DigiChild

Co-funded by the Erasmus+ Programme of the European Union

DEVELOPMENT OF DIGITAL COMPETENCE IN PRESCHOOL EDUCATION

ATTITUDES TO DIGITAL EDUCATION IN PRESCHOOL EDUCATIONAL ESTABLISHMENTS

DEVELOPED BY

the DigiChild team

Co-funded by the Erasmus+ Programme of the European Union

Erasmus+ DigiChild Survey Results
"Attitudes to Digital Education in Preschool Educational Establishments"

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I. DigiChild project general description

The survey was done under the umbrella of the Erasmus+ DigiChild Strategic Partnership project (Developing Teachers' Skills to Educate Pre-School Children with and Through Digital Technologies / 2020-1-EE01-KA226-HE-093388, 1.03.2021-28.02.2023).

Project partners:

University of Tartu, Estonia (Coordinator)
Heidelberg University of Education, Germany
University of Primorska, Slovenia
University of Latvia, Latvia
Rarvere Rohuaia Kindergarten, Estonia
Vrtec Koper, Slovenia
CreaKids Kindergarten, Latvia

II. Justification of reasons for the DigiChild survey on attitudes to digital pre-school education

The prolonged and repetitive lockdowns in 2020-2021 globally changed the nature, attitude, and approaches to education at all levels, mainly touching off the cardinal changes at secondary and tertiary levels and in life-long learning, still influencing primary education even sneaking into preschool learning.

While the digitalization of education seems unavoidable, the attitudes to it, openness, and readiness of different groups, especially to early digitalization of education, have mainly remained an untapped territory. In our project survey, we have intended to outline the areas of awareness, concern, and priorities that will allow broadening the minds of the teachers and general public towards conscious digitalization of early education, which is now, unfortunately, mostly intuitive.

The survey intends to outreach different target groups to identify both the areas of potential quick progress and concerns. The target groups include:

- in-service preschool teachers and administration, preschool psychologists, and specialists in special education.
- future preschool teachers (students studying/majoring as preschool teachers).
- parents of preschool learners/children.

This survey has allowed identifying different points of view - what preschool teachers can potentially teach, how the administration in preschools and kindergartens can support the progress, the parental attitudes and receptiveness to early digitalization of education, as well as the dominant social fear, mal- and misperception, digital stress, and wellbeing or even ignorant attitude to educational technologies. This survey has helped to develop courses for current and future preschool teachers to help them find the best ways to introduce smart technologies into the learning process, raise awareness of the general public, and contribute to general digital wellbeing.

The overall drive for accountability of digital skills necessary for 21st-century education and their assessment has never been greater as the entire world was forced to go digital within several weeks in the spring of 2020. In the wake of the global pandemic, most educators around the globe viewed digital tools as a supportive element accidentally beneficial to the learning process. By the end of the pandemic, the digital competencies of educators and students had ski-rocketed, and neither group saw education as possible outside the digital dimension. Still, despite the fast rate of digitalization, the skills of teachers and students remain largely varied and diverse depending on the countries, age groups, levels of education, and many other parameters.

This report is a preliminary summary of the survey results, and a more thorough analysis will be presented in the academic articles published by the project partners. The survey results are used to develop a BA course, a professional development course, and a MOOC.

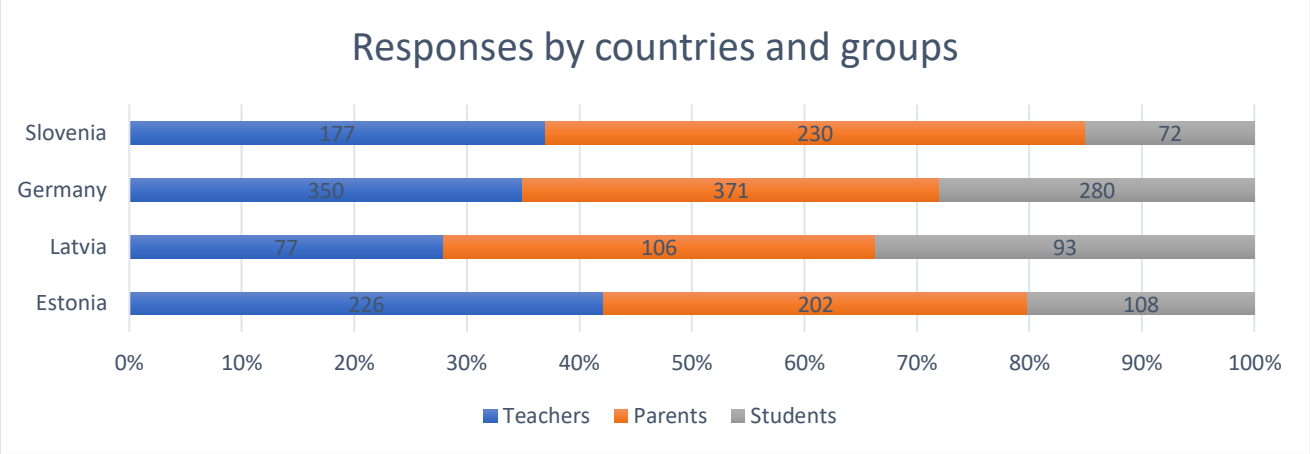
III. DigiChild Survey Methods

Our survey aims to analyze the available skills, openness, and digital gap required for the introduction of digital tools into the learning process at the preschool level. The survey was done in four EU countries (Estonia, Germany, Slovenia, and Latvia). Still, as the survey was also advertised online on social media, people from other EU and non-EU countries participated. The responses from other countries were omitted in this report.
The survey was jointly developed in September-December 2021. All seven partners of the DigiChild project (Narva College of the University of Tartu, Heidelberg University of Education, University of Primorska, University of Latvia, Rakvere Rohuaia Kindergarten, Vrtec Koper Kindergarten, CreaKids Kindergarten) participated in the survey development. The DigiChild survey was developed on the basis of the Digital Competence Framework for Educators / DigiCompEdu (https://joint-research-centre.ec.europa.eu/digcompedu_en). The partners also integrated the knowledge, skills, and approaches developed in the DigiChild project or practices available in the DigiChild countries. The survey included several parts: demographic data (about the respondents and their children), teachers'/parents' attitudes and openness to the introduction of digital learning in kindergartens, teachers'/parents' digital skills (self-assessment), digital skills of their preschool children assessed by teachers/parents, and the resources available at the kindergarten/home to support the digital learning process. In December 2021-January 2022, the survey was translated into English, Estonian, German, Slovenian, Latvian, and Russian, and afterward, it was coded in the SoSci program (soscisurvey.de) appropriate for multilingual surveys. The target audiences were surveyed online:
current preschool teachers: https://www.soscisurvey.de/DigiKid-teachers/
future preschool teachers (students who major as preschool teachers):
https://www.soscisurvey.de/DigiKid_parents/
parents of preschool children: https://www.soscisurvey.de/DigiKid-students/
The online survey was available from February 21 till May 11. The target audiences were outreached twice at the beginning of the survey (February 2022) and once in the middle (early April 2022). The potential participants received the letters to participate in the surveys directly from the involved DigiChild partners, indirectly (from departments of education or kindergarten directors the partners contacted), or online (on Facebook). The preliminary survey data analysis was done in May and June 2022.

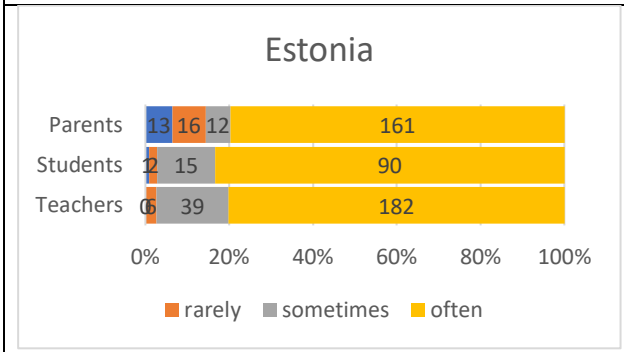
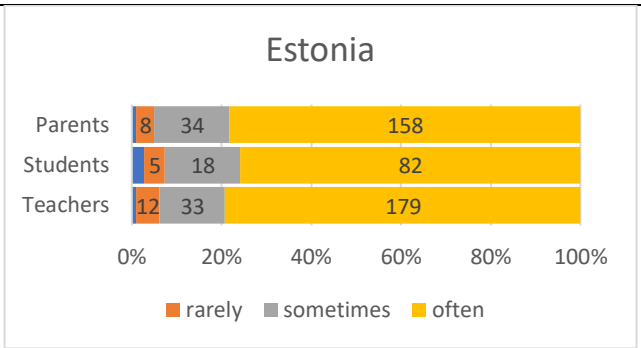
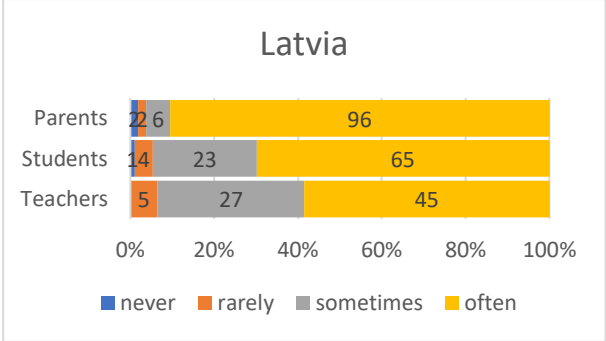
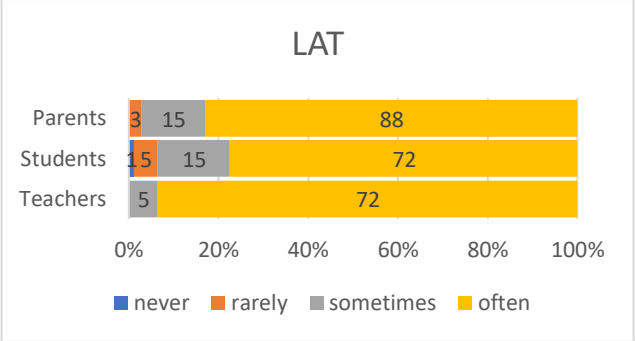
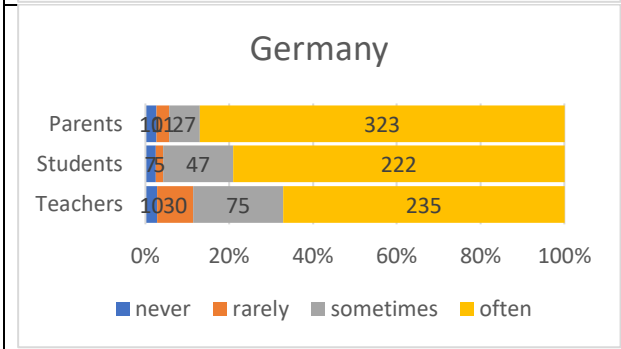
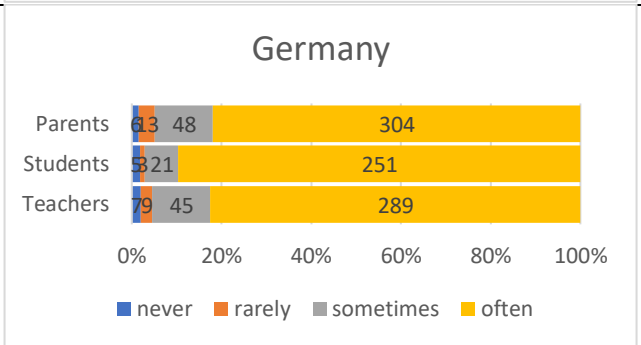
IV. DigiChild survey results

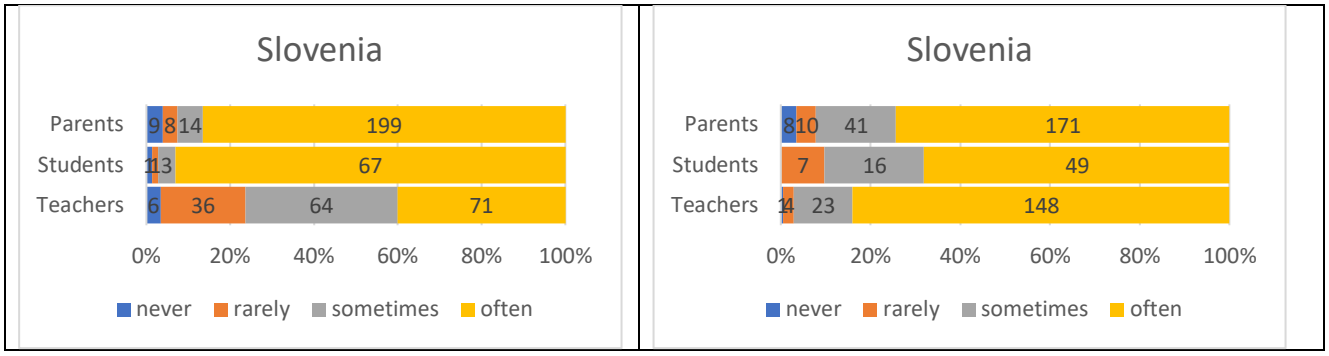
1. Statistical data

The survey itself has outreached 7318 people who followed the link, and the project received 2762 complete surveys.
Survey for teachers: 2103 clicks – 1237 responses (58.8% completion rate).
Survey for parents: 4062 clicks – 905 responses (22.3% completion rate).
Survey for students: 1153 clicks – 620 responses (53.3% completion rate).
The total number of responses: 2762 responses.
Responses from the project countries: 2292 responses.



2a-2b. Frequency of ICT use in professional life and personal life

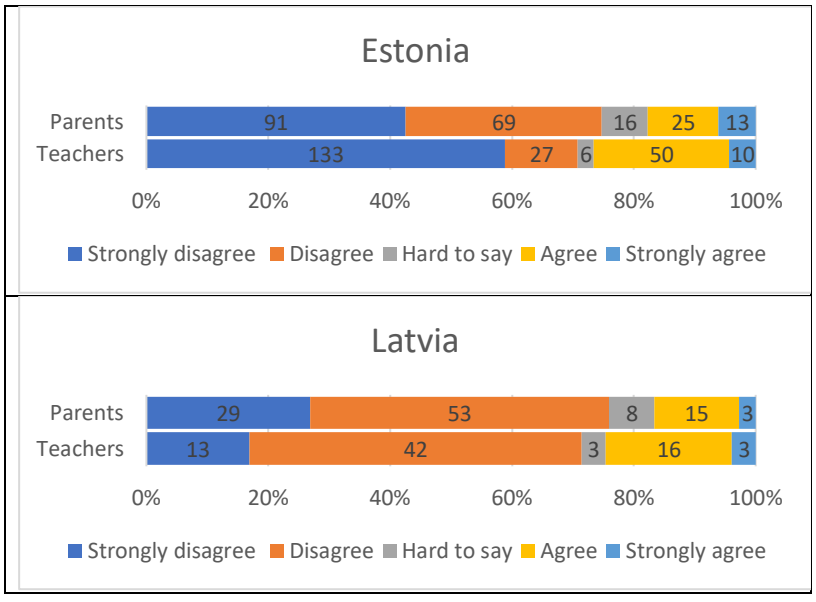
In professional life	In personal life
	
	
	

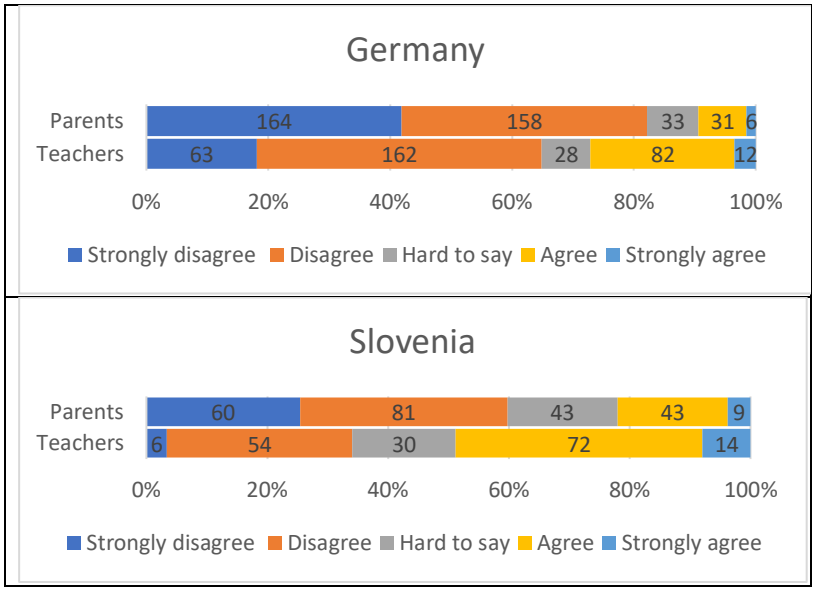


ICTs play an essential role in the life of current and future kindergarten teachers and parents of preschool children. Only a tiny portion of the surveyed people (0-6%) in all the project countries never or rarely use ICT for personal reasons, while the dominant majority (at least 94%) use new technologies sometimes or always. Technology is predominantly omnipresent in the personal life of the target audiences.
The tendency is similar, though the numbers are slightly lower, regarding using technologies for professional purposes. The surveyed groups with relatively high frequency ('often' and 'sometimes') use ICT for professional purposes and usually total at least 90% of responses. The highest level of professional life and studies digitalization is observed in Estonia, and the lowest level is in Slovenia. In Latvia, Slovenia, and Germany, the general tendency is that kindergarten teachers use digital technologies for professional purposes less often than students and parents and less often than for their personal life. In contrast, in Estonia, the use of ICT is similar among the target groups and in personal compared to professional life.

3a-g. Attitudes to the use of ICT with pre-school children.

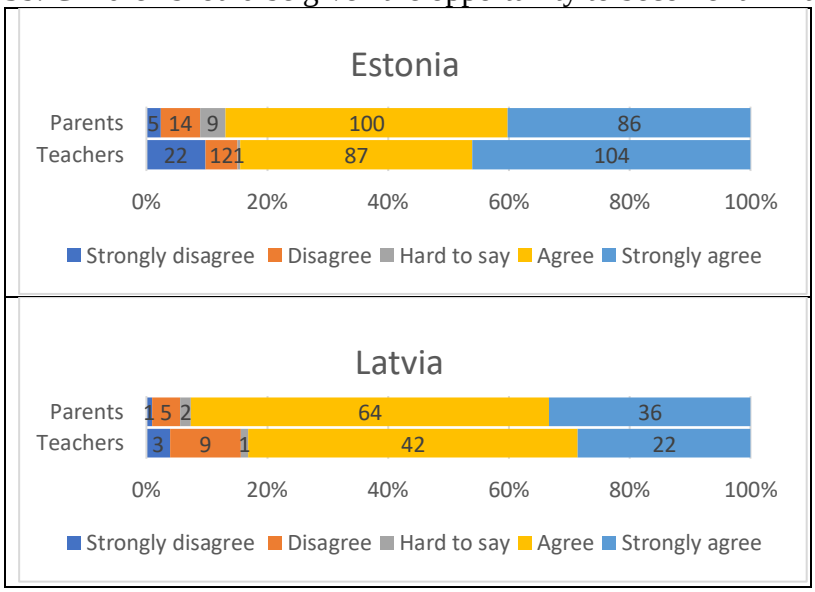
3a. There is little I can do to help children to learn how to use ICT meaningfully in terms of socialization influence.

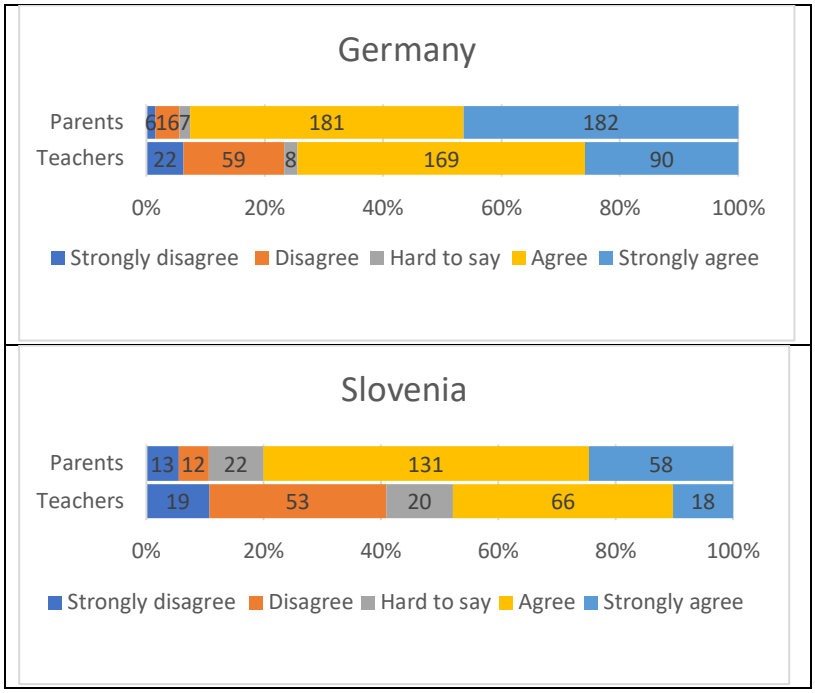




Both teachers and parents disagree with this statement and believe that they can help children with ICT and socialization influence.
At the same time, the belief in own power varies from country to country. In Estonia, Latvia, and Germany, 60-80% of teachers and parents believe in their power and disagree or strongly disagree with this statement. The situation is different in Slovenia, where the same attitude is expressed by 35-6% of respondents.
In all the countries, the proportion of parents who agree and strongly agree that they can have influence over the digital socialization of their kids is higher than of teachers'. The only big noticeable difference is that in Estonia 60% of teachers strongly disagree with this statement, its polarly different counterpart is Slovenia, where the ratio of such teachers is under 3%.

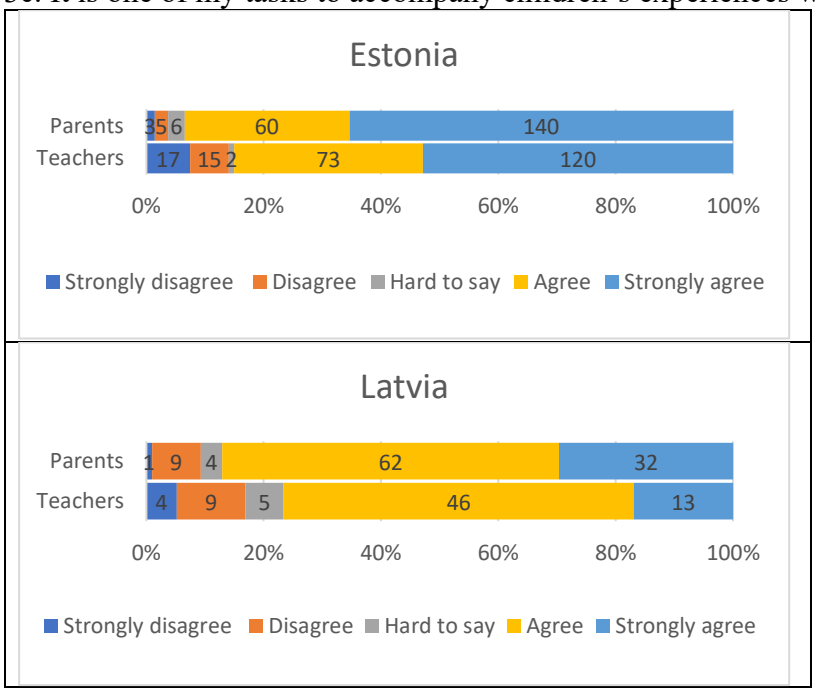
3b. Children should be given the opportunity to become familiar with ICT in kindergarten.

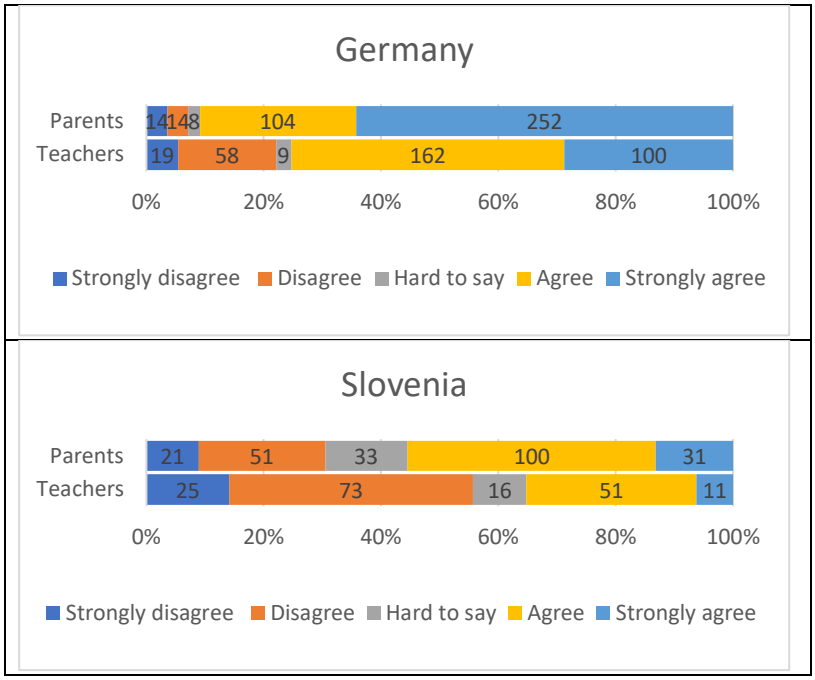




The tendency is the same in all four countries where the majority of kindergarten teachers 'strongly agree' or 'agree' children should learn digital technologies in kindergarten, still the ratio is different. Over 80-90% of parents and teachers in Latvia and Estonia feel this as well as parents in Germany in and Slovenia. Still, 74% of teachers in Germany feel positive about the use of ICT in kindergarten, while the same ratio in Slovenia is as low as 48%.

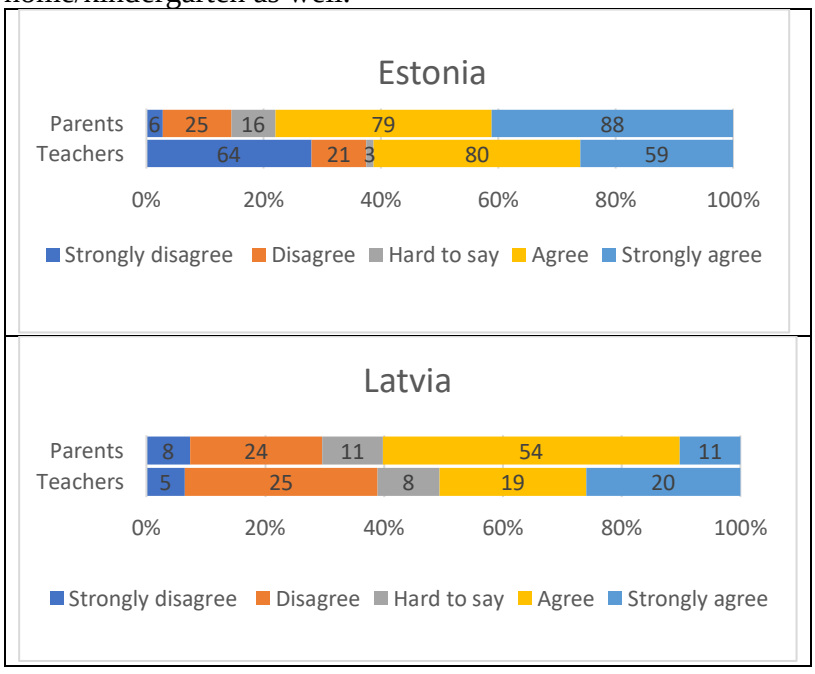
3c. It is one of my tasks to accompany children's experiences with ICT.

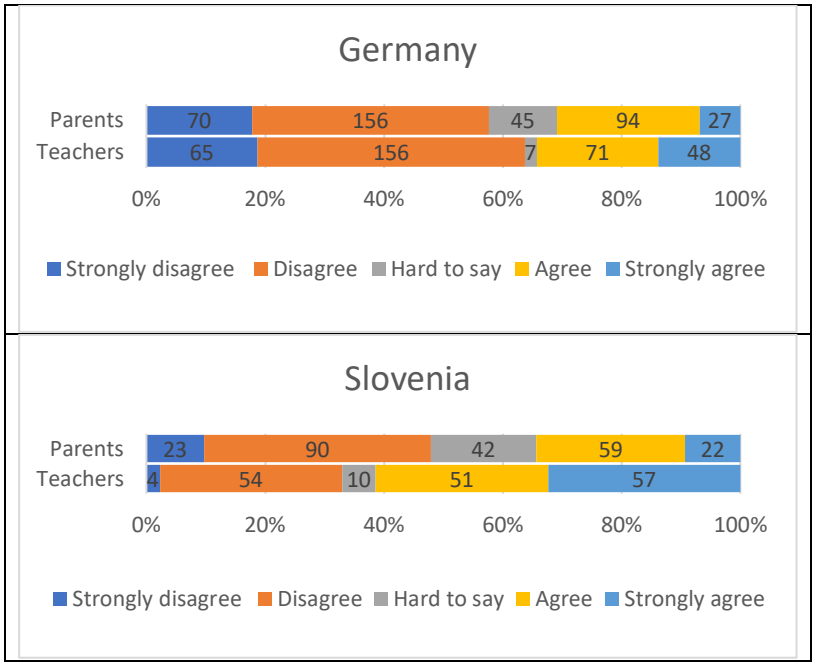




Both parents and teachers in Estonia, Latvia, and Germany (75-90%) strongly agree or agree that this is their task to accompany children's experiences with ICT.
The situation differs in Slovenia, where under 10% of parents and teachers strongly agree with the statement, and only 35% of teachers agree or strongly agree this is one of their tasks. Actually, most teachers (over 55%) in Slovenia disagree or strongly disagree that this is their task to accompany children with ICT. In comparison, only 35% of teachers agree and strongly agree with this statement.
Almost 60% of parents in Estonia and Germany strongly agree that they can support their kids with ICT. Every second preschool teacher in Estonia strongly believes they can accompany the children's experiences with ICT; this fraction is considerably smaller in all the other surveyed countries.

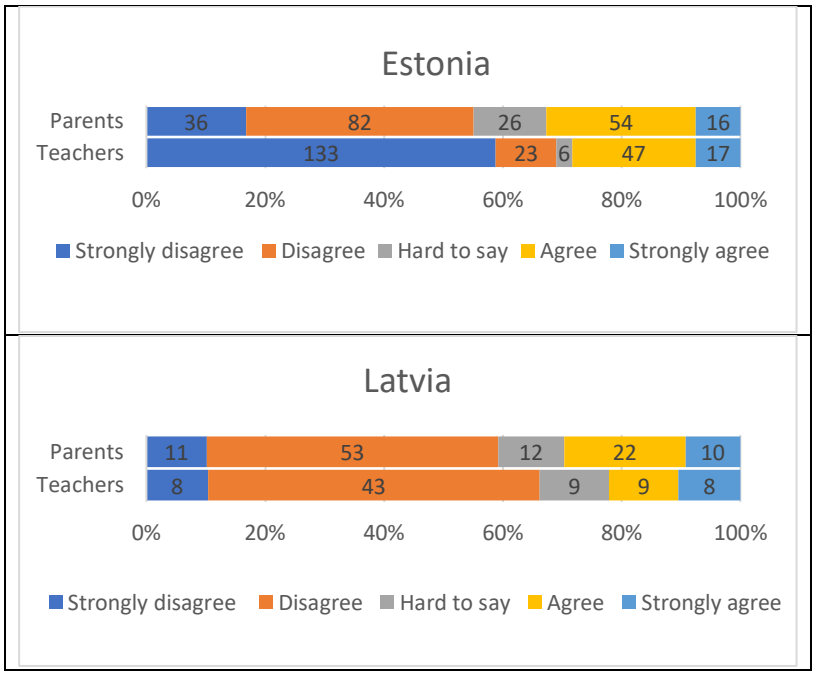
3d. While children spend a lot of time with ICTs, these do not have to play a role at home/kindergarten as well.

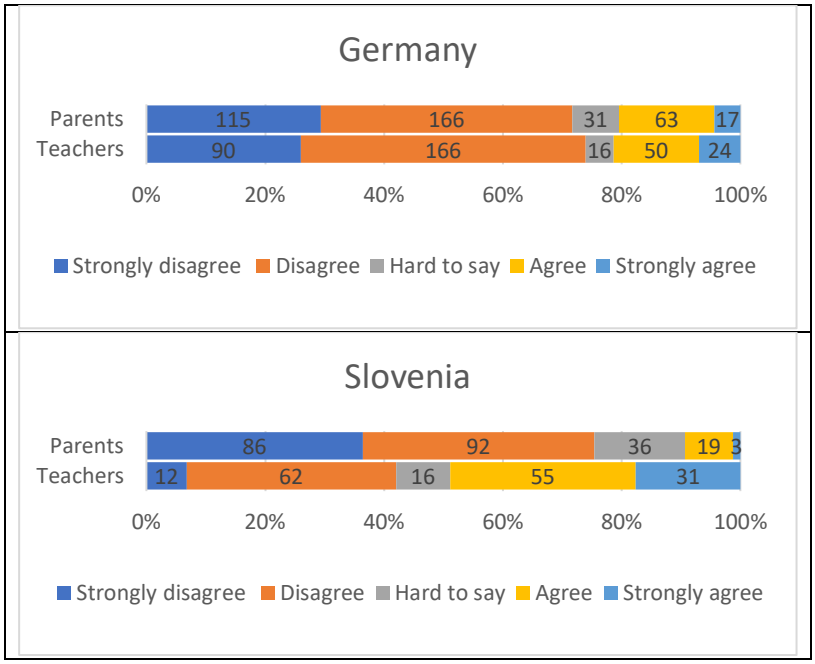




In Germany, 55-60% of teachers and parents agree and strongly disagree that ICTs do not have to play a role in kindergarten and at home. Germany is followed by Slovenia. The situation is different in Latvia and Estonia, where 50-80% of parents and teachers agree or strongly agree that considering the time the children spend with ICTs already, they still do not have to play a significant role.

3e. The use of ICTs is the task of the school and not of the kindergarten.

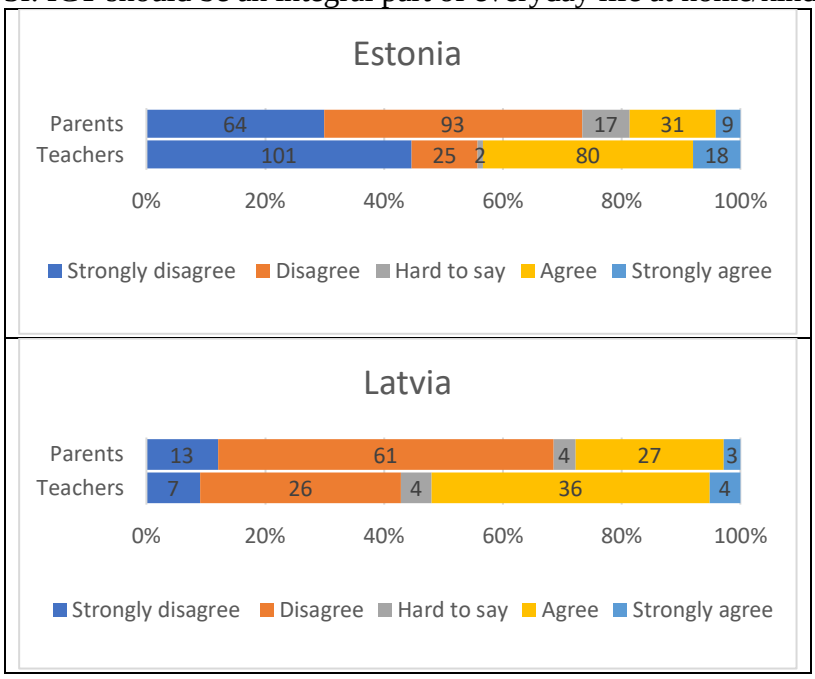


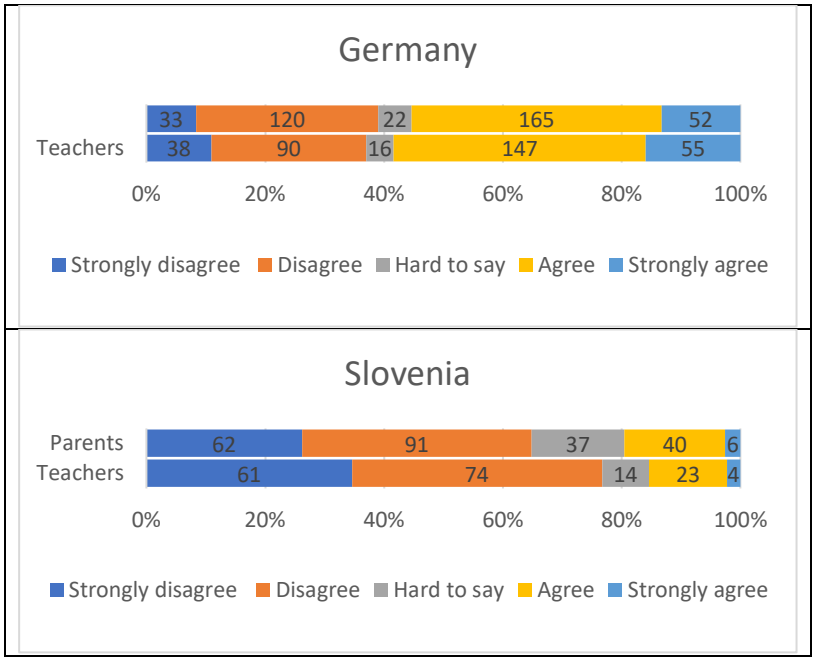


55-75% of parents and kindergarten teachers in Estonia, Latvia, and Germany and parents in Slovenia disagree or strongly disagree that the use of ICTs should start at school, not in kindergarten. This attitude is much less frequent in Slovenia, where 50% of kindergarten teachers believe that there is no place for ICTs in kindergarten. The most positive about the early use of ICTs are teachers in Estonia (almost 60%), while the most negative are teachers in Slovenia (nearly 20%).

The most significant gap inside the country is observed in Slovenia. There, the gap between the parents' and teachers' openness to the early use of ICTs is over 30%, with teachers lagging behind.

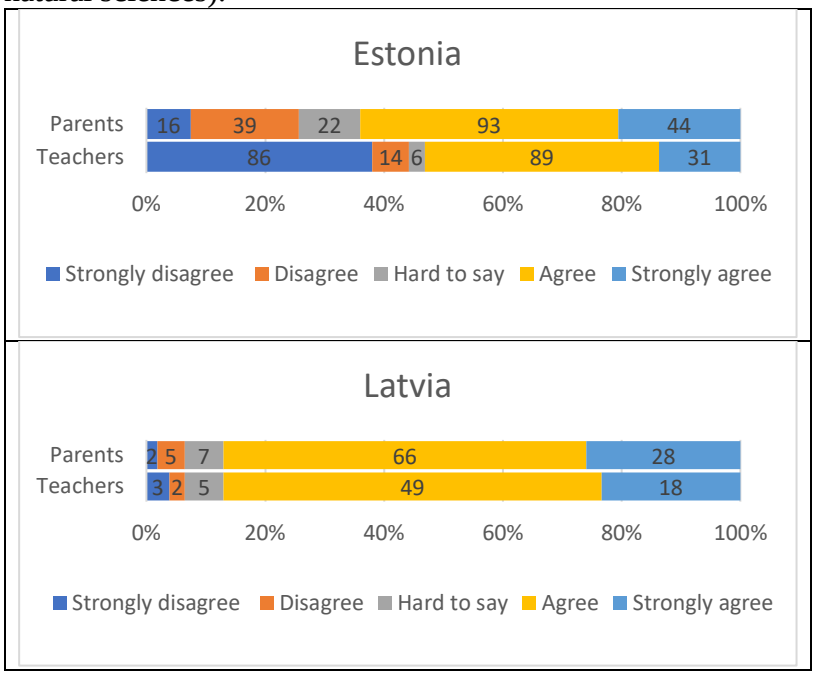
3f. ICT should be an integral part of everyday life at home/kindergarten.

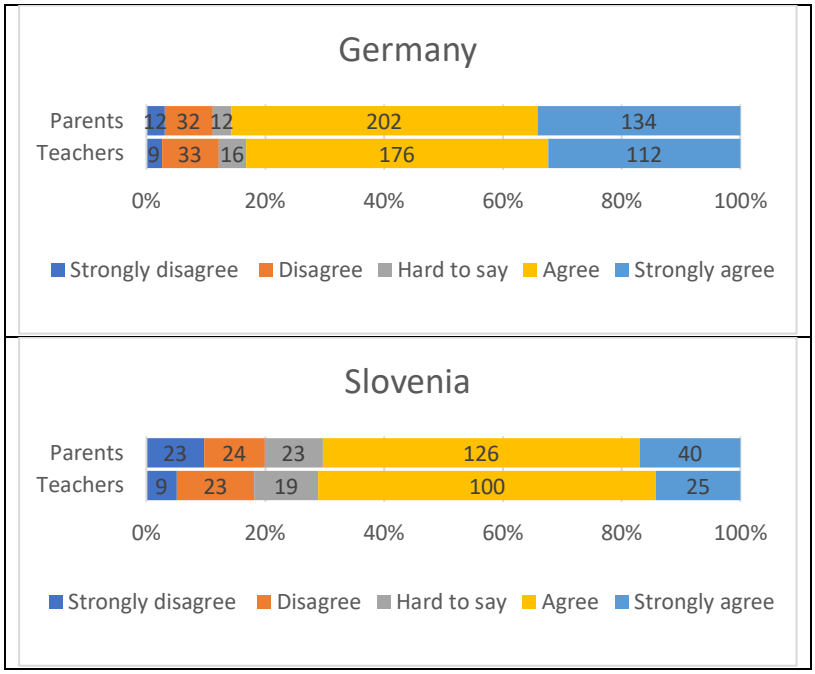




Germany is the only country where over 50% of the target audiences believe that ICTs should be used daily at home and in kindergarten. Still, almost 40% are against daily ICT use.
The idea of frequent use of ICT is highly unsupported by Slovenian teachers and parents, as well as by parents in Latvia and Estonia (70-80%). The highest number of teachers strongly against obligatory everyday use of ICTs is in Estonia, reaching almost half of the teachers surveyed.

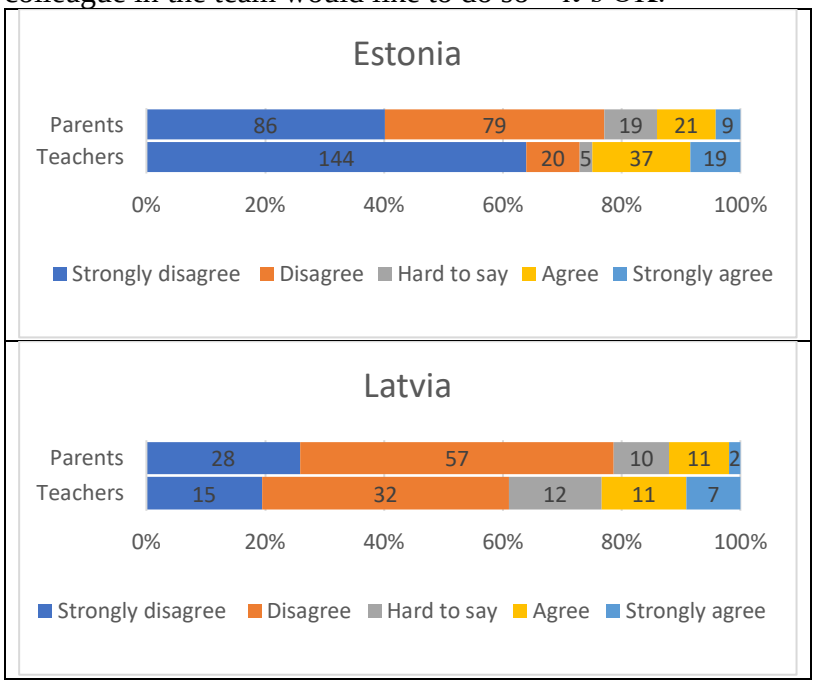
3g. ICTs are suitable to promote further educational areas (e.g. language development, math, natural sciences).

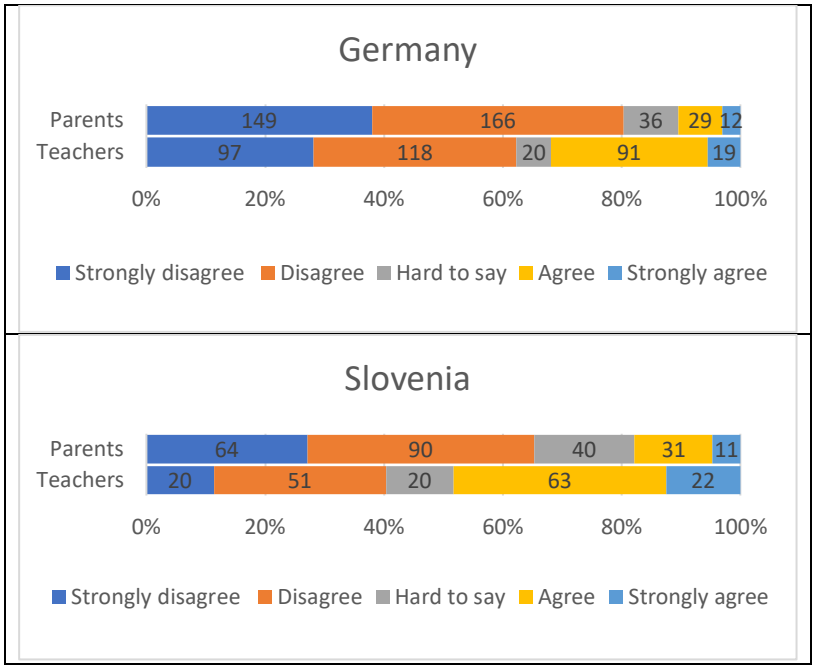




The teachers and parents in all four surveyed countries tend to agree that ICTs are suitable for promoting other educational areas. The most common support to do this is in Latvia (almost 90%), followed by Germany (over 80%) and Slovenia (over 70%). The lowest level is in Estonia, where slightly over 50% of interviewees answered positively.
Estonia is the only country where almost 40% of teachers strongly disagree that with the help of digital tools, multiple areas of education can be developed.

3f. Personally, I don't want to get involved in the use of ICT in kindergarten (home). But if a colleague in the team would like to do so – it's OK.



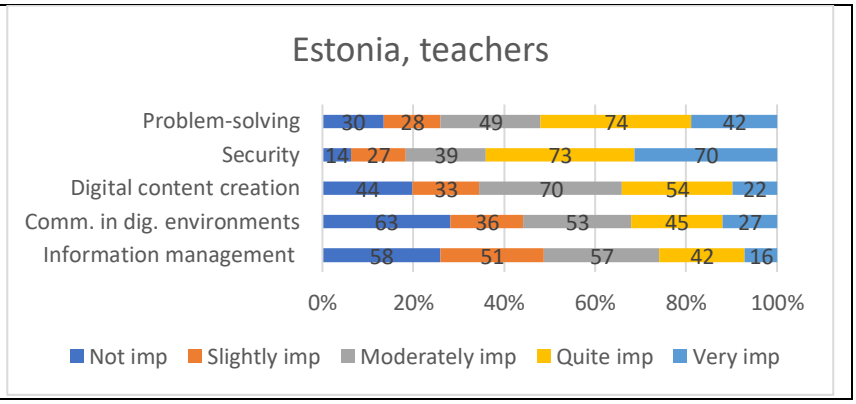


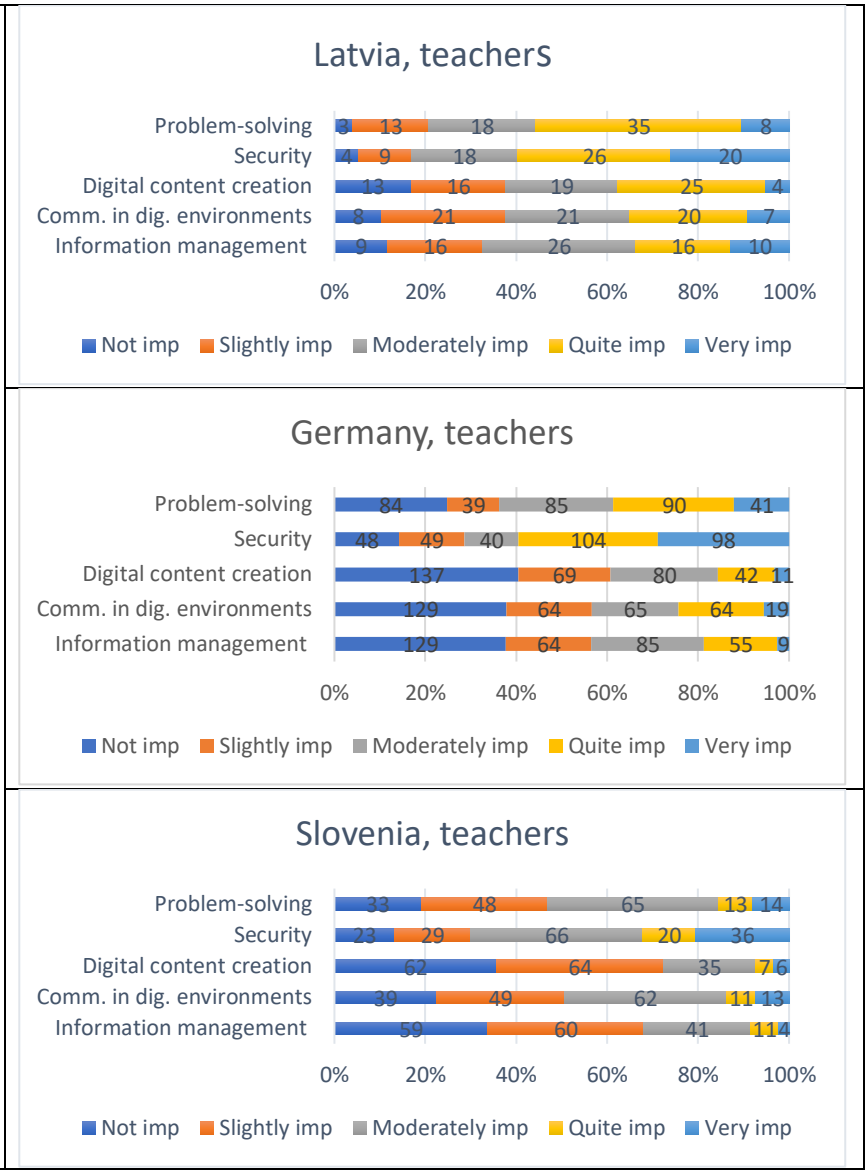
Most respondents (60-90%) in Estonia, Latvia, and Germany, as well as among Slovenia parents, disagreed or strongly disagreed with laying the burden of ICT skills development on others. At the same time, only 40% of Slovenian teachers disagree with the statement, while almost 50% prefer to stay away from ICTs at work.
Over 60% of Estonian teachers strongly disagree with the highest statement among all the groups.

Overall, the results show that the teachers and parents in the surveyed countries are open regarding their attitudes toward introducing and using digital technologies. Teachers in Estonia indicate the highest level of openness towards ICTs. They are followed by teachers and parents in Latvia and Germany. In contrast, the teachers in Slovenia show the lowest level of engagement and eagerness to work with digital technologies in kindergarten. The results also show that parents and teachers quite often show the same/similar ratios in the country. However, this is not the case in Slovenia, where parents feel more responsible for their kids' digital skills and digital literacy than teachers. At the same time, in Germany, parents and teachers support the everyday use of technologies in the classroom and at home, which is not the case in Estonia and Slovenia.

4a-e. Importance of goals in terms of using ICT in kindergarten / at home.

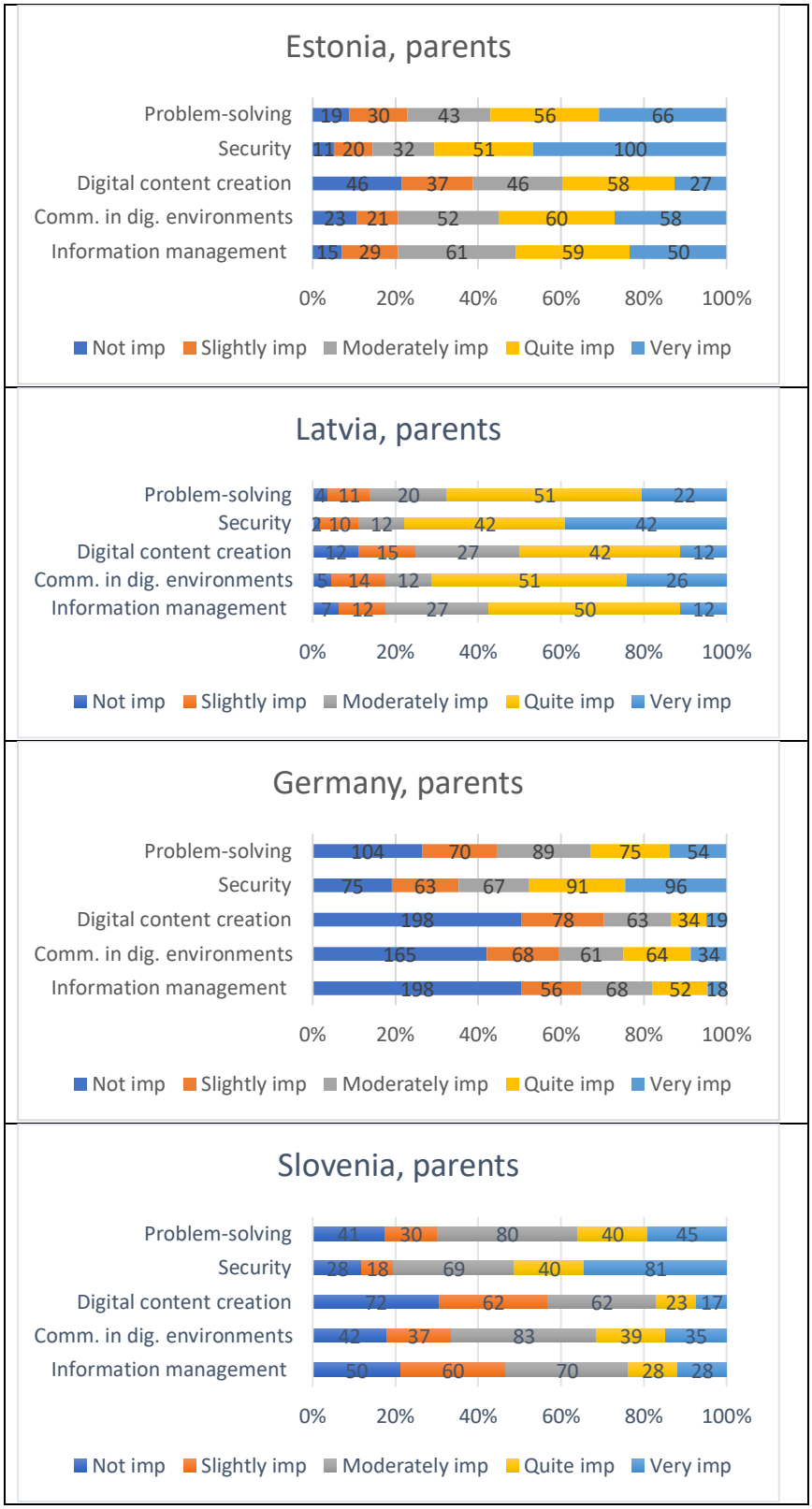
Kindergarten teachers





The ICT use in kindergartens includes five goals: information management, communication in the digital environment, digital content creation, security, and problem-solving.
The teachers in the four surveyed countries identified “security” as the goal of utmost importance, followed by problem-solving. The least essential goals are digital content creation, communication in the digital environment, and information management.
The goals are found to be more critical in Estonia and Latvia (30-65%) and not or slightly important in Slovenia (10-30%).

Parents of pre-school children

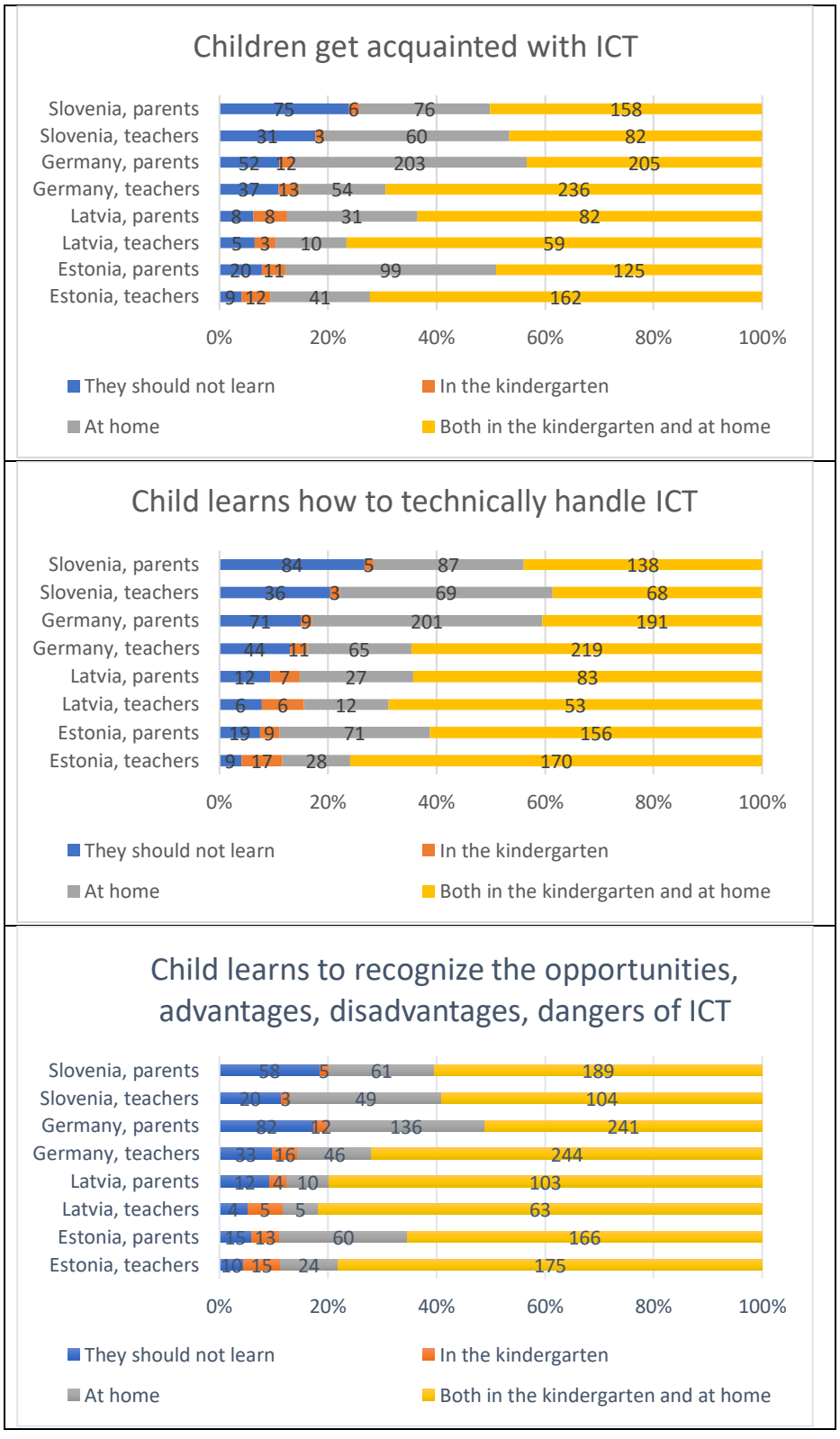


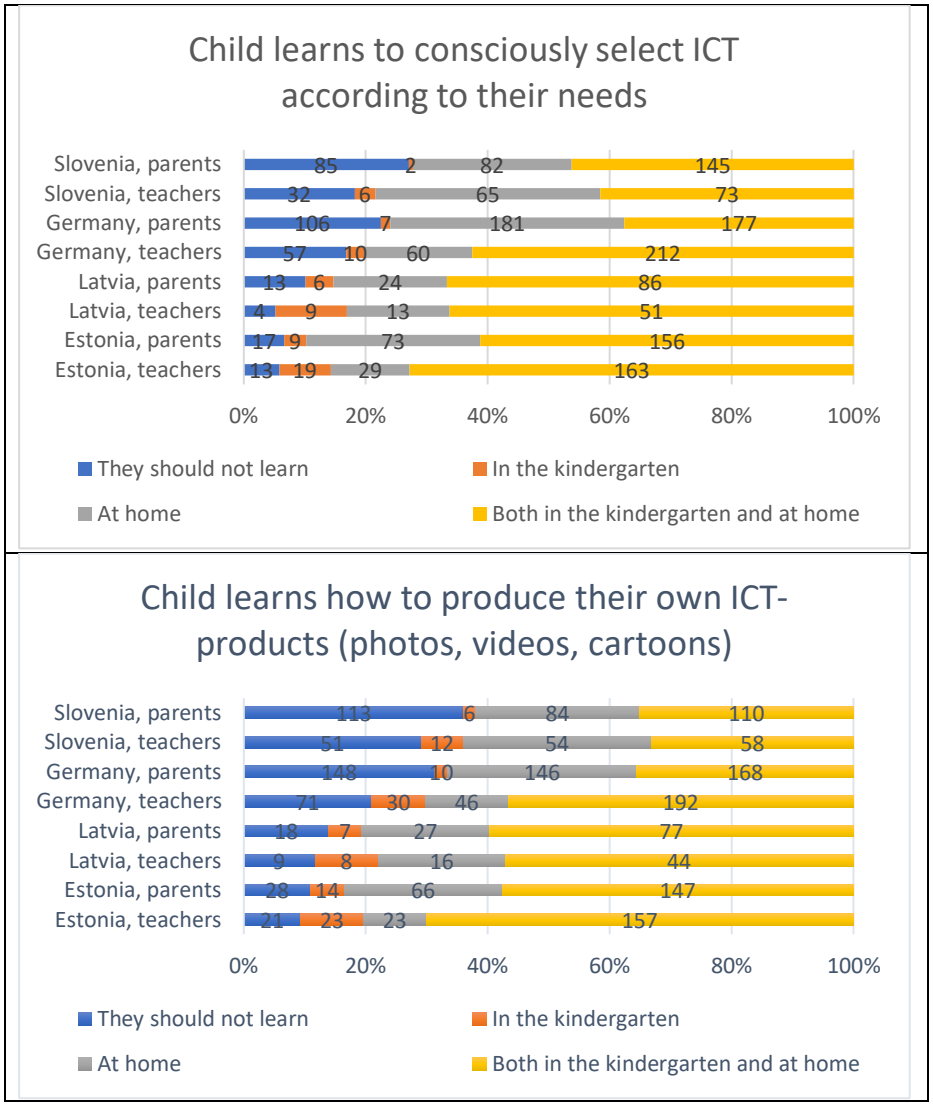
More than half of parents in Latvia and Estonia identified all the goals as very important and quite important. The number of people who find these goals as unimportant or slightly important rarely exceeded 20% of responses.

Half of the parents in Germany and Slovenia found security important, while other aspects in Germany were found not or slightly important.

The survey shows that security is a top priority among all the groups in all the countries and was viewed as quite or very important by at least 50% of respondents (except for teachers in Slovenia). Problem-solving goals followed security in all the countries. The attitudes toward the plans were more or less similar among the different groups in the same country except for Slovenia, where parents find the goals more important than kindergarten teachers.

5a-e. Where should children learn how to use ICT?





For all the five questions, the most common answer among the respondents (both parents and teachers) was that the ICTs should be used for educational purposes both at home and in the kindergarten. The second most popular option among both groups was “at home,” meaning that the children should learn ICTs skills under the guidance of parents.
The proportion of respondents who believe that children should not learn ICT ranges from under 5% among teachers in Estonia to over 35% among parents in Slovenia. Teachers and parents in Estonia are most open to their children learning ICT skills. Estonia is followed by Latvia and Germany.
The proportion of people who think ICTs should be learned only in kindergarten is never over 10% for any group in any country.

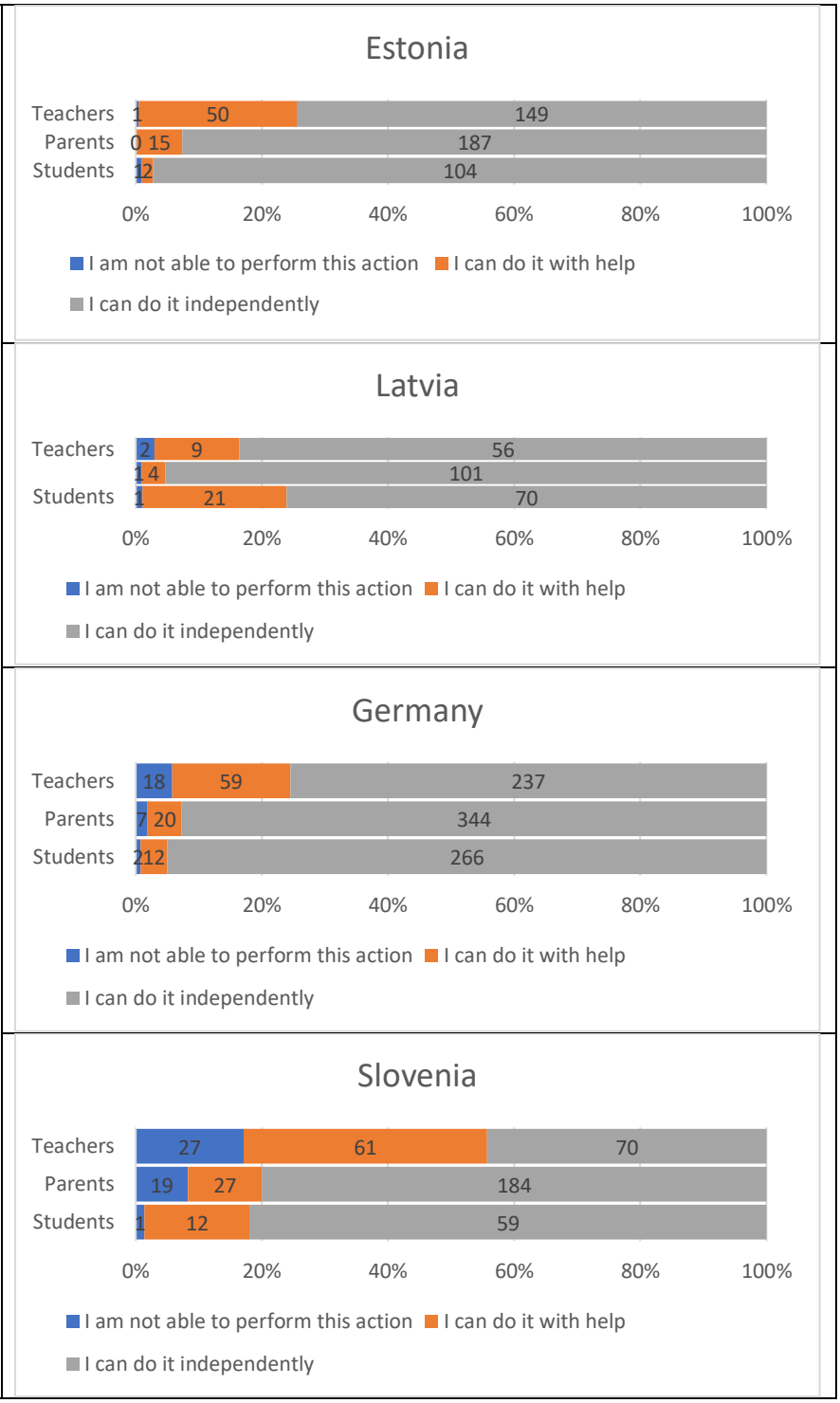
Predominantly, for teachers and parents, the most common answer was that the kids should get acquainted and develop digital skills in kindergarten and at home. This response was followed by the answer “at home,” and both teachers and parents mentioned home as a potential learning environment. Parents and teachers from Slovenia and Germany quite often mentioned that they do not support the idea of having early digital learning for children of preschool age.

6a-e.
Confidence in doing different tasks connected with ICTs.

The variety of ICT skills required by parents and kindergarten teachers can be divided into three main groups: typical user skills, where all the three groups tend to show a high level, advanced user skills, where the groups show a good level; and advanced digital and coding skills where the skills are usually low. The results are similar for all the surveyed countries though the percentage varies slightly.

Group 1. Excellent skills

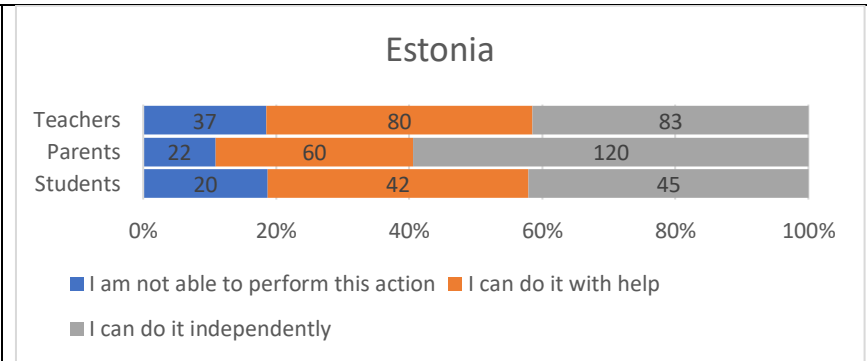
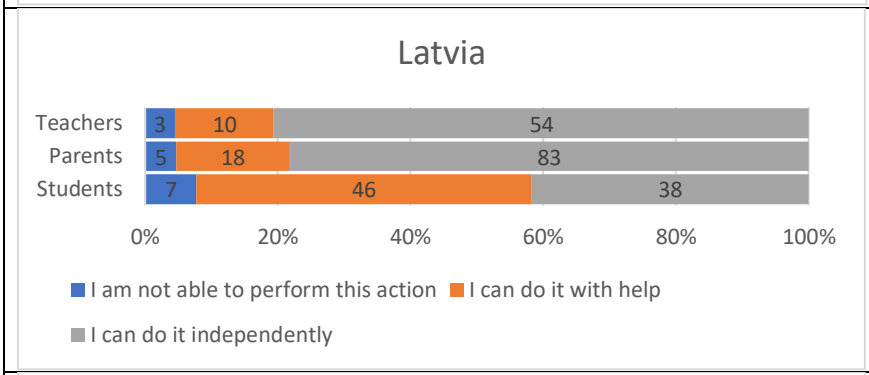
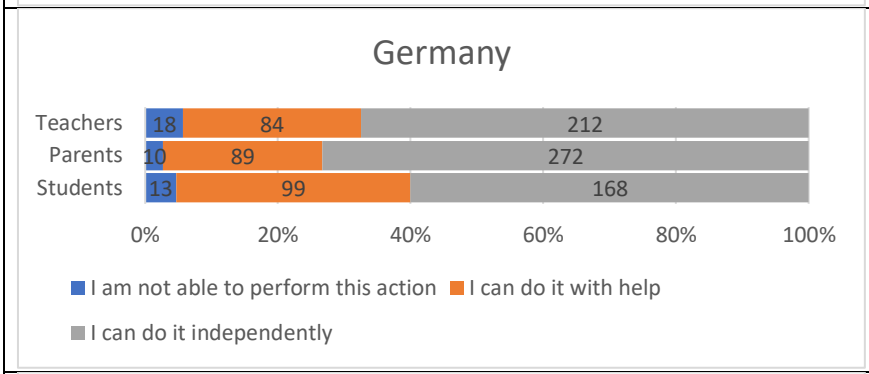
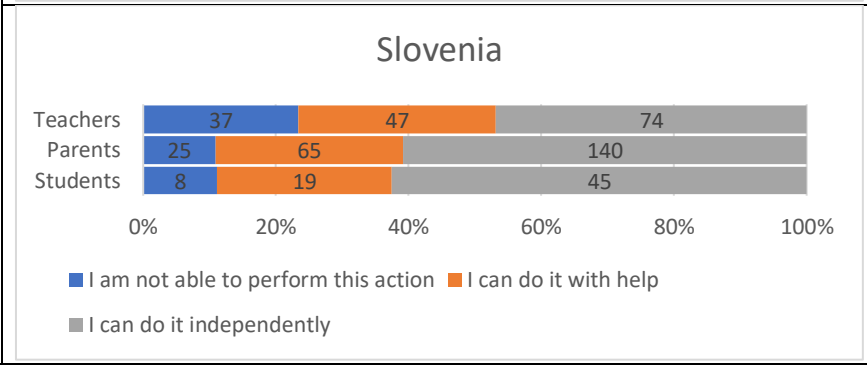
Digital skills and tasks:
a) Download and save learning resources from/to websites or learning platforms (*pictures on the right for this question*);
b) Upload and share learning resources from/to websites or learning platforms;
c) Participate in a discussion forum on the Internet;
d) Participate in social networks;
e) Produce a text using a word processing programme;
f) Capture and edit digital photos, movies, or other graphics;
g) Work in a shared cloud (e.g. Google Drive, Dropbox).



The dominant majority of interviewees said they can do the respective task independently, a small fraction requires assistance, and a minimum minority cannot perform the action. (The typical representation is given on the right).

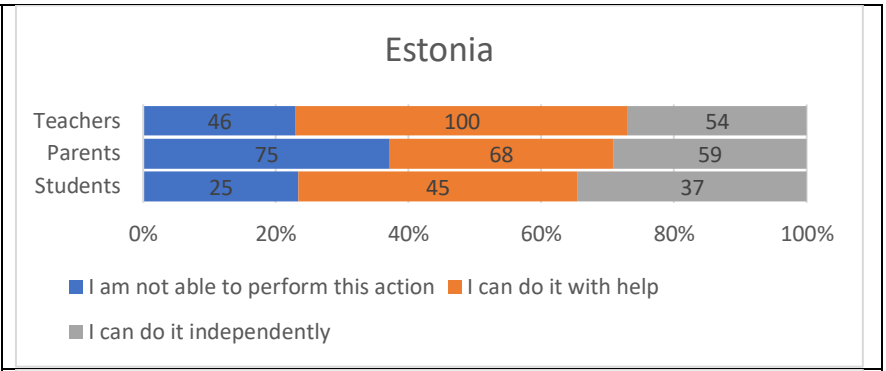
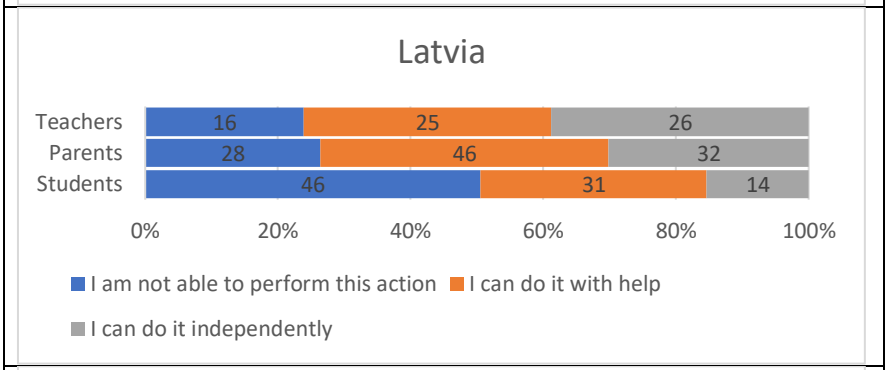
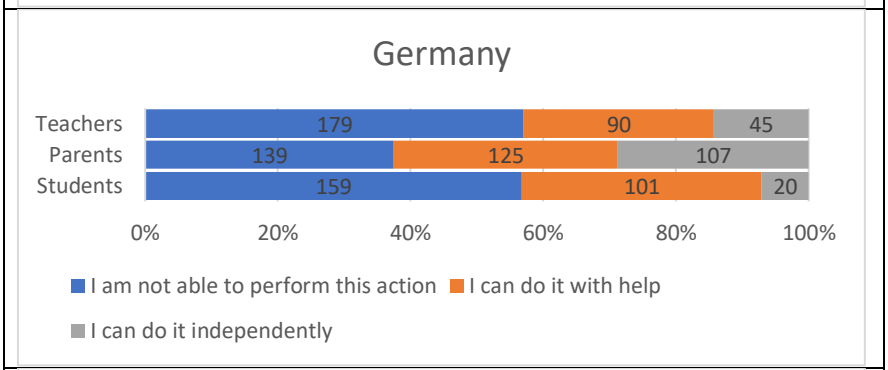
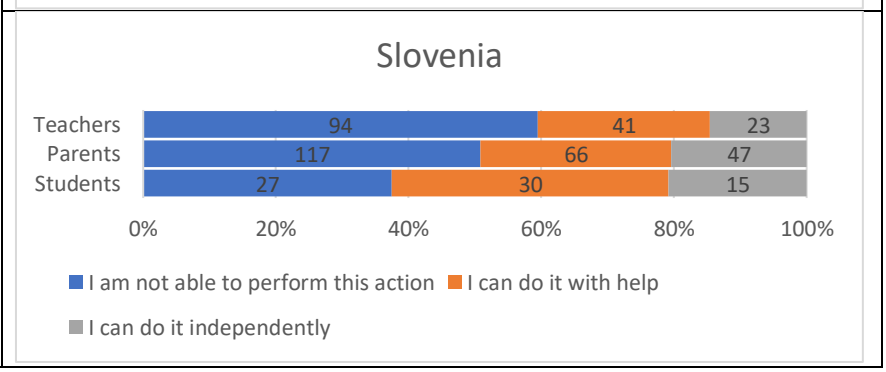
The fraction of respondents who perform the tasks in Estonia and Latvia is under 3%, while the similar portion in Germany and Slovenia reaches 5% and 20%, respectively.

Group 2. Good skills

Digital skills and tasks: a) Recognise fake news (intentional spread of false information) (*pictures on the right for this question*); b) Download and install software on a computer; c) Use ICT to conduct experiments (collecting data and/or images, storing them, documenting observation, etc.); d) Use the Internet safely to protect your privacy and online reputation; e) Create a presentation with built-in video or audio clips; f) Create a presentation with simple animation functions; g) Use a spreadsheet programme for calculations, diagrams etc. In this group the answers did not range much between the countries and groups of respondents.	   

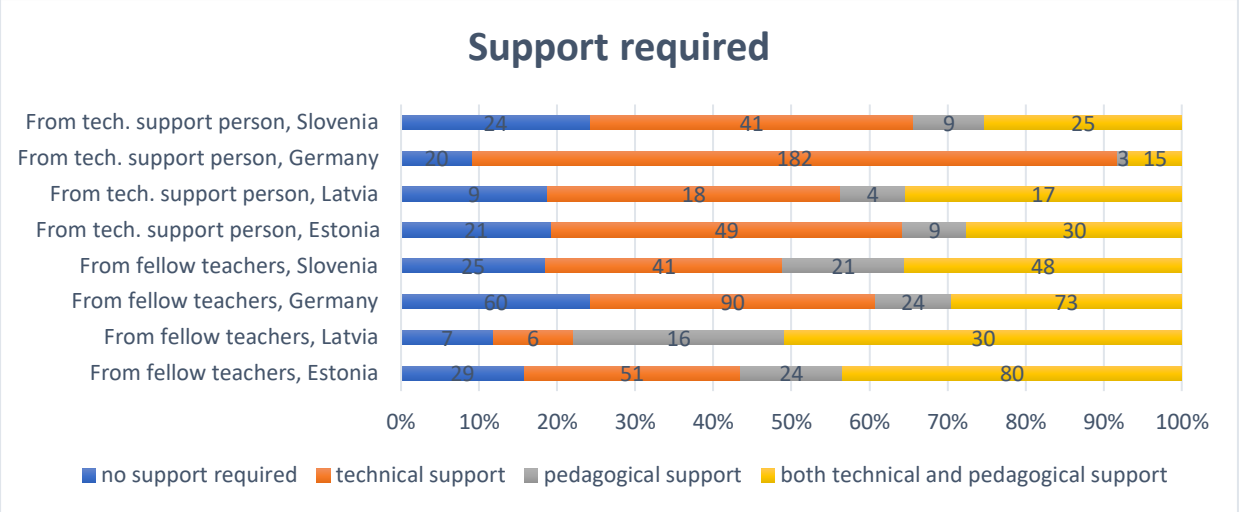
More than half of respondents, on average, said that they could do the following task independently; on average, about 30% said that they can do it with some help, and 10-20% said that they cannot perform this task.

Group 3. Moderate and low skills

Digital skills and tasks: a) Prepare materials to use with an interactive whiteboard/smart screen (*pictures on the right for this question*); b) Code/programme apps, programmes and/or robots; c) Create learning materials in apps or in different digital learning environments (e.g. LearningApp); d) Create and maintain blogs or websites; e) Create a database (e.g. Access, Base).	   

Over two-thirds of respondents said that they cannot perform this task or require assistance to perform it, and under one-third of respondents admitted that they do the task independently. The difference between the countries is not huge, still in Estonia and Latvia the proportion of interviewees who cannot perform this action is considerably smaller than in Germany and Slovenia.

7. ICT support required and offered in kindergarten / at home / during studies



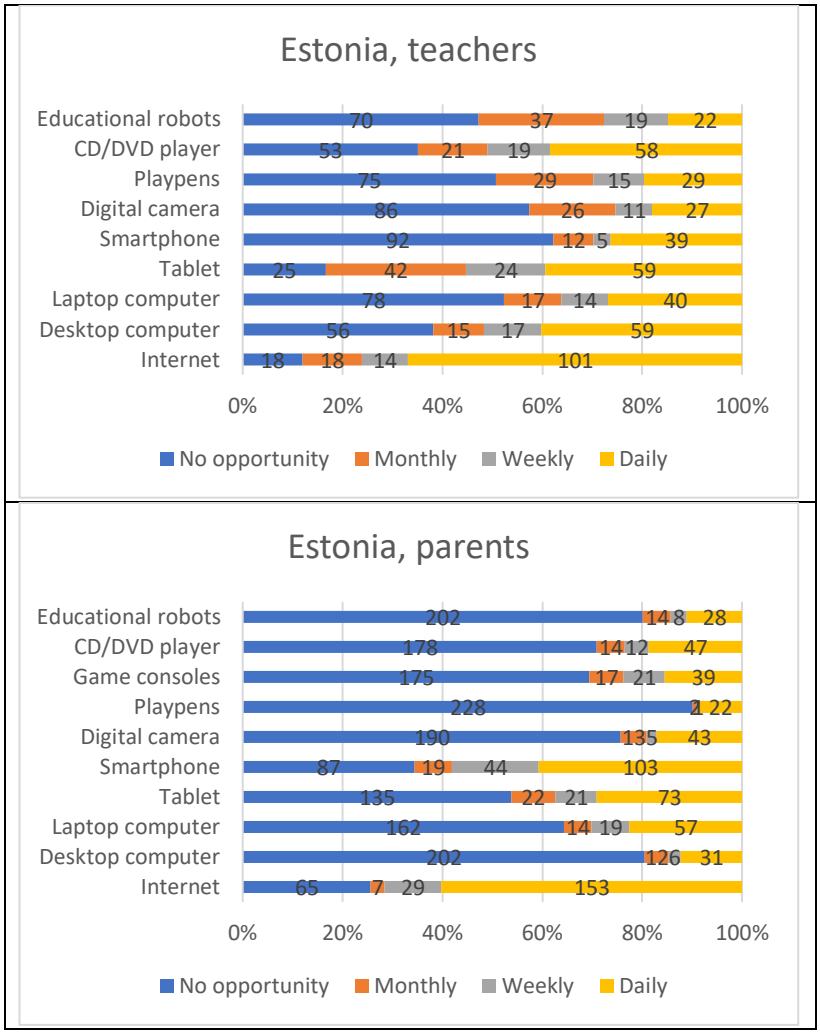
The three target groups were asked which kind of support they receive from colleagues, IT professionals, the Internet, superiors, and friends if needed.
Parents and students often responded that they do not need any support. The situation is different with teachers. They still do not often need support from friends, the Internet, or the administration. Still, they are open to support from colleagues and IT experts. Roughly only 20% in all the countries do not need support from colleagues or tech specialists. Still, quite often, kindergarten teachers need technical support from IT experts, and they also need tech, pedagogical, and both technical and pedagogical support from colleagues.

8. Opportunity for children to use digital devices and services at home with parents or at kindergarten with teachers.

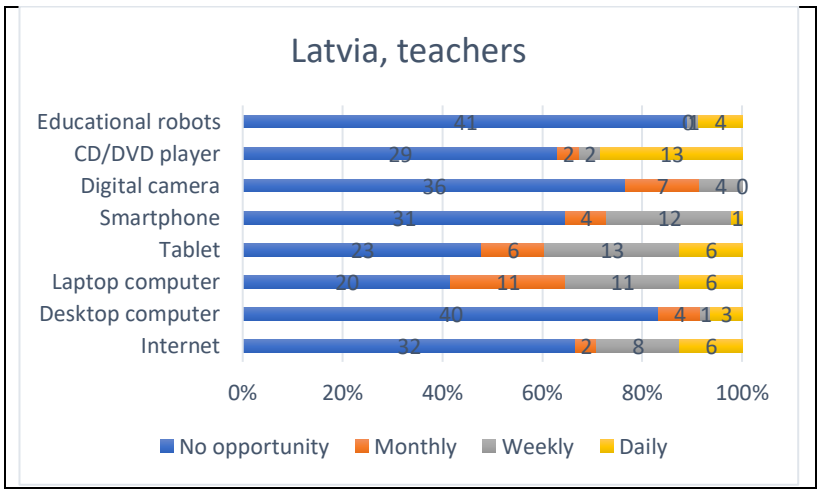
The survey asked the respondents which technologies were used in the kindergartens and families for educational purposes. The answers allowed us dividing the results into 3 groups:

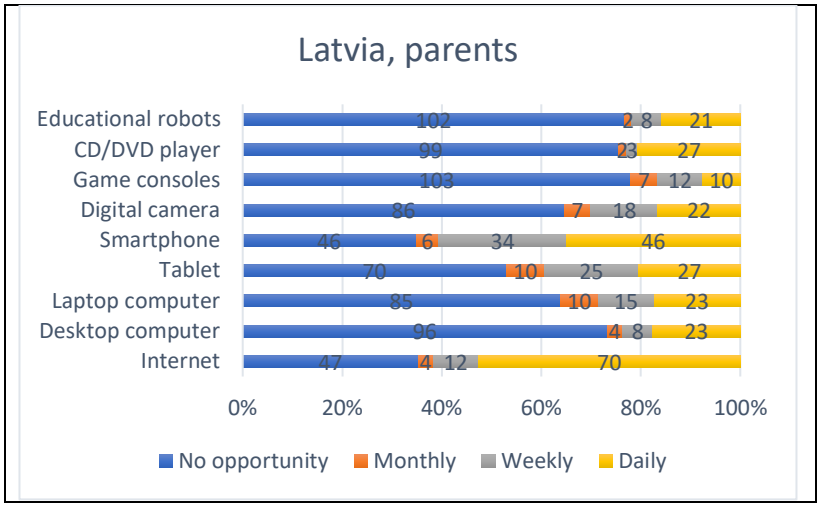
a) Technologies used more or less frequently in all the surveyed countries (Internet, tablet, smartphone, digital camera or camcorder, CD/DVD player);
b) Technologies popular in one or two countries (desktop computer, laptop, playpens, Tonie-/Tigerbox, educational robots);
c) Technologies rarely used in all the countries (e-book reader, digital reading and books);
d) Technologies used only with parents (game consoles).

We will concentrate on the technologies common for each country. If fewer than 10% of respondents answered that they use this technology, this technology is not mentioned in general results.

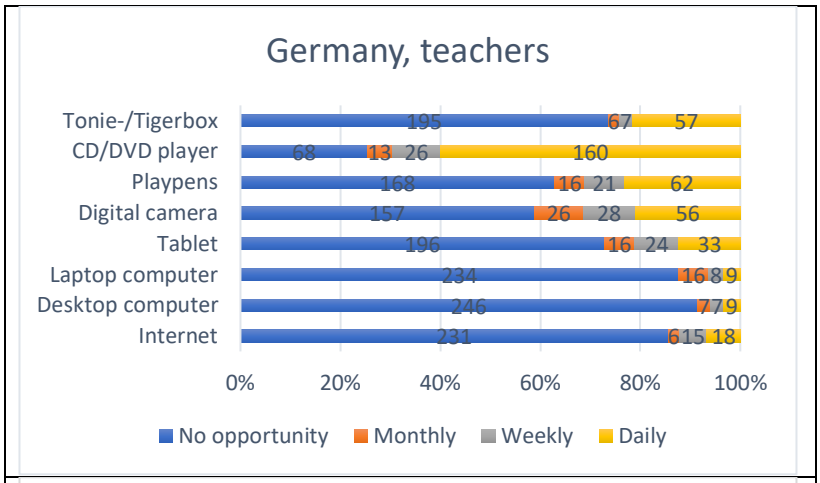


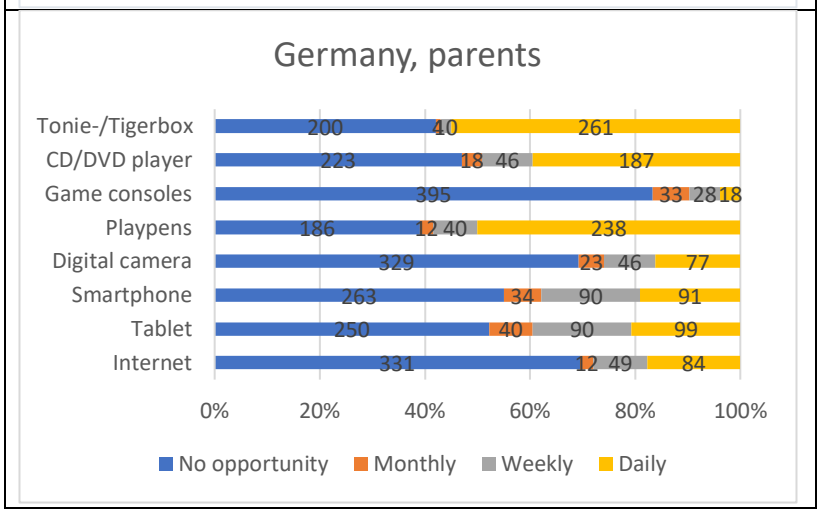
Estonian teachers and parents offer their preschool children the widest variety and frequency of educational technologies among surveyed countries.
The survey also shows that technologies are used in kindergartens more often than at home. Only smartphones and game consoles are used more often at home than in kindergartens.



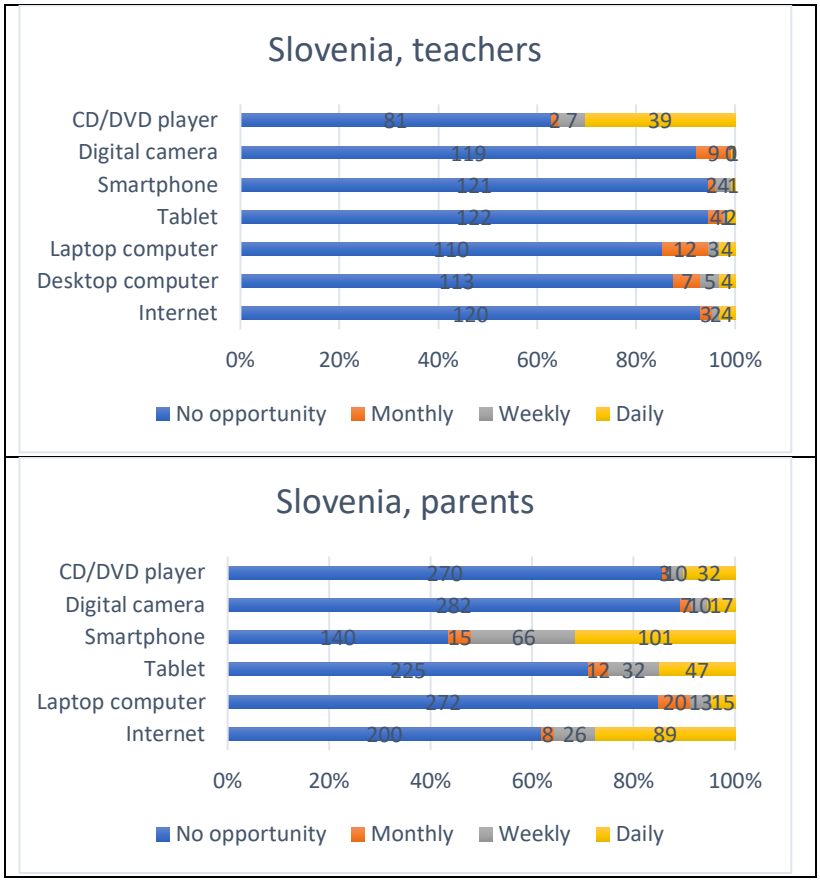


In Latvia, parents generally offer their children a richer digital experience than kindergartens in terms of frequency and variety.
Only educational robots and laptops are more often used in kindergartens than at home.





In Germany, parents create for their children more opportunities than child-care institutions. All the technologies are more often used at home. The only technology more frequently used in kindergartens is a CD/DVD player.



In Slovenia, parents offer their children more experience with new technologies. Still, even the most frequently used technology (smartphone) is used by almost 60% of parents with some level of frequency.
Digital technologies used in kindergartens are quite limited (under 10% of responses). The only frequent digital device by a third of teachers is a CD/DVD player.

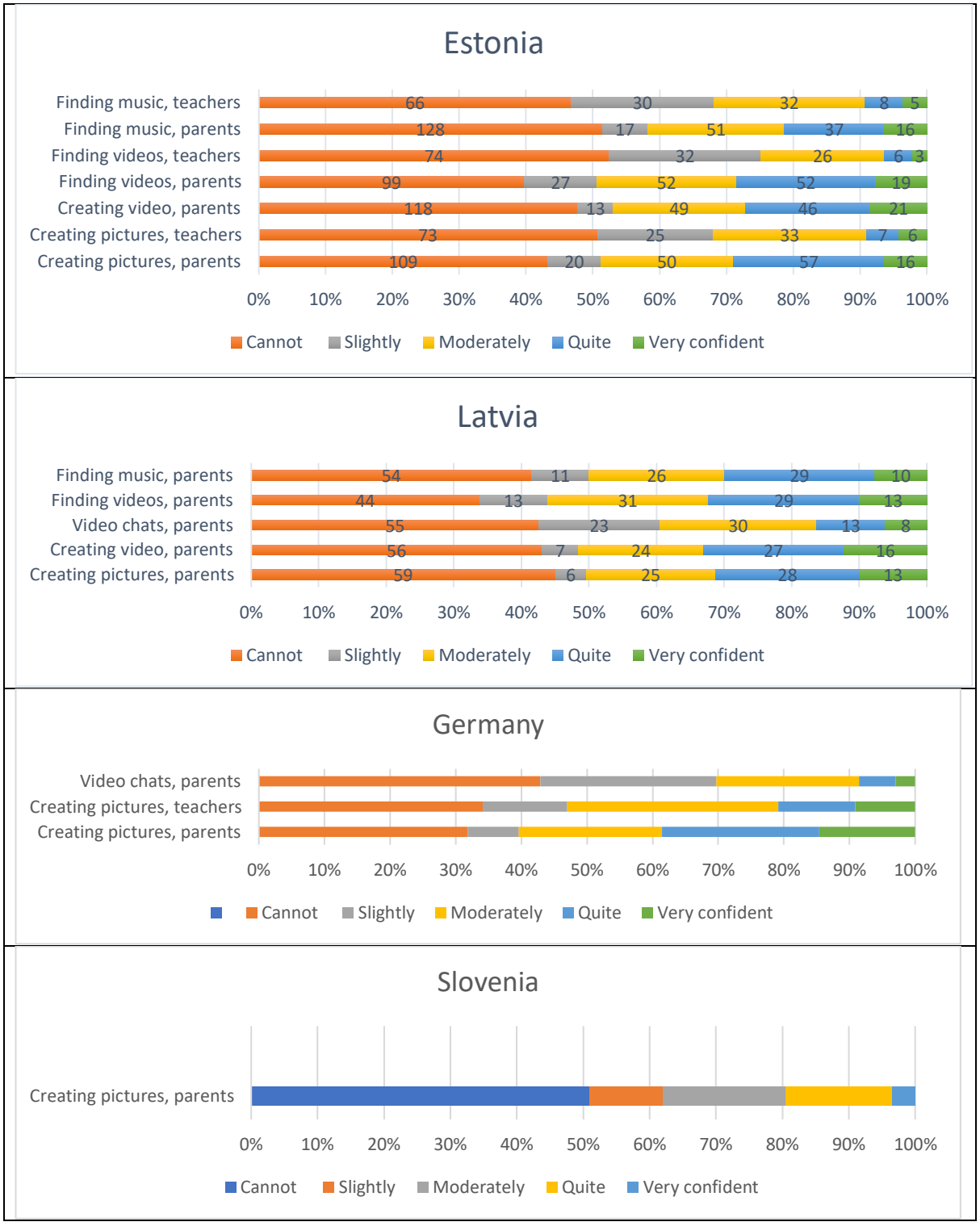
Overall, the survey shows that Estonia offers their children broader digital educational experiences regarding technologies used and frequency. The number of technologies and opportunities in the other three surveyed countries is narrower than in Estonia. In Latvia, Germany, and Slovenia, parents create for their children richer digital environments than kindergartens. This trend is not typical of Estonia. The smallest number of technologies offered and opportunities to use them are found in Slovenia, both in kindergartens and at homes.

9. Children's confidence in doing different activities/actions using ICT devices

The survey analyzed the main areas that the children of preschool age can perform. The results allowed identifying skills that the children possess and divide the counties into some groups (pictures illustrate the results):

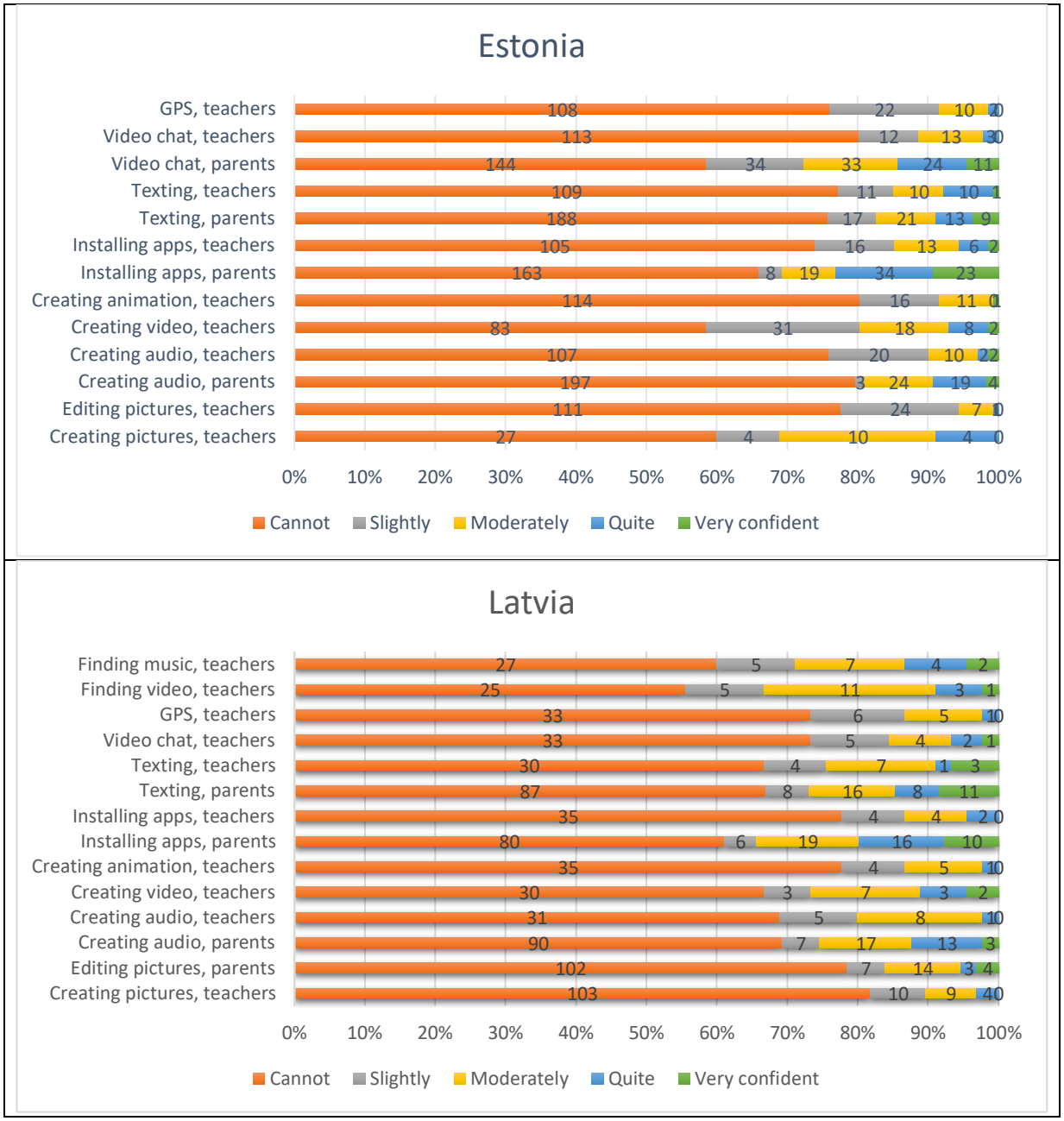
a) High skills: half or more interviewees mentioned that their children have at least a basic level of respective skill;

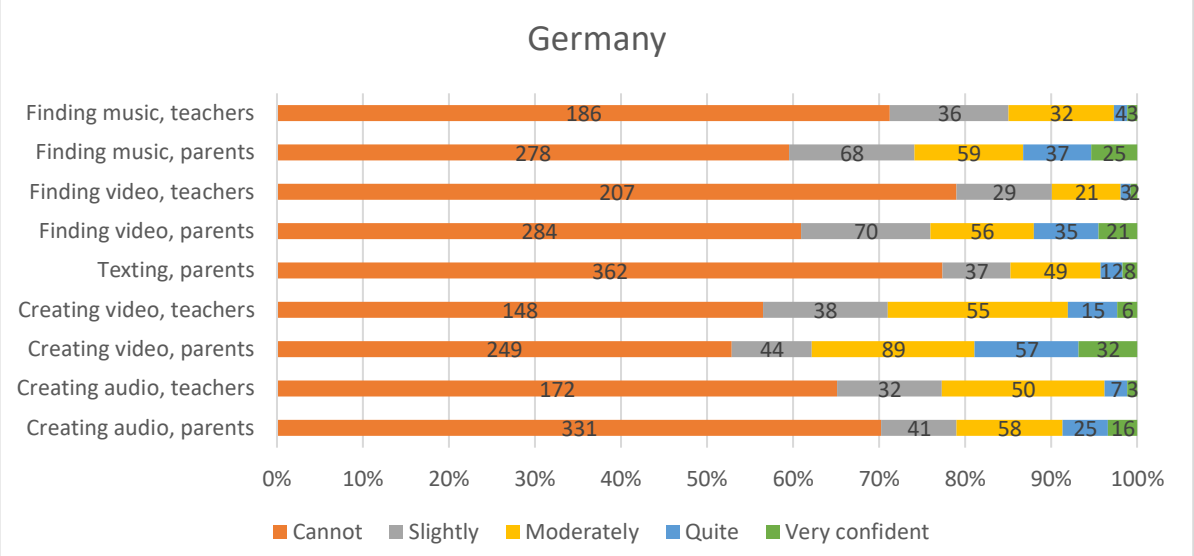
High skills

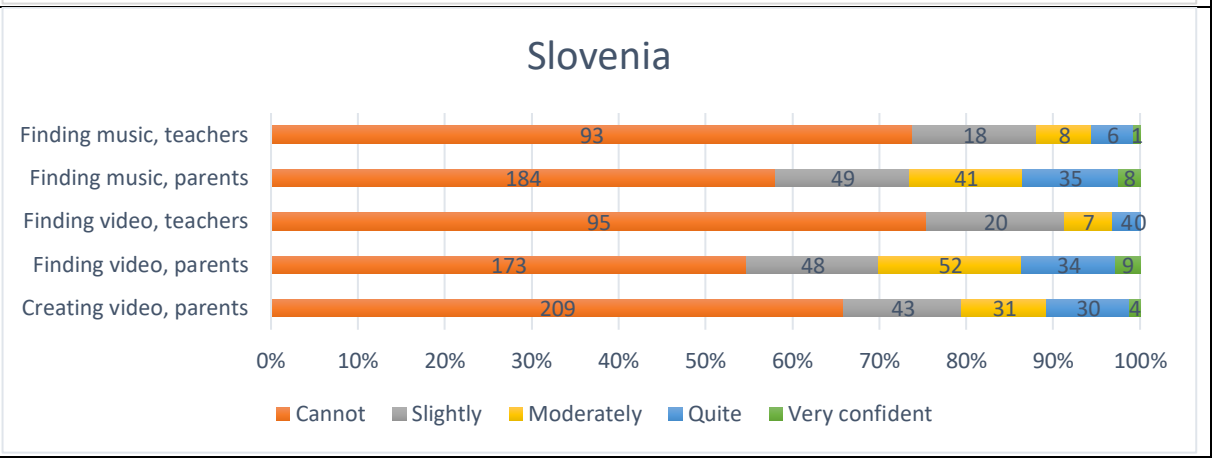


a) Moderate skills: 20-50% of interviewees mentioned that their children have some level of respective skills;

Moderate skills

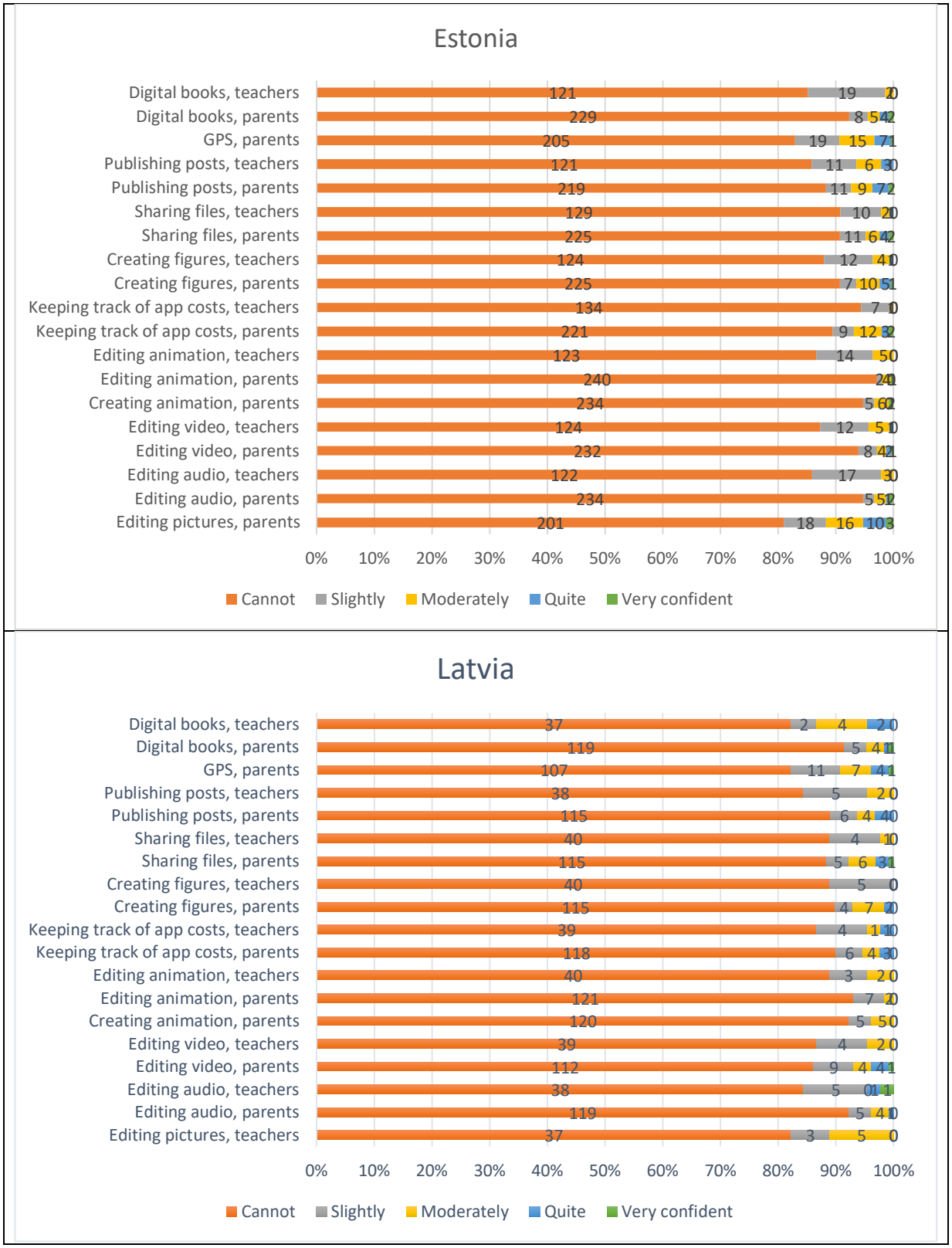

Estonia
GPS, teachers 108 22 10 0
Video chat, teachers 113 12 13 3 0
Video chat, parents 144 34 33 24 11
Texting, teachers 109 11 10 10 1
Texting, parents 188 17 21 13 9
Installing apps, teachers 105 16 13 6 2
Installing apps, parents 163 8 19 34 23
Creating animation, teachers 114 16 11 0
Creating video, teachers 83 31 18 8 2
Creating audio, teachers 107 20 10 2
Creating audio, parents 197 3 24 19 4
Editing pictures, teachers 111 24 7 0
Creating pictures, teachers 27 4 10 4 0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Cannot Slightly Moderately Quite Very confident
Latvia
Finding music, teachers 27 5 7 4 2
Finding video, teachers 25 5 11 3 1
GPS, teachers 33 6 5 1
Video chat, teachers 33 5 4 2 1
Texting, teachers 30 4 7 1 3
Texting, parents 87 8 16 8 11
Installing apps, teachers 35 4 4 2 0
Installing apps, parents 80 6 19 16 10
Creating animation, teachers 35 4 5 1
Creating video, teachers 30 3 7 3 2
Creating audio, teachers 31 5 8 1
Creating audio, parents 90 7 17 13 3
Editing pictures, parents 102 7 14 3 4
Creating pictures, teachers 103 10 9 4
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Cannot Slightly Moderately Quite Very confident





Low skills: under 20% of interviewees mentioned that their children have at least basic level of respective skill.

Low skills


Estonia
Digital books, teachers
Digital books, parents
GPS, parents
Publishing posts, teachers
Publishing posts, parents
Sharing files, teachers
Sharing files, parents
Creating figures, teachers
Creating figures, parents
Keeping track of app costs, teachers
Keeping track of app costs, parents
Editing animation, teachers
Editing animation, parents
Creating animation, parents
Editing video, teachers
Editing video, parents
Editing audio, teachers
Editing audio, parents
Editing pictures, parents
121 19 2 0
229 8 5 4 2
205 19 15 7 1
121 11 6 3 0
219 11 9 7 2
129 10 2 0
225 11 6 4 2
124 12 4 1 0
225 7 10 5 1
134 7 0
221 9 12 8 2
123 14 5 0
240 2 1 0
234 5 6 2
124 12 5 1 0
232 8 4 2 1
122 17 3 0
234 5 5 2
201 18 16 10 3
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Cannot
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Editing animation, parents
Creating animation, parents
Editing video, teachers
Editing video, parents
Editing audio, teachers
Editing audio, parents
Editing pictures, teachers
37 2 4 2 0
119 5 4 1 1
107 11 7 4 1
38 5 2 0
115 6 4 4 0
40 4 1 0
115 5 6 3 1
40 5 0
115 4 7 2 0
39 4 1 1 0
118 6 4 3 0
40 3 2 0
121 7 2 0
120 5 5 0
39 4 2 0
112 9 4 4 1
38 5 0 1 1
119 5 4 1 0
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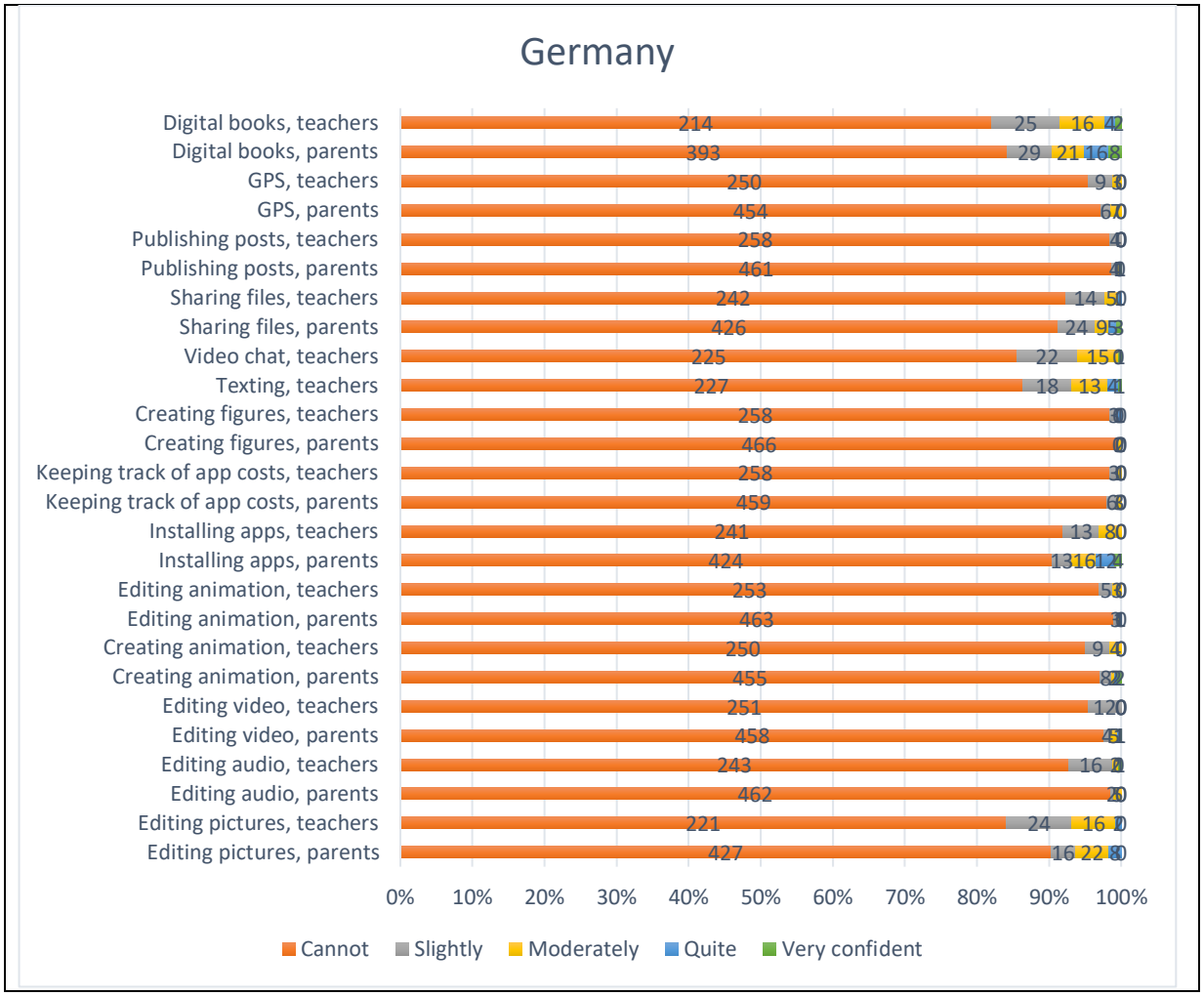
Germany
Digital books, teachers
Digital books, parents
GPS, teachers
GPS, parents
Publishing posts, teachers
Publishing posts, parents
Sharing files, teachers
Sharing files, parents
Video chat, teachers
Texting, teachers
Creating figures, teachers
Creating figures, parents
Keeping track of app costs, teachers
Keeping track of app costs, parents
Installing apps, teachers
Installing apps, parents
Editing animation, teachers
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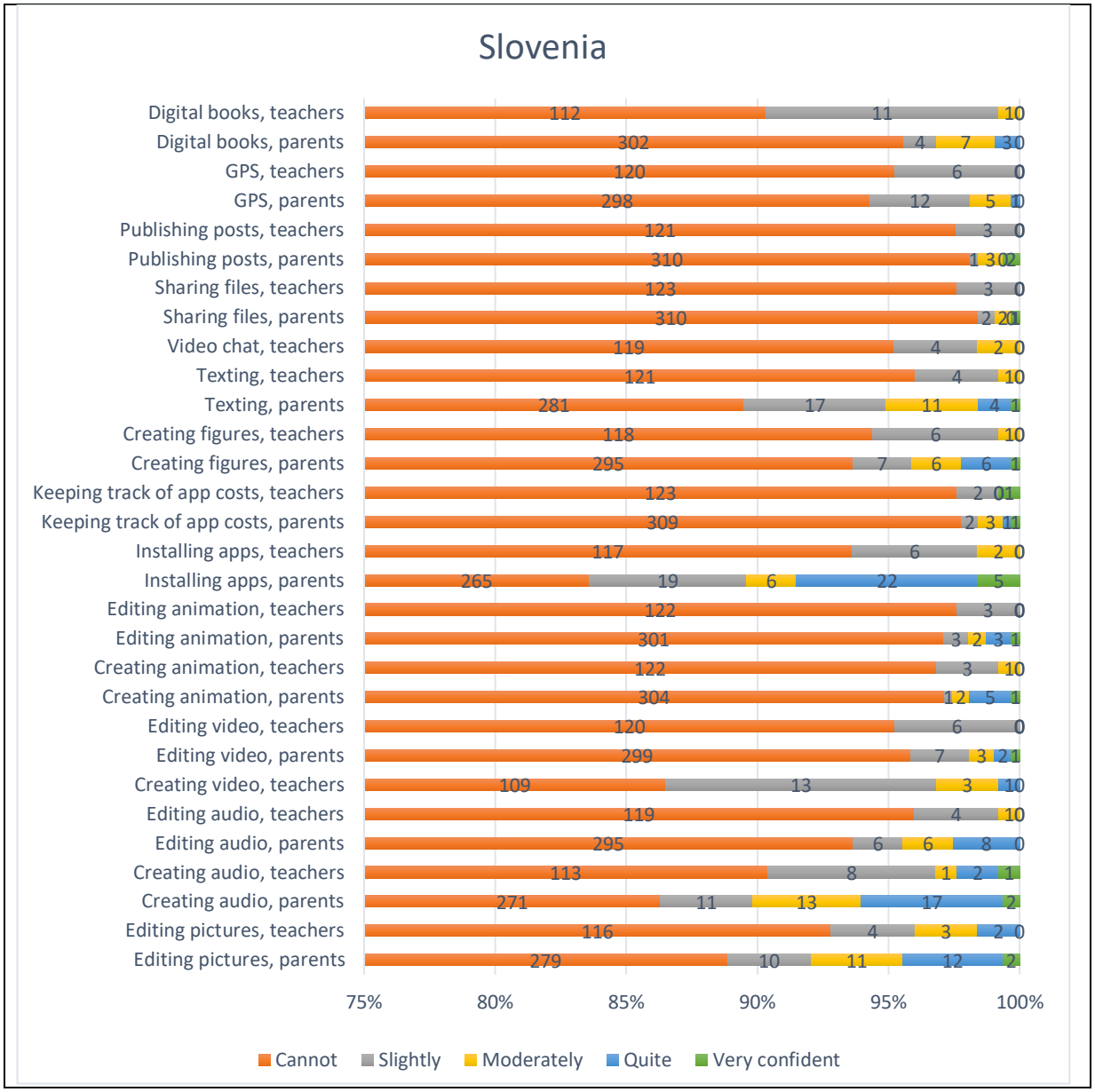
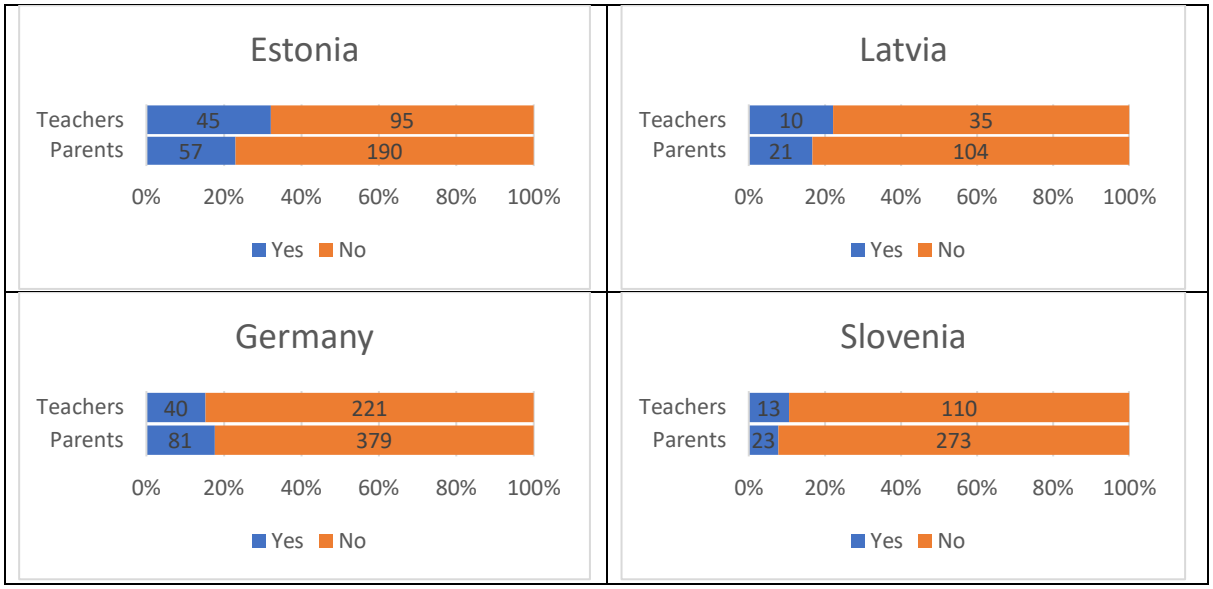


The assessment of skills of children by parents and kindergarten teachers has shown that the kids in Estonia have the highest level of digital skills. Half of the interviewees said that their children can do such things as create videos and pictures and find videos and music. The Estonian children are followed by children in Latvia, children in Germany, and children in Slovenia. The survey has shown that the children in Slovenia have the lowest level of digital skills.

10. Teaching skills purposefully

The teachers and parents were asked whether they purposefully teach digital skills. For all the skills, the respondents answered that they do teach them predominantly purposefully. It is worth noticing that teachers and parents from Latvia and Estonia more often mentioned that they do teach digital skills purposefully, which is usually a less frequent case for Germany and Slovenia.

Question: Do you purposefully teach to find and listen to music online or offline?

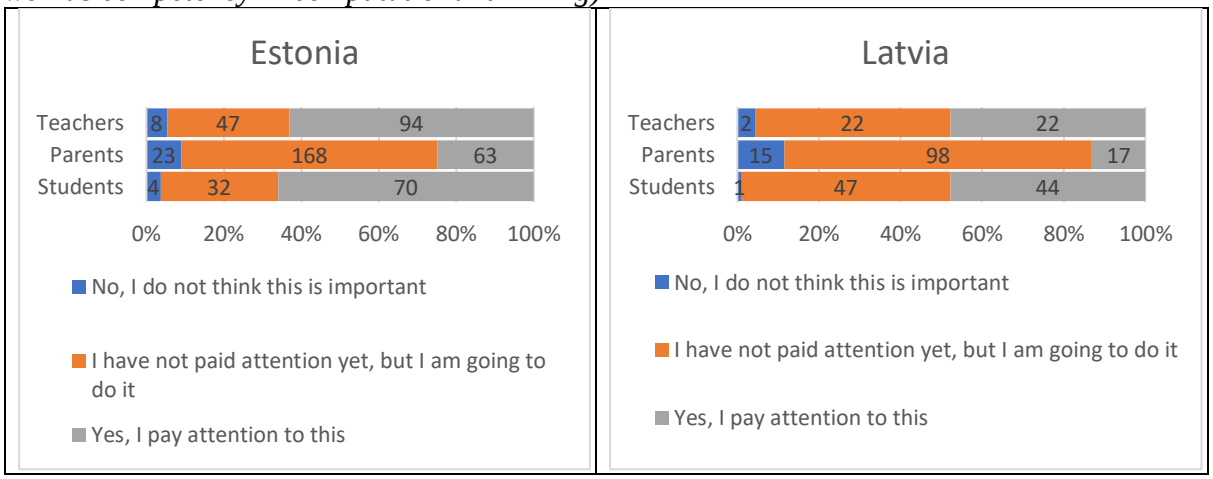


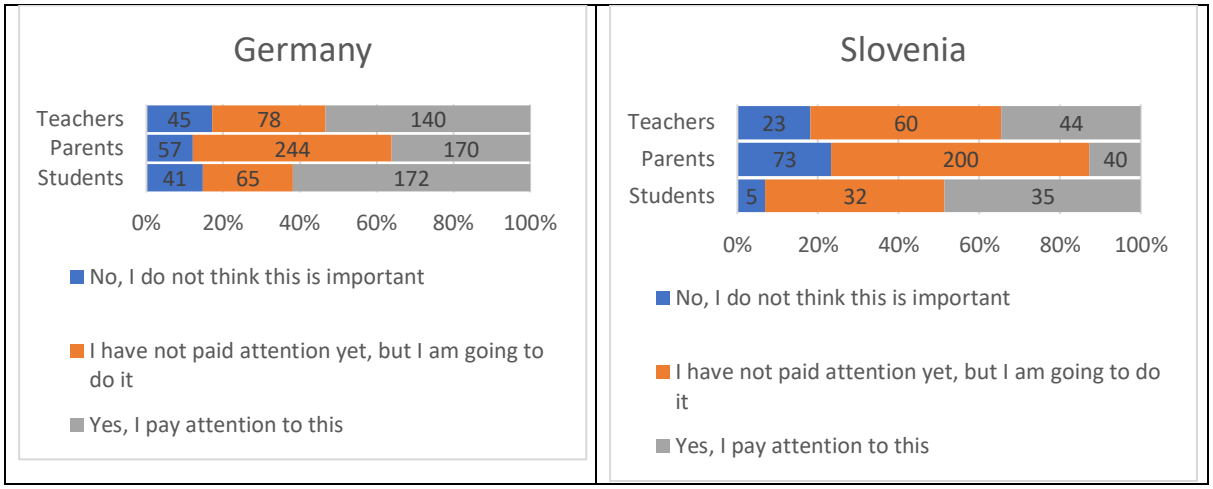
A correlation becomes noticeable if we compare the results of Question 7 and Question 8: If parents concentrate more on teaching digital skills to kids, the children. As a result, they handle devices and applications better.

11. Paying attention to the concerns connected with the digitalization of life.

The survey identified several areas of digitalization dominating modern life: digital identity, digital use, digital safety, digital security, digital socio-emotional skills, digital communication, digital literacy, and digital rights. The percentage of answers varies slightly from question to question, but the tendencies for the four countries are quite traceable, and trends are noticeable.

Question: Digital literacy (The ability to find, evaluate, utilize, share and create content as well as competency in computational thinking)





About half of the teachers in all countries pay attention to various digital skills. Noticeably, students pay attention to these skills more often than in-service kindergarten teachers.
The proportion of respondents who do not find these skills critical is tiny in Estonia and Latvia, but it gets higher in Germany in Slovenia.
30-60% of respondents said they will now pay more attention to teaching digital skills to children. The highest number of answers in the category “I have not paid attention yet, but I am going to do it” was given by parents in all the surveyed countries.

V. DigiChild survey versions

Survey A: Survey for Current Pre-School Teachers

Dear Respondent! Thank you for your interest in our DigiChild survey. This survey focuses on the digital education practices in pre-school educational establishments.

Seven partners committed to enhancing cooperation in the field of primary digital learning and improving the effectiveness of methods of teaching. The European Commission is working together with national governments to meet an ambitious goal for all citizens to become digitally literate at a young age. Four universities and three kindergartens joined their forces to upgrade digital education styles and approaches, to have a new generation of teachers able to efficiently engage digital devices to promote critical thinking, computational thinking, and teamwork skills from an early age.

This survey aims to map the current state of the art regarding the use of digital technologies in kindergarten. It also aims at analyzing the attitudes of pre-school teachers and parents of pre-school children towards the introduction of digital technologies at the early stages of education. The results of the survey will be used to develop a course "Development of Digital Competences in Pre-School Education". The course will be offered in different formats: to current students, in-service teachers in the face-to-face format, and online in the MOOC format. Answering all the questions will take 20-30 minutes maximum. Please do not interrupt the survey as this program does not allow saving the data and you will have to start it again. Your responses are fully anonymous and that is why we are kindly asking you to be as sincere and honest as you can in answering the questions. The survey is conducted as a part of the Erasmus+ project 2020-1-EE01-KA226-HE-093388 “Developing Teachers' Skills to Educate PreSchool Children With and Through Digital Technologies/DigiChild” (01.03.2021-28.02.2023). In this survey, seven partners - the University of Tartu and Rakvere Rohuaia Kindergarten (Estonia), Heidelberg University of Education (Germany), Primorska University and Vrtec Koper Kindergarten (Slovenia), University of Latvia and CreaKids Kindergarten (Latvia) - want to learn and analyze the current situation of digital pre-school education in the European Union.

If you have any questions regarding the survey, please contact Oleksandra Golovko (oleksandra.golovko@ut.ee).

Questions

1. What is your country of residence?

Estonia
Germany
Latvia
Slovenia
Other country, please, specify:

2. Your gender:

female
male
other

3. Your age

___ years old

4. You have been working at kindergarten for

___ years.

1. Your qualifications for working in kindergarten:

Level 4: Secondary education (12-13 classes at school)
Level 5: Vocational school
Student for Level 6: Bachelor Student in Pre-School Pedagogy

Level 6: Bachelor's Degree in Pre-School Pedagogy
Level 6: Bachelor's Degree in any other area
Level 7: Master's Degree in Pre-School Pedagogy
Level 7: Master's Degree in any other area or Diploma
Other: please specify

6. Your working position:

teacher
assistant
manager/leader/director
other: please specify

7. Number of children in your kindergarten:

___

8. How old are the children in your kindergarten?

From ___ to ___ years old.

9. How often do you use ICT ((Information Communication Technologies – e.g. smartphones, applications, programmes, tablets, etc.) in your professional and personal life?

	never	rarely	sometimes	often
professional life				
personal life				

10. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree	Hard to say
In view of numerous socialization influences on children, there is little I can do to help children to learn how to use ICT meaningfully.					
Children should be given the opportunity to become familiar with ICT in kindergarten.					
It is one of my tasks to accompany children's experiences with ICT.					
While children spend a lot of time with ICTs, these do not have to play a role in the kindergarten as well.					
The use of ICTs is the task of the school and not of the kindergarten.					
ICT should be an integral part of everyday life in the kindergarten.					
ICTs are suitable to promote further educational areas (e.g. language development, math, natural sciences).					
Personally, I don't want to get involved in the use of ICT in kindergarten. But if a colleague in the team would like to do so – it's OK.					

11. Please select how important the following goals are in terms of using ICT in kindergarten.

	Not important	Slightly important	Moderately important	Quite important	Very important
Information management (including information search, evaluation). The child is able to find and select the necessary information online using a search engine (e.g. find a cartoon on YouTube).					
Communication in digital environments (including communication with the help of digital devices, netiquette, digital identity management). The child is able to use digital tools or applications to communicate with parents, groupmates, and teachers e.g. to send emoticons or simple texts, following agreed rules of netiquette (e.g. not to send messages too late). The children learn about the opportunities and dangers of the online world.					
Digital content creation (including copyrights, licenses, programming). The child is able to create and edit simple digital materials - photos, animation, audio, video. The child can control robots using visual programming languages and software (e.g. Matatalab, Lego WeDo 2.0).					
Security (including protection of the device, personal data, health, and the environment). The child learns about the potential risks and opportunities of the digital world. The child is able to give examples of how the use of technology can harm and benefit the environment.					
Problem-solving (incl. solving technical problems; innovation and creative use					

of technology; Identifying digital competence gaps). The child can describe a possible problem with the device and, if necessary, ask a teacher for help. The child, with the teacher's help, can use digital technology to do creative tasks (e.g. draw pictures, find a solution to a problem, identify an animal). The children can assess their own digital competency and explain what they can already do.					

12. Please choose where you think children should learn how to use ICT.

	They should not learn	In the kindergarten	At home	Both in the kindergarten and at home
Children get acquainted with ICT.				
Children learn how to technically handle ICT.				
Children learn to recognize the opportunities, advantages, disadvantages, and dangers of ICT.				
Children learn to consciously select ICT according to their needs.				
Children learn how to produce their own ICT-products (photos, videos, cartoons).				

12. How often have you used ICT for the following activities in the last 3 months?

	never	monthly	weekly	daily
For communication with children, parents, and other educational institutions.				
For sharing and exchanging digital knowledge and experience with other kindergarten teachers.				
For reflecting, critically assessing, and developing digital pedagogical practice in kindergarten.				
For professional development and communication in the field of Early Childhood Education and Care: To use digital technologies to engage in collaboration with other educators, sharing and exchanging knowledge and experience, and collaboratively innovating pedagogical practices.				

For selecting and using digital resources in kindergarten by considering the specific learning objective, context, pedagogical approach, and learner group.				
For modifying digital content (e.g. video file, audio file, text file, content presentations).				
For creating or co-creating new digital content.				
For organizing digital content and making it available to learners, parents, and other educators.				
For protecting sensitive digital content. To respect and correctly apply privacy and copyright rules. To understand the use and creation of open licenses and open educational resources, including their proper attribution.				

14. To what extent are you confident in doing the following?

	I am not able to perform this action	I can do it with help	I can do it independently
Download and save learning resources from/to websites or learning platforms for children to use.			
Upload and share learning resources from/to websites or learning platforms for children to use.			
Participate in a discussion forum on the Internet.			
Participate in social networks.			
Produce a text using a word processing programme.			
Capture and edit digital photos, movies, or other graphics.			
Work in a shared cloud (e.g. Google Drive, Dropbox).			
Create a database (e.g. Access, Base).			
Create an online questionnaire/survey (e.g. Google form, Lime Survey, Survey Monkey).			
Use a spreadsheet programme for calculations, diagrams etc. (e.g. Excel, STTP, Calc).			
Create a presentation with simple animation functions.			
Create a presentation with built-in video or audio clips.			

Create and maintain blogs or websites.			
Prepare materials to use with an interactive whiteboard/smart screen.			
Code/programme apps, programmes and/or robots.			
Create learning materials in apps or in different digital learning environments (e.g. LearningApp).			
Use the Internet safely to protect your privacy and online reputation.			
Recognise fake news (intentional spread of false information).			
Download and install software on a computer.			
Use ICT to conduct experiments (collecting data and/or images, storing them, documenting observation, etc.).			

15. When using ICT in kindergarten, what kind of support do you get and from whom?

	no support required	technical support	pedagogical support	both technical and pedagogical support	Prefer not to say
From a more experienced / knowledgeable teacher.					
From ICT/technology coordinator.					
From experts from outside the preschool.					
From an online helpdesk, community, or website.					
From head master or kindergarten principle.					

If you need some other support, please specify.

16. How many children do you have in your group this year?

____

17. How old are children in your group this year?

____

18. How often do the children in your group have an opportunity to use the following ICT, services or educational robots?

Under which conditions do you, as a teacher, have access to the following devices and services for educational activities?

Please, answer both questions.

	[Please choose] - no opportunity for children - monthly opportunity for children	[Please choose] - no access for teacher - access for teacher on demand -free access for teacher

	- weekly opportunity for children - daily opportunity for children	
Internet connection		
Desktop		
Laptop		
Tablet/iPad		
Smartphone		
E-book reader (a device to read books and newspapers on screen)		
Interactive whiteboard/Smartboard		
Digital camera or camcorder		
Digital reading and books		
Playpens (e.g. Ting)		
Game consoles (e.g., Gameboy, X-BOX)		
CD/DVD player		
Tonie-/Tigerbox		
LegoWeDo		
Bee-Bot/Blue-Bot		
Ozobot		
Sphero Bolt		
Matatalab		
Qobo		
Dash and Dot		
Coding Express		

19. If your children use other digital devices, please, specify

20. How confident are, on average, the children in your group in doing the following activities using ICT devices? Do you teach these skills purposefully?

In this question, please, tick two options in every line.

	[Please choose] - Kids do not know how to use them - Kids are slightly confident, need strong assistance - Kids are moderately confident, need some assistance - Kids are quite confident, need no assistance - Kids are very confident, can teach others how to use them	[Please choose] - Yes, I teach these skills purposefully - No, I don't teach these skills purposefully
Create pictures		
Edit pictures		
Create audio		
Edit audio		
Create video		
Edit video		

Create animation		
Edit animation		
Install apps on a mobile device		
Keep track of the costs of mobile app use		
Create figures and diagrams		
Send/receive text messages		
Video chat or Webconference		
Share files and collaborate		
Publish posts, and /or pictures, and/or videos online		
Use maps or GPS		
Use maps or GPS		
Find and listen to music online or offline		
Find and use digital books online or offline		

21. If you have an example of successful activity, please, share with us.

22. Do you pay attention to the following concerns connected with the digitalization of our life?

	No, I do not think this is important	I have not paid attention yet, but I am going to do it in the future	Yes, I pay attention to this
Digital identity: The ability to create and manage one's online identity and reputation. This includes an awareness of one's online persona and management of the short-term and long-term impact of one's online presence			
Digital use: The ability to use digital devices and media, including the mastery of control in order to achieve a healthy balance between life online and offline.			

Digital safety: The ability to manage risks online (e.g. cyberbullying, cyber sexual abuse, radicalization) as well as problematic content (e.g. violence and obscenity), and to avoid and limit these risks.			
Digital security: The ability to detect cyber threats (e.g. hacking, scams, malware), to understand best practices and to use suitable security tools for data protection.			
Digital socio-emotional skills: The ability to be empathetic and build good relationships with others online.			
Digital communication: The ability to communicate and collaborate with others using digital technologies and media.			
Digital literacy: The ability to find, evaluate, utilize, share and create content as well as competency in computational thinking.			
Digital rights: The ability to understand and uphold personal and legal rights, including the rights to privacy, intellectual property, freedom of speech, and protection from hate speech.			

23. The team will appreciate immensely your further comments and suggestions. If you have any, please share here.

Dear Respondent!

We would like to express our sincere gratitude for the time and energy you invested in this survey and the development of science and education. Please, do not forget to press the button "NEXT".

Yours,

DigiChild project team

Survey B: Survey for Parents of Pre-School Children

Dear respondent! Thank you for your interest and participation in our DigiChild survey.

Information and communication technologies (ICT), shape our everyday lives. At work, in educational institutions as well as in leisure time and at home, we use ICT for communication and storage of information. Digital media biographies begin already in early childhood. Children therefore need sensitive guidance and support in the family and in day-care facilities. The aim of this survey is to record the current status of the use of digital technologies in kindergarten as well as the attitude of pedagogical professionals towards it. In addition, the attitudes of parents with daycare children regarding digital technologies in the early phases of education are to be recorded. The results of the survey will be used to develop further training modules in the field of early digital media education for educational professionals in practice.

In addition, modules for students in the field of early education and a MOOC format for online use for professionals in practice will be developed.
Four universities and three kindergartens in Estonia, Germany, Latvia, and Slovenia have joined forces to improve methods and approaches in the field of digital literacy training so that pedagogical professionals in practice and future professionals will be able to use digital devices efficiently and meaningfully in daycare centres (kindergartens). It will take approximately 30 minutes to answer the questions. Please do not interrupt the survey, as the program does not allow you to save the data and you would have to start the survey again. Your answers will be anonymous, so please answer the questions as sincerely and honestly as possible.
The survey is conducted in the framework of the Erasmus+ project 2020-1-EE01-KA226-HE-093388 "Developing Teachers' Skills to Educate Pre-School Children with and Through Digital Technologies/DigiChild" (01.03.2021-28.02.2023). The University of Tartu and Rakvere and Rohuaia Kindergarten (Estonia), Heidelberg University of Education (Germany), Primorska University and Vrtec Koper Kindergarten (Slovenia), University of Latvia and CreaKids Kindergarten (Latvia) are involved in this survey.
If you have any questions about the survey, please, contact Oleksandra Golovko (oleksandra.golovko@ut.ee).
Thank you very much for participating!

1. What is your country of residence?
Estonia
Germany
Latvia
Slovenia
Other, please, specify:
2. How many children do you have in your family?
1
2
3
4
5
more than 5
3. How old are your children?
Please, provide the information about as many children as you have
child one - ___ years old
child two - ___ years old
child three - ___ years old
child four - ___ years old
child five - ___ years old
Please, answer the following questions, having in mind the same child aged 1-7.
4. How old is this child?
1
2
3
4
5
6
7
5. Gender of your child
boy

girl

6. Does your child face any of the following difficulties that mean they cannot do what other children do?

Physical disabilities or illnesses
Learning difficulties
Mental disabilities
Multiple disabilities or difficulties
No, he/she does not face any difficulties

7. How often does your child have the opportunity to use the following devices and services at home?

Who has access to the following at home?

Please, answer both questions.

	[Please choose] - Child has no access - Child has monthly access - Child has weekly access - Child has daily access	[Please choose] - No access for anyone - Access for parents only - Child has access when supervised by parent - Child has access independently
Internet connection		
Desktop computer		
Laptop		
Tablet/iPod		
Smartphone		
E-book reader (a device to read books and newspapers on screen)		
Digital camera or camcorder		
Digital reading and books (books that can be read on e-book readers or tablets)		
Playpens (e.g. Ting)		
Game consoles (e.g., Playstation, Nintendo, XBOX)		
CD/DVD player		
Tonie-/Tingerbox		
Educational robots (Bee-Bot/Blue-Bot; Ozobot, LEGO WeDo 2,0...)		

If you use some other ICT (Information and Communication Technologies – programmes, applications, smart devices) with your child at home, please, specify:

8. How confident is your child in doing the following activities using ICT devices?

Do you teach these skills purposefully to your child at home?

Please, answer both questions.

	[Please choose] - S/he does not know how to use them	[Please choose] - No, I do not teach them purposefully

	-S/he is slightly confident, need strong assistance -S/he is moderately confident, need some assistance -S/he is quite confident, need no assistance -S/he is very confident, can teach others how to use them	- Yes, I teach them purposefully
Create pictures		
Edit pictures		
Create audio		
Edit audio		
Create video		
Edit video		
Create animation		
Edit animation		
Install apps on a mobile device		
Keep track of the costs of mobile app use		
Create figures and diagrams		
Send/receive text messages		
Video chat or Web conference		
Share files and collaborate		
Publish posts, and /or pictures, and/or videos online		
Use maps or GPS		
Find and watch videos and films online or offline		
Find and listen to music online or offline		
Find and use digital books online or offline		

9. If you use ICT with your child at home, please, provide an example of a successful activity.

10. Which of the following skills and abilities do you teach to your child?

	I do not think this is essential	I have not paid attention yet, but I am going to do it	I pay attention to this
Digital identity: The ability to create and manage one's online identity and reputation. This includes an awareness of one's online persona and			

management of the short-term and long-term impact of one's online presence			
Digital use: The ability to use digital devices and media, including the mastery of control in order to achieve a healthy balance between life online and offline.			
Digital safety: The ability to manage risks online (e.g. cyberbullying, grooming, radicalization) as well as problematic content (e.g. violence and obscenity), and to avoid and limit these risks.			
Digital security: The ability to detect cyber threats (e.g. hacking, scams, malware), to understand best practices and to use suitable security tools for data protection.			
Digital social-emotional skills: The ability to be empathetic and build good relationships with others online.			
Digital communication: The ability to communicate and collaborate with others using digital technologies and media.			
Digital literacy: The ability to find, evaluate, utilize, share and create content as well as competency in computational thinking.			
Digital rights: The ability to understand and uphold personal and legal rights, including the rights to privacy, intellectual property, freedom of speech and protection from hate speech.			

11. Where do you think your child should learn how to use ICT?

	They should not learn ICT	In kindergarten	At home	Both in kindergarten and at home
Child gets acquainted with ICT.				
Child learns how to technically handle ICT.				
Child learns to recognize the opportunities, advantages, disadvantages, and dangers of ICT.				
Child learns to consciously select ICT according to their needs.				
Child learns how to produce their own ICT-products (photos, videos, cartoons).				

12. To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree	Hard to say
In view of numerous socialization influences on children, there is little I					

can do to help children to learn how to use ICT meaningfully.					
Children should be given the opportunity to become familiar with ICT at home.					
It is one of my tasks to accompany children's experiences with ICT.					
While children spend a lot of time with ICTs, these do not have to play a role at home as well.					
The use of ICTs is the task of the school.					
ICT should be an integral part of everyday life at home.					
ICTs are suitable to promote further educational areas (e.g. language development, math, natural sciences).					
Personally, I don't want to get involved in the use of ICT at home.					

13. Please select how important are the following goals in terms of using ICT at home.

	Not important	Slightly important	Moderately important	Quite important	Very important
Information management (including information search, evaluation). The child is able to find and select the necessary information online using a search engine (e.g. find a cartoon on YouTube).					
Communication in digital environments (including communication with the help of digital devices, netiquette, digital identity management). The child is able to use digital tools or applications to communicate with parents, groupmates, and teachers e.g. to send emoticons or simple texts, following agreed rules of netiquette (e.g. not to send messages too late). The children learn about the opportunities and dangers of the online world.					
Digital content creation (including copyrights, licenses, programming).					

The child is able to create and edit simple digital materials - photos, animation, audio, video. The child can control robots using visual programming languages and software (e.g. Matatalab, Lego WeDo 2.0).					
Security (including protection of the device, personal data, health, and the environment). The child learns about the potential risks and opportunities of the digital world. The child is able to give examples of how the use of technology can harm and benefit the environment.					
Problem-solving (incl. solving technical problems; innovation and creative use of technology; Identifying digital competence gaps). The child can describe a possible problem with the device and, if necessary, ask a parent for help. The child, with the parent's help, can use digital technology to do creative tasks (e.g. draw pictures, find a solution to a problem, identify an animal). The child can assess their own digital competencies and explain what they can already do.					

14. When using ICT at home, what kind of support do you get?

	No support required	Technical support	Content support	Both technical and content support	Prefer not to say
From preschool teachers					
From IT professionals					

From friends					
From relatives					
From colleagues					

If you need or get any other support, please specify

15. Number of books at home

under 50
50-100
100-500
500

16. How often do you use ICT in professional or/and personal life?

	never	rarely	sometimes	often
Professional life				
Personal life				

17. How often have you used ICT for the following activities in the past 3 months?

	never	monthly	weekly	daily
For communication with own and other families, teachers, and other institutions.				
For sharing and exchanging digital knowledge and experience with other colleagues.				
For continuous professional development (training, learning online, reading).				
For professional communication: To use digital technologies to engage in collaboration, sharing and exchanging knowledge and experience, and collaboratively innovating professional practice.				
For selecting and using digital resources at home for specific learning purpose.				
For modifying digital content (e.g. video file, audio file, text file, content presentations).				
For creating or co-creating new digital content.				
For organizing digital content and making it available to children at home and the family.				

18. To what extent are you confident in doing the following things?

	Not able to perform this action	I can do it with some help	I can do it independently
Download and save learning resources from/to websites or learning platforms for children to use.			
Upload and share learning resources from/to websites or learning platforms for children to use.			
Participate in a discussion forum on the Internet.			
Participate in social networks.			

Produce a text using a word processing programme.			
Capture and edit digital photos, movies or other graphics.			
Edit text online containing internet links and images.			
Work in a cloud (e.g. Google disk, Dropbox).			
Create a database. (e.g. Access)			
Edit a questionnaire online (e.g. Google-form, Limesurvey, Survey Monkey)			
Use a spreadsheet programme for calculations, diagrams, etc. (e.g. Excel, STTP, Calc).			
Create a presentation with simple animation functions.			
Create a presentation with video or audio clips.			
Create and maintain blogs or websites.			
Prepare materials to use with an interactive whiteboard/smart screen (e.g. interactive whiteboard, beamers, etc.).			
Code/programme apps, programmes and/or robots.			
Create learning materials in apps in different digital learning environments.			
Use the Internet safely to protect your privacy and online reputation.			
Recognise fake news (intentional spread of false information).			
Download and install software on a computer.			
Use ICT to conduct experiments (collecting data and/or images, storing them, documenting observation, etc.).			

19. Your age

_____

20. Your gender

male
female
other

21. Civil status of you as a parent

married / registered life partnership / living with your partner who is the child's parent
married / registered life partnership / living with your partner who is not child's parent
married / registered life partnership, not living with your partner
divorced / registered life partnership cancelled
widowed/life partner died
single

other
If you have some other civil status, please specify.

22. Your highest level of education
Level 2: Not finished basic school
Level 3: Basic school (9 classes at school)
Level 4: Secondary education (10 classes at school)
Level 4: Secondary education (12-13 classes at school)
Level 5: Vocational school
Level 6: Bachelor's Degree
Level 7: Master's Degree
Level 8: Doctor's degree
Other, please, specify
23. Your partner's highest level of education
Level 2: Not finished basic school
Level 3: Basic school (9 classes at school)
Level 4: Secondary education (10 classes at school)
Level 4: Secondary education (12-13 classes at school)
Level 5: Vocational school
Level 6: Bachelor's Degree
Level 7: Master's Degree
Level 8: Doctor's degree
Other, please, specify
24. The team will appreciate immensely your further comments and suggestions. If you have any, please share here.
Thank you!
Dear Respondent,
We would like to express our sincere gratitude for the time and energy you invested in this survey and in the development of science and education. Do not forget to press the button "NEXT"!
Sincerely Yours,
DigiChild team

Survey C: Survey for Future Pre-School Teachers / Students Majoring as Pre-School Teachers

Dear Respondent! Information and communication technologies (ICT), shape our everyday lives. At work, in educational institutions as well as in leisure time and at home, we use ICT for communication, studies, entertainment, storage of information, and other purposes. Digital media biographies begin already in early childhood. Children, therefore, need sensitive guidance and support in the family and in daycare facilities.
Four universities and three kindergartens from Estonia (the University of Tartu and Rakvere and Rohuaia Kindergarten), Germany (Heidelberg University of Education), Slovenia (Primorska University and Vrtec Koper Kindergarten), and Latvia (the University of Latvia and CreaKids Kindergarten) have joined forces to improve methods and approaches in the field of digital literacy training so that in-service and future pedagogical professionals could able to use digital devices efficiently and meaningfully at work.

In order to develop modules for study programs in early childhood education, we are surveying students' use of digital media, their skills, and their attitudes towards the use of digital technologies in kindergarten.
The results of the survey will be used to develop further training modules in the field of early digital media education for educational professionals in practice. In addition, modules for students in the field of early education and a MOOC format for online use for professionals in practice will be developed.
It will take approximately 15-20 minutes to answer the questions. Please do not interrupt the survey, as the program does not allow you to save the data and you will have to start the survey again. Your answers will be anonymous, so please answer the questions as sincerely and honestly as possible.
The survey is conducted in the framework of the Erasmus+ project 2020-1-EE01-KA226-HE-093388 "Developing Teachers' Skills to Educate Pre-School Children with and Through Digital Technologies/DigiChild" (01.03.2021-28.02.2023).
If you have any questions regarding the survey, please contact Oleksandra Golovko (oleksandra.golovko@ut.ee).
Thank you for allocating the time to participate in this survey!

1. Your country of residence

Estonia
Germany
Slovenia
Latvia
Other, please, specify

2. Your gender:

female
male
other

3. Your age:

____ years old

4. The university where you study

_____

5. Your programme:

pre-school teacher/education
primary school teacher/education
pedagogy
Other, please, specify:

6. Your semester:

Vocational education: 1 semester
Vocational education: 2 semester
Vocational education: 3 semester
Vocational education: 4 semester
Bachelor: 1 semester
Bachelor: 2 semester
Bachelor: 3 semester
Bachelor: 4 semester
Bachelor: 5 semester
Bachelor: 6 semester
Master: 1 semester
Master: 2 semester
Master: 3 semester

Master: 4 semester
Other, please, specify

7. How often do you use ICT (Information and Communication Technologies – programmes, applications, hardware) for studies and in personal life?

	never	rarely	sometimes	often
for studies				
in personal life				

8. How often have you used ICT for the following activities in the past 3 months?

	never	monthly	weekly	daily
For communication in a professional context (e.g. with fellow students, university lecturers, or other people related to your studies).				
For participating in online sessions (e.g. online courses, conferences).				
For university studies.				
For documentation and reflection of profession-related internships.				
For modifying digital content (e.g. video file, audio file, text file, content presentations).				

9. To what extent are you confident in doing the following?

	I am not able to perform this action	I can do it with help	I can do it independently
download and save learning resources from/to websites or learning platforms			
upload and share learning resources from/to websites or learning platforms			
participate in a discussion forum on the Internet			
participate in social networks			
produce a text using a word processing programme			
capture and edit digital photos, movies, or other graphics			
work in a shared cloud (e.g. Google Drive, Dropbox)			
create a database (e.g. Access, Base)			
create an online questionnaire/survey (e.g. Google form, Lime Survey, Survey Monkey)			
use a spreadsheet programme for calculations, diagrams, etc. (e.g. Excel, SPSS, Calc)			
create a presentation with simple animation functions			

create a presentation with built-in video or audio clips			
create and maintain blogs or websites			
prepare materials to use with an interactive whiteboard/smart screen (e.g. interactive whiteboard, beamers etc.)			
code/programme apps, programmes			
use the Internet safely to protect your privacy and online reputation			
recognise fake news (intentional spread of false information)			
download and install software on a computer			

10. When using ICT in relation to your studies, where do you get support in case you need it?

	never	rarely	sometimes	often
From fellow students with more knowledge and/or experience				
From the university media center/IT support service				
From my lecturers/teachers				
From the Internet				
From friends and family				

Other, please, specify:

11. Do you pay attention to the following concerns connected with the digitalization of our life?

	No, I do not think this is important	I have not paid attention yet, but I am going to do it in the future	Yes, I pay attention to this
Digital identity: The ability to create and manage one's online identity and reputation. This includes an awareness of one's online persona and management of the short-term and long-term impact of one's online presence.			
Digital use: The ability to use digital devices and media, including the mastery of control in order to achieve a healthy balance between life online and offline.			
Digital safety: The ability to manage risks online (e.g. cyberbullying, grooming,			

radicalization) as well as problematic content (e.g. violence and obscenity), and to avoid and limit these risks.			
Digital security: The ability to detect cyber threats (e.g. hacking, scams, malware), to understand best practices and to use suitable security tools for data protection.			
Digital social-emotional skills: The ability to be empathetic and build good relationships with others online			
Digital communication: The ability to communicate and collaborate with others using digital technologies and media			
Digital literacy: The ability to find, evaluate, utilize, share and create content as well as competency in computational thinking			
Digital rights: The ability to understand and uphold personal and legal rights, including the rights to privacy, intellectual property, freedom of speech and protection from hate speech			

12. Please select how important the following goals are in terms of using ICT in kindergarten.

	not important	slightly important	moderately important	quite important	very important
Information management (including information search, evaluation): The child is able to find and select the necessary information online using a search engine (e.g. find a cartoon on YouTube)					
Communication in digital environments (including communication with the help of digital devices, netiquette, digital identity management): The child is able to use digital tools or applications to communicate with parents, groupmates and teachers					

e.g. to send emoticons or simple texts, following agreed rules of netiquette (e.g. not to send messages too late). The children learn about the opportunities and dangers of the online world.					
Digital content creation (including copyrights, licenses, programming): The child is able to create and edit simple digital materials – photos, animation, audio, video. The child can control robots using visual programming languages and software (e.g. Matatalab, Lego WeDo 2.0).					
Security (including protection of the device, personal data, health and the environment): The child learns about the potential risks and opportunities of the digital world. The child is able to give examples of how the use of technology can harm and benefit the environment.					
Problem-solving (including solving technical problems; innovation and creative use of technology; identifying digital competence gaps): The child can describe a possible problem with the device and, if necessary, ask a teacher for help. The child, with the teacher´s help, can use digital technology to do creative tasks (e.g. draw pictures, find a solution to a problem, identify an animal). The children can assess their own digital competencies and explain what they can already do.					

13. Should children aged 0-7 learn how to do the following?

	No, they should not learn this	Yes, aged 0-3	Yes, aged 3-7
Create pictures			
Edit pictures			
Create audio			
Edit audio			
Create video			
Edit video			
Create animation			
Edit animation			
Install apps on a mobile device			
Keep track of the costs of mobile app use			
Create figures and diagrams			
Send/receive text messages			
Video chat or web conference			
Share files and collaborate			
Publish posts, and/or pictures, and/or videos online			
Use maps or GPS			
Find and watch videos and films online or offline			
Find and listen to music online or offline			
Find and use digital books online or offline			

14. The team will appreciate immensely your further comments and suggestions. If you have any, please, share here.

Dear Respondent!

We would like to express our sincere gratitude for the time and energy you invested in this survey and the development of science and education. Please, do not forget to press the button "NEXT".

Yours,

DigiChild project team