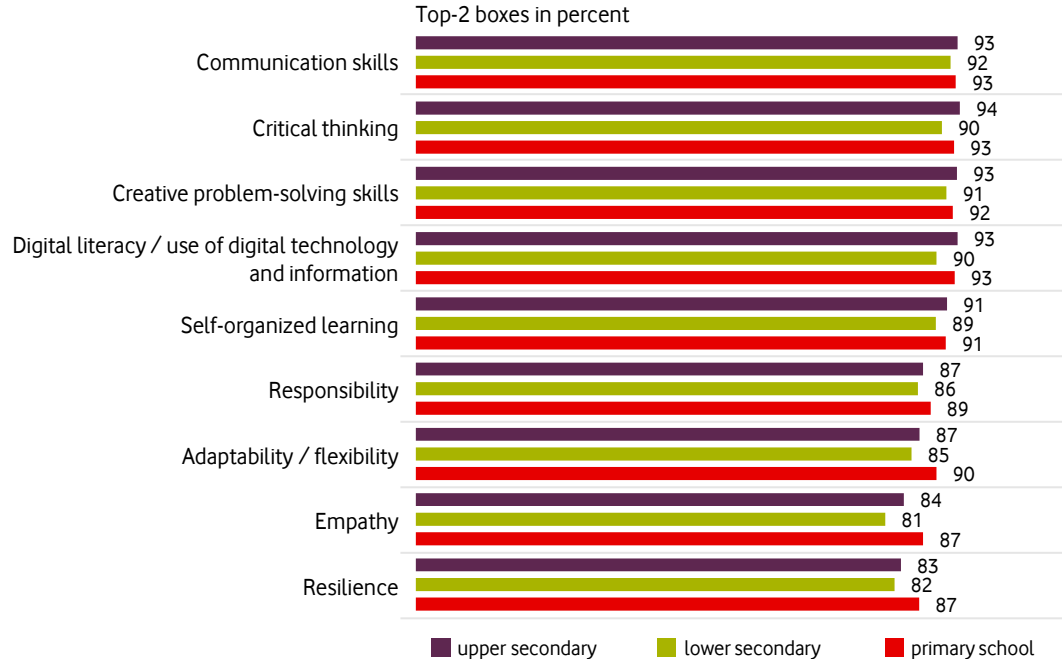
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree



Education level

Responsibility of schools to promote the following competencies to students



- > For most competencies, **differences in attributing responsibility** to schools are **small between teachers** working at **different education levels**.
- > Teachers in **primary schools** attribute **slightly greater responsibility** to schools in fostering **social and emotional skills** than do their peers belonging to secondary schools. This is the case for responsibility, adaptability, empathy and resilience but not for communication skills. **However**, the level of **responsibility attributions** for these skills is **still high** among teachers from **secondary schools** with more than four in five teachers agreeing.
- > Overall, these results highlight again that **teachers see schools as responsible in promoting a broad set** of technical, emotional and social **skills at all schools** from primary to upper secondary schools.

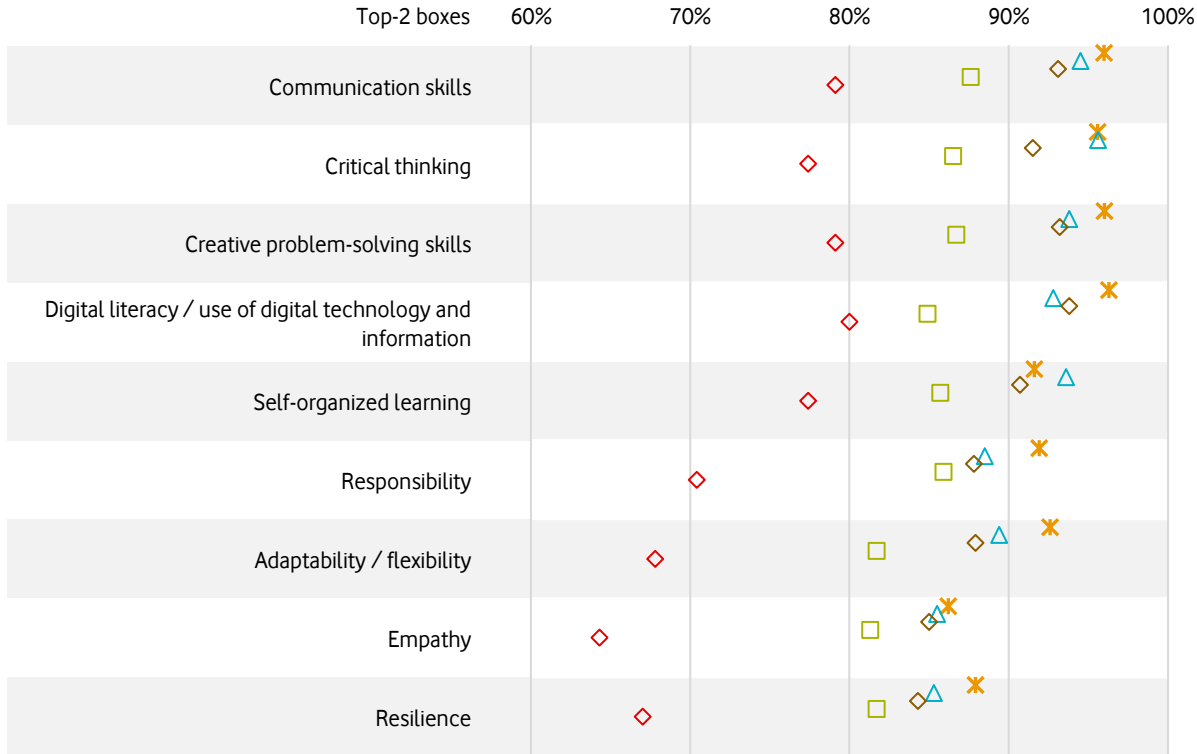
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree



Skill level

Responsibility of schools to promote the following competencies to students



- > While differences are again limited between education levels, **responsibility attributions vary clearly between** teachers with different **digital teaching skill levels**.
- > Teachers with **excellent or good digital skills**, i.e., leaders, experts and explorers, **see a clear responsibility of schools** to promote all competencies. In contrast, those with **lower skill levels** such as the beginner or the traditionalist are **more reserved** regarding a prominent role of schools, **particularly** when it comes to fostering **emotional and social skills**.

x Leader △ Expert ◇ Explorer
□ Beginner ◇ Traditional

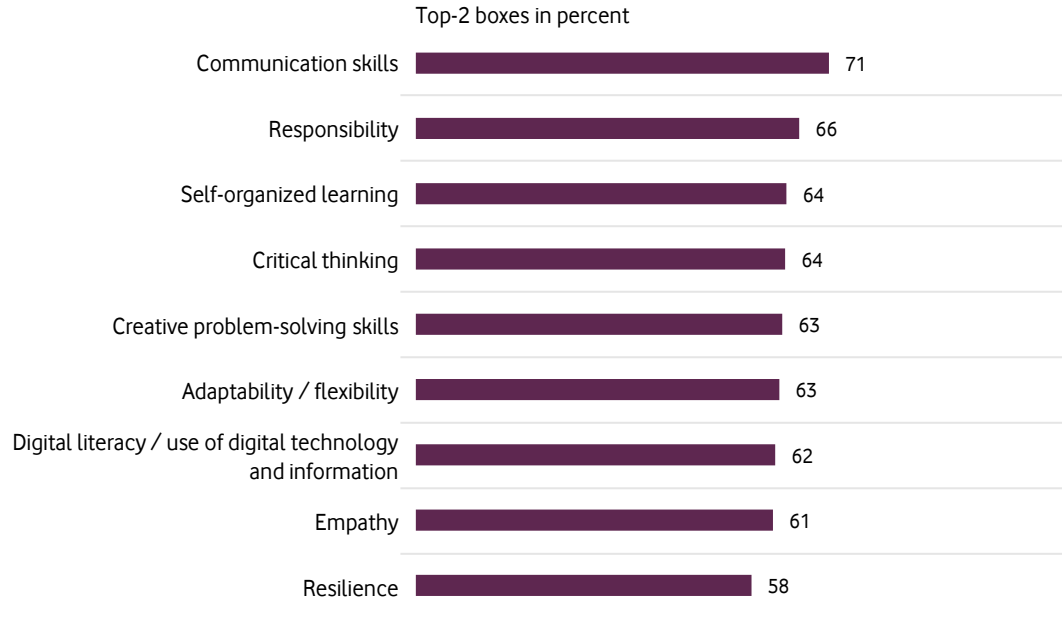
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree



Overall

Capabilities of school to promote respective competencies to students



Base: All participants n=3082; calculated without don't know / prefer not to answer.

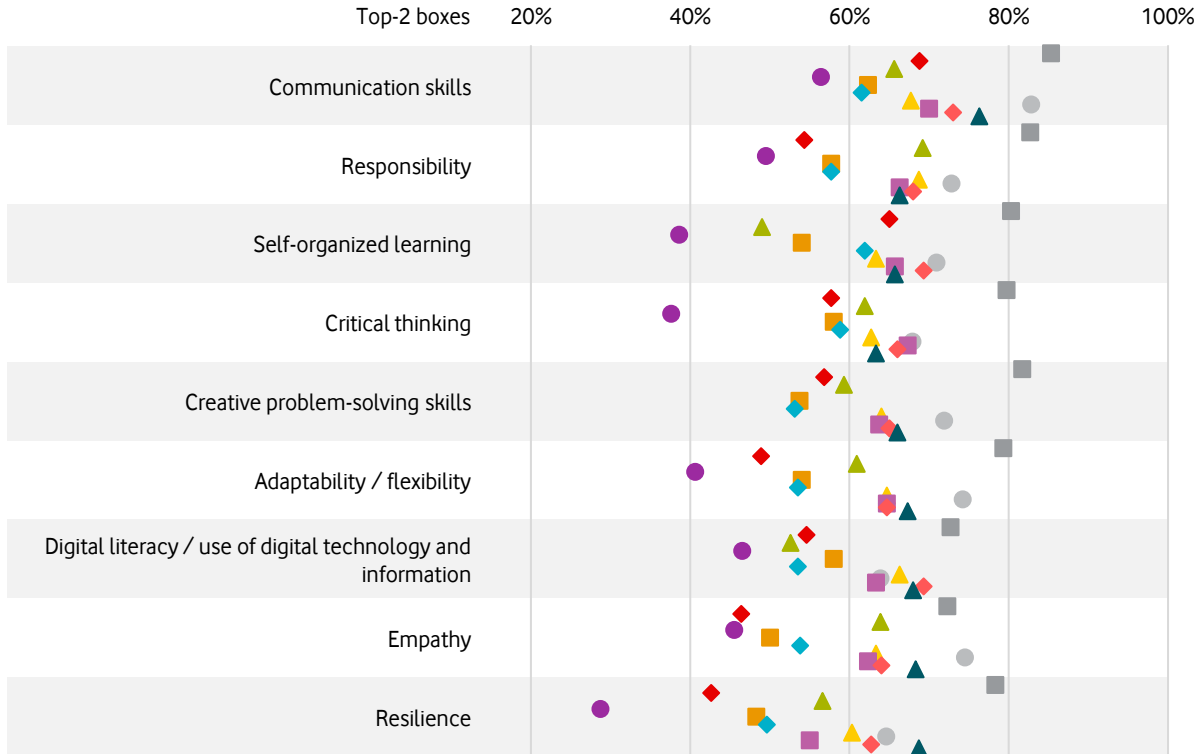
Question 3: "To what extent is your school capable of promoting these respective competencies to students?"; scale: 1= very well to 6= insufficient

- > Overall, the **majority of European teachers** say their **schools possess good capabilities** to promote students' competencies relevant for striving in a digital society.
- > European schools' **capabilities** are rated **highest** in fostering **communication skills, responsibility, self-organized learning and critical thinking**. About two thirds of teachers across Europe assess these capabilities as being good at their school.
- > The capabilities of European schools in enhancing pupils' **digital literacy is ranked third lowest** with only 62% of teachers stating their school is well prepared for teaching this competence.
- > Schools' capabilities in promoting **empathy** and **resilience rank lowest** across Europe. Only a bit more than half of European schools do well in fostering resilience.



Countries

Capabilities of school to promote respective competencies to students



- > Schools in **Europe** possess **very different** degrees of **capabilities** to foster pupils' competencies for a digital future.
- > For instance, **less than half of Hungarian** teachers say their **schools promote** these competencies **well**, and only a few more teachers in Germany, Italy and the Netherlands grade their schools with good marks regarding their schools' capabilities.
- > In contrast, this figure stands at **70% to 80% in Albania and Romania**.
- > Hence, **country-specific approaches are needed** to improve schools' capabilities.



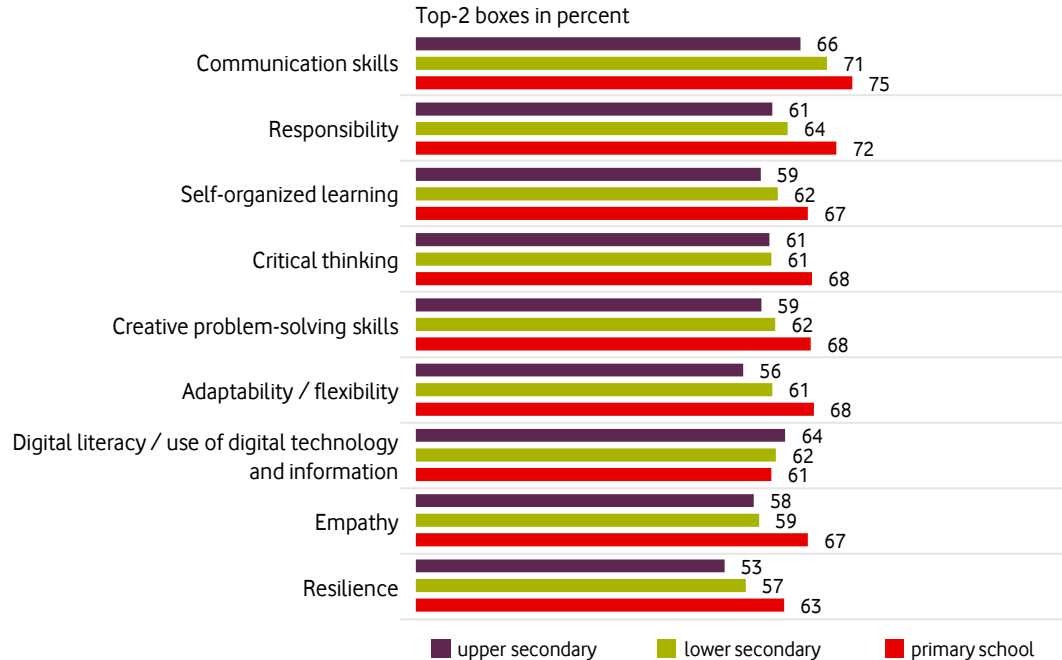
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 3: "To what extent is your school capable of promoting these respective competencies to students?"; scale: 1=very well to 6=insufficient



Education level

Capabilities of school to promote respective competencies to students



Base: All participants n=3082; calculated without don't know / prefer not to answer.

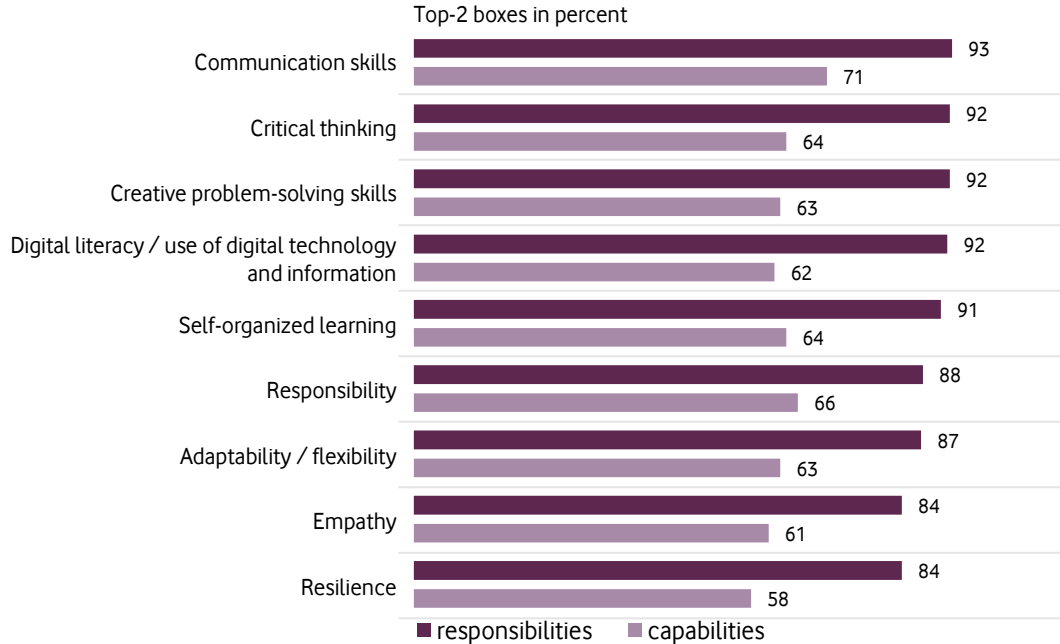
Question 3: "To what extent is your school capable of promoting these respective competencies to students?"; scale: 1= very well to 6= insufficient

- > While teachers' schools' education level does not produce much differences in attributing high responsibility to schools to promote skills to strive in a digital future, **education level matters** for **schools' capabilities** in fostering these competencies.
- > **Primary schools** tend to possess **slightly better capabilities than lower secondary schools**, while **lower secondary schools** receive **somewhat better scores than do upper secondary schools**.
- > The only **exception** is schools' **capability** in fostering pupils' **digital literacy**. Here, **secondary schools** tend to be **slightly better than primary schools**.
- > Though upper secondary schools lack behind on most capabilities, **more than half** of them are assessed as having **good capabilities in fostering all competencies** asked in the survey.



Overall

Responsibilities vs. capabilities



Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree

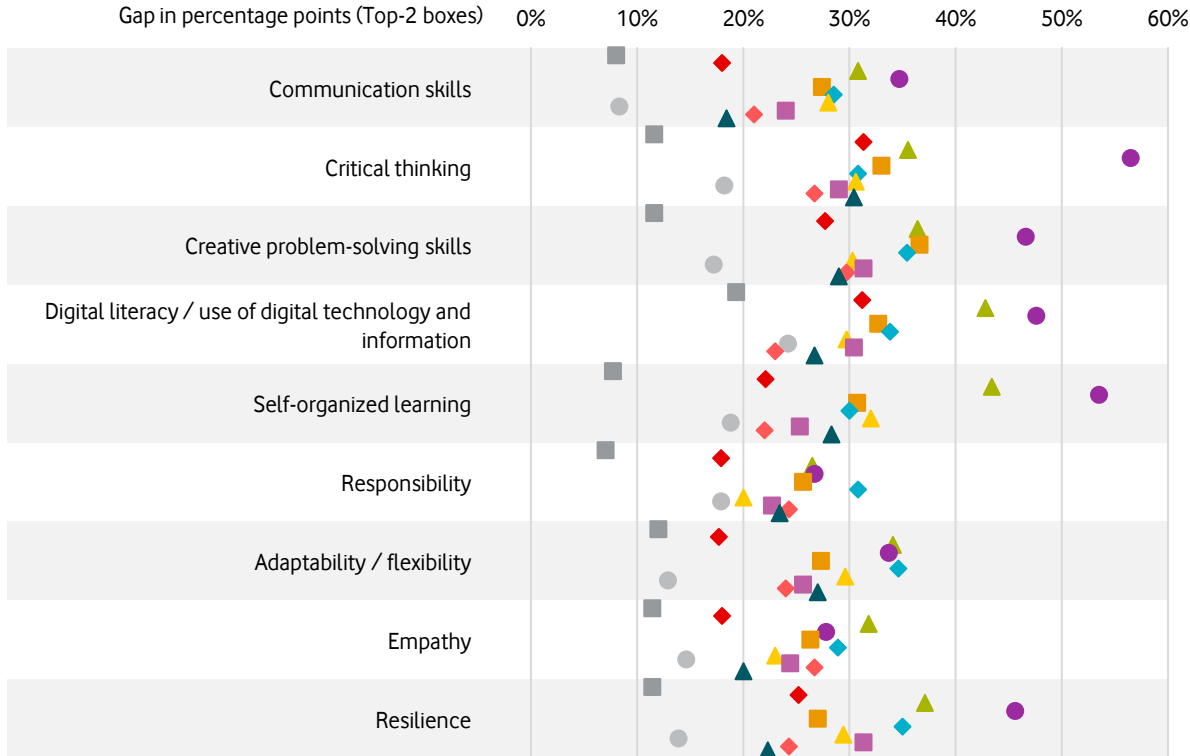
Question 3: "To what extent is your school capable of promoting these respective competencies to students?"; scale: 1= very well to 6= insufficient

- > On average across Europe, there is a considerable **gap between the responsibility** teachers attribute to **schools** in fostering students' skills for a digital future **and the capabilities of schools** to do so well. **For all competencies**, schools' **capabilities** are rated **lower than their responsibility**.
- > The **biggest gap** between responsibility and capability exists for **digital literacy** with 30 percentage points.
- > **Gaps** tend to be **slightly smaller** for **emotional and social skills**, though they are at least as big as 20 percentage points.
- > That is, **teachers** are **willing to prepare** the **young generation** for a digital future **but** their **schools** are **not ready** yet. **Schools need greater support** in improving their capabilities to match the high responsibility teachers attribute to their schools – and thus also themselves.



Countries

Gap between responsibilities and capabilities



- > In **most European countries**, the **gap between the responsibility** teachers attribute to their schools and the **capabilities** these schools possess is **between 20 to 30 percentage points** for all competencies.
- > However, some countries appear to be clear outliers. The **gaps** are **smaller** in **Albania** and **Romania**, while they are **higher** in **Hungary** and – to a lesser extent – in **Italy**.
- > Overall, however, **gaps exist in all countries** analyzed. It is thus a **European-wide task** to **help school increasing their capabilities** to the high level of responsibility attributed to schools.



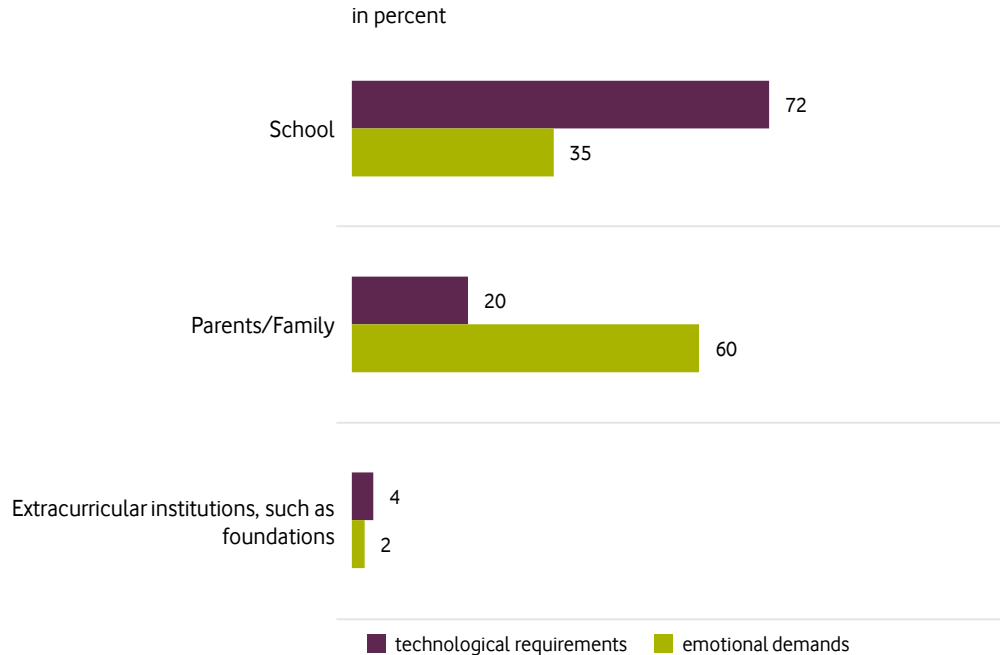
Base: All participants n=3082; calculated without don't know / prefer not to answer. Question 2: "To what extent do you see it as the responsibility of schools to promote the following competencies to students?"; scale: 1= fully agree to 4= disagree

Question 3: "To what extent is your school capable of promoting these respective competencies to students?"; scale: 1= very well to 6= insufficient



Overall

Mainly responsible for the requirements of a digital future



Base: All participants n=3082; shown: single punch answers

Questions 3a and 3b: "Who do you consider to be mainly responsible for: preparing young people for the technical / technological requirements of a digital future? (a) / preparing young people for the emotional and social demands of a digital future?"

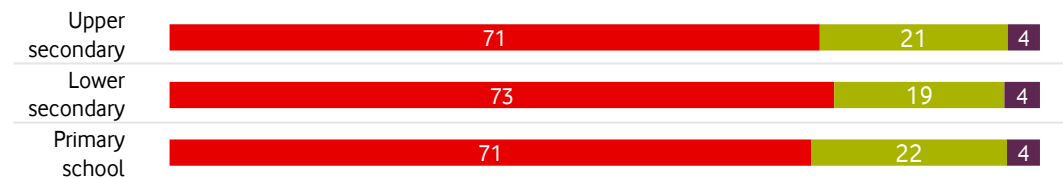
- > European teachers predominantly say it is the **school** that **must prepare young people in technological competencies** to strive in a digital future, while they allocate only a **minor role for parents** in enhancing **technological skills**.
- > In contrast, teachers across Europe attribute **higher responsibility to parents than schools** when it comes to preparing the young generation for the **emotional and social demands** of a digital future.
- > **Extracurricular institutions** are considered as rather **irrelevant** for both the future technological and emotional requirements.
- > Overall, teachers opt for a **clear division of responsibilities**. **Teachers want to take responsibility**, but they also **demand** pupils' **parents to play a prominent role** in getting the young generation ready for a digital future.



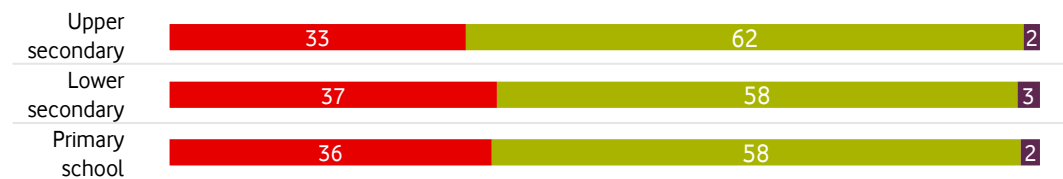
Education level

Mainly responsible for the requirements of a digital future

technical / technological requirements of a digital future?



emotional and social demands of a digital future?



■ school ■ parents / family ■ extracurricular institutions

Base: All participants n=3082; shown: single punch answers

Questions 3a and 3b: "Who do you consider to be mainly responsible for: preparing young people for the technical / technological requirements of a digital future? (a) / preparing young people for the emotional and social demands of a digital future?"

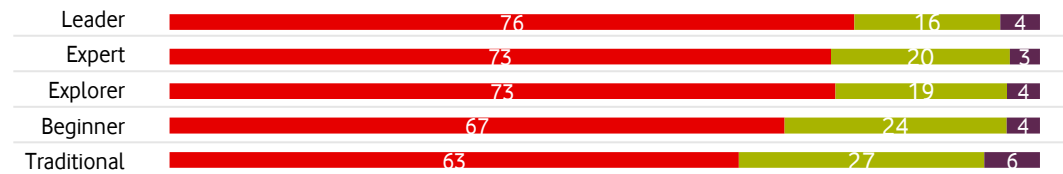
- > **Variations** in responsibility attribution for schools and parents are **limited between** teachers belonging to different **education levels**.
- > Regarding the **technological requirements** of a digital future, teachers from primary, lower secondary and upper secondary schools do **all agree to the same extent** that **schools** are the **mainly responsible actor** in promoting such skills, while parents are only interpreted as a minor contributing factor.
- > **Consensus** between teachers working at different education also **exists on a greater responsibility of parents** than schools in preparing the young generation **for the emotional and social requirements** of a digital future. However, teachers at upper secondary schools see slightly greater responsibility of parents than do their peers at other education levels.



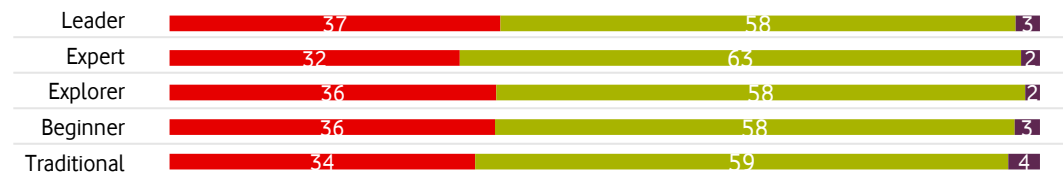
Teachers' digital skill level

Mainly responsible for the requirements of a digital future

technical / technological requirements of a digital future?



emotional and social demands of a digital future?



■ school

■ parents / family

■ extracurricular institutions

Base: All participants n=3082; shown: single punch answers

Questions 3a and 3b: "Who do you consider to be mainly responsible for: preparing young people for the technical / technological requirements of a digital future? (a) / preparing young people for the emotional and social demands of a digital future?"

- > **Across digital skill levels** of European teachers, a **vast majority** says it is the **school** that is **responsible** for **preparing young people** for the **technical demands** of the digitalization.
- > However, teachers with **higher digital skill levels** such as the leader or expert **attribute greater responsibility to schools** regarding **technological skills** than those with lower digital skills such as the traditionalist or beginner.
- > **Differences** in attributing greater **responsibility to parents** than schools in preparing young people for the **emotional and social demands** of a digital future are **limited between** teachers with different **digital skills levels**. All types of teachers agree to about the same extent that this is mainly a task for parents.



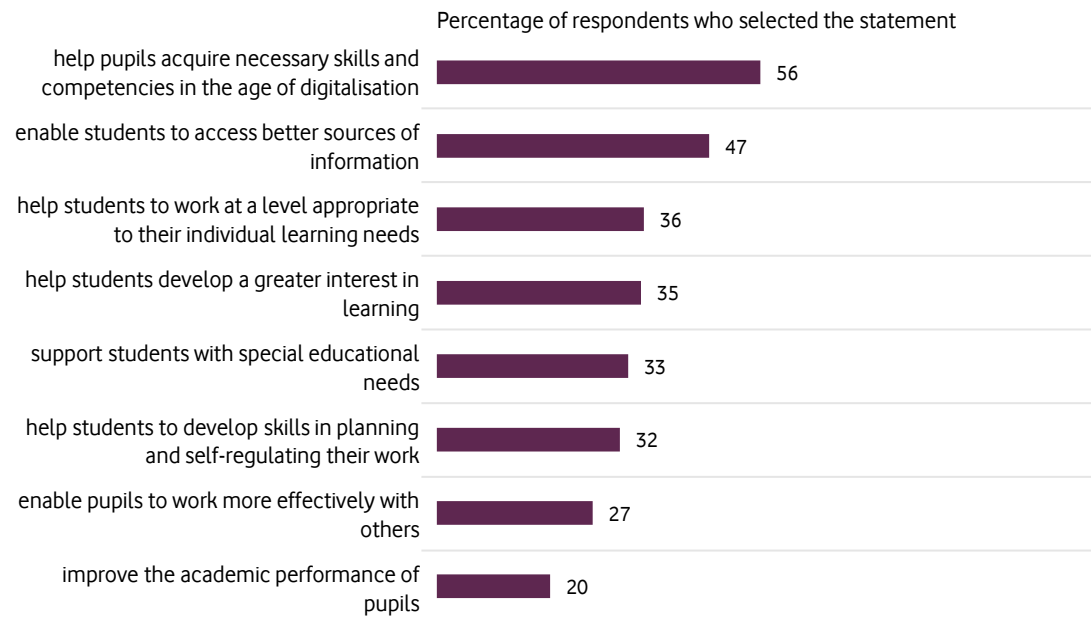
Attitudes of teachers: Risks and potential of digital technologies

02



Overall

Potential of digital technologies and media hold for learning



Base: All participants n=3082

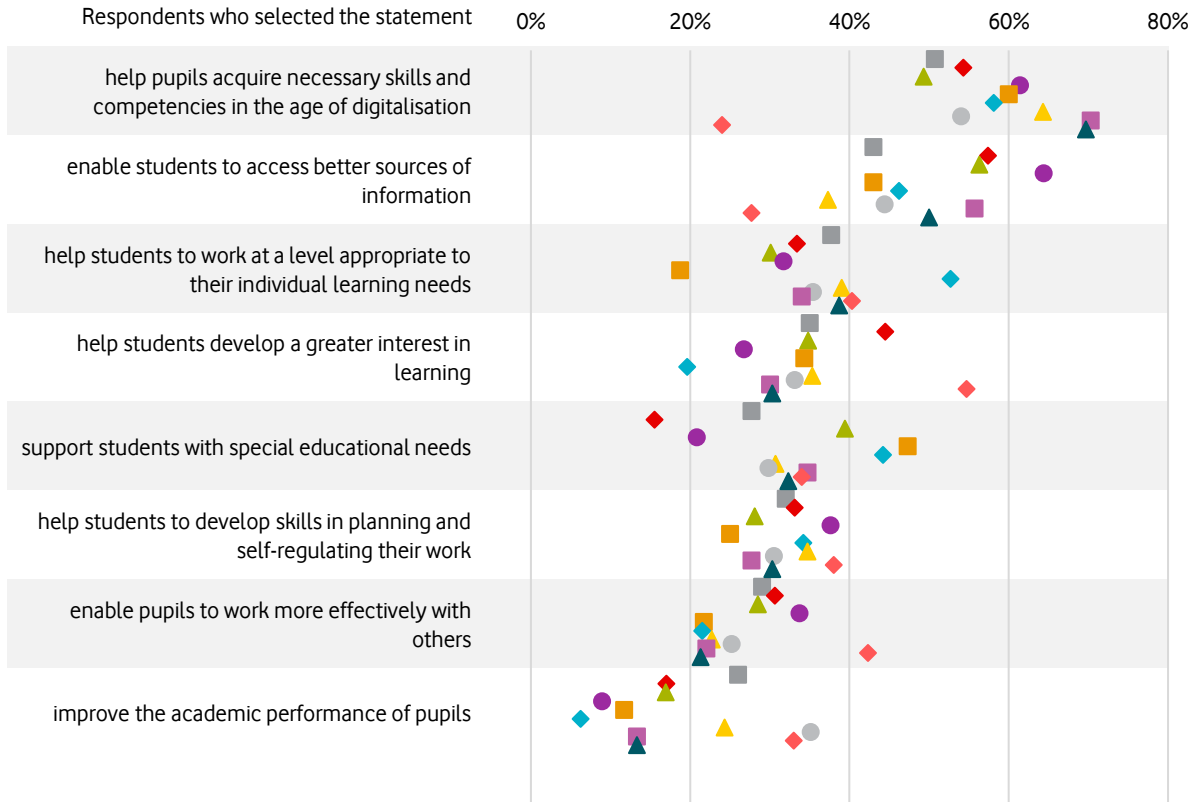
Question 4: "Please name the 3 statements you agree with the most about the potential digital technologies and media hold for learning."

- > Teachers in Europe see the **biggest potential of digital technologies** for learning in helping pupils acquiring **skills for** the age of **digitalization** and in enabling students to **access better sources of information**. However, only about half of teachers have selected these aspects as one of the three most important potentials.
- > In addition, **only about a third** of teachers **select** improvements in **individualized learning** as one of the biggest potentials digital technology hold for learning.
- > European teachers have **doubts about the potential** of digital media in enabling pupils to **work effectively with others** and in **improving the academic performance** of students. Less than three in ten teachers have selected these points as relevant potentials.



Countries

Potential of digital technologies and media hold for learning

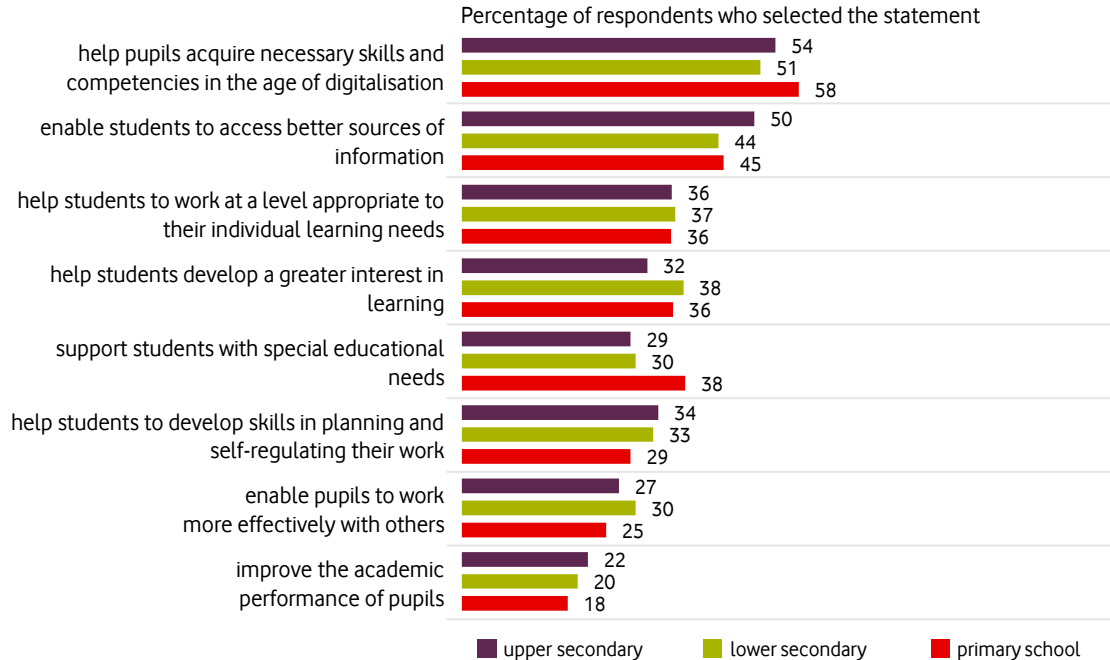


- > **Though** teachers from different **European countries differ** in how they assess the potentials digital technologies hold for learning, the hierarchy between potentials is approximately the same in all countries. Except for Turkey, **teachers in most countries** state that the **two most important potentials** are helping pupils acquiring **skills for the age of digitalization** and enabling students to **access better information**.
- > However, there exist **considerable variations between countries** in the assessment of digital media's potential to **support students with special educational needs**.



Education level

Potential of digital technologies and media hold for learning



Base: All participants n=3082

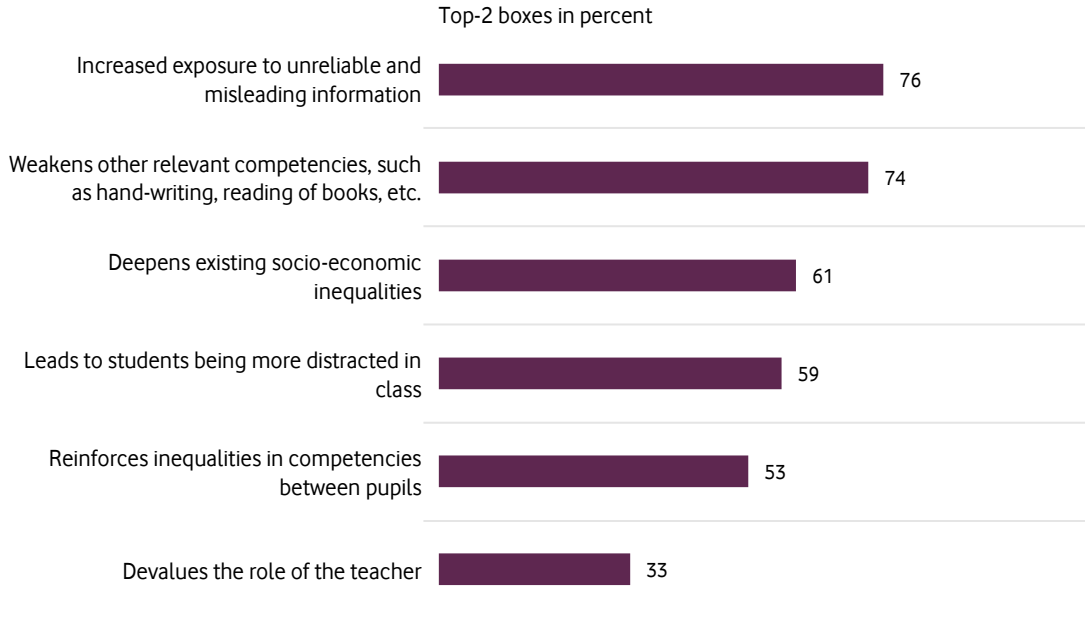
Question 4: "Please name the 3 statements you agree with the most about the potential digital technologies and media hold for learning."

- > Regardless of whether teachers work in primary, lower secondary or upper secondary schools, they **all choose most often** the same two aspects **as the biggest potentials** digital media hold for learning: helping pupils **acquire skills for** the age of **digitalization** and improving the **access** to better **information** sources.
- > Teachers at **primary schools** are **more optimistic** than their peers at other education levels that **digital media** can **support special educational needs**.
- > Teachers belonging to **secondary schools** **assess** the **development of skills in planning work** as a **more relevant potential** than do teachers working at primary schools.
- > **Across schools' education levels**, teachers see the **smallest potential** of digital technology in **improving the academic performance** of pupils.



Overall

Risks of using digital technology and media in teaching and learning



Base: All participants n=3082; calculated without don't know / prefer not to answer.

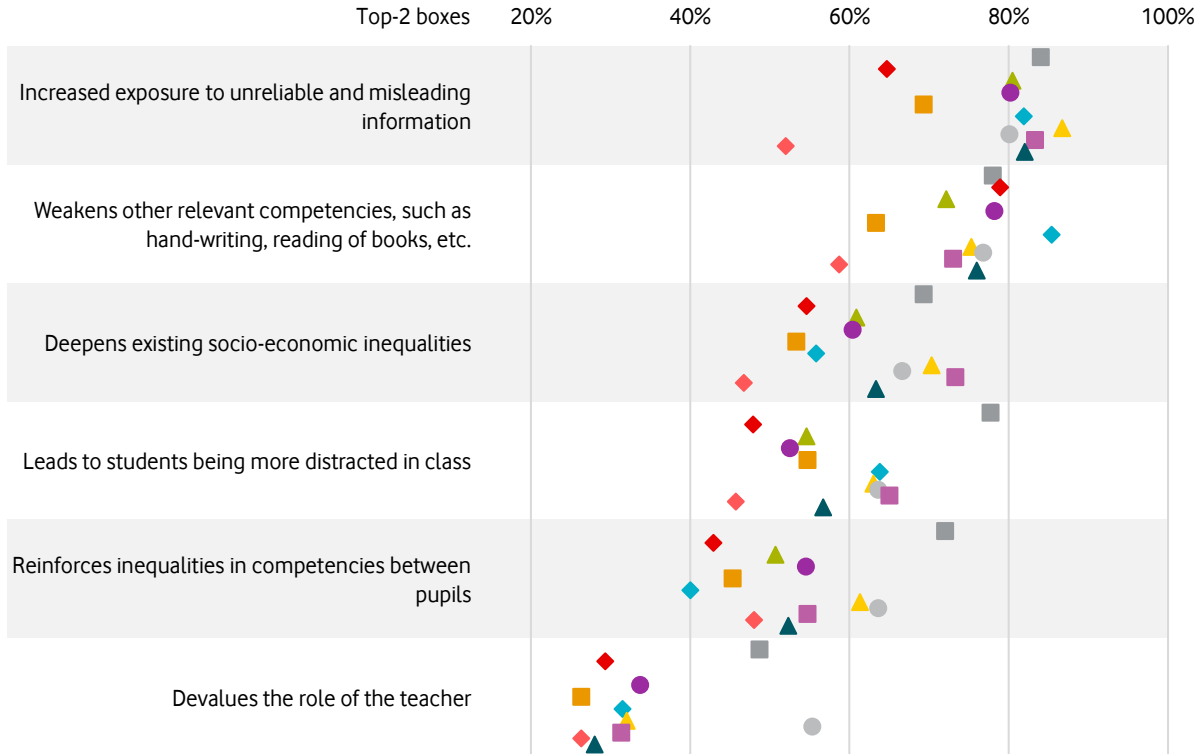
Question 5: "To what extent do you agree with the following statements about the risks of using digital technology and media in teaching and learning?"; scale: 1= fully agree to 4= disagree

- > About **three in four** European teachers are **concerned** that digital technology in the classroom entails the **risk of increased exposure to unreliable and misleading information and of weakening** other more **traditional competencies** such as hand-writing or the reading of books.
- > In addition, **more than half** of teachers across Europe say **digital teaching** comes with the **risk of deepening** existing **socio-economic inequalities**, increased **distraction** in the classroom and the **reinforcement of inequalities in pupils' competencies**.
- > In contrast, only a **minority fears** that **digital media** will **devalue** their **role as a teacher**.
- > Overall, the **majority** of European teachers is **considerably concerned** about the risks that may arise from digital teaching. The development of **teaching technology** should thus try to **reduce** these **risks**.



Countries

Risks of using digital technology and media in teaching and learning



- > **Most teachers in all European countries** see the **biggest risks** of digital media in increased **exposure to misinformation** and in a **weakening** of other more **traditional skills**, though teachers from Turkey are somewhat less concerned than their peers in other European countries.
- > In addition, there is a **consensus** between teachers from most European countries that a potential **devaluation of the role of the teacher** is a **minor risk** of digital teaching. **However**, teachers in **Albania** and **Romania** are much **more worried** about this risks than are teachers from all other countries.



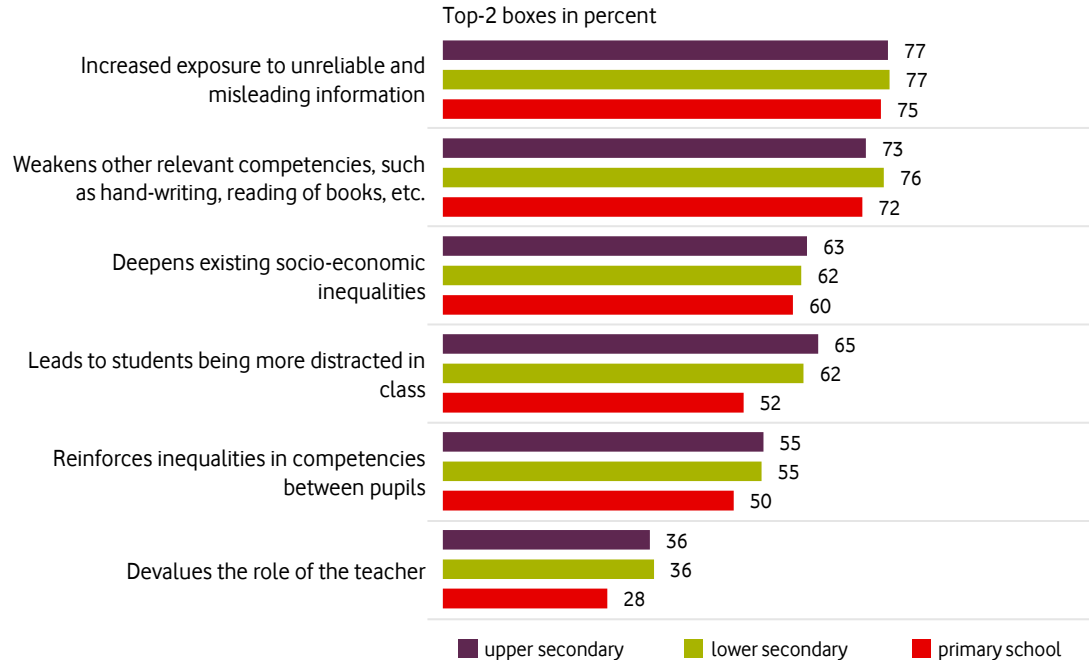
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 5: "To what extent do you agree with the following statements about the risks of using digital technology and media in teaching and learning?"; scale: 1= fully agree to 4= disagree



Education level

Risks of using digital technology and media in teaching and learning



- > There is **consensus between** teachers working at **different education levels** that the **biggest risks** of digital media in teaching are **increased exposure to misinformation** and the **weakening** of more **traditional competencies**.
- > However, teachers belonging to **primary schools** tend to be **slightly less concerned about** the **other risks** of digital teaching than are those working at secondary schools.
- > In particular, teachers in **secondary schools** **fear** somewhat **more often** that **digital media distracts students, reinforces inequalities** in pupils' competencies and **devalues** the role of the **teacher**.
- > Overall, however, these **results indicate** that the **risks** of digital teaching are rather **independent of pupils' age** and more a **question of how digital media is designed for and used** in the classroom.

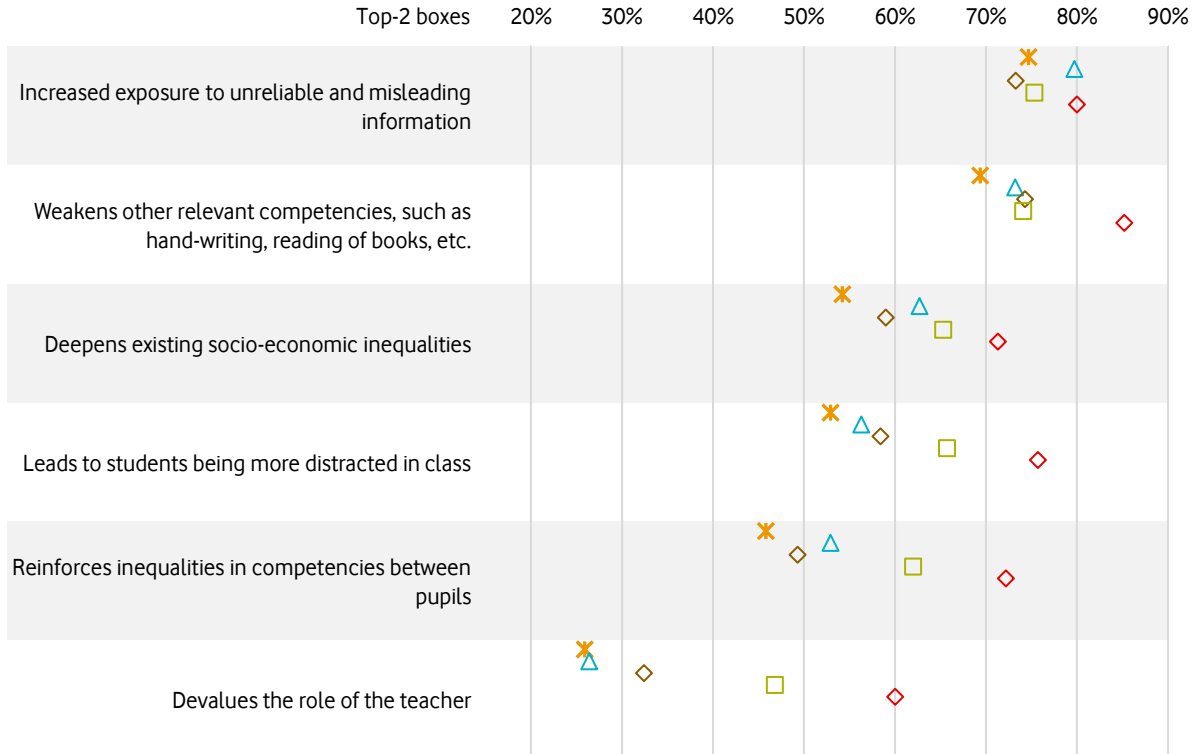
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 5: "To what extent do you agree with the following statements about the risks of using digital technology and media in teaching and learning?"; scale: 1= fully agree to 4= disagree



Skill level

Risks of using digital technology and media in teaching and learning



- > While teachers with **high** levels of **digital** teaching **skills** tend to **see lower risks** of digital technology than do those with lower digital skills, **differences** between teachers are **smaller** for the risk of **increased exposure to misinformation** and the **weakening** of other more **traditional skills**.
- > These two risks are seen as most severe regardless of teachers' digital skills. **These risks** thus seem to be **less** a sole **perceptual problem** derived by being unfamiliar with technology but **rather** are **real problems** that may be best addressed by **improving technology** to mitigate these risks.

✖ Leader △ Expert ◇ Explorer
□ Beginner ◇ Traditional

Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 5: "To what extent do you agree with the following statements about the risks of using digital technology and media in teaching and learning?"; scale: 1= fully agree to 4= disagree



Self-Assessment: Teacher competencies

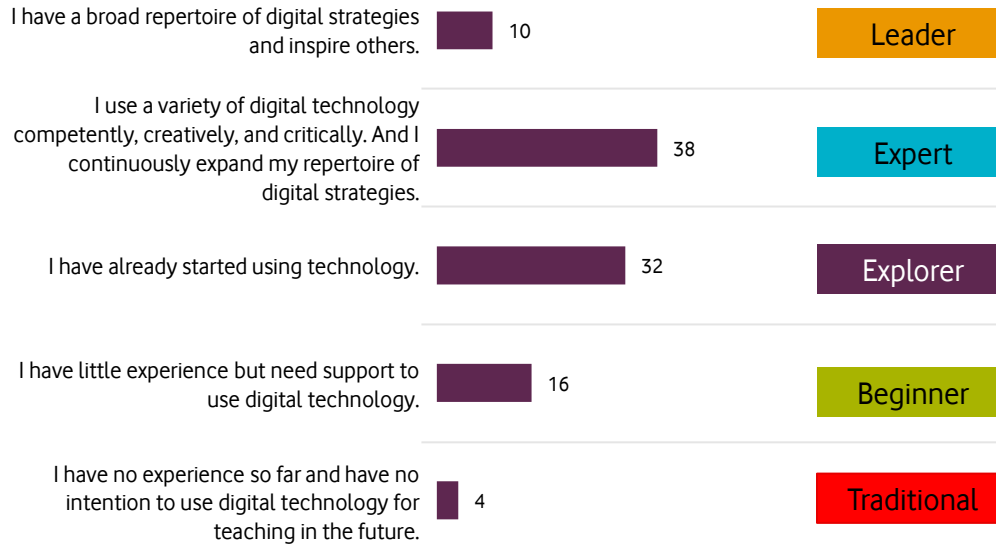
03



Overall

Use of digital technology in the classroom - which statements applies most to you? (digital skill level)

Percentage of respondents who selected the statement



- > Overall, **European teachers** report **plenty of experience with using digital technology in the classroom.**
- > The **most prevalent** digital skill type is the digital **expert**, who uses a variety of digital technology for teaching in a competent manner. **More than a third** of teachers consider themselves to be at this skill level. In addition, **10%** describe themselves as **leaders**, who are not only competent in digital teaching but also inspire others.
- > Nevertheless, there is **still work to do** in better preparing teachers for digital teaching. About **a third** of teachers across Europe has **just started gaining experiences** with digital teaching (i.e., the explorer). Moreover, **one in five** European teachers is a beginner or a traditionalist, i.e., **not competent** at all in digital technology.

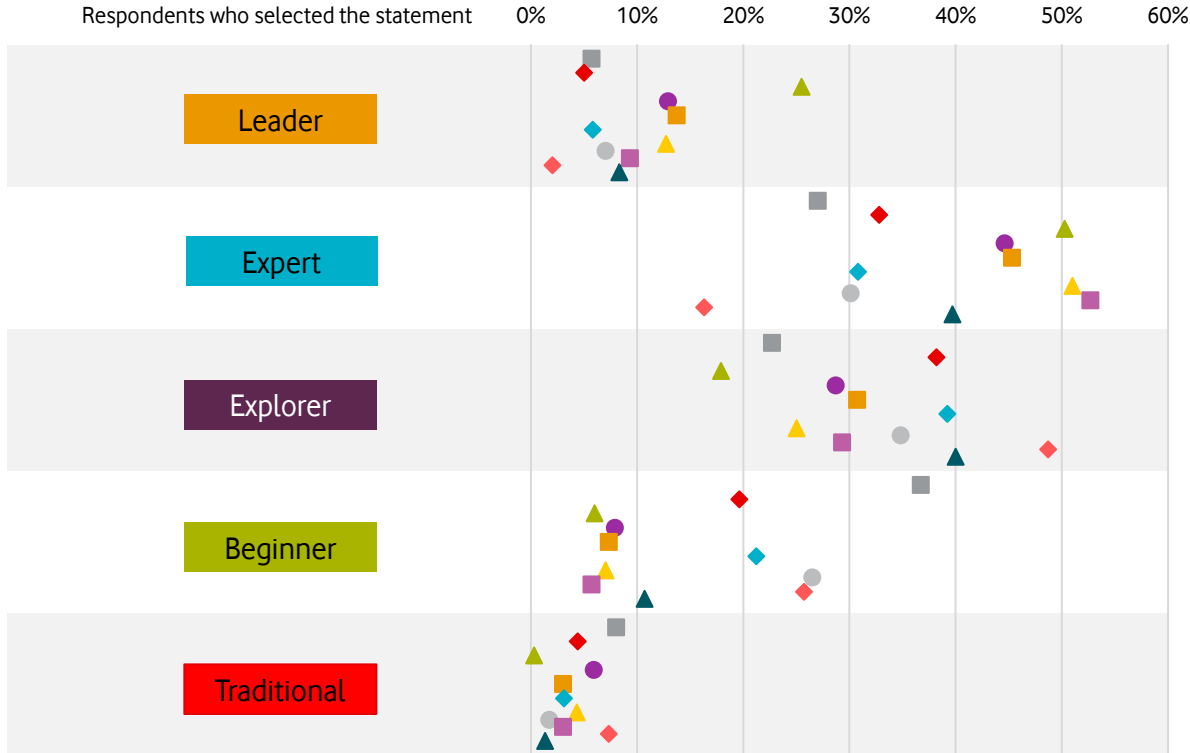
Base: All participants n=3082; shown: single punch answer

Question 6: "When using digital technology in the classroom – which of the following statements applies most to you?"



Countries

Use of digital technology in the classroom - which statements applies most to you? (digital skill level)

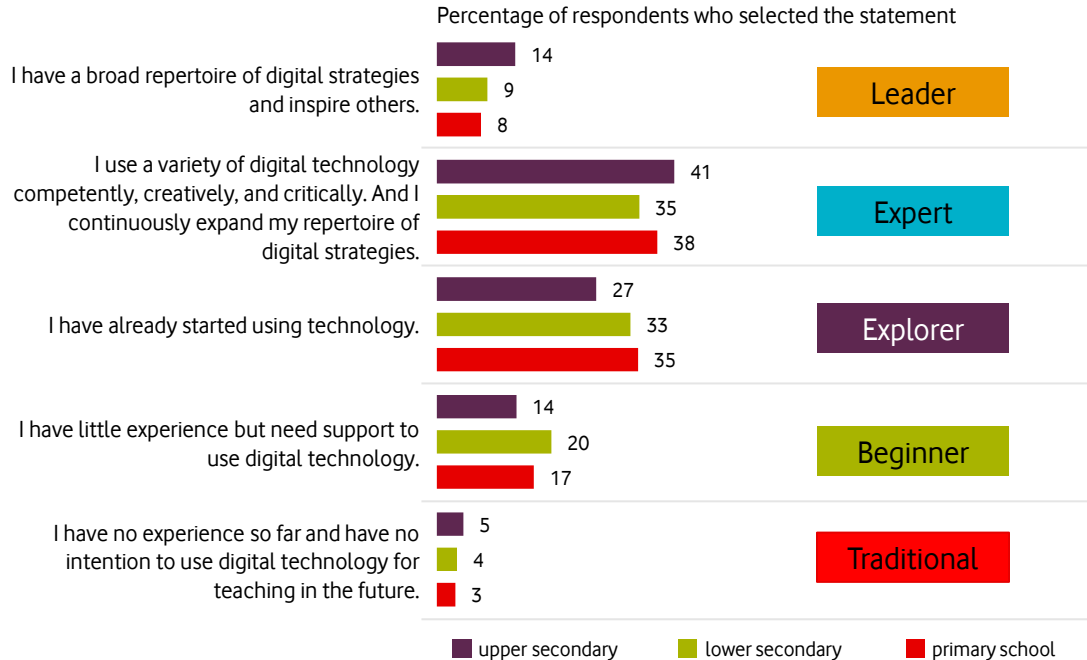


- > There are **remarkable disparities between European countries** when it comes to teachers' digital teaching skills.
- > **Leaders** and **experts** in digital teaching are **more prevalent in Hungary** and in the **Southern European countries** Greece, Portugal, Spain and Italy than they are in other countries of Mid or Eastern Europe.
- > Teachers from **Turkey** are more often located at **lower digital skill levels**, i.e., the explorer, the beginner or the traditionalist. However, **less skilled teachers** can also be found rather often in **Germany, Albania, Romania and the Netherlands**.



Education level

Use of digital technology in the classroom - which statements applies most to you? (digital skill level)



Base: All participants n=3082; shown: single punch answer

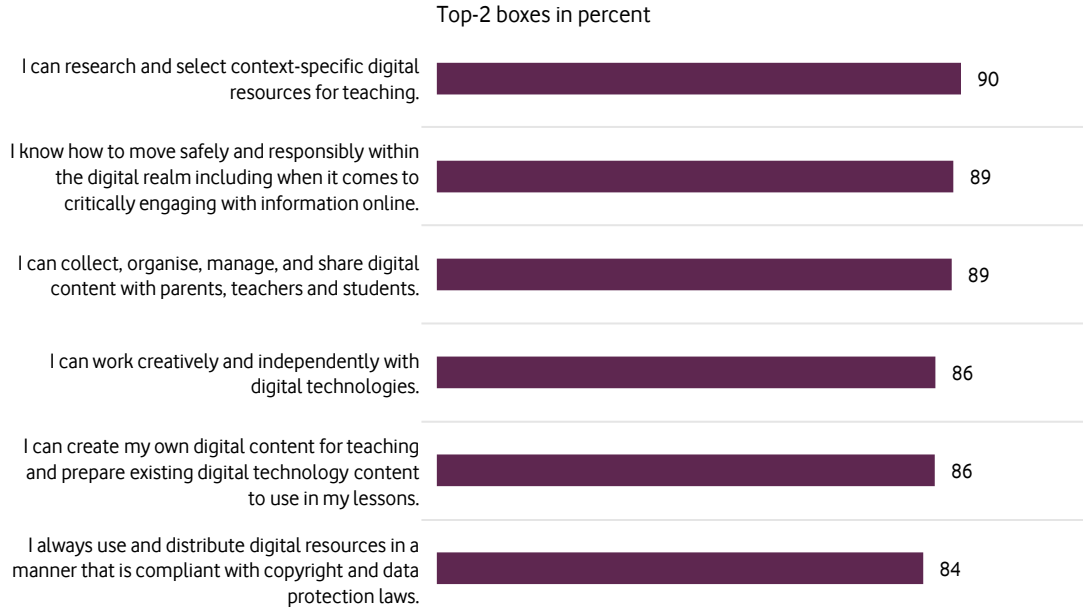
Question 6: "When using digital technology in the classroom – which of the following statements applies most to you?"

- > While considerable differences in digital teaching skills exists between countries, **variations are limited between** teachers working at different **education levels**.
- > However, teachers belonging to **upper secondary schools** tend to be **slightly more often digital leaders and experts** than are their peers at other education levels.
- > In addition, those who work in **lower secondary schools** have **slightly more often limited digital skills** of a beginner or a traditionalist than those working at primary schools.
- > Overall, these **findings suggest** that **teachers at all types of schools must be motivated to improve their digital teaching skills and experience** rather than focusing on a specific education level of schools.



Overall

Personal competencies



Base: All participants n=3082; calculated without don't know / prefer not to answer.

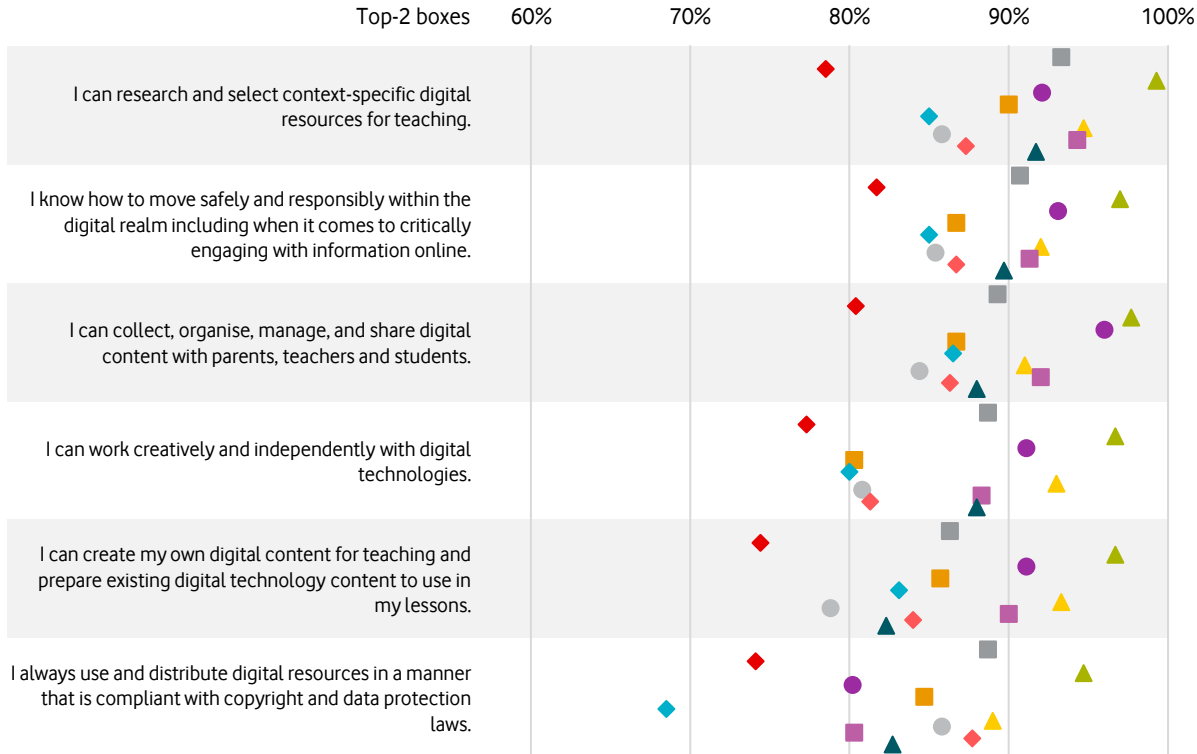
Question 7: "To what extent do you agree with the following statements about your competencies?"; scale: 1= fully agree to 4= disagree

- > When it comes to **specific digital competencies**, European teachers' **self-assessment** of these specific competencies is **very good** with **more than four in five** teachers across Europe reporting to have **good skills in all the aspects** asked.
- > **Researching and selecting context-specific digital resources** for teaching **ranks highest** among teachers in Europe with a share of 90% stating they are competent in this aspect.
- > **Well established** digital competencies among European teachers also are **knowing how to move safely within the digital realm** and the ability to **manage and share digital content** with parents, teachers and students.
- > With still 84%, the **lowest competence** is the **distribution** of digital resources that is **compliant with** copyright and data protection laws.



Countries

Personal competencies



- > Teachers from **different European countries differ substantially** in how they assess their specific digital competencies.
- > **More than 90%** of teachers in **Greece and Portugal** report to have **good abilities in all competencies**, which makes these countries leading the country table. In contrast, **Germany and the Netherlands are located at the lower end** of this table, with only about 80% of teachers report having the respective competencies.
- > These **results** thus **indicate** again the **need** for **country-specific training programs** for teachers.



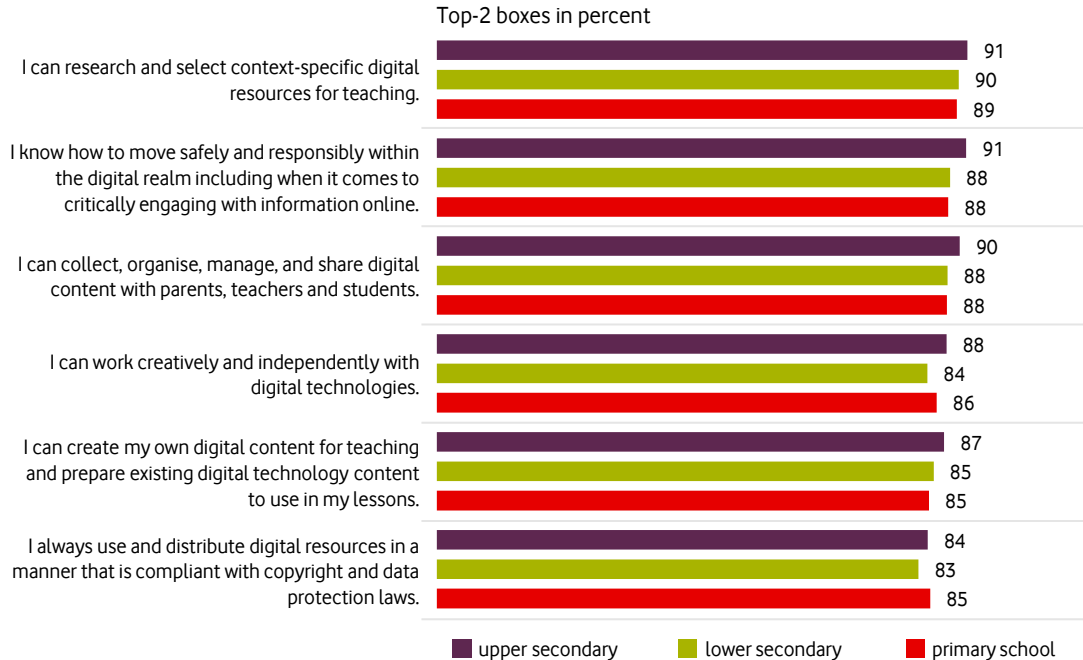
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 7: "To what extent do you agree with the following statements about your competencies?"; scale: 1= fully agree to 4= disagree



Education level

Personal competencies



Base: All participants n=3082; calculated without don't know / prefer not to answer.

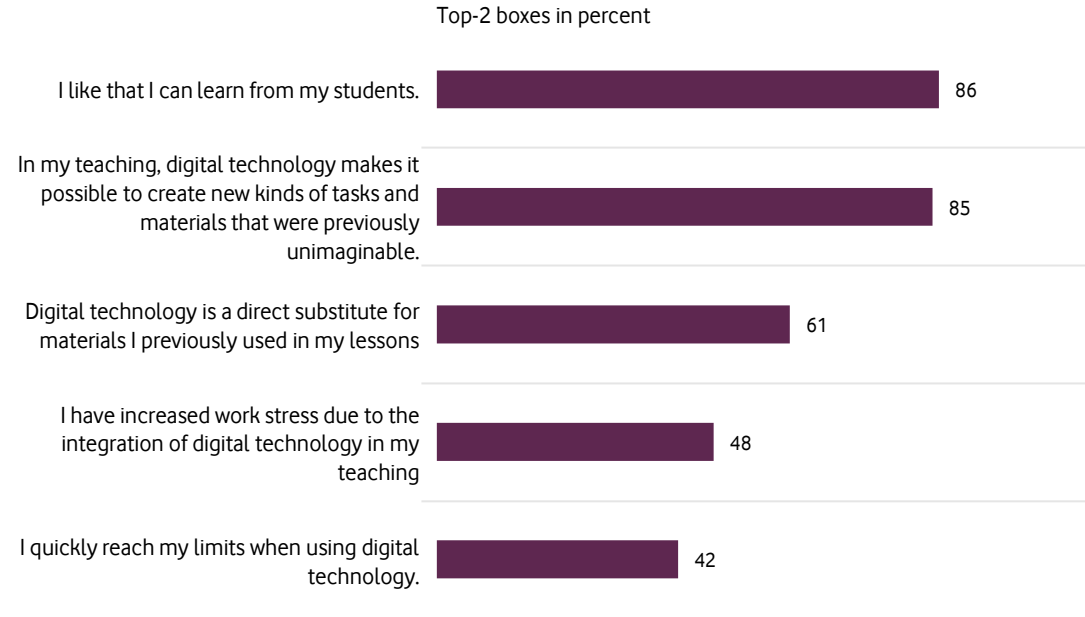
Question 7: "To what extent do you agree with the following statements about your competencies?"; scale: 1= fully agree to 4= disagree

- > For most personal digital competencies asked in the survey, **differences in teachers' self-assessment are very small between teachers working at different education levels.**
- > Teachers belonging to **upper secondary schools** tend to **assess themselves somewhat better than** do their **peers** working at schools at other education levels, but these **differences are often only marginally in size.**
- > Given that teachers at all education levels rank very good on these competencies, **future trainings may focus on other, more specific competencies** than those measured here.



Overall

Use of digital technology in the classroom



Base: All participants n=3082; calculated without don't know / prefer not to answer.

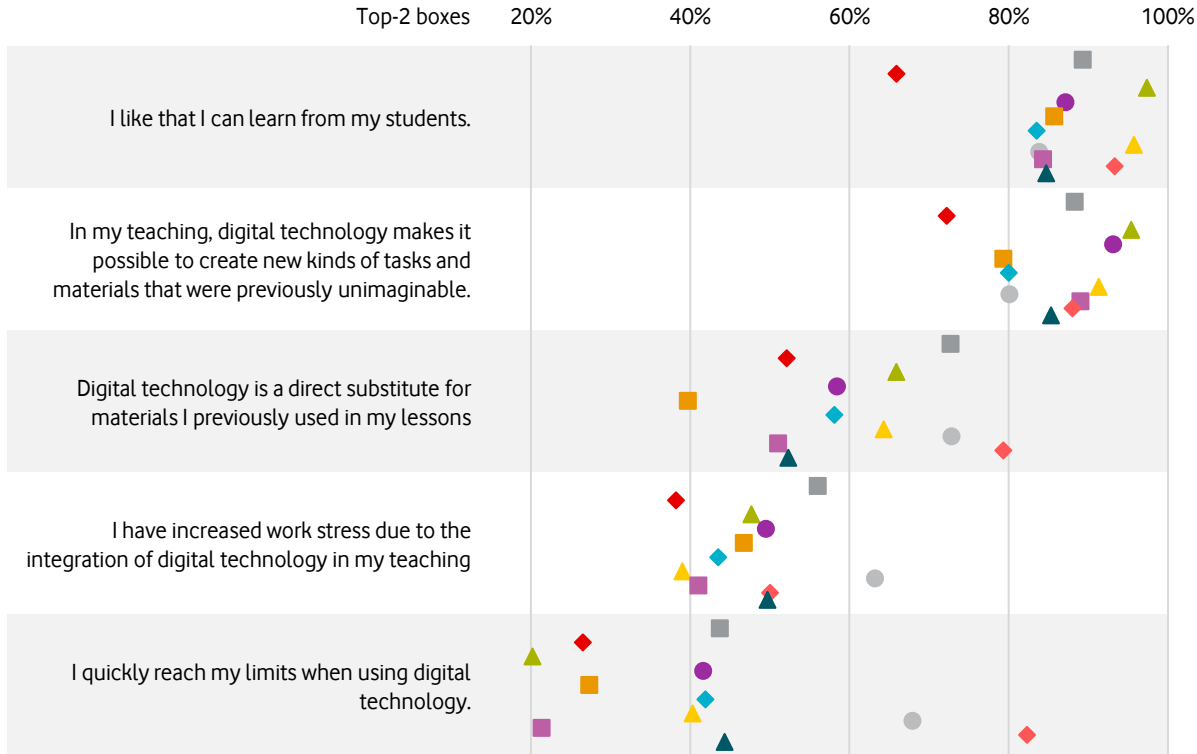
Question 8: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning in your classroom?"; scale: 1= fully agree to 4= disagree

- > **Most** European teachers **have a positive mindset towards** the use of **digital technology** in the classroom.
- > More than **four in five** teachers across Europe agree they **like to learn from** their **students** when using digital technology for teaching **and** that **digital technology makes it possible to create new** kinds of tasks and **materials** that were previously unimaginable.
- > In addition, only a **minority reports** that they feel **increased work stress** due to the integration of digital technology in their teaching and that they **quickly reach their limits** when using digital technology.
- > Although this is only stated by a minority, it is a **substantial minority** of more than two in five European teachers. Thus, it is important to **design technology and train teachers in ways that reduce additional stress.**



Countries

Use of digital technology in the classroom



- > **Except for Germany**, teachers in **all European countries** show a **positive attitude towards digital teaching** with 80% or more agreeing that they like to learn from their students and that digital technology enables the creation of new learning materials.
- > In addition, about **half of teachers** say they **experience** more **work stress** due to digital teaching with only **small differences between countries**.
- > However, **countries** are **divided** on how many **teachers** feel they **reach their digital limits**, which ranges between countries from about 20% to 80% of teachers of a country.



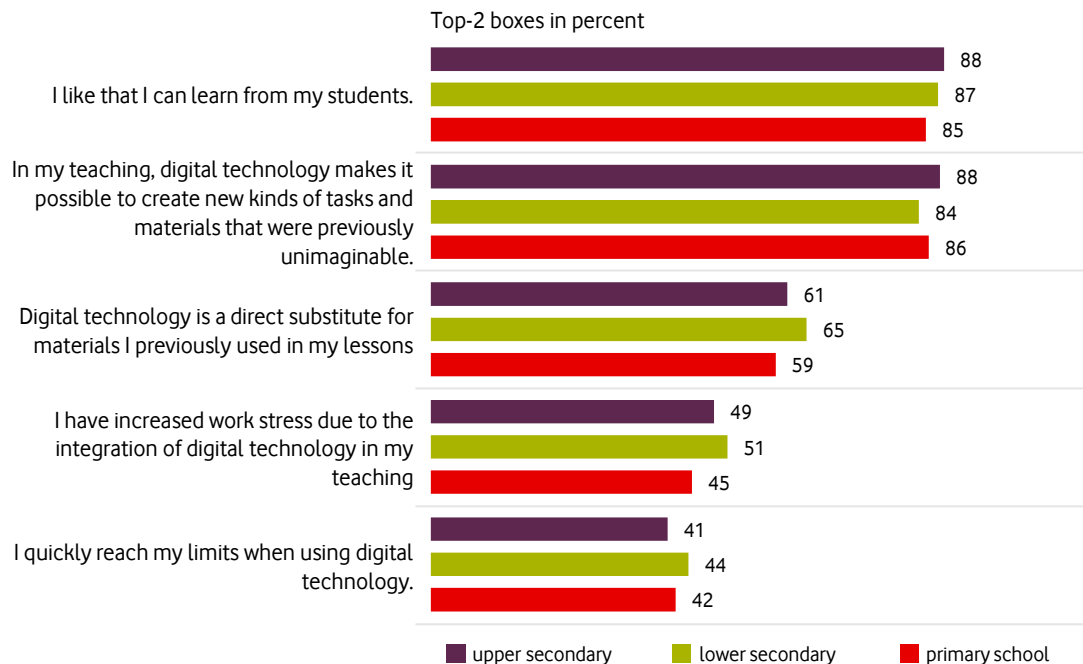
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 8: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning in your classroom?"; scale: 1= fully agree to 4= disagree



Education level

Use of digital technology in the classroom



Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 8: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning in your classroom?"; scale: 1= fully agree to 4= disagree

- > Again, **differences** in positive attitudes on and negative experiences with using digital technology in the classroom are **limited between** teachers working at different **education levels**.
- > **Regardless of** whether teachers work at primary, lower secondary or upper secondary **schools**, more than **four in five** agree they **like to learn from** their **students** and that **digital technology makes it possible to create new** kinds of tasks and **materials**.
- > However, teachers working at **primary schools** tend to report **slightly lower** levels of **stress** due to the integration of digital technology in their teaching than do their peers at lower secondary schools. The same can be said for how many teachers **reach their limits** when using digital technology in the classroom.



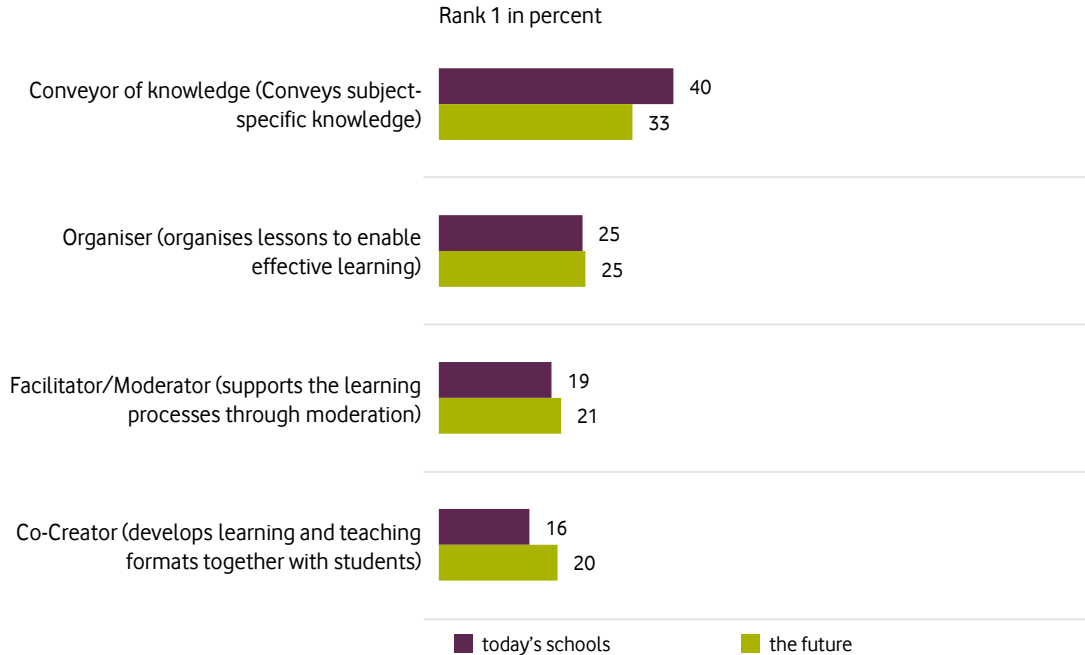
Role of the teacher & actions in the classroom

04



Overall

Please order the following roles of teachers regarding their current / future importance



Base: All participants n=3082; shown: single punch answer

Questions 9a and 9b: "Please order the following roles of teachers regarding their importance [to today's schools (a) / they might have in the future (b)] from 1 to 4, where 1 means "most important" and 4 means "least important".

- > European teachers do **not expect fundamental changes** in the **relevance** of certain **roles of teachers**.
- > The teacher's role as a **conveyor of knowledge** is most often ranked as the **most important role** for **now and** in the **future**, though its relevance is expected to decline slightly over time.
- > **Only 16%** of teachers in Europe believe the **role** as **co-creator** is most **important today**, and only a **few more** believe it will be very **important** in the **future** (20%).
- > However, **despite** some **differences** in the relevance of teacher roles, **no role will** fully **dominate** all other roles **in the future** but all roles are expected to be of importance.
- > That is, **teachers must be well prepared to perform all** these **roles** rather than focussing on one single role.

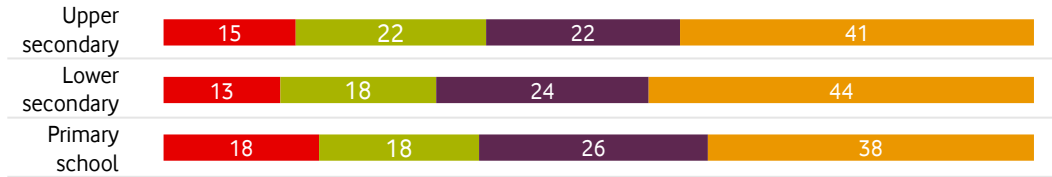


Education level

Please order the following roles of teachers regarding their current / future importance

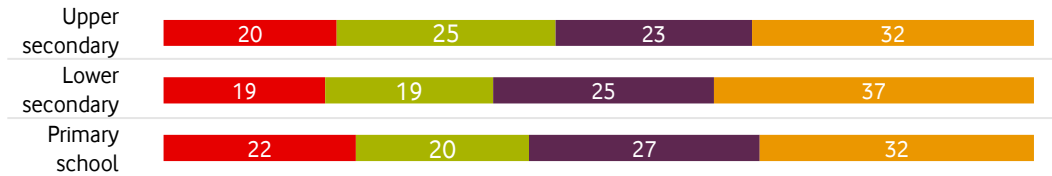
Roles of teachers regarding their importance to today's schools

Rank 1 in percent



Roles of teachers regarding their importance in the future

Rank 1 in percent



co-creator facilitator organiser conveyor

Base: All participants n=3082; shown: single punch answer.

Questions 9a and 9b: "Please order the following roles of teachers regarding their importance [to today's schools (a) / they might have in the future (b)] from 1 to 4, where 1 means "most important" and 4 means "least important".

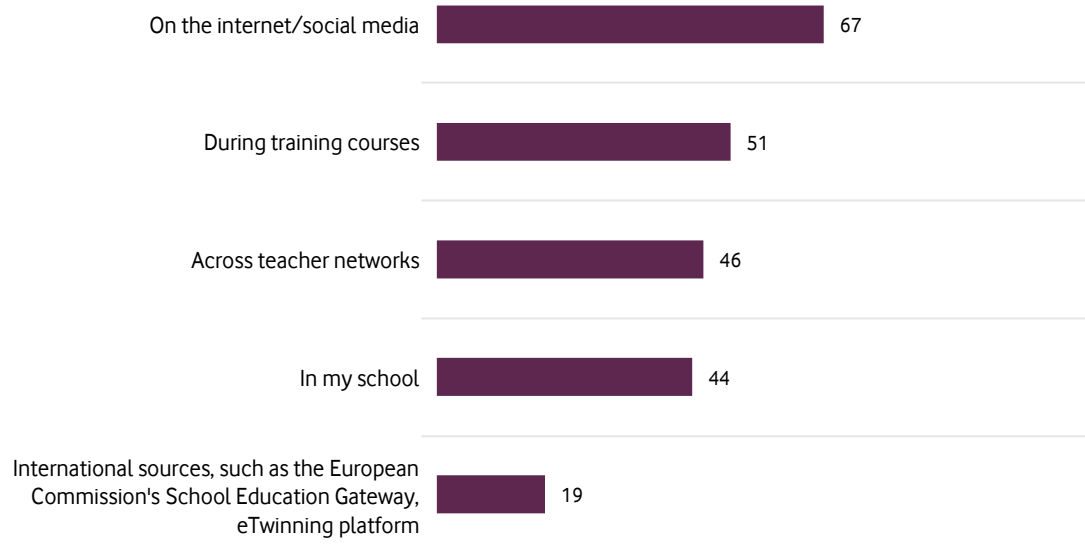
- > Teachers working at **different education levels do not differ strongly** in what they believe is the most relevant role of teachers today. **Across education levels**, the **conveyor** of knowledge is considered to be **most relevant**.
- > Likewise, **differences** in the **future relevance** of teaching roles are **limited between education levels**. The conveyor is still considered most important for the future, though **differences** in the relevance of certain **roles** are expected to **become smaller** in the **years to come**.
- > Results thus indicate that **all teacher roles will be relevant at all education levels**, which thus implies teachers must be well prepared to perform all teaching roles regardless of whether they work at primary, lower secondary or upper secondary schools.



Overall

Knowledge, ideas and inspiration for using digital technology in the classroom

Percentage of respondents who selected the option



Base: All participants n=3082

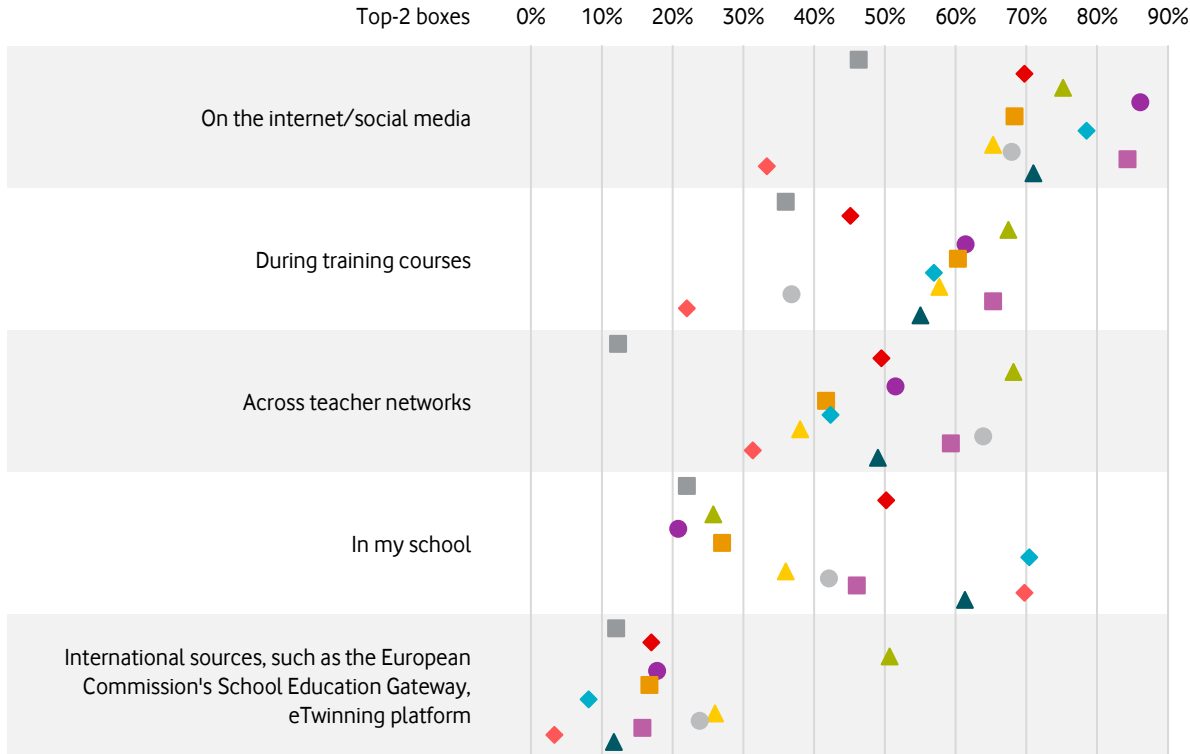
Question 9c: "Where do you look for knowledge, ideas, and inspiration for using digital technology in the classroom?"; multiple answers possible

- > European teachers' **most important information source** for inspiration on how to integrate digital technologies in their teaching is the **internet/social media**. About two thirds of teachers across Europe report to use this source for inspiration.
- > Likewise **relevant sources** are **training courses, teacher networks** and **teachers' schools, though on a lower level** than the internet with only about 50% of teachers relying on these sources.
- > In contrast, **international sources** such as those offered by the European Commission **play a minor role** for European teachers.
- > Overall, **teachers rely on a wide range of sources** to get inspiration on digital teaching, though the **absolute number** of teachers using the sources is **limited**. For instance, more than half of teachers do not receive inspirational content from their schools.



Countries

Knowledge, ideas and inspiration for using digital technology in the classroom

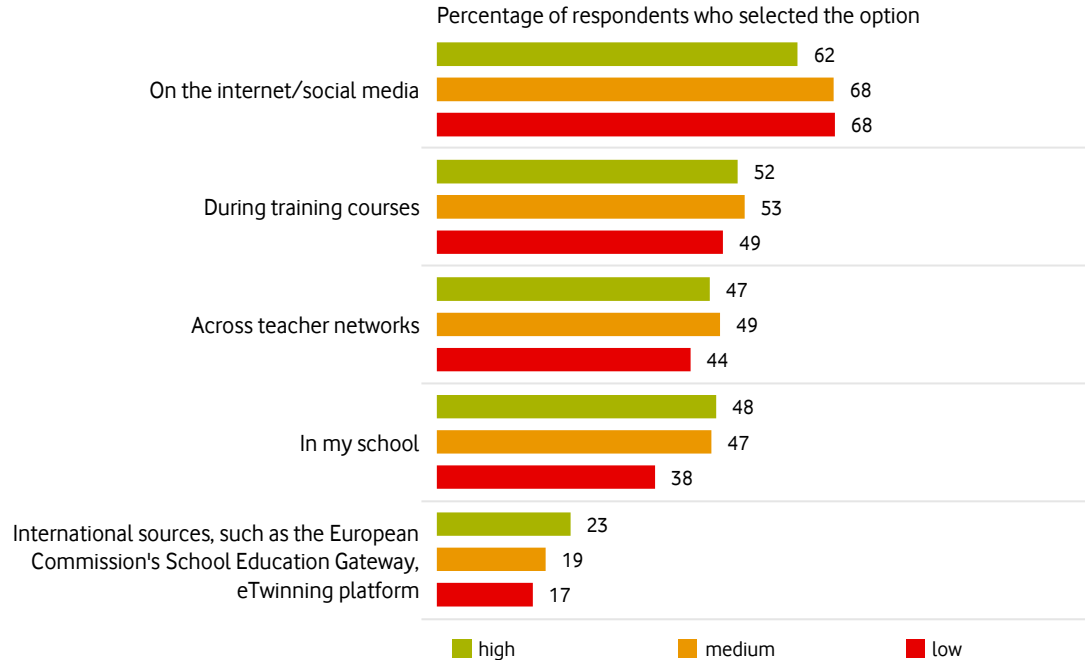


- > In **most countries**, the **internet/social media** is the **most important source**, though the absolute level is lower in Turkey and Albania.
- > **Receiving inspiration via training courses, teacher networks and schools differs remarkably between countries.** For instance, Turkish teachers have limited contact with training courses and teacher networks but are well reached by their schools.
- > **International sources** are of **minor importance** in **all countries**, except Greece. This country may be worth to be considered as a role model on how to foster the reach of this type of source in other countries.



Quality of IT infrastructure

Knowledge, ideas and inspiration for using digital technology in the classroom



Base: All participants n=3082

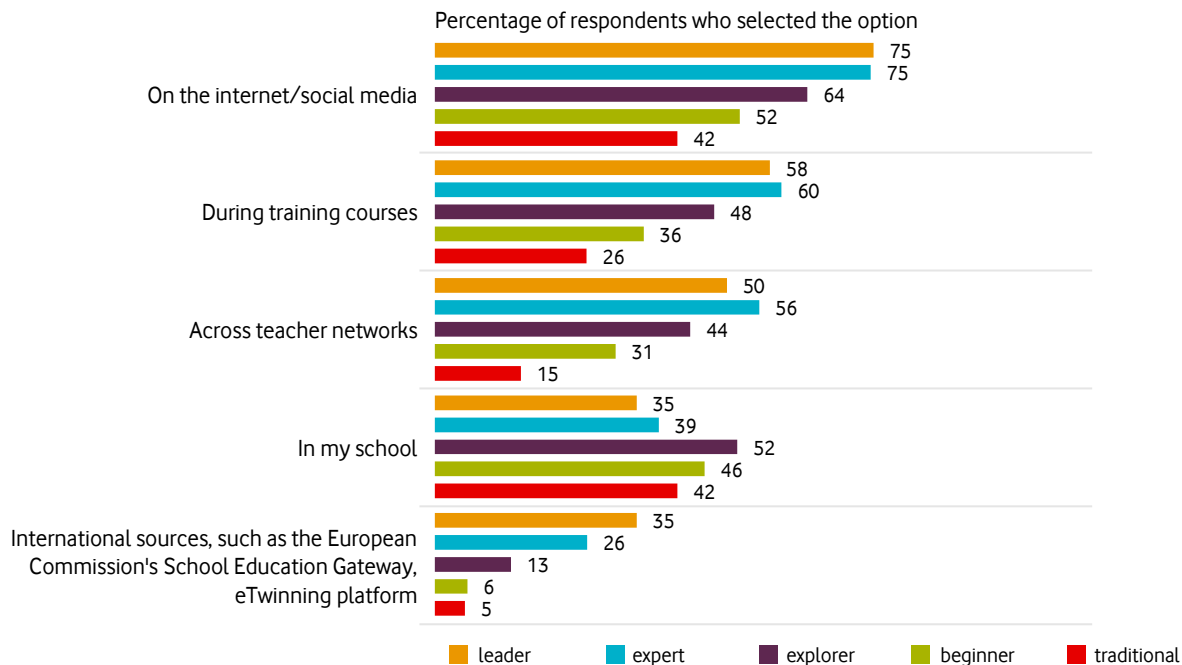
Question 9c: "Where do you look for knowledge, ideas, and inspiration for using digital technology in the classroom?"; multiple answers possible

- > Overall, **differences between** teachers working at schools with different **levels of IT infrastructure** quality are **small**.
- > Teachers working at schools with a **high-quality IT-infrastructure** **rely** slightly **less on the internet/social media** as a source for inspiration than do their peers working at schools with medium- or low-quality infrastructure.
- > Inspiration via **training courses** and via **teacher networks play the same role** for teachers regardless of the IT quality of their school.
- > While the **school** is a **relevant source** for teachers working at schools with **high- or medium-quality IT infrastructure**, substantially **less teachers** from schools with **poor IT quality receive inspiration** on digital teaching **via their schools**.



Teachers' digital skill level

Knowledge, ideas and inspiration for using digital technology in the classroom



Base: All participants n=3082

Question 9c: "Where do you look for knowledge, ideas, and inspiration for using digital technology in the classroom?"; multiple answers possible

- > Teachers with **good or excellent digital teaching skills** predominantly **rely on the internet/social media** to get inspired.
- > In addition, the **leader and the expert** are also **more likely to receive inspiration from all sources** than are their peers with low digital skills. An exception, however, is the school as a source of inspiration. The school is more relevant for the explorer than for any other type.
- > The **traditionalist** is not **well reached by any** of the **sources** when compared to peers with higher digital teaching skill levels. If at all, **schools** are able to **reach the lowest skilled teachers to some extent**. Given that this group of teachers needs most guidance to start integrating digital technology in the classroom, it may be worth to further **strengthen schools' ability to inspire these teachers**.



School Life, Peer-group collaboration and IT Equipment

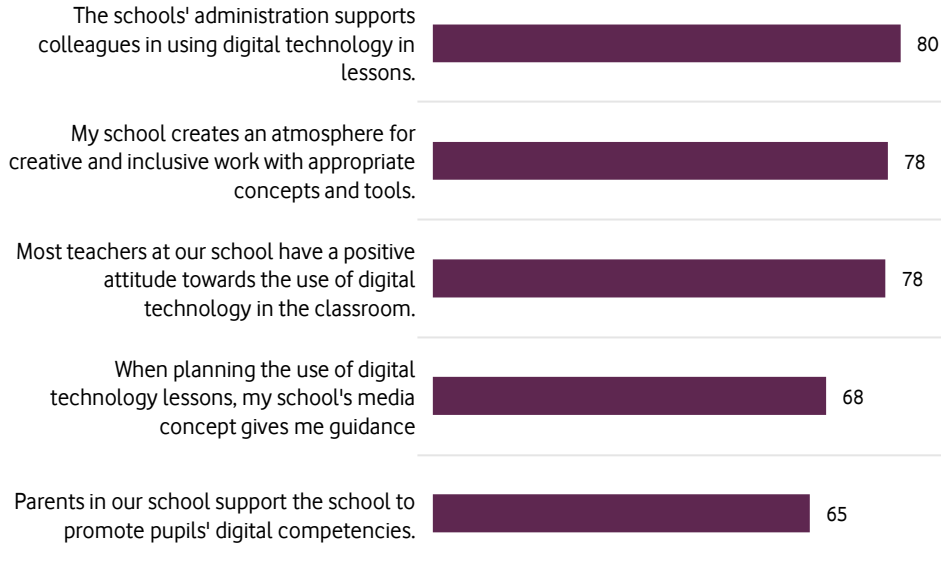
05



Overall

Use of digital technology in teaching and learning at your school

Top-2 boxes in percent



Base: All participants n=3082; calculated without don't know / prefer not to answer.

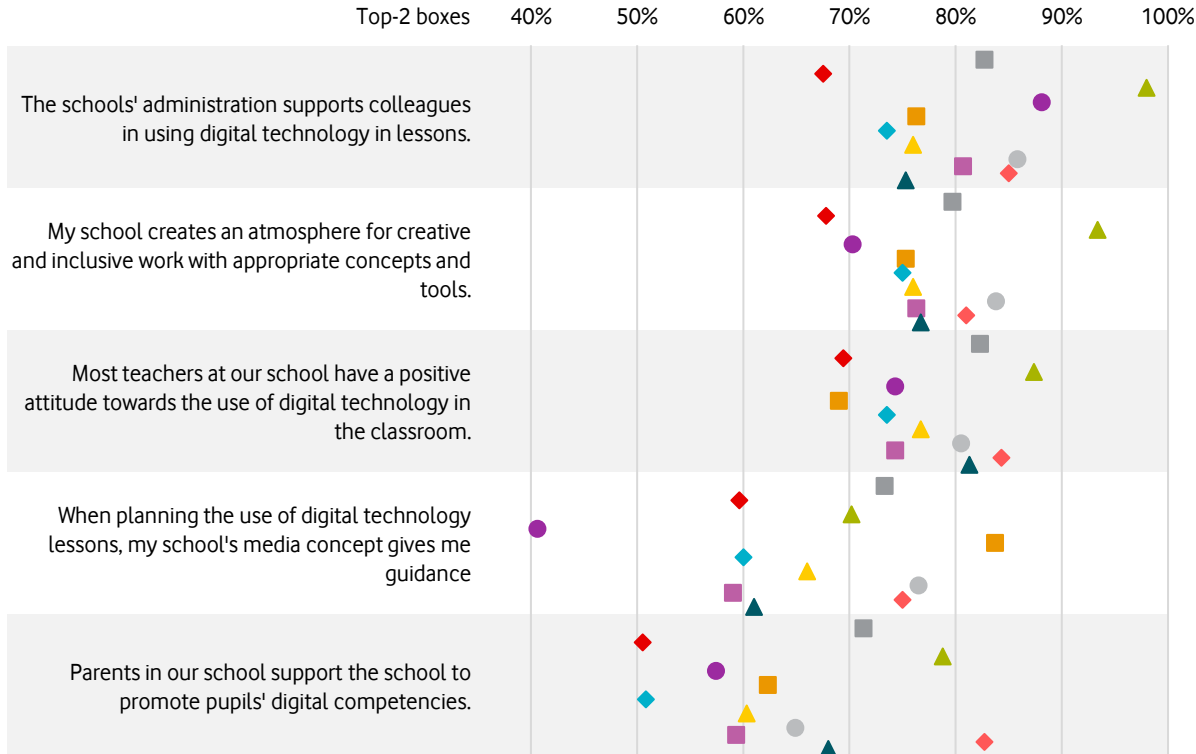
Question 10: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning at your school?"; scale: 1= fully agree to 4= disagree

- > **Four in five** European teachers **agree** that their **school's administration supports** the use of **digital technology** in the classroom.
- > **Nearly as many** say there **school creates a digitally-friendly working atmosphere** and that most of their **colleagues** in school **have a positive mindset** towards digital teaching.
- > However, **fewer teachers agree** that their **school's media concept** provides them with **sufficient** guidance, though it is still **two thirds of teachers** who do agree here.
- > In addition, **only two in three** teachers across Europe **report** that **parents** sufficiently **support** them in promoting pupil's **digital competencies**.
- > Overall, these **results suggest** that teachers' **working environment** is rather **supportive** of digital teaching **but more guidance** and **support** is needed from **schools** and **parents**.



Countries

Use of digital technology in teaching and learning at your school



- > About **90% of teachers from Greece report very good digital working conditions** such as a supportive administration, a digitally-friendly working atmosphere at their school and having many colleagues with a positive mindset towards digitalization. **Greece ranks highest on these aspects.**
- > In contrast, **Germany ranks lowest with less than 70% of teachers reporting good digital working conditions** at their schools.
- > However, **even bigger differences between countries** can be found on how teachers assess their **schools' media concept** and **parents' support in digitalization.**



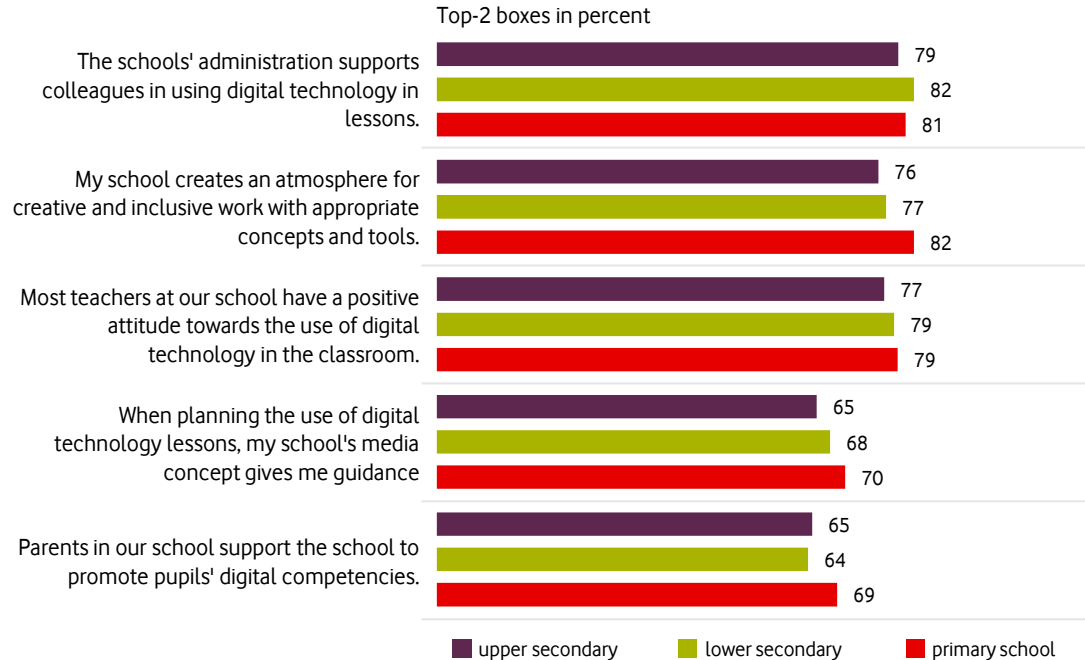
Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 10: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning at your school?"; scale: 1= fully agree to 4= disagree



Education level

Use of digital technology in teaching and learning in your classroom



Base: All participants n=3082; calculated without don't know / prefer not to answer.

Question 10: "To what extent do you agree with the following statements about the use of digital technology in teaching and learning at your school?"; scale: 1=fully agree to 4=disagree

- > In contrast, **variations** in how far the school is a good place for digital teaching are very **limited between** teachers working at different **education levels**.
- > Teachers working at **upper secondary** schools tend to assess their schools **somewhat worse** than do those working at other education levels, while teachers belonging to **primary schools** give **slightly better** marks to their schools than do their peers at other education levels.
- > Overall, these results indicate that the **friendliness towards digital teaching** does **not depend** much **on the education level**. This implies that **policies** aiming to improve the digital working conditions at schools **should focus on all education levels**, particularly in countries with poor ratings.



Overall

Various aspects of the IT infrastructure at your school

How would you rate the various aspects of the IT infrastructure at your school?



Base: All participants n=3082; shown: single punch answer.

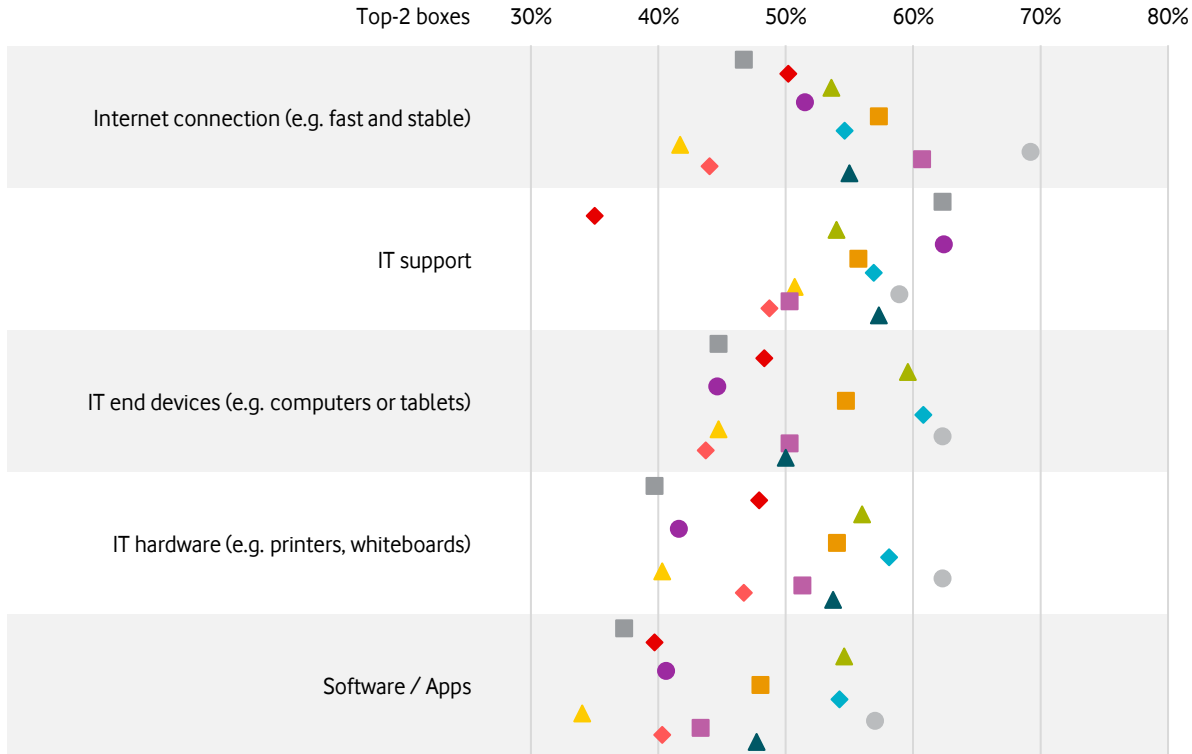
Question 11: "How would you rate the various aspects of the IT infrastructure at your school?"

- > The **quality** of the **IT infrastructure** of European schools is **mediocre**.
- > Across the different aspects of IT infrastructure, **only about half** of teachers in Europe report their **school does excellent or well** in these aspects, while about the **other half** says these aspects are only **average or poor** at their school.
- > Schools' **internet connection** and **IT support** are **slightly better** rated than the **software and apps** the schools are providing, though the **differences** are rather **small**.
- > Overall, these results show that about **half of European schools need significant improvements** in the quality of their IT infrastructure. Moreover, these improvements are needed **across all aspects of IT infrastructure**, from basic requirements such as a fast and stable internet connection to well-designed software and apps.



Countries

IT infrastructure at your school



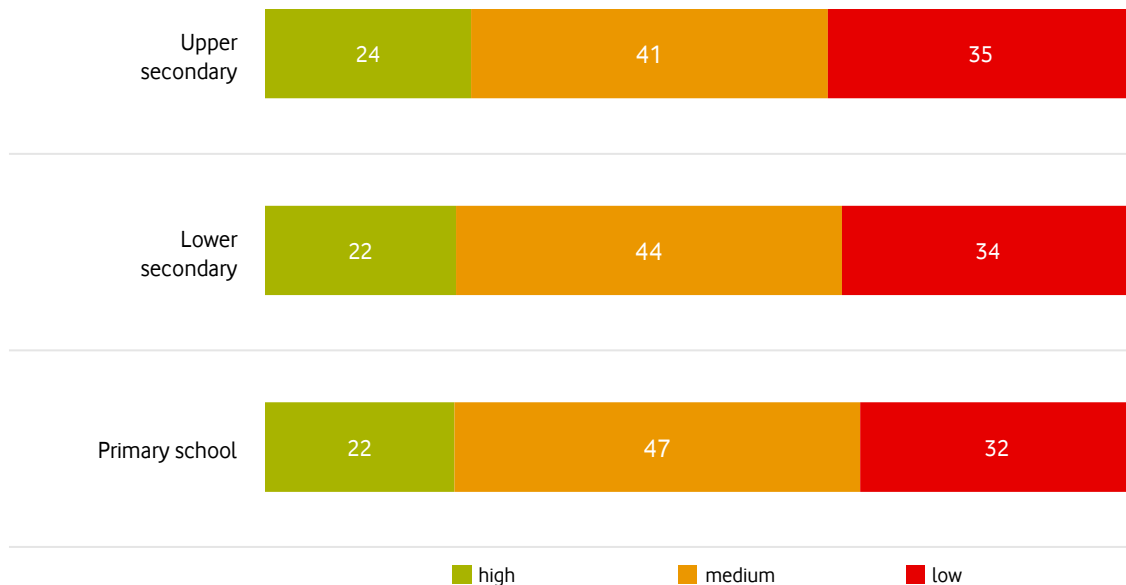
- > **Countries differ substantially** in terms of the quality of **schools' IT infrastructure**.
- > **Romania outperforms all other European countries** on nearly all aspects, though only about two thirds of Romanian schools have good IT infrastructure in absolute terms.
- > **Albanian, Portuguese, Hungarian and Turkish schools** receive the **poorest ratings**.
- > The **IT support** at **German schools** is rated remarkably **worse** than in all other countries.
- > Only about a **third of teachers in Portugal rate** the **quality** of their school's IT infrastructure as being **good or excellent**.



Education level

IT infrastructure at your school

Quality of IT infrastructure



Base: All participants n=3082

Variable "Quality of IT infrastructure" was calculated with Q11. For further explanations see "Methodological Remarks".

- > While countries differ substantially in the quality of their schools' IT infrastructure, **differences are small between the education levels** of schools. **Across education levels, school's IT** is most often rated as being **mediocre**.
- > Moreover, about a **third of teachers across education levels** say that the quality of their school's **IT infrastructure is poor**.
- > **Regardless of the education level**, only about a **quarter of schools** possess a **high-quality** IT infrastructure.
- > Thus, these results imply that **improving the IT infrastructure** of European schools is a **holistic task that must be solved** to about the same extent **at primary schools, lower secondary schools and upper secondary schools**.



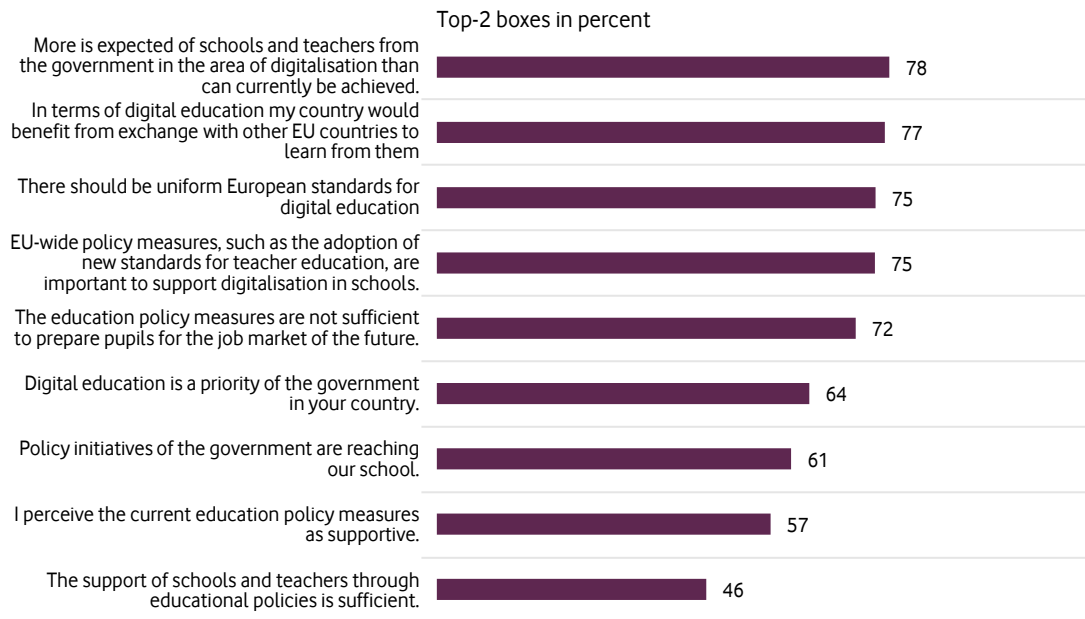
Education policy measures

06



Overall

Teachers' attitudes on education policy measures



Base: All participants n=3082; calculated without don't know / prefer not to answer.

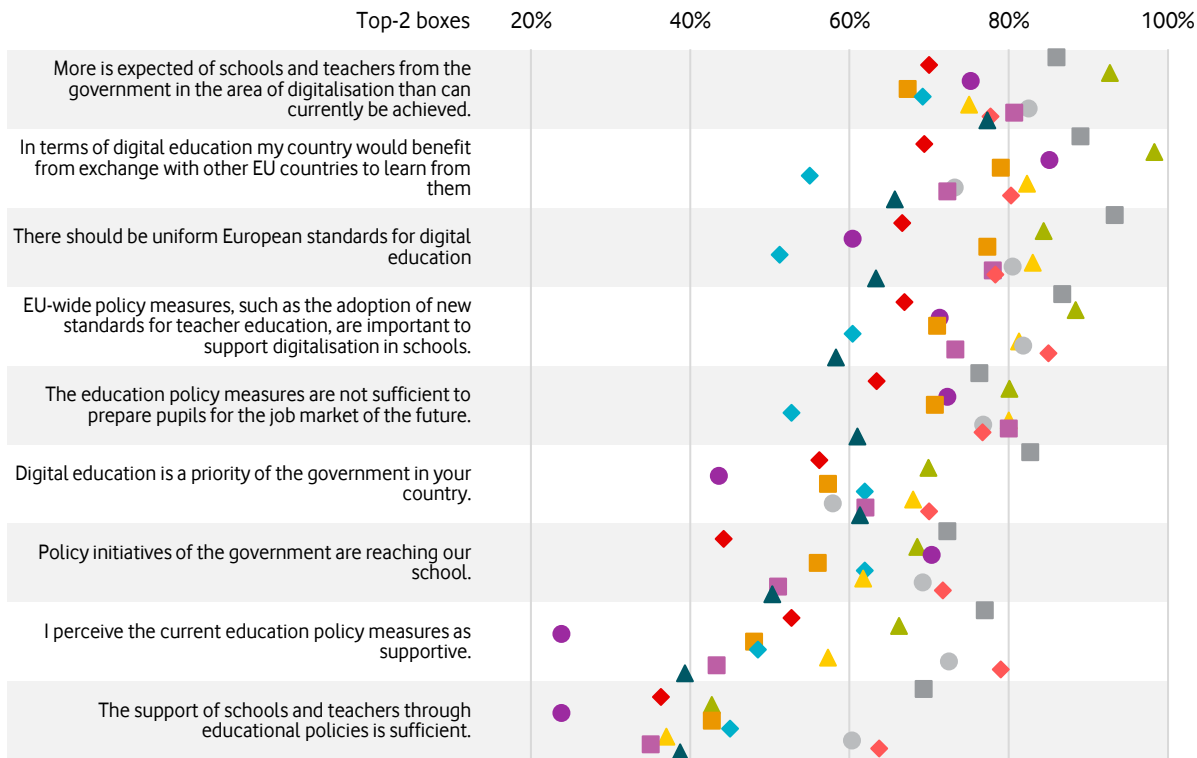
Question 12: "To what extent do you agree to the following statements?"; scale: 1= fully agree to 4= disagree

- > Nearly **four in five** European teachers **complain** that **government expectations towards digital teaching** are higher than what can be realistically achieved.
- > In addition, **three quarters** of teachers across Europe show **positive attitudes towards European-wide policies**, standards and exchange on digital education.
- > At the same time, **teachers miss guidance from national governments' education policies**. Only about three in five teachers agree that digital education is a priority of their government, policy initiatives reach schools, and the policies are supportive.
- > With **only 46%**, even less European teachers **say education policies are sufficient**.
- > Overall, these findings show that **significant improvements in education policy measures are needed**.



Countries

Teachers' attitudes on education policy measures

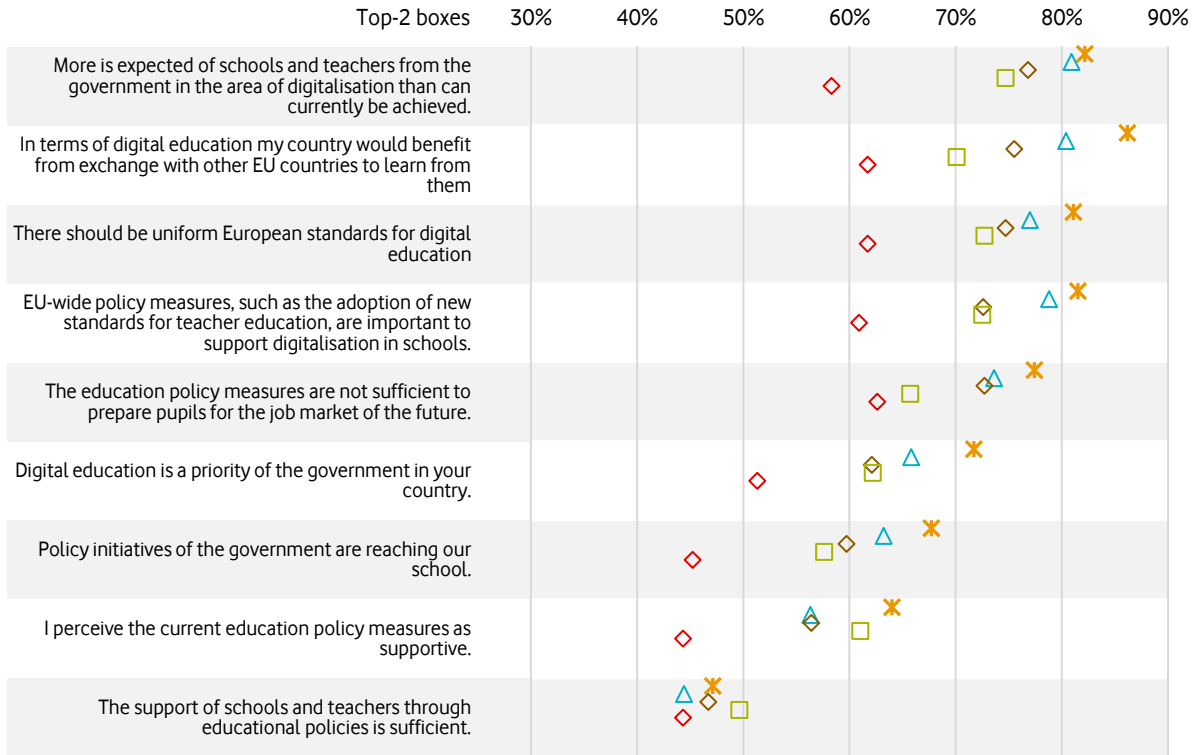


- > While **attitudes on education policy measures differ remarkably between countries**, variations are relatively **small** on the feeling that **government expectation** towards digital teaching are **too high**, which is the dominant view in all countries.
- > **Dutch teachers** are **less supportive of EU-wide standards and policies** than are their peers in other European countries.
- > The **biggest differences** between countries relates to the question of whether **policies are supportive and sufficient**. While **more than 60%** of teachers in **Albania** and **Turkey** agree, it is **just above 20% in Hungary**.



Skill level

Teachers' attitudes on education policy measures



- > There is a **clear relationship between** teachers' **attitudes** on education policy measures **and** their **digital skill levels**.
- > Teachers with **higher skill levels** have **more positive attitudes** towards education policies than do those with low skill levels.
- > That is, **perceptions** of education policies **depend** not only on the substance of these measures but **also on teachers'** experiences with and **expertise in digital teaching**.
- > However, **digital leaders and experts** are **more concerned about government expectations** being too high.

✖ Leader △ Expert ◇ Explorer
□ Beginner ◇ Traditional



Teacher Training & Support

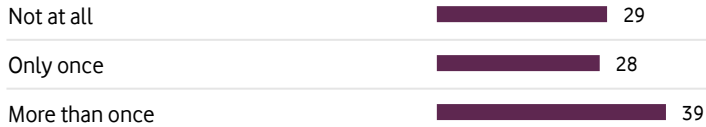
07



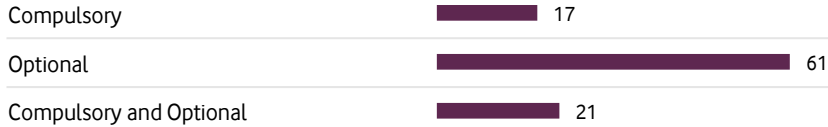
Overall

Official training on the use of digital technology

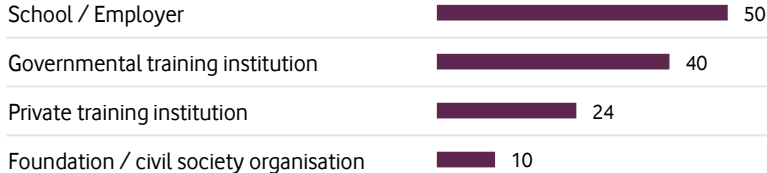
Official training or further education focussing on the use of digital technology and media in teaching in the last two years



Was this training compulsory or optional?



Who offered the(se) training(s)?



Base: All participants n=3082

Questions 13-15

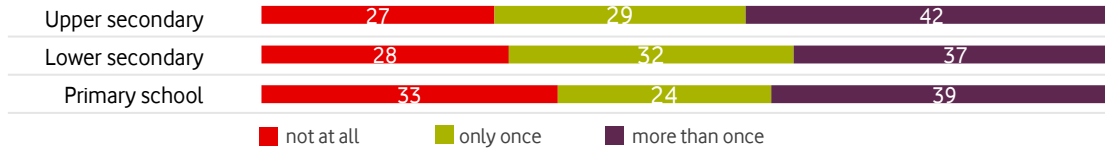
- > More than **two thirds** of European teachers have **attended official trainings** on the use of digital technology in the classroom.
- > Moreover, **teachers who attend** official trainings are more likely to **do so repeatedly** rather than just once.
- > The vast majority of trainings attended by European teachers are optional rather than compulsory.
- > **Most courses** are **organized by schools** or **governmental training** institutions, while **private training** institutions and **foundations** play a **minor role**.
- > Given these results, **trainings** on digital education are **well institutionalized** across Europe, but **to reach** the third of **teachers who did not participate** yet, it may be **beneficial to make more courses compulsory** rather than optional.



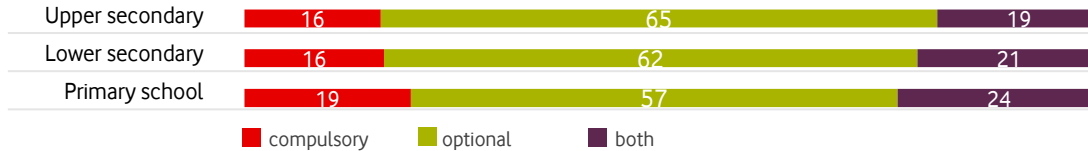
Education level

Official training on the use of digital technology

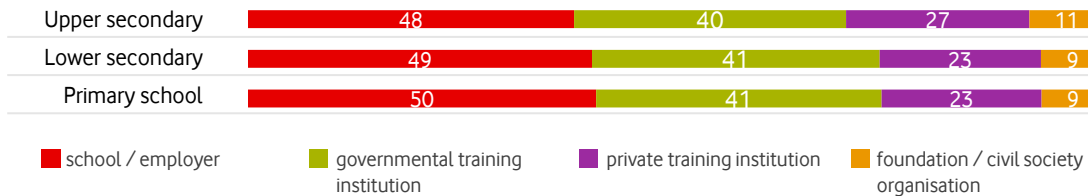
Official training or further education focussing on the use of digital technology and media in teaching in the last two years



Was this training compulsory or optional?



Who offered the(se) training(s)?



Base: All participants n=3082

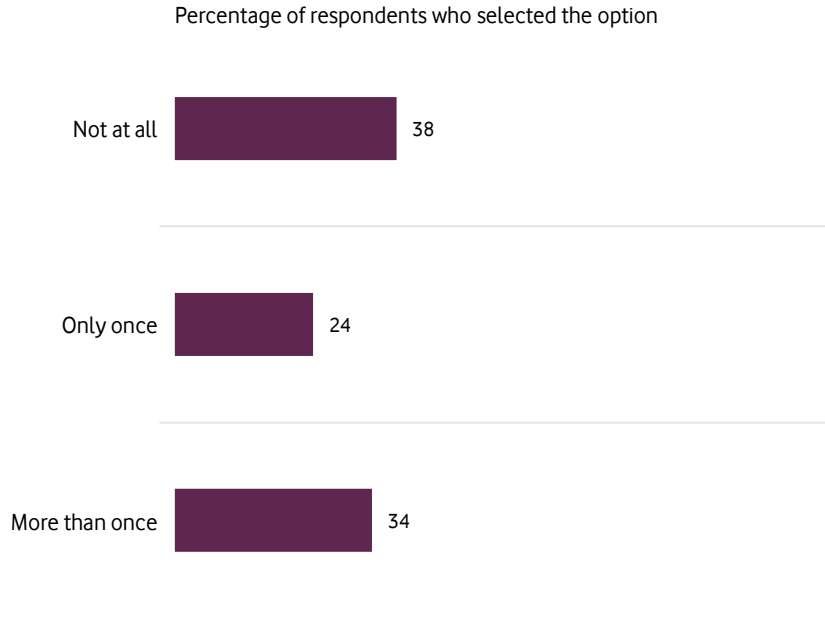
Questions 13-15

- > **Variations** in experiences with official trainings on digital teaching are **limited between** teachers working at different **education levels**.
- > However, teachers belonging to **upper secondary schools** are **slightly more active** in trainings **than** are their peers from **primary schools**.
- > In addition, teachers working at **primary schools** attend slightly **more often compulsory trainings** than do those at upper secondary schools.
- > **Schools** and **governmental institutions** are the **most important organizers** of trainings **regardless of education level**.
- > Overall, these results indicate that **compulsory official trainings should be organized more often** at all education levels, but **particularly at primary schools**.



Overall

Informal professionalisation measures and learning opportunities for the use of digital technology



Base: All participants n=3082; shown: single punch answer.

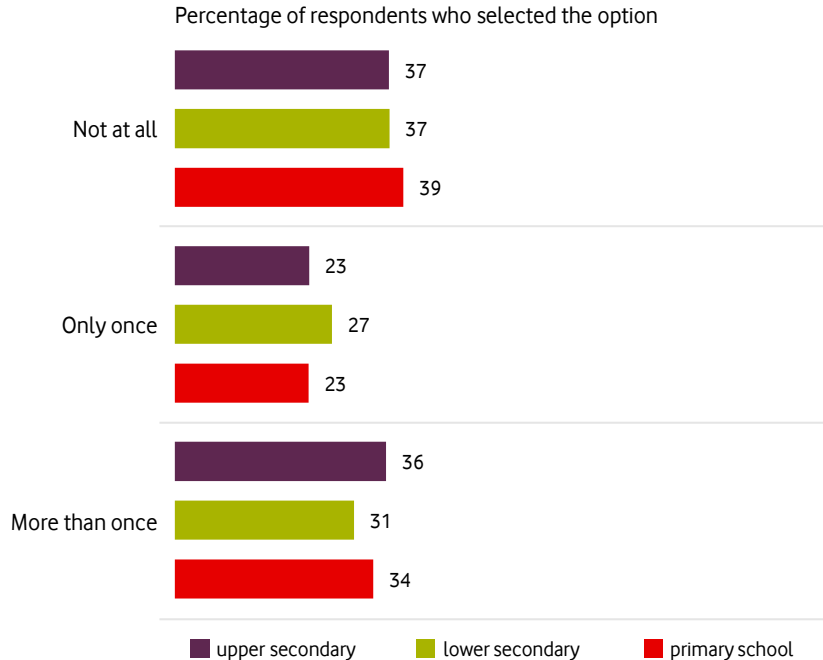
Question 16: "In the last two years, have you participated in informal professionalisation measures and learning opportunities that have focused on the use of digital technology in teaching (e.g. via social media, webinars)?"

- > When it comes to **informal professionalization measures** for digital teaching, **more than a third** of European teachers have **never taken advantage** of such opportunities.
- > However, the **majority** of teachers in Europe has **attended informal trainings** on the use of digital technologies in the classroom.
- > About **a quarter** of teachers **participated at least once** in such trainings.
- > **More than a third** took advantage of informal professionalization measures **more than once**.
- > That is, **informal trainings** are **somewhat less popular than formal trainings**, but they still are a **relevant source** for teachers to improve their digital teaching skills. Thus, it may be beneficial to further increase teachers' access to informal trainings.



Education Level

Informal professionalisation measures and learning opportunities for the use of digital technology



Base: All participants n=3082; shown: single punch answer

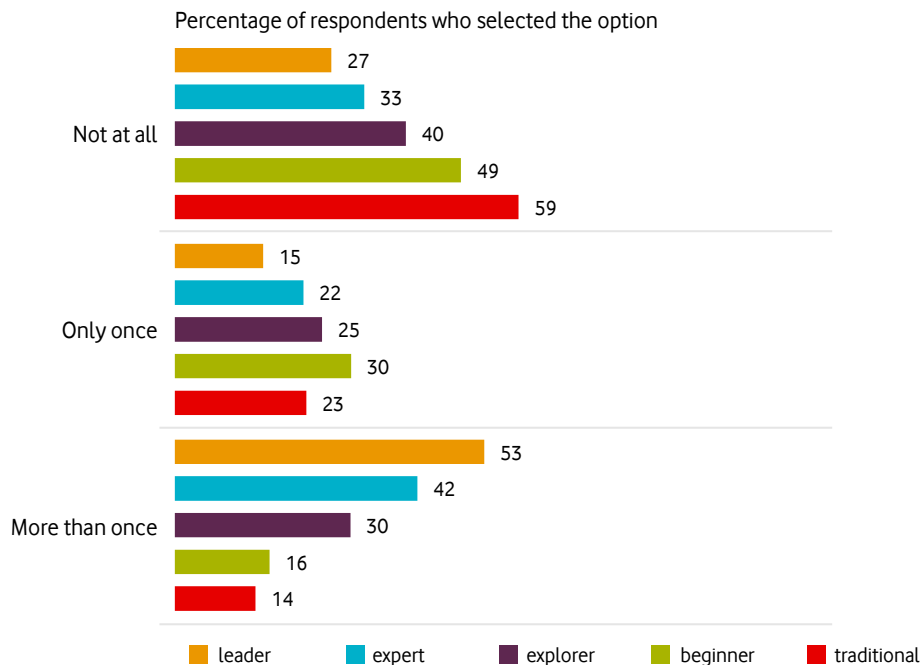
Question 16: "In the last two years, have you participated in informal professionalisation measures and learning opportunities that have focused on the use of digital technology in teaching (e.g. via social media, webinars)?"

- > As for formal trainings, **differences between** teachers working at different **education levels** are **small** in attending informal trainings.
- > Teachers working at **primary schools** are somewhat **less likely to take advantage** of informal professionalization measures than are their peers belonging to schools at other education levels.
- > Teachers from **upper secondary schools** **attend slightly more often informal trainings repeatedly** than do teachers from lower secondary schools, while the latter are more likely to attend only once.
- > **Overall**, however, the **rather small differences** between teachers working at different schools **suggest** that **improving** teachers' access to **informal professionalization measures** should take place **at all education levels**.



Teachers' digital skill level

Informal professionalisation measures and learning opportunities for the use of digital technology



Base: All participants n=3082; shown: single punch answer.

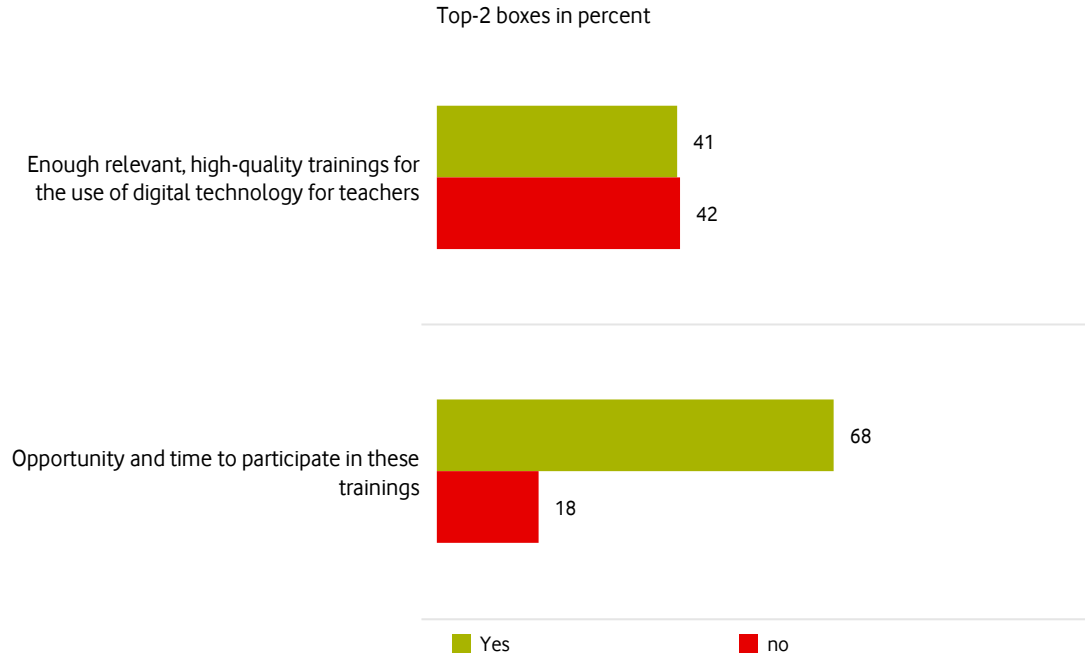
Question 16: "In the last two years, have you participated in informal professionalisation measures and learning opportunities that have focused on the use of digital technology in teaching (e.g. via social media, webinars)?"

- > While teachers' school's education level is rather irrelevant for explaining differences in **taking advantage of informal professionalization measures** for digital teaching, **remarkable differences** exist **depending on teachers' digital teaching skills**.
- > **Teachers with strong digital teaching skills** such as the leader and the expert are much **more likely to attend informal trainings repeatedly** than are teachers with low digital skills such as the beginner and traditionalist.
- > In contrast, the **majority of beginners and traditionalists** have **never participated** in informal professionalization measures.
- > Thus, **informal trainings** mainly **reach those who possess** already **good** digital teaching **skills**, while they **fail to attract** those **who would profit the most** from such trainings.



Overall

Participation in Trainings



Base: All participants n=3082; shown: single punch answers

Questions 17 and 17a: "In your opinion, do enough relevant, high-quality trainings for the use of digital technology for teachers like you exist? (a) Would you have the opportunity and the time to participate in these trainings?"

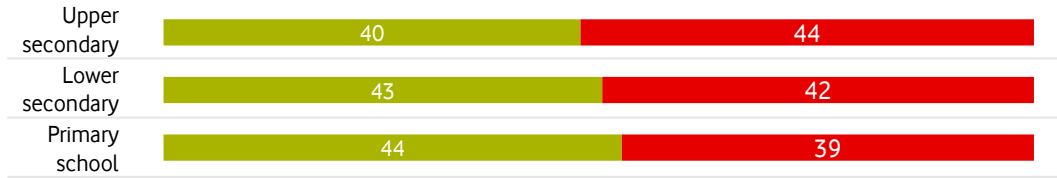
- > **European teachers** are **divided on** whether enough relevant, **high-quality trainings** for the use of digital technology exist for teachers.
- > While **41%** of teachers in Europe **agree**, **42% disagree**.
- > However, the **vast majority** of teachers states they **would have the opportunity and time to participate** in these trainings.
- > More than **two thirds agree**, while only **18% disagree** on that point.
- > That is, **receiving high-quality trainings** on digital teaching is less a matter of teachers' time budget but rather a **question of whether such trainings are offered** to them.
- > Moreover, these results suggest that **more well-designed trainings are unlikely to overburden** European teachers.



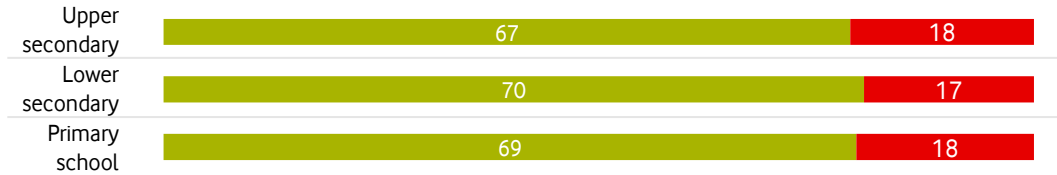
Education level

Participation in Trainings

In your opinion, do enough relevant, high-quality trainings for the use of digital technology for teachers like you exist?



Would you have the opportunity and the time to participate in these trainings?



■ yes

■ no

Base: All participants n=3082; shown: single punch answers. Shown without don't know / prefer not to answer.

Questions 17 and 17a: "In your opinion, do enough relevant, high-quality trainings for the use of digital technology for teachers like you exist? (a) Would you have the opportunity and the time to participate in these trainings?"

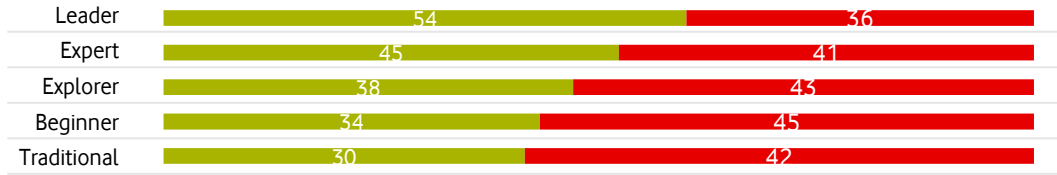
- > **Differences** in teachers' attitudes on trainings for digital teaching are **limited between** teachers working at different **education levels**.
- > **Across education levels, teachers are divided on whether enough** relevant, high-quality **trainings** for the use of digital technology **exist**. However, teachers belonging to **primary schools agree slightly more often** than do their peers from upper secondary schools.
- > Likewise, about **two thirds** report they **would have the opportunity and time to participate** in these trainings **regardless of** whether they work at **primary school, lower secondary or upper secondary** school.
- > That is, **more** well-designed **trainings** on digital teaching **should be offered to all education levels**, because they all have the same need and time for such trainings.



Teachers' digital skill level

Participation in Trainings

In your opinion, do enough relevant, high-quality trainings for the use of digital technology for teachers like you exist?



Would you have the opportunity and the time to participate in these trainings?



■ yes ■ no

Base: All participants n=3082; shown: single punch answers. Shown without don't know / prefer not to answer.

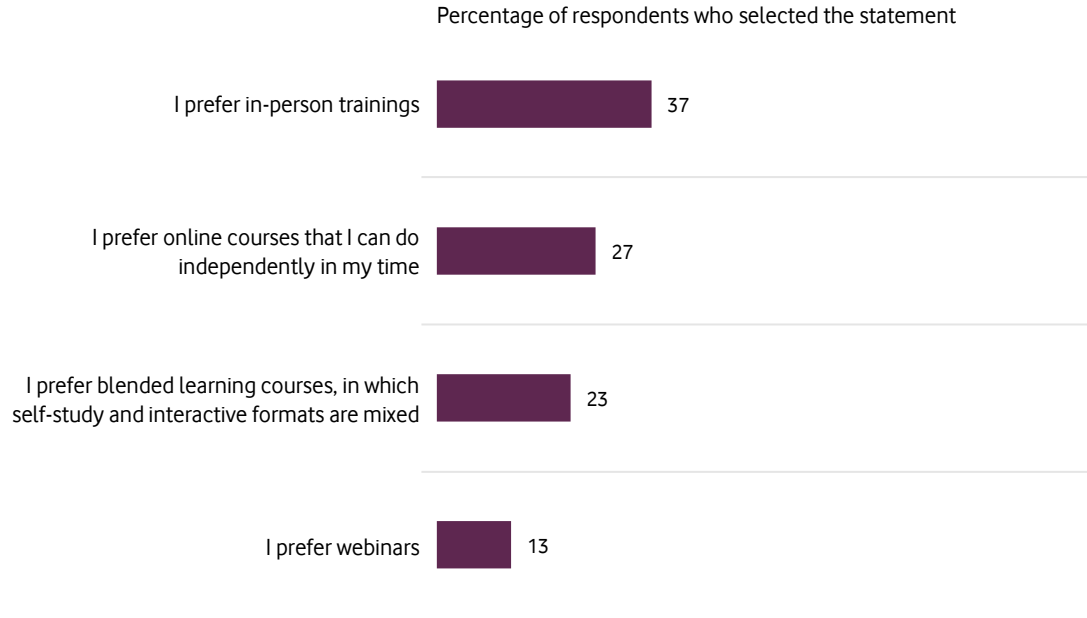
Questions 17 and 17a: "In your opinion, do enough relevant, high-quality trainings for the use of digital technology for teachers like you exist? (a) Would you have the opportunity and the time to participate in these trainings?"

- > Teachers with **different** digital teaching **skills assess** the situation of **high-quality trainings** on the the use of digital technology in the classroom **very differently**.
- > In a quasi-linear relationship, **teachers agree** the **more often** that **enough** high-quality **trainings exist the higher their skill level**. While 54% of digital leaders agree, this figure only stands at 30% among traditionalists.
- > Moreover, those with **higher** digital skill **levels** are also more likely to state they would **have** the **opportunity** and **time** to participate in these trainings.
- > Thus, the **perception of trainings** on digital teaching **depends** substantially **on** teachers' **experience** in and **motivation** for digital teaching. It may thus be beneficial to understand why traditionalists lack time for participating and how they can be better reached by training offers.



Overall

Preference for training or further education



Base: All participants n=3082; shown: single punch answer

Question 18: "Which of the statements most reflects your preference for training or further education?"

- > The **setting** European teachers **prefer the most** for further education courses are **in-person trainings** with more than a third of teachers selecting this option.
- > About **a quarter** of teachers in Europe **prefers online courses** that can be completed independently.
- > About the **same amount** of teachers **prefer blended learning**.
- > The **least popular setting** for training courses are **webinars**. Only 13% of teachers select this option.
- > Given these results, **further education programs should focus on in-person trainings, online courses and webinars**. This is likely to ensure that different settings are offered depending on teachers' preferences without spending resources on offering unpopular webinars.



Countries

Preference for training or further education

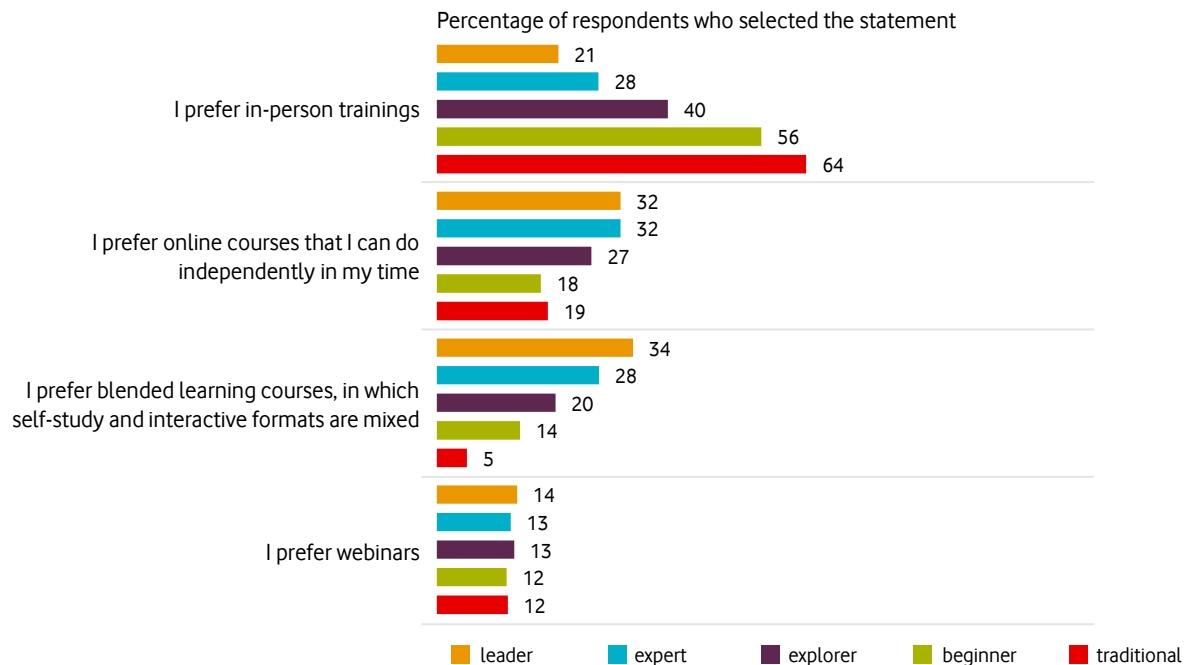


- > Teachers from **different countries** have **very different preferences** regarding the setting of training courses.
- > For instance, only about 10% of Greek teachers prefer in-person trainings, while this setting is preferred by more than 50% of teachers in Albania, Germany and Turkey.
- > The **only setting with few differences between countries** are **webinars**, which are unpopular in all countries.
- > That is, **further education programs should consider the preferences on settings in each country** to ensure successful trainings.



Teachers' digital skill level

Preference for training or further education



Base: All participants n=3082; shown: single punch answer.

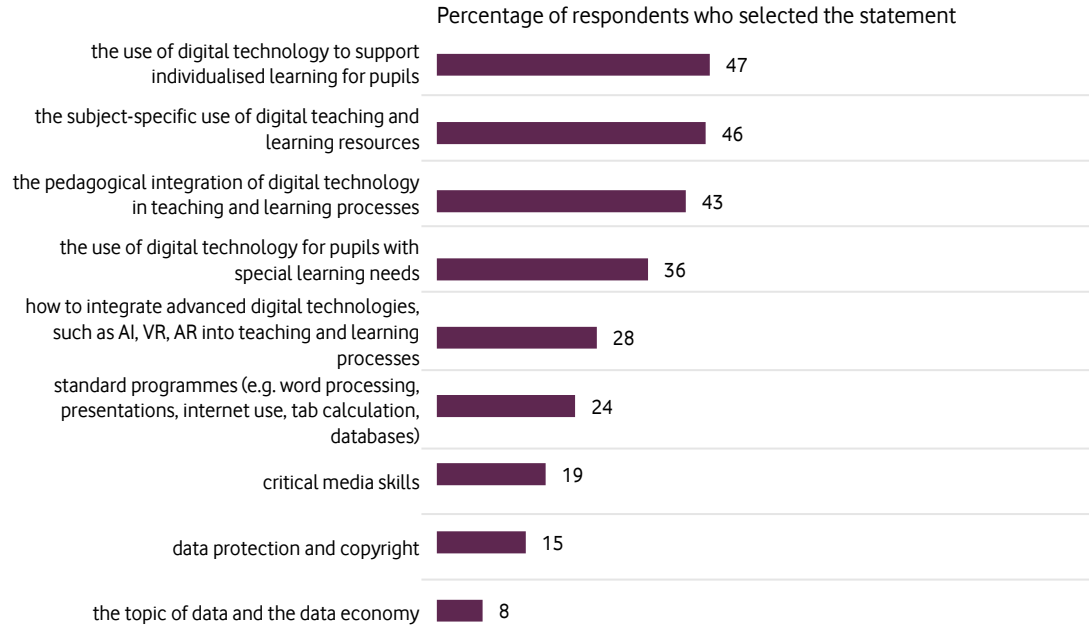
Question 18: "Which of the statements most reflects your preference for training or further education?"

- > Preferences on the settings of further education programs do also vary remarkably depending on the level of teachers' digital teaching skills.
- > Those with high digital skills such as the leader and expert prefer much more strongly online courses and blended learning than do those with low digital skills such as the beginner and traditionalist.
- > In contrast, teachers with low digital skills are substantially more in favor of in-person trainings than are those with strong skills.
- > The only exception are, again, webinars, which are unpopular across skill levels.
- > Overall, these results suggest that further education programs should offer different training settings to reflect the needs of teachers with different digital skill levels and to attract them to attend such courses.



Overall

Most interesting trainings with regard to the use of digital technology in the classroom



Base: All participants n=3082

Question 19: "Which trainings with regard to the use of digital technology in the classroom would you be most interested in? Please, select the three most attractive trainings."

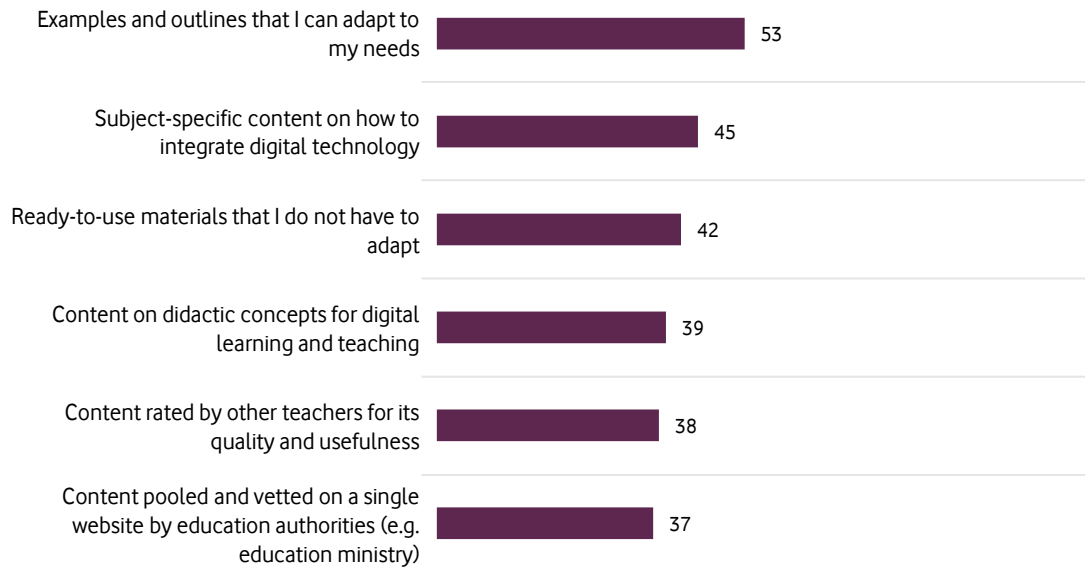
- > For European teachers, the **three most attractive topics** for trainings on digital teaching are the use of digital technology to support **individualized learning** for pupils, the **subject-specific use** of digital teaching and learning resources and the **pedagogical integration** of digital technology in teaching and learning processes.
- > Each of these topics is **selected by nearly half of teachers** as one of the three most attractive training subjects.
- > In contrast, **less than one in five** teachers in Europe are **interested in** trainings on digital teaching concerned with **critical media skills, data protection and copyright** as well as **data economy**.
- > However, **despite** these **differences** in topic interests, it may be beneficial to **offer a wide range of training topics, as no topic** clearly **dominates** all other topics.



Overall

Which content / material would best support you in the use of digital technology in the classroom?

Percentage of respondents who selected the statement



- > The **majority of teachers** in Europe say they **would profit from digital teaching content** that **provides examples and outlines** that can be adapted to teachers' needs.
- > In addition, **more than two in five** European teachers are **interested in subject specific content** on how to integrate digital technology in teaching.
- > A bit less relevant, but still selected by **more than a third** of teachers is content on **didactic concepts, content rated** by other teachers and **content pooled and vetted** on a single website by education authorities.
- > Given these results, **teaching materials** that will be considered as being useful by teachers **should contain good and customizable examples**. However, as other content is likewise rated as important by a substantial minority, it may be meaningful to offer the full range of content to teachers.

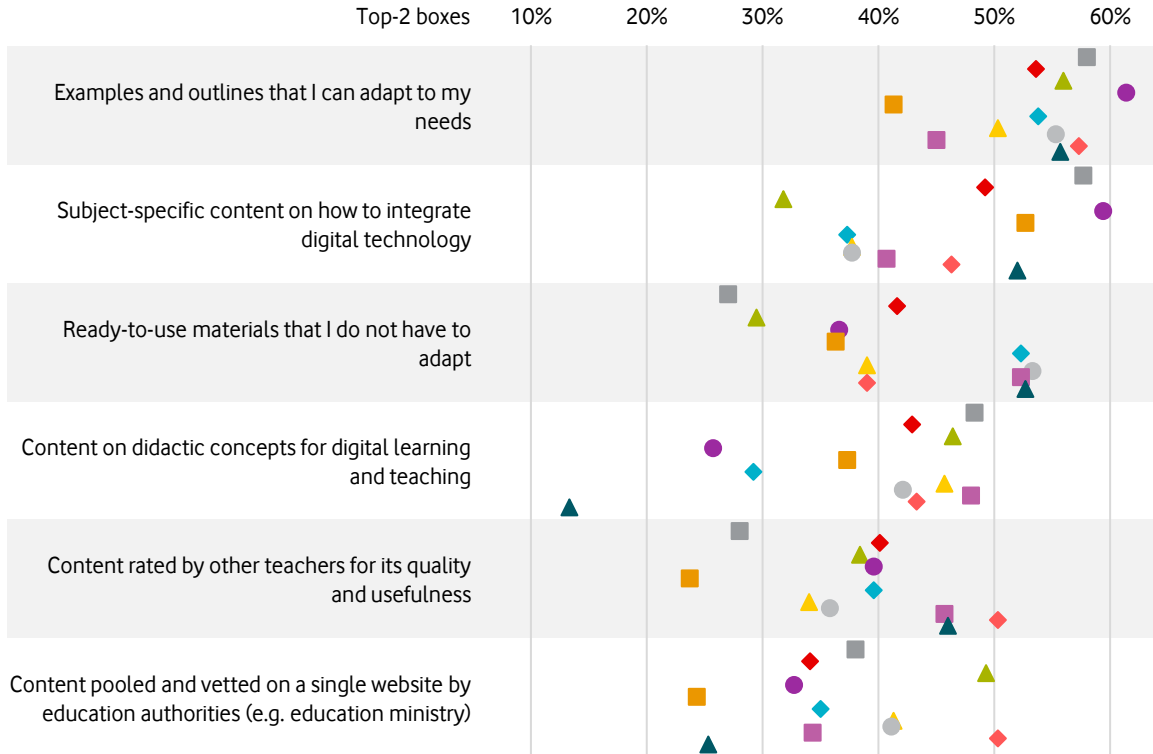
Base: All participants n=3082

Question 20: "Which content / materials would best support you in the use of digital technology in the classroom? Please, select the three most supportive contents / materials."



Countries

Which content / material would best support you in the use of digital technology in the classroom?



- > Except for Italy and Spain, a **majority** of teachers **in each country** states that the **best materials** to support their digital teaching efforts are **examples and outlines** that can be adapted to their needs.
- > **Interest in other materials is more strongly divided between countries.** For instance, just above 10% of UK teachers say they would profit from content on didactic concepts for digital teaching, while it is nearly half of teachers in Spain.
- > Overall, these **results underline** that **teaching materials must** be prepared specifically to **meet national demands.**



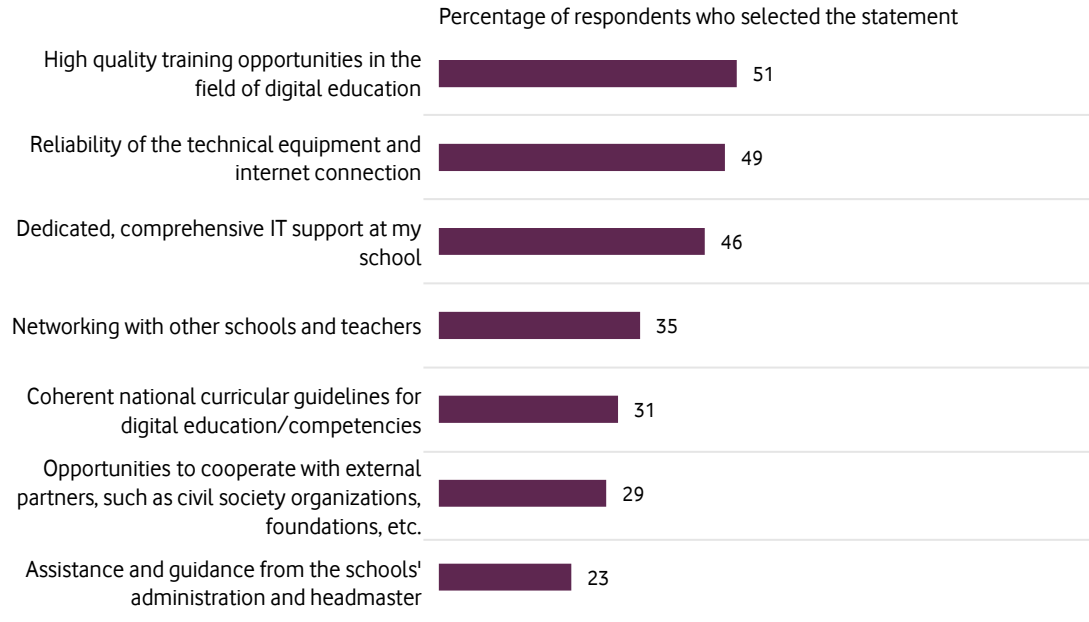
Base: All participants n=3082

Question 20: "Which content / materials would best support you in the use of digital technology in the classroom? Please, select the three most supportive contents / materials."



Overall

Which measures would best support you in the use of digital technology in the classroom?



Base: All participants n=3082

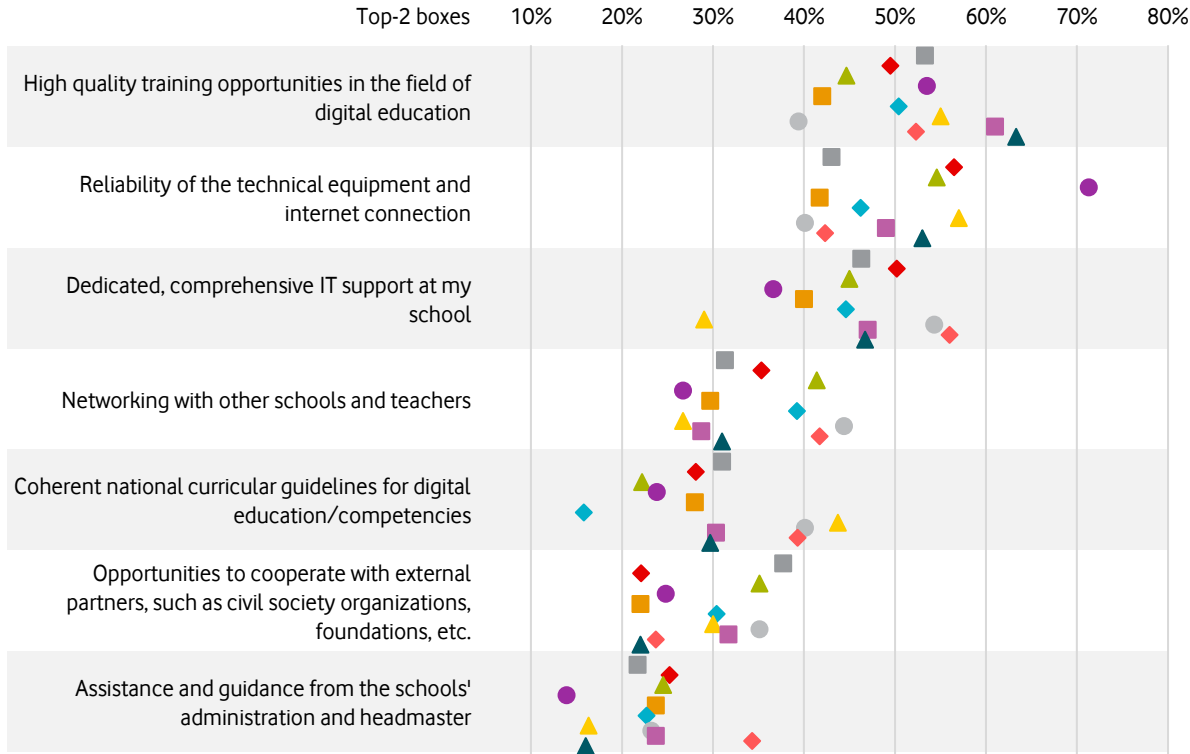
Question 21: "Which measures would best support you in the use of digital technology in the classroom? Please, select the three most supportive measures."

- > Asking European teachers about the **measures** that would **best support** them in **digital teaching**, the **most often selected measure** is **high quality training**, closely **followed by** the **reliability** of the technical equipment and **internet connection** and by having a **dedicated, comprehensive IT support at their school**. About half of teachers have selected these options as one of the three most supportive measures.
- > In contrast, **just about a third select networking** opportunities with other schools and teachers, a coherent **national curricular** and **collaborations** with **external partners**.
- > That is, while **training opportunities** for teachers **should be a clear priority** of further education programs on digital teaching, **improving schools' IT infrastructure** will be **likewise important** to ensure teachers can successfully apply digital teaching.



Countries

Which measures would best support you in the use of digital technology in the classroom?



- > Compared to other questions asked in the survey, **variations between countries** are rather **limited** when it comes to the question of which measures would best support teachers in digital teaching.
- > **High-quality training, reliability** of technical equipment and **internet connection** and a dedicated, comprehensive **IT support** are the **most preferred** measures in **most countries**.
- > That is, a **focus** on the **dualism** of **high-quality training and good IT infrastructure** should be applied across Europe to improve digital teaching and thus ensure a bright educational future for kids in Europe.



Base: All participants n=3082

Question 21: "Which measures would best support you in the use of digital technology in the classroom? Please, select the three most supportive measures."





Vodafone
Foundation

