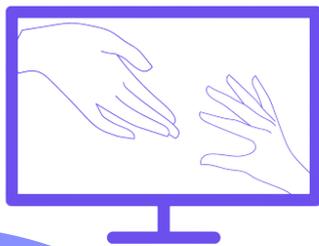


KEEP



KEY ENGAGING EDUCATIONAL PRACTICES USED BY SECONDARY SCHOOL TEACHERS TO KEEP CONNECTED WITH THEIR STUDENTS FOLLOWING COVID-19 PANDEMIC

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Ecosystemic report for secondary education during COVID-19 in four European countries



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1. Introduction

One of the KEEP project's contributions to practice, research and policy is developing an Ecosystem Model of distance education. It can serve as a framework for planning, improving, monitoring and evaluating distance education quality in emergent situations at regional, local and personal level (please refer to Figure 1).

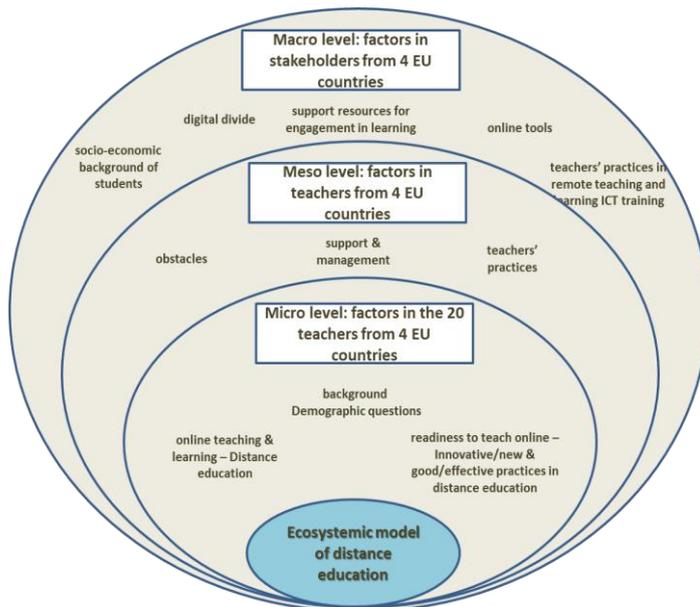


Figure 1 : Ecosystemic model of distance education

The term 'Ecosystem' usually applies to ecology and biology and tries to describe a complex system or organisms within the physical environment. Each component and part, in some way or another, relies on another domain. The ecosystem describes the interrelated system that links plants and animals together in a network of living things.

However, an educational ecosystem is approached similarly. It can include a network of schools & stakeholders (faculty staff, institutions, scientific societies, institutions of higher education and other professional organizations) that support Distance Learning. The ecosystemic approach eliminates learning in isolation and

creates ongoing opportunities for cross-collaboration and partnerships that can advance learning for all students.

Particularly, for this report, an educational ecosystem forms part of the social system to which the school belongs, the community where it's located, and the stakeholders involved. Moreover, collegial reflection on the teachers' digital practices following the COVID-19 pandemic will eventually allow a better understanding of the European e-Teaching ecosystem, which in turn could facilitate and promote further exchange of experiences and practices between European partners inside and outside the project. Thus, an ecosystemic report, given each country's educational context, is based on the identification and clarification of conditions and parameters that could have influenced the work of secondary teachers during the lockdown, such as:

1. School system
2. Territory
3. Social conditions of the students
4. Digital divide
5. Support resources for engagement in learning
6. Effective workflows for students' tasks and communication
7. ICT training
8. Online Tools (applications, digital environments, platforms etc.)

2. Methodology

Applying an ecosystemic approach makes it possible to question the interrelationships between the elements that contribute to the activity of teachers at a macro level, at a meso level and at a micro level in the classroom (Voulgre, 2018a; Voulgre, 2018b).

One of the principal methodologies applied in the KEEP Project was structured around developing a 'national' ecosystemic report, which would have consisted of the practices for each partnership country and its ecosystemic contextualisation according to the responses. Furthermore, digital schooling practices implemented during COVID-19 were identified and contributed alongside outputs 1 and 3 to overcoming and preventing school failure in Europe as it was increased due to the pandemic.

The objectives mentioned above were achieved by conducting a mixed methodological approach, which consists of quantitative and qualitative research strategies and their tools.

Quantitative research is a research strategy that emphasises quantification in the collection and analysis of data, following a deductive approach to the relationship between theory and research (Bryman, 2016). Mainly, for the educational sector, survey research is usually conducted to reach a group of people and apply a cross-sectional research design based on the quantitative research strategy. The data is collected by using the tool of a questionnaire.

Qualitative research is a research strategy that usually emphasises words rather than quantification in the collection and analysis of data and that emphasises an inductive approach that leads to the creation of theories (Bryman, 2016). In educational research, one of the most

traditional techniques is focus groups. These are group interviews focused on specific topics. They are useful for brainstorming ideas and finding out what groups of people think. They can be used with a range of different people as stakeholders and provide insightful information especially for getting their opinions about a limited number of topics.

All data was analysed through qualitative thematic analysis (Braun & Clarke, 2006) aimed at capturing those factors that the stakeholders regarded as comprising the different quality elements for the data. All the transcripts from focus groups from each example was processed through two major intertwined steps: first all data was segmented and categorised by topic (e.g. "ICT training"), and then each topic category was analysed for indicators (e.g., "Prior training") relevant to the criteria of the project (Braun & Clarke, 2006). The results of the analysis were subjected to a review by all project participants. It should also be noted that the analysis followed the project's focus on digital divide, innovative/best teaching practices and technological tool.

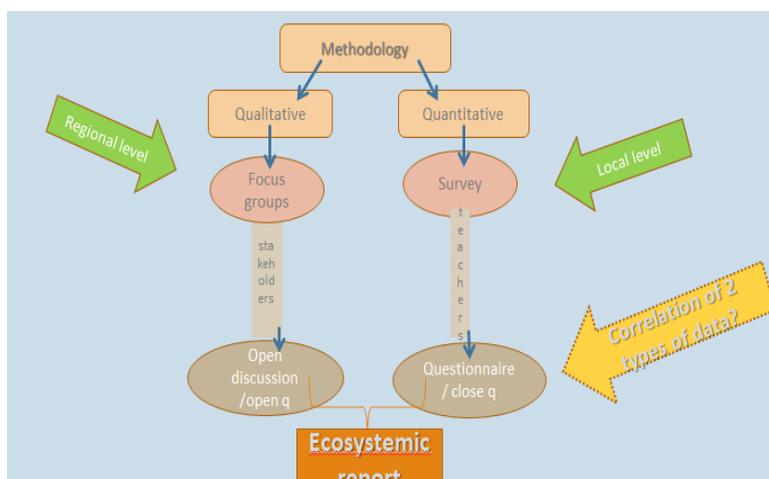


Figure 2: methodological process – techniques and tools

The following sections describe in more depth the quantitative and qualitative techniques used - focus groups and survey. Each section consists of the following parts:

- 1) theoretical elements
- 2) how each approach was applied to KEEP
- 3) planification & implementation
- 4) deliverables from partners and
- 5) obstacles

2.1 Report structure

This report brings together the main findings from all the research activities mentioned above. It attempts to shape the contextualisation of the four partner countries in secondary education during the pandemic. It focuses on the project's two new contributions to research and policy-making in educational practice during emergent situations like a pandemic. It first sets out the **macro level context** from involved stakeholders - parents, students, leaders and experts. It provides evidence and testimonials on the obstacles and difficulties they experienced/faced during the pandemic in distance secondary education (Chapter 3.1 results from Focus Group 2). Although it is acknowledged this level would have had included target groups from educational makers in a national level eventually we realised was not feasible from all partners.

Then the following chapter, **meso level context** - refers particularly to the teaching context and practices teachers adopted (Chapter 3.2, results from Focus Group 1). Lastly, the **micro level context** presents the findings from the survey that shows, at a local level, the 'picture' of secondary education as was reported by secondary teachers.

These chapters concluded in Chapter 4 with an account of comparisons among the four countries and the issues that emerged during COVID-19

that shaped and formed in a particular way their education ecosystem.

2.2. Focus group

The University of Patras was responsible for developing the methodological tools for applying the Focus Group technique by each team in the four different countries. A focus group for each country was held online or face-to-face depending on each country's COVID-19 regulation and availability to extract more information on contextualisation and compare results at a qualitative level. The synthesis of each group was agreed to be of different groups involved in education (stakeholders) such as: parents, students, counsellors, inspectors (regional or national), secondary teachers (preferably not those participating in interviews). A set of open questions was composed in English and distributed among the partners to contribute accordingly and made them suit to different educational cultures, but foremost covering all aspects addressed by the project.

Methodological elements

From a theoretical point of view, a Focus Group (FG) is a research technique used to collect data through group interaction. The group comprises a small number of carefully selected people who discuss a given topic. FGs provide many of the advantages of a one-to-one interview, but with the important difference that they yield a collective rather than an individual point of view. A FG is a group involving a small number of demographically similar people or participants who have other common traits/experiences. Their reactions to specific researcher/evaluator-posed questions are studied. FGs are used to identify and explore how people think and behave, and they throw light on why, what, and how questions.

In a Focus Group, participants interact with each other rather than with the interviewer, and it is from the interaction of the group that the data emerge: hence the dynamics of the group are important (Denscombe, 2014; cited in Cohen et al., 2018, p. 532). Focus Groups are therefore appealing for researchers who seek to study the interactions and communication dynamics of groups and, owing to their practical utility, are an increasingly popular method of data collection among qualitative researchers (Savin-Baden and Howell Major, 2013, p. 374). However, they do present particular challenges (particularly in terms of data analysis and the management of group dynamics) to which careful consideration needs to be given at all stages in the process as nobody is fully experienced for conducting a Focus Group.

In education, a Focus Group can be a group of selected experts or representatives of stakeholders focusing on a specific subject, sharing knowledge and experience. It would explore practical innovative solutions to problems or opportunities in the field and draw on experience derived from related situations.

KEEP – Focus group

Concerning the Focus Groups that were designed for the KEEP project, the main aim was to collect the data needed to reflect and enrich the results of the survey implemented during December 2021-January 2022 on secondary teachers (see 2.2.) Therefore, the discussion focused on research results and addressed issues that were not yet met according to project objectives or needed another view to create comparisons with survey's results providing a qualitative analysis. Thus, data was gathered on social conditions of students (early school leaving, drop out, territory) digital divide, and support resources for engagement in learning.

Each KEEP partner conducted two (02) Focus Groups. Focus Group 1 was with secondary teachers outside the project: teachers who did not participate in the interviews used later on the project to create the teachers portraits but had completed the questionnaire from the survey distributed at an earlier phase of the project. Focus Group 2 was a group of stakeholders such as: leaders (headteachers, regional inspectors/counsellors, directors/managers of education services), experts, students and/or parents.

In short, the objectives of a KEEP-Focus Group were to:

- to provide a good understanding of the E-teaching ecosystem for each partner-country.
- to help replicate the innovative practice, pointing out the enablers/obstacles/parameters.

Sampling

Regarding the selection of the sample, we carried out purposive sampling (Bryman, 2016). In this way, all the interviewees were selected with specific criteria because of their relevance to the research questions. Therefore, in Focus Group 1 (Teachers), were selected teachers who were involved in remote teaching during the pandemic. Also, those teachers participated and replied to the survey-questionnaire but were not selected to give interviews. Similarly, in Focus Group 2 (Stakeholders), were selected parents, pupils, experts and school's leaders who were engaged in the educational procedure at that time.

Planification and implementation

Initially Focus groups involve five main steps:

1. developing the questions we want to ask or the topics we want to have the discussion

2. identifying the sample (our participants)
3. conducting the group
4. drawing together and analysing the data
5. reporting the findings

For each of the above steps a further description is provided. Ethical considerations were taken into account for conducting each Focus Group.¹

Step 1: Developing the questions

A Focus Group is a group of people who are asked about their perceptions, attitudes, opinions, beliefs, views and practices/actions regarding many different topics (e.g., abortion, political candidates or issues, a shared event, needs assessment). Group members are often free to talk and interact with each other. Instead of a researcher/evaluator asking group members questions individually, FGs use group interaction to explore and clarify participants' beliefs, opinions, and views.

In the case of Focus Groups designed for the KEEP project a set of open questions for the different target groups (teachers, other stakeholders) was composed in English and distributed among the partners to contribute accordingly and finalise them. Then the set of questions of each Focus Group was translated into the local languages of partners to conduct the two Focus Groups in their country.

In order to form the set of questions we took into consideration the following suggestions (NFER, 2013):

- be preceded by a short introduction which outlines who we are (short introduction of people conducting the FG, the purpose of the FG, and how the data will be used (e.g. to improve practice and inform new policies)).

- start off with an 'ice-breaker', e.g. 'please introduce yourself, telling us what school /educational area you are from and what is your role'. An 'ice-breaker' is a question we shall use to 'open' the discussion among the stakeholders and make them feel as part of the team.
- be more general at first, and then become more specific, ending in a 'review' question which summarises the main points discussed (e.g. 'what are the most important points we have discussed today?', or 'what have you found out about [the topic] today?' Talking about the terms....it will be ideal to 'bounce ideas' around and develop an interesting narrative around the terms.
- be clear, concise and logically ordered
- be no more than 5 to 10 in number for a focus group lasting one to one and a half hours.
- elicit a detailed response and not one-word answers. We should ask 'open' questions (e.g. what, how, why and where questions) rather than 'closed' questions which will gain a short, 'yes' or 'no' answer.

Step 2: Identifying the sample

Each Focus Group could ideally have involved between 5-10 people. It was advisable though to include all of the 'right' people who understand and can talk in-depth about the topic(s). Moreover, it should have included people that had no conflicts of interest to encourage free and uninhibited discussion e.g. in our case we needed to have teachers in a separate Focus Group to avoid conflict of interest with governors or education counsellors/inspectors, parents and students.

For each Focus Group designed under the KEEP project, it was crucial to keep all different groups of people out of conflict by trying and getting them from other educational settings and/or local

¹ The GDPR regulation was taken into account for data privacy. Consent forms were provided to participants.

areas/authorities. Bearing in mind that if this factor was well-managed, we would have been more likely to get more sincere and authentic answers. Although the KEEP-Focus Group 2 gathered students, leaders and parents, we acknowledged that in terms of 'leaders' a different 'picture' might have been created among the partners. It didn't seem easy to approach this type of ranking simultaneously in other countries and educational systems. Therefore, depending on partners' availability and accessibility, in the end, Focus Group 2 was decided upon having headteachers from all partners and no higher-ranking positions such as education counsellors, inspectors, etc.

Step 3: Conducting the group

The interactivity of a Focus Group allows researchers to obtain qualitative data from multiple participants, often making focus groups a relatively expedient, convenient, and efficacious research method. Researchers/evaluators should select members of the Focus Group carefully in order to obtain useful information (NFER, 2013).

Managing a KEEP-Focus Group, we came up with the following instructions for all teams to keep the same direction and, more importantly, formulate the same views on the matter:

- You needed an impartial and experienced person (known as the 'moderator' or 'facilitator') to lead the group. The moderator/facilitator was to explain the purpose of the group, ask the questions, keep the participants on track and on time, invite all participants to contribute and summarise the discussion at key points. Also, either took notes and/or recorded the discussion for later note-taking in order to learn from the group.
- Ideally, the moderator was supported by someone else (the 'assistant' or 'observer'). The assistant/observer helped the group run

smoothly, taking notes (including noting down who is speaking) and paying attention to dynamics not expressed in words, e.g., body language, and people who appeared to have something to add but did not speak up. The latter could have been missed if the Focus Group was audio/video recorded. Also, they helped with timekeeping and supported the moderator/facilitator.

- If someone might feel experienced enough, it is possible to moderate alone. In these circumstances, it is advisable to audio/video record the discussion (only with all participants' permission/consent forms).
- At the beginning of the focus group session, we should explain why we have invited participants to provide their feedback. An example that can be adapted from each partner follows:

Thank you for coming today. We have invited you to provide feedback about your experience as a teacher (or other role) in the KEEP European project. We value your honest feedback and plan to use the feedback for research. You are welcome to build on each other's thoughts and ideas.

- Confidentiality will lead to more open and honest feedback from participants. An example that can be adapted from each partner follows:

The information that you share today will be kept anonymous. We ask that you help protect anonymity and confidentiality by agreeing not to share what we hear today with people outside the room. Do you agree? We will be taking notes of key ideas and themes during this conversation. Identifying information will not be included in notes that are shared outside of this room. Do you have any questions?

- Make a statement at the beginning of the focus group session to explain what will happen with any transcripts, recordings, and notes that result from the focus group. An example that can be adapted from each partner follows:

We are audio/video-recording this session. The recording may be transcribed and will be used to obtain details about our conversation today. The transcripts, and not the direct recordings, may be used to help make decisions about program improvement and may also be used in self-study documents. No identifying information will be included in the transcripts. Does anyone have any questions or concerns about audio recording?

Each KEEP-Focus Group among the partners was planned to be conducted in **July-September 2022** even if the interviews of the following part of the project were ongoing. It was recommended to be held online but each partner could have made their own decision based on their availability.

Expected deliverables from partners

The deliverables were the discussion transcripts held from each KEEP-Focus Group in each partner country. The recordings from each Focus Group per country were translated into English, put in transcripts and sent to the University of Patras to harmonise the report.

The Focus Groups' transcriptions were decided to be literal for saving time. The Focus Groups were held either via physical or online meetings. In case of a physical one, an audio recording was necessary but not a video, as we agreed to not provide a semiotic analysis² on it.

² Authors and contributors acknowledge the bias on the transcriptions and translations.

Obstacles

1st obstacle: timeline

Focus Groups were meant to be distributed May – June 2022 and after the realisation of interviews (WP3). For practical reasons we decided to conduct them in parallel than it was initially planned. both Polish focus groups were conducted before summer (one in May, and one in June). Belgium came up that regarding their teachers' availability, both FGs would have been conducted in September 2022. French and Greek partners followed so FGs were mostly conducted during September – October 2022.

2nd obstacle: sampling criteria

Firstly, the Focus Group was designed to be only one including all stakeholders. Then as discussed with partners it was proposed to split them in two to avoid possible conflicts. In that case, it would have been more flexible to control and focus on questions on different aspects of the teaching process.

Secondly, we had to decide upon what criteria Focus Group 1 (Teachers) would be selected. We agreed upon methodological appropriateness and conveniently resources, so the teachers who already replied to the questionnaire but were not interviewed were those to get involved and, in a way, rewarded for their contribution.

Thirdly, we had to decide upon what criteria Focus Group 2 (Other stakeholders) would be selected. We agreed to involve people convenient to resources and their availability. For example if teachers in Focus Group 1 identified being parents with children in secondary education during the pandemic this could have been an option to minimise effort for finding new resources.

3rd obstacle: amount of data

Digital resources for audio/video recording, translation & transcript preparation were proposed to facilitate partners' workload. However, automatic translation and transcript didn't work correctly in many cases. Polish recordings had to be transcribed and translated by Polish partners (time-consuming and exhausting task)

4th obstacle: analysis of data

Although a document on the methodological framework was in place about the planification & implementation of Focus Groups to have a consensus of the context and actions needed to be taken, yet we decided that we would be more convenient to make adjustments in relation to data analysis. Therefore, we agreed to analyse only audio and not video recording regardless of physical or online meetings of Focus Groups. Equally, the transcription of Focus Groups was literal.

5th obstacle: bilingual partner

In the case of Belgium due to a bilingual sample we decided to have bilingual Focus Groups. The University of Paris co-organised these meetings so the Belgian partner could immediately translate from French to Dutch and vice versa. This planning avoided ending up with four (04) Focus Groups.

6th obstacle: external societal factors

For one of our partners, Poland there was a problem with recruiting teachers to the focus group due to additional, unexpected circumstances regarding War at their border and lots of Ukrainian students suddenly appeared in Polish schools - teachers were really tired and the topic of the pandemic situation was not that relevant anymore.

2.3. Survey

Methodological elements

When you seek to describe trends in a large population of individuals then a survey is a good procedure to use. Survey is a cross-sectional research design in quantitative research strategy in which you usually administer a self-completion questionnaire or a structured interview to a small group of people (called the sample) to identify trends in attitudes, opinions, behaviors, or characteristics of a large group of people (called the population) Bryman, A. (2016).

In cross-sectional research design, data on the variables of interest are collected more or less simultaneously. When an individual completes a questionnaire, which may contain for example twenty variables, the answers are supplied at essentially the same time. With a cross-sectional design it is possible to examine relationships only between variables. There is no time ordering to the variables, because the data on them are collected more or less simultaneously, and the researcher does not manipulate any of the variables. If the researcher discovers a relationship between two variables, he or she cannot be certain whether this denotes a causal relationship (internal validity). All that can be said is the variables are related. However, external validity is strong when the sample from which data are collected has been randomly selected. When non-random methods of sampling are employed, external validity becomes questionable.

KEEP – Survey

The survey's objective is to give voice to those who were teaching during the pandemic in school years 2019-20 & 2020-2021 and at the same time to create a contextualisation of their profiles. It was used to collect and compare evidence on the actual use of innovative teaching practices in

secondary education during the pandemic, as well as to solicit teachers' perspectives on innovative/best teaching practices using technological tools. Survey results were used at the teacher level to support continuous professional development and the intelligent use of technological tools in distance education. In turn it could help teachers to identify "what works" in order to improve existing teaching practices for remote teaching and learning and manage transitions to new practices with use of technological tools while maximising their effective use. Finally, the results could provide deeper insights into how technological tools shape innovative teaching practices and affect students' learning outcomes so policies to be improved. The survey was freely available to secondary teachers in each of the four countries.

The questionnaire was divided into three parts:

Part A: Background – Demographic questions

Part B: Online teaching & learning – Distance education

Part C: Readiness to teach online – Innovative/new & good/effective practices in distance education.

Planification and Implementation

The University of Patras was responsible for the synthesis of the questionnaire to survey teachers' contextualisation and select who finally participated and got interviewed. The reasoning behind the questionnaire was to keep it short and avoid time-consuming tasks, as it was meant to cover almost 1.5 years of teaching. Initially, this might have been a setback if more open questions were included.

The questionnaire was structured so that it was easy to understand and use from teachers among the partner countries. Initially was created in

English and then translated in the language of each partner country. Most questions demand for one response by close-ended questions, one call for response along a scale, while a few are open-ended and literally are those addressing innovative/best teaching practices and technological tools to be presented. To ensure high quality data, survey responses were anonymous to protect respondents' identity. The answers are kept confidential. They were combined with answers from other respondents to calculate totals and averages from which no single respondent can be identified. Especially, Part C with open questions focused on teachers' innovation and best practices as this would have been one of the indicators for selecting teachers for interviews. Other indicators for selecting teachers were found in the parts A&B of the questionnaire (see annexes) and included teachers from different level of studies-teaching experience-subject-type of school-location & population of school ideally. All partners added their ideas and propositions. Some of the propositions were agreed to be included in the interview's question set.

The survey started in mid-December and was meant to finish the first or second week after the Christmas holidays (mid to end of January), depending on the local need of each partner. Each partner was in charge of translating the questionnaire into their language and distributing it to secondary teachers.

A doc regarding 'Participation information sheet' respecting GDBR and local regulations from the University of Patras was also composed and distributed among the consortium.

Sampling

Regarding the web-survey part, we carried out convenience sampling. A convenience sample is

one that is simply available to the researcher due to its accessibility (Bryman, 2016). We chose this sampling method because we did not have an analytical list of the population of teachers to select some of them randomly.

Expected deliverables from partners

Each partner needed to choose **5 questionnaires** that met most of the criteria for contextualisation. An example of the ideal sample of each partner country would have been to have:

Five questionnaires from teachers with different levels of studies, different location, population and type of school, different years of teaching experience and different subjects. On top, different innovative/new teaching practices and technological tools were indicators for the selection.

If a partner did not meet all the above criteria, it could have made the selection with as many as it might have had. Preferably, attention was drawn to the different innovative/new teaching practices and technological tools and the more complete answers they had collected.

The five questionnaires were translated into English and uploaded on Basecamp under the folder 'WP2-Contextualisation/Teachers' selections/(name of partner country)'. A confirmation email (komis@upatras.gr or amisirli@upatras.gr) or message on Basecamp was sent by each partner. The University of Patras was responsible for the coding and the quantitative analysis of all the data of 20 questionnaires in total.

Also, each partner needed to fill in on the uploaded excel file titled: 'WP2_Survey-questionnaire data'. There was a separate file for each country in their folder. The deadline was the **28th of February 2022.**

Obstacles

The main idea of the survey was to keep it short so as not to discourage submission and achieve more responses on a local level.

1st obstacle: timeline

Survey was meant to be distributed June-July 2021 and then we moved to Dec 21 – Jan 22 due to lack of time for preparation & administration to meet the timeline of the school year's schedule.

2nd obstacle: sample

Whether it would be addressed in all secondary teachers of each country / in some regions or if we would follow a convenience /availability sampling. We agreed for the second option.

3rd obstacle: age groups of students

We realised that secondary education does not cover the same age groups of students in all partner countries. We reached a consensus of 14-16 years old.

4th obstacle: location/area of schools

The location/area of school proved to be difficult on how to present it in a way that would be represented by all partners. We ended up to opt out of a question of types of territory such as city, town, rural area and keep only to question about population, which was presented in a 5 scale.

3. Synopsis of the main elements for each level of analysis.

3.1 Macro level (Regional) – Focus group 2

Country/ Indicator	1. Obstacles	2. Support and management	3. Teachers' practices
Belgium (BE)	Students: i) lack of trained teachers and policy, ii) lack of motivation and iii) lack of support		Students: i) Effective practices - use of digital boards - differentiated school's timetable
	Parents: i) lack of policy, ii) lack of infrastructure, iii) lack of support and iv) mental & physical health	Parents: i) lack of support and communication	Parents: i) collaborative digital tools ii) use of digital accredited platforms with resources iii) timetable pedagogical adaptation and reflection iv) use of digital accredited platforms with resources
	Leaders: i) lack of policy, ii) lack of infrastructure, iii) lack of support and iv) mental & physical health	Leaders & parents: i) school leadership	Leaders: i) collaborative digital tools ii) use of digital accredited platforms with resources iii) timetable pedagogical adaptation and reflection iv) use of digital accredited platforms with resources

France (FR)	Students: i) lack of equipment and infrastructure and ii) lack of communication (synchronous teaching) and support		Students: i) lack of contact and communication
		Parents: i) kind of support – inconsistent guidance, ii) needs that could not be met – instructions and guidance and iii) positive initiatives – personal effort	
	Leaders: i) lack of policy, ii) lack of teachers' training and iii) lack of equipment & resources	Leaders: i) kind of support – teachers' training, ii) needs that could not be met – equipment and infrastructure and iii) positive initiatives – teachers' digital skills	

<p>Greece (GR)</p>	<p>Students:</p> <ul style="list-style-type: none"> i) lack of interaction with subsequent ii) lack of motivation and iii) lack of teachers' training. <p>Parents:</p> <ul style="list-style-type: none"> i) students' optional attendance and ii) lack of a pedagogical framework and technical provision. <p>Leaders:</p> <ul style="list-style-type: none"> i) lack of policy (technical and pedagogical framework), ii) lack of infrastructure and iii) lack of teachers' training. 	<p>Parents:</p> <ul style="list-style-type: none"> i) kind of support – technological solutions, ii) needs that could not be met – facilities/infrastructure, mental health, academic continuity. <p>Leaders:</p> <ul style="list-style-type: none"> i) kind of support – technological solutions and training, ii) needs that could not be met– facilities/infrastructure, pedagogical framework and mental health (exposure to parents). 	<p>Students:</p> <ul style="list-style-type: none"> i) use of stylus, ii) use of videos, iii) use of music. <p>Parents:</p> <ul style="list-style-type: none"> i) use of electronic mail (email), ii) use of stylus, iii) use of camera and whiteboards and iv) use of Open Educational Resources (OERs). <p>Leaders teachers invested on</p> <ul style="list-style-type: none"> i) time, and ii) money
<p>Poland (PL)</p>	<p>Students:</p> <ul style="list-style-type: none"> i) lack of contact/communication, ii) lack of policy for a pedagogical framework, iii) lack of motivation, and iv) lack of equipment-infrastructure <p>Parents:</p> <ul style="list-style-type: none"> i) lack of policy, ii) lack of motivation, iii) poor attendance, iv) lack of classroom management, v) lack of educational digital content 	<p>Parents:</p> <ul style="list-style-type: none"> i) kind of support – governmental financial support / mental health, ii) needs that could not be met – lack of equipment, and ii) positive initiatives – social skills 	<p>Parents:</p> <ul style="list-style-type: none"> i) use of digital tools

	and vi) mental and physical health		
	Leaders & Experts: i) lack of equipment & infrastructure, ii) exposure of students' private space/embarrassment of students, iii) exposure of teachers' private space and profession/embarrassment for teachers, iv) uncertainty and v) lack of digital skills	Leaders: i) kind of support – technological, ii) needs that could not be met – lack of equipment and resources / teachers' digital skills	-

In summary, the results we have from the four European countries (Belgium, France, Greece & Poland), as testified by students, parents and leaders regarding their experience of distance education during the pandemic, in terms of i) **obstacles**, ii) **support and management** and iii) **teachers' practices** highlighted very interesting issues that should be taken into account for future recommendations.

The main obstacles that students in all four countries raised are: i) lack of motivation, ii) lack of communication and support. However, some countries also raised issues such as i) lack of teachers' training and policy and ii) lack of equipment-infrastructure. On the other hand, parents' voices were only heard by some of the four countries. However, the obstacles they highlighted are i) students' optional attendance and ii) lack of policy and infrastructure and iii) provision for mental and physical health. On balance, leaders found that the main obstacles were: i) lack of policy, ii) lack of infrastructure, iii) different levels of teachers' digital skills, iv) under scrutiny, v) identity and vi) well-being.

In terms of management, parents would expect to have more government financial support to deal with the needs of infrastructure that emerged or at least have technological equipment provided to all as a basic starting set of devices. All parents strongly agreed that there needs that were not met are the learning gaps towards covering an academic continuity of student's learning and also issues around mental health that was significantly underestimated at that time but still seem to occur in families in the four European countries and globally. Finally, parents take into account as positive initiatives teachers' and leaders' devotion and personal effort to make things work to the best of their students.

Lastly, the testimonies regarding teachers' practices during the pandemic are presented by students, parents and leaders. The students pointed out some effective and innovative teaching practices as the use of digital tools or even videos and music, all integrated into a differentiated school's timetable. However, some students expressed more of the need for contact and communication. On balance, from the parent's point of view, digital tools highlighted effective teaching practices, especially those that facilitated and reinforced collaboration or accredited digital platforms providing Open Educational Resources (OERs). The differentiation in timetables was also pointed out to meet pedagogical adaptations and reflection. Especially for Greek parents, it was a revelation to communicate via email.

3.2. Meso level (Local) – Focus Group 1

Country/ Indicator	1. Socio-economical background of students /Digital divide	2. Support resources for engagement in learning	3. Online tools	4. Teachers' practices in remote teaching and learning	5. ICT training
Belgium (BE)	<ul style="list-style-type: none"> i) lack of digital infrastructure & equipment & funding ii) health issues iii) human factors iv) lack of motivation & self-esteem v) low parental mediation and support to students' learning vi) distractive factors-passive presence/dropout 	<ul style="list-style-type: none"> i) technical and management problems proved to be the main barriers ii) use applications that were not previously allowed in face-to-face education iii) teachers testified that they were/felt unprepared for distance education, ii) was not obvious how to organise teaching and learning iii) how to support students and keep them on track. iv) students' psychological support v) staff had competent digital skills. 	<ul style="list-style-type: none"> i) Synchronous: SmartSchool Live ii) Asynchronous: Bookwidgets 	<ul style="list-style-type: none"> i) a new teaching strategy ii) subject explanatory videos. 	<ul style="list-style-type: none"> i) prior online teaching experience as starting from scratch ii) some training this year that education was shifted back to face-to-face iii) some teachers more technologically aware who motivated and supported their colleagues to deal with distance education.
France (FR)	<ul style="list-style-type: none"> i) lack of equipment-internet connection-free space to study 	<ul style="list-style-type: none"> i) management actions ii) calling students on the phone and trying to sort out 	<ul style="list-style-type: none"> i) Padlet, Moodle, CNED, La Quizinière de 	<ul style="list-style-type: none"> i) different practices and tools - most effective and 	<ul style="list-style-type: none"> i) little or no prior online teaching experience and training in online teaching

	ii) lack of a cohesive school planning for communication – minimised attendance rate and iii) motivation for learning.	the sort of support they could have individually iii) self-training and iv) online meetings.	Canopé, Genially, LearningApps, Plickers, Kahoot la Digitale	innovative teaching practice was flipped classroom.	ii) teachers were not equipped for distance learning.
Greece (GR)	i) lack of equipment or, inadequate equipment (mobile phones), ii) inadequate connection or lack of connection and iii) lack of personal space.	i) adapting teaching and actions to keep students' mental state healthy. ii) being creative and drawing help from external providers and being resourceful in providing information to suit their students' needs iii) management actions for technical and psychological support.	i) Synchronous:- Webex ii) Asynchronous: eclass/e-me Innovative technological tools: i) My simple show, ii) Geogebra, iii) Book Creator, and iv) Web-based software.	i) teaching practices were redesigning subject content and scaffolding ii) effective teaching practice was to support psychologically ii) innovative teaching practices were project-based teaching approach-focus on team-working and collaboration and evaluation and reflection on learning by using polls.	i) prior online teaching experience focused on technological rather on pedagogical knowledge. ii) participated in trainings and created their own online community of practice iii) training offered by Universities and organisations-in Greece or abroad-and education counsellors but not from the state.
Poland (PL)	i) lack of equipment-internet connection-free space to study ii) lack of a cohesive school planning for communication – minimised attendance rate	i) management actions to keep students on track ii) electronic register iii) phoning students iv) organised training from external providers.	i) use of innovative technological tools LearningApps, Wordwall, Quizizz, Quizlet, Canva, StepTalk, Learning	i) differentiated pedagogy is based on this particular situation to break down teaching and lesson planning into	i) no training provision to help them make the transition to remote teaching ii) self-training iii) shared activities with colleagues.

	iii) lack of digital textbooks iv)lack of instructions and pedagogical framework and v) motivation for learning.		corner by EU and YouTube ii) face-to-face education Quizizz Kahoot Wordly	small steps ii) project-based methodology.	
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In summary, teachers in the four European countries (Belgium, France, Greece & Poland) raised many issues regarding i) **the socio-economic background of students /digital divide**, ii) **support resources for engagement in learning**, iii) **online tools** and iv) **teachers’ practices in remote teaching and learning ICT training** that might be useful for future recommendations.

The socio-economic background of students in all four countries showed that they share a huge need for infrastructure and digital equipment and resources. So in terms of digital divide during the Covid-19 pandemic it seems that was created a significant gap that widened pre-existing inequalities and became a key factor to passive presence in the learning process and consequently dropout of it. Another factor that was raised and is in line with that result is the need of a cohesive school planning for communication management system along with a pedagogical framework that would have remained students motivation and self-esteem in high levels and would have minimised the stress they experienced trying to adapt to the new educational conditions. This finding is in line with the study of Kruszewska, Nazaruk & Szewczyk (2022).

The main issue that teachers felt supporting them to provide engagement in learning to their students was the action management tool trying to sort out the sort of support they could deliver technical and psychological support. However, in some countries, management issues did not work out as expected or as teachers would wish to have and proved to be one of the main barriers they pointed out, along with the lack of additional training and guideline they needed to have to support students and keep them on track.

Teachers pointed out many online digital tools they used to organise distance teaching. In some countries like Belgium and Greece, it is present using a standard tool for synchronous (SmartSchool Live, Webex) and asynchronous learning (Bookwidgets, eclass/e-me), respectively. However, in all four countries, teachers mentioned many innovative digital tools applied in their teaching according to their different disciplines, such as Padlet, Moodle, CNED, La Quizinière de Canopé, Genially, LearningApps, Plickers, Kahoot, la Digitale, My simple show, Geogebra, Book Creator, Wordwall, Quizizz,

Quizlet, Canva, StepTalk, and Learning corner by EU. Especially in Poland, teachers integrated into their face-to-face teaching some of those digital tools Quizizz, Kahoot and Wordly.

In terms of teaching in distance education, teachers raised mainly a differentiated pedagogical approach that was implemented to address the new learning process under the pandemic spectrum by breaking down smaller steps of the learning tasks and, at the same time, providing more scaffolding to either support learning or psychological support to keep students engaged in learning. Especially the innovative teaching practices that were highlighted were flipped classroom and project-based teaching, which are basically focused on team-working and collaboration, evaluation and reflection on learning by using polls.

It is common ground that teachers in all four countries felt abandoned without appropriate ICT training that had taken place before they were called to teach. They did not have prior teaching experience in distance education. Consequently, in some countries like Belgium, Greece and Poland, where teachers were more technologically aware or had been trained in ICT or even taken some pieces of training by the time of the pandemic outburst, were those who motivated and supported their colleagues to deal with distance education. Especially in Greece, there was an exemplary group of teachers who created a community of practice and organised a considerable number of not only secondary teachers to have support and assistance in technological and pedagogical issues. Also, it is worth mentioning that in Belgium, organised training by the state was introduced when education shifted back to face-to-face. Similarly in Greece teachers in primary and secondary education were called to an organised training by the state towards the end of the school year 2020-21, which was not received positively by the education community.

3.3 Micro level (Local) – Survey results of teachers selected for their innovative practices in four countries.

Background – Demographic questions

In all partners, most participants identified themselves as 'Female', and most of the teachers are over than 45 years old (see Figure 1).

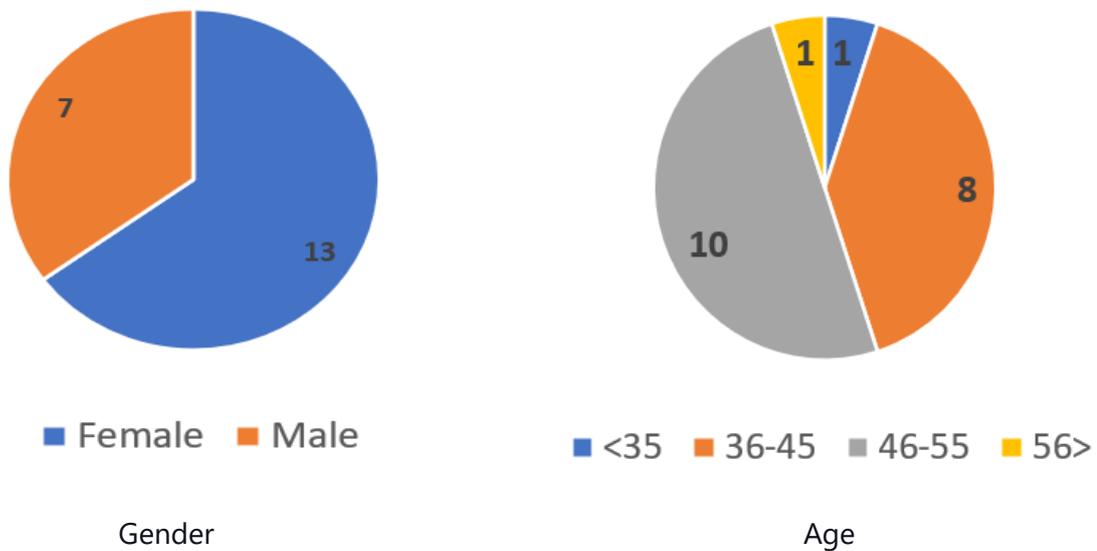


Figure 1. Gender & age group distribution

As you could see on Figure 2, the dominant level of study is a Master's degree. Regarding their teaching experience, it seems most of teachers have at least 16 years.

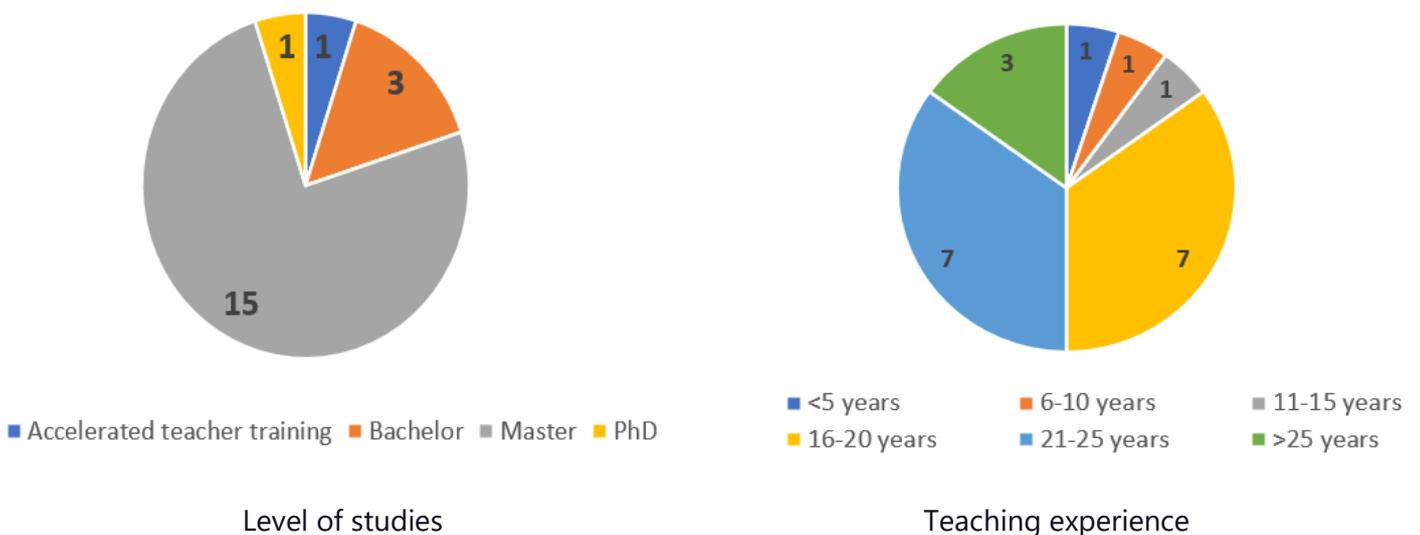


Figure 2. Level of studies & teaching experience distribution

Regarding the school's location and population, most teachers stated that their school is located in areas with 50001 to 1000000 habitats (see Figure 3).

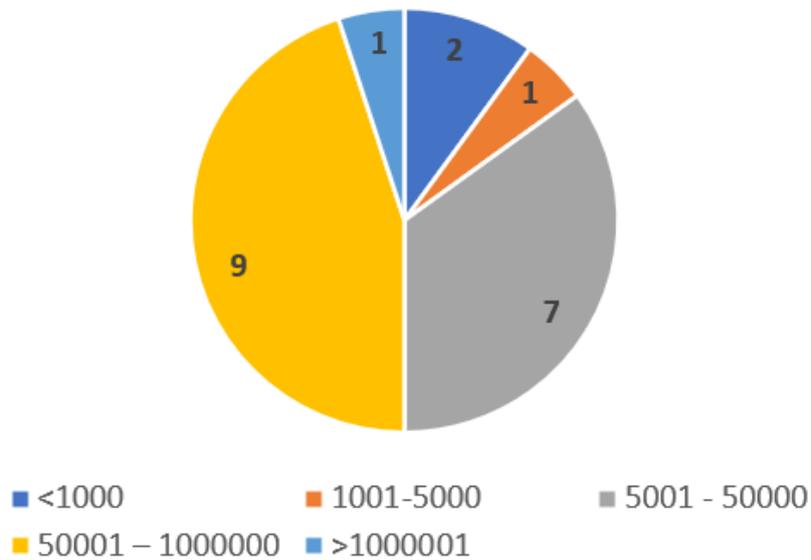


Figure 3. Location & population of the area distribution

Regarding the type of school, most of the teachers work in a public school (see Figure 4). Moreover, about the population of students in these schools, most of the teachers declared that they teach in big school that have at least 300 pupils.

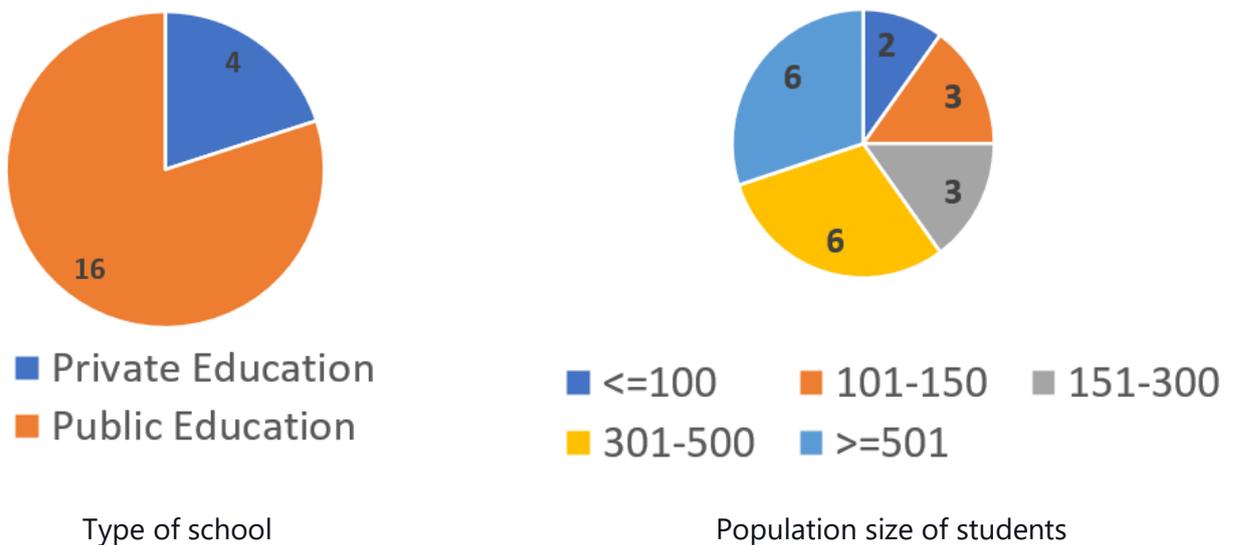


Figure 4. Type of school & students' population size distributions

Most of the teachers teach in the age group of 14 to 15 years. In addition, as shown in Figure 5 most of them teach in Upper secondary school.

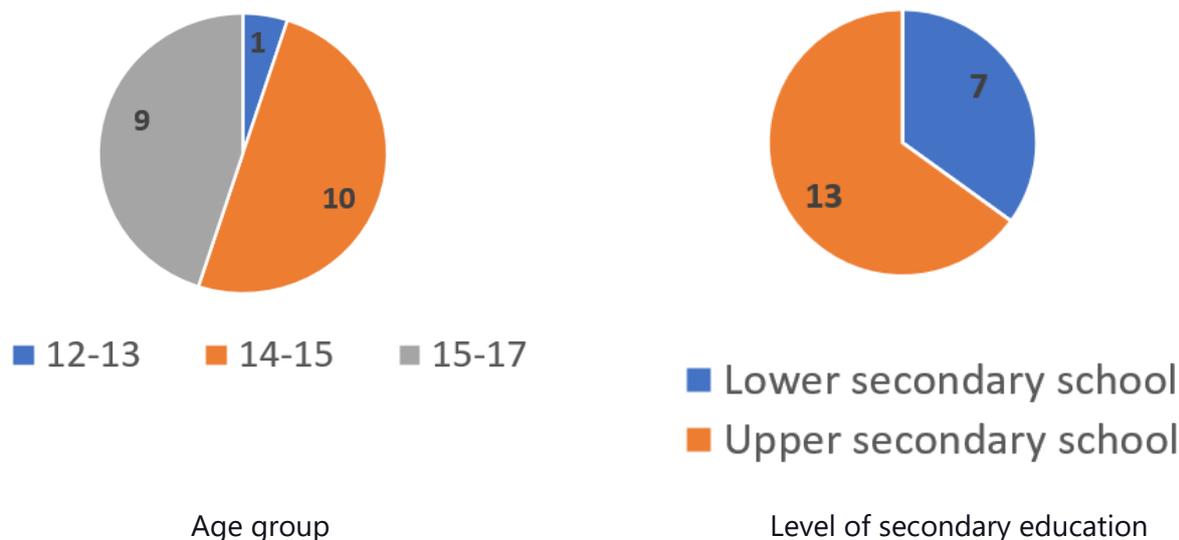


Figure 5. Age group & level of secondary education distributions

The subjects' selection was made upon trying to cover curriculum subjects from general education such as teaching language, Maths and History, and also representative subjects covered in technical and vocational levels such as Hotel and Industrial Technics (see Table 1).

Table 1
Grade & subject taught

Grades	Lower secondary education	Upper secondary education
Subject taught	Maths, History, Physical, Italian language, French language, Science, History, Music	Hotel, Industrial Technics, Physics, History, Geography, Greek language, Maths, Polish language, Physics, Computer science, Spanish language

Online teaching & learning – Distance education

As it is shown in Figure 6, most of the teachers had prior online teaching experience before the school closure. Likewise, the majority reported they had no prior training in online teaching/distance education before the school closure. Furthermore, all the responders agreed that the shift from face-to-face to online teaching was a governmental decision due to this unforeseen situation of the pandemic. However, after the first year of the pandemic, all teachers reported having online teaching experience and training; the latter was self-initiated from free online resources.

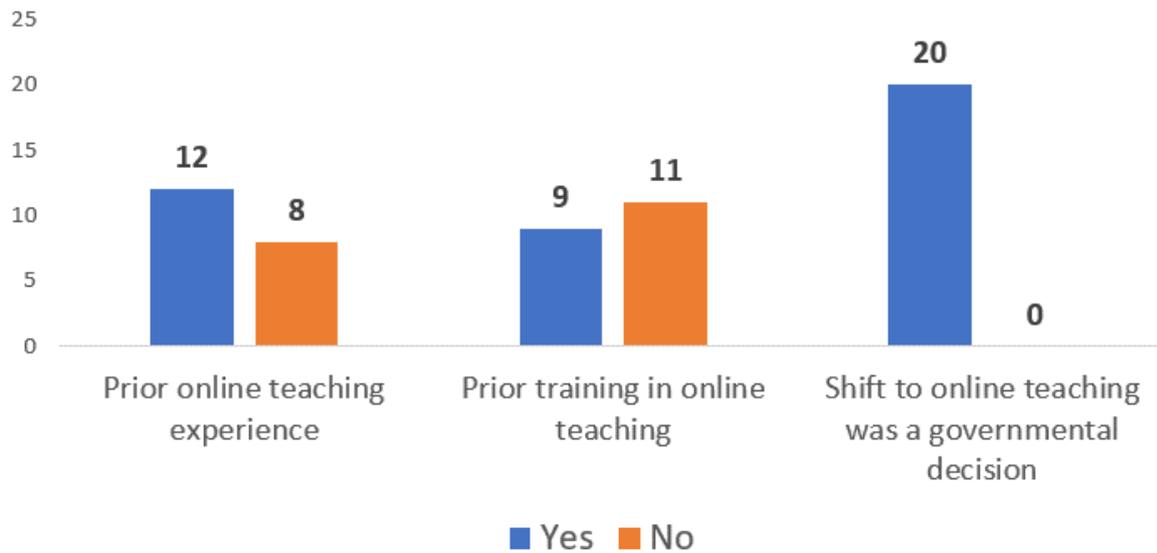
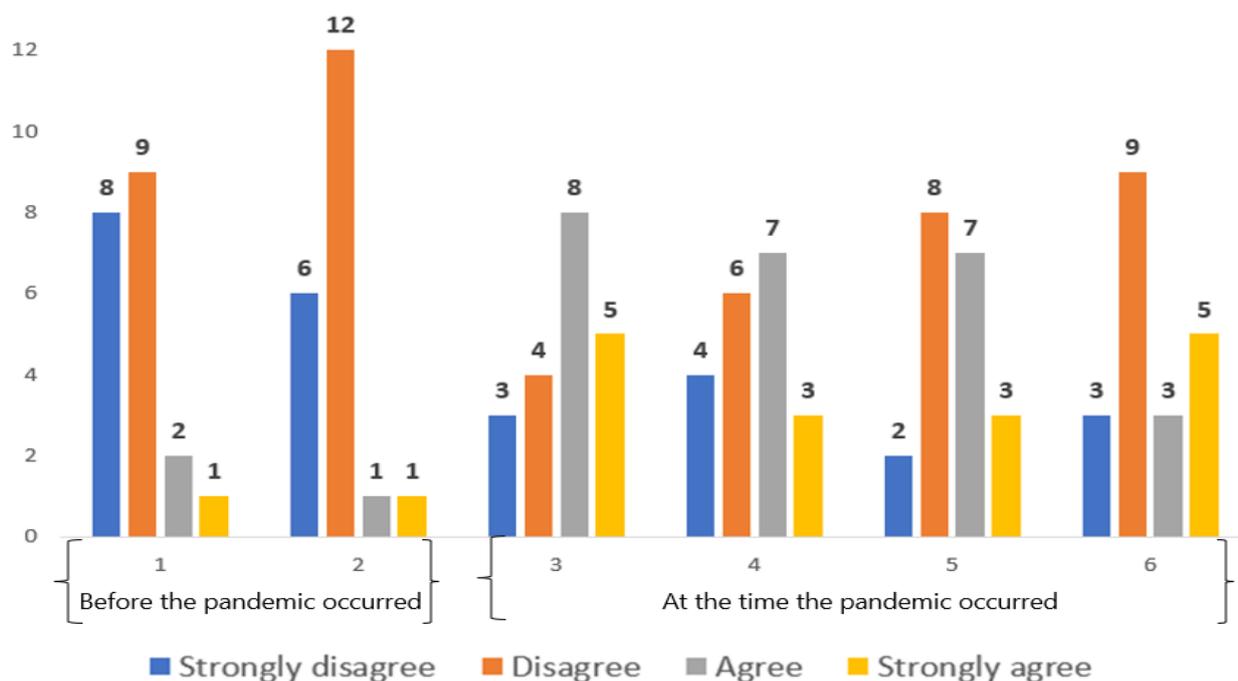


Figure 6. Online teaching: experience, training and decision making: Before the pandemic

As shown in Figure 7, regarding the institutional support for online teaching, most teachers reported that their institutions had not a clear vision towards it, and no professional development strategy was established before the pandemic (items 1&2). However, most of the participants agreed they experienced a supportive environment for professional development provided by their institution when the pandemic occurred (item 3). For the same period, teachers did not clearly seem to disagree or agree that their institutions supported them by providing an explicit pedagogical framework and teaching practices adapted to distance education along with the role of ICT and infrastructure resources, their responses are equally shared in the two-point scale (disagree, and agree) (items 4, 5 & 6).



1. there was a clear vision towards online teaching.
2. there was a professional development strategy towards online teaching already put in place in your institution.
3. there was a supportive environment as regards professional development for online teaching provided by your institution.
4. there were clear objectives as regards online teaching.
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.
6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.

Figure 7. Institutional support for online teaching

Some results of the survey of twenty teachers in four European countries, although it is not representative, are in line with results from data published by Nikiforos, Tzanavaris, & Kermanidis (2020). For example, the majority of the teachers (18 out of 20) were between 36 and 55 years old thus this age span is expected to be familiar with ICT technologies. Teachers were also very experienced, as 17 out of 20 had more than 16 years of teaching experience. Additionally, a significant number of 16 out of 20 had high academic skills, holding a master's or a Ph.D. degree. Preliminary descriptive results of the current research revealed the experience of the twenty teachers in regarding distance education during the lockdown period in the COVID- 19 pandemic.

4. Detailed contextualisation results

4.1 Macro level - Regional level

Focus Group 2 results³

The aim of conducting the Focus Group 2 was to present the obstacles and difficulties stakeholders experienced/faced in their teaching during the pandemic. The synthesis for each FG2 in each partner country is shown below.

Synthesis Focus Group 2 per each country			
BELGIUM	FRANCE	GREECE	POLAND
Four (04) parents	Two (02) parents	Five (05) parents	Seven (07) parents
Two (02) students	Two (02) students (01 collège, 01 lycée)	Four (04) students (2 Gymnasio - 2 Lykeio)	no students
Four (04) educational experts	Two (02) headteachers	Four (04) leaders (Educational Counsellor Computing, Project Coordinator for Innovation: Sustainable Development, School Headteachers)	Five (05) of the parents were also educational experts One (01) teacher One (01) Headteacher
	One (1) inspector		

³ Focus Group2 – Stakeholders (parents, students, leaders/experts)

Indicator 1: Obstacles and difficulties

What was the **most difficult part/obstacle** from your point of view about the **learning experience** during the COVID-19 pandemic?

BELGIUM

Belgian **students'** point of view stood out three significant obstacles regarding the learning experience they had during the pandemic, and these are: i) **lack of trained teachers** and **policy**, ii) **lack of motivation** and iii) **lack of support**. In particular, the lack of training in teachers' digital competencies, alongside the lack of additional policy, was evident from the first day of the lockdown. Their teachers did not seem to have integrated any form of digitization as was commented by students.

'They were not prepared at all, were not trained at all to use even a simple program like TEAMS. This caused a lot of problems in terms of learning. So each teacher had their own way of doing things'

On the other hand, the students participating in the Focus Group pointed out the lack of **intrinsic motivation** they felt to be the 'owners' of their learning. All of a sudden, the teaching and learning landscape was changed, and students, to a large extent, commented that:

'Studying itself became more intense, because you had to study more actively instead of passively. Normally you just sit in class. Now you had to actively take part in your class, actively study by yourself. You cannot take passive part of what is happening in the school anymore'

Moreover, they added that the 'on-off' situation of face-to-face to remote teaching and learning caused them a burnout as schools put all efforts

into covering learning gaps in a short period of time.

'... you're already tired while you're going back to school (after lockdown) and then suddenly they try to start catching up. So, you tried to study, and you tried to do as many things as you could during lockdown, which already left me ... with a half burnout ... trying to catch up, without anything ..., without actually being offered a lot of support'

That feeling was severely underestimated by schools and families who expected otherwise of students, so they were being offered limited support to their individual needs according to students' comments:

'Parents had to work, they had to maintain their household a bit. And then the teachers were busy too, they had to make a lot of new material, they had to change all their curricula. That leaves very little time for individual pupils.'

On balance Belgian **experts and parents** pointed out four significant obstacles that interfered and disrupted learning : i) **lack of policy**, ii) **lack of infrastructure**, iii) **lack of support** and iv) **mental & physical health issues**. Both experts and parents seemed to come to an agreement of how inconsiderate decision-makers handled the situation of schooling during the pandemic, leading to inefficient and ineffective strategies in supporting learning, since they were mainly directed to middle class families, with too little

concern for other groups of students/families. This is supported by their comments

'the fact that the government's communication about COVID was not at all adapted to the issue of children and teenagers, but directed mainly to a middle class adult audience. ... There was a real sociological misunderstanding by the decision-makers of the reality of families, acting as if they all have space, digital tools etc at home'

In addition, lack of resources was evident in both schools and families. Especially, during the first lockdown teachers were left on their own without having support of neither new policies nor resources as stated:

'the minister's directives came fairly late, and so teachers didn't know what to do either and therefore they couldn't start anticipating the facts. Because if you do something now, it might turn out later that it was not allowed'

On the other hand, disadvantaged families could not cope with the need of remote teaching, often living in small places and balancing between work and study. That was clearly stated:

'The biggest problems were mainly that they really just don't have room, both physically and mentally to focus on school at home. Not to mention access to the Internet and the lack of devices, but also the small size of the household...'

The lack of support was a big issue :

'... support, that is normally given in schools, fell away... With the online teaching, it is much easier to stay in the background and a lot of children

who were already school weary before COVID actually disappeared off the radar, there was hardly any contact between teachers and some children'

Last but not least, all groups agreed and were very conscious of the **mental and health issues** the pandemic caused to students and families.

'The mental burden on the parents, who were not at all equipped to occupy their children seven (07) days a week and twenty-four (24) hours per day. Or parents coming under stress because of job loss and so on'.

'...children/youngsters have gained weight because of a complete lack of physical activity, which impacts their (mental) health and their relationships with parents. The fact that children sat more individually at home behind their computer screen, and had to miss their friends, also had a significant impact on well-being and along that road back actually – it is a bit of a cycle - also back an impact on school performance'

However, from an educational and decision-making point of view, there was no provision towards mental and health issues after the lockdowns. On the contrary, education continued its focus on academic development regardless of the need of having a mentally healthy student population to build up.

'...education and school life focused too much on catching up on the lost time and learning losses instead of spending more time on re-socialising and well-being'

FRANCE

In France, **students** raised two obstacles that emerged during the pandemic and signposted their learning experience: i) **lack of equipment**

and infrastructure and ii) **lack of communication (synchronous teaching) and support**. Notably, the need for more equipment

and infrastructure was based on the fact that most students reported

having laptops or personal computers at home. In addition, students described that homework was primarily assigned via emails or digital textbooks but mostly needed to be marked or received feedback. Tests also, when they happened, were not marked, so these elements make it obvious why students felt a lack of support. Lastly, only a few video conferences took place during their learning experience that would have facilitated communication and support via using cameras and verbal speech.

'So when the lockdown was announced, I had no personal equipment. So I had to change my equipment several times. I was on a tablet, then I was on another tablet and I finished on a computer.'

'We had videocalls from time to time, but not all the teachers organized them.'

And in terms of homework, we did not get any grades. So it was a bit complicated. We only had some exercises to have an idea of our skills.'

French **parents** pointed out only one issue that they thought was the main obstacle in their children's learning: i) **lack of communication and support**. Although the workload for a week was reasonable there wasn't much contact or interaction. Pupils lived lockdown differently as living conditions were very different from one household to another. Some lived in overcrowded flats, had to share digital devices, had no privacy, and lived in their room for two months. According to parents, during that awfully described situation some teachers took no part and served nothing to support their students by creating channels of communication.

'Some teachers were using "Mon Bureau Numerique". But there were others who also used the Pronote textbook. Then others were

using the parents' personal email. And for me and my partner who are both teachers we knew a little bit about all that. Sometimes, we had a little trouble finding our way around. I had to know basically what was due and when, because it was coming from different sources. But I also understand that people used the tools they had. But it could sometimes be a little complicated. I think that for parents who are not really users or who did not follow their children on these tools before, it must have been even more complicated. That's it, but everyone did what they could.'

Lastly, French **leaders** raised three issues as the main obstacles towards learning during the pandemic: i) **lack of policy**, ii) **lack of teachers' training** and iii) **lack of equipment & resources**.

Firstly, it was pointed out the lack of policy and decision-making for an approved pedagogical framework and additional digital tools. Teachers did their best to find solutions and came up with their own ideas and resources to overcome and adapt to the new situation. Thus, they used blogs or WhatsApp groups to keep in touch with their pupils. They came up with fun activities such as drawing competitions to motivate their students. Moreover, the lack of equipment and resources was another major issue. In several cases, teachers had sent loads of exercises to be printed out, which eventually drained parents and their family budget to support such an initiative. In other instances, leaders testified that teachers may have printed out their lessons and organised pick-ups for parents.

On the other hand, teachers were not familiar with planning teaching for distance education, but they received no training to do so. So in most of the cases parents instead of teachers had to support their children with every effort and skills they might have. Most of the schools were not equipped to deal with distance education. Teachers were not digital experts. Students could

not spend hours in front of a screen. They had exercises to do but they could not do them on their own and sometimes lessons were missing. It was a very difficult time to cope with all the changes that came along the pandemic in education.

'But the biggest problem was the lack of computer equipment. The colleague said that when they sent kilos of PDFs, there were no printers on the other side. So the families couldn't print the forms etc. There was a shortage of cartridges. There was a shortage of cartridges and ink.'

In short, it was extremely complicated.

GREECE

Greek **leaders** pointed out three significant obstacles that interfered and disrupted learning in their areas of responsibility: i) **lack of policy (technical and pedagogical framework)**, ii) **lack of infrastructure** and iii) **lack of teachers' training**.

Firstly, the lack of policy was evident and dominant at the first lockdown. From the leaders' perspective schools moved from one day to the other without having in place a secure technical and pedagogical framework. Especially, the latter was obvious in the second phase of the lockdowns where teachers' skills were insufficient to create attractive and engaging lesson plans in distance education and motivate students to participate. However, in this aspect we can see emerging elements of teachers' insufficient digital skills.

'I spent the whole weekend writing instructions that is for the first day on how to get started. Because even the concepts were not known...'

At the beginning, he didn't realize that. For example, when you took a look at the workload of the whole week, it was ridiculous.'

'It was really new for [the teachers] : doing visios, using the tools, etc.'

So that was a real need. We tried to respond to it with our digital usage trainers.'

'We have teachers who are rather reluctant on this point. So, it's quite complicated to accompany them so that they take the plunge and so that they can set up this direct communication, or even indirectly through these tools, and which is also part of the dynamic, quotation marks, of communicating regularly with the families.'

'the pedagogical aspect...everybody thought they had to learn to push two buttons. It wasn't to learn to push two buttons. Then they came that the kids were bored that the kids weren't participating. That the kids and people realized in the second phase after the first period that here they have to organize my lesson differently to utilize resources and so on. It's a different teaching approach when you do with technology and so on'

'I would like to add that a considerable difficulty for teachers was for those who taught laboratory courses at the EPALs [vocational schools] in the laboratory centres of the EPALs where these courses took too many hours. Since there were no laboratory conditions, it took time to find other types of activities that could meet the objectives of distance education. This was one case of difficulty, and another was in the early years and first grades of primary, where children could not respond independently and needed constant parental presence in early years and first grades of primary (1st grade, 2nd grade). And this, of course, and the fact that the teachers were aware of this difficulty made them more uncomfortable alongside the parental intervention they had to deal'

Within this issue it is important to mention that e-safety rules should have been applied consistently.

'...and students not logging in by name. That is, there was difficulty in that they had to and they lost too much time identifying if they were actually students and we had cases where they were quoting for fun some students in rooms they shouldn't be'

Moreover, it was very disturbing that there were constant problems in infrastructure from the beginning of the first lockdown (March 2020) due to low bandwidth, which was the most common obstacle testified by leaders. This situation was part of the major picture of technical weaknesses caused due to limited proper infrastructure and provision before the pandemic hit.

'One point that was very annoying to teachers was the delayed connection i.e. technical problems...the state was not ready to support one and a 1.500.000 students and 150,000 teachers, which in terms of synchronous teaching there was a similar problem of course in that only two platforms were chosen for asynchronous education'

'I had a school that because there was no internet accessibility in the area of a school in a village has students from more distant schools. He was trying to get the child to go near the cafeteria with a tablet and get access from there. This was not the norm but there were such cases. I had a school that had a reception class with refugee children in Tripoli where there was a special project ... Because they were moving and as soon as something was done with their paperwork i.e. it was temporarily transient from Greece for a few months. Then the Headteacher was afraid the kids would leave and take the tablets with them. There was effort with the tablets but also a lot of practical difficult issues. Or some people were staying somewhere and

didn't have electricity. Extreme cases that did exist though'

Lastly, teachers had to deal, unexpectedly and without any preparation, with digital tools and platforms that the majority had not used before. Their digital skill proved to be insufficient for the needs of this particular situation.

'Half of the teachers withdrew from the environmental programs as not having any contact with the digital tools'

As pointed out by leaders at the Regional Centre for Educational Planning of Western Greece (RCEP) they did whatever they could to support the teachers in their area of responsibility starting from providing explanations of the use of tools for synchronous teaching in order to keep students engaged to the learning process. Leaders also had to deal largely with teachers' anger and acted as the best role models they could to motivate and facilitate teaching process providing the best they could regardless of cost in time and effort.

'Now in relation to teachers big problem in that they didn't know what to do, how to work it. I will just tell you that the guide we put out for WebEx has downloaded more if I remember correctly than 102,000 times since the last time, the fifth edition we put out had a lot of them had difficulty because the interface was in English for example. We sat down and translated all the screens in that material so they wouldn't have a problem with the language. Another problem they had was that they thought they were going to take what they did in class and just do it online. This of course didn't work as we heard from the students for so many reasons, because first of all it wasn't technically feasible to do. And of course there was a huge need for And of course a lot of children were absent during this period...we also had angry teachers because they felt that the state was not providing them with the equipment that they

should have been provided with... Several gave priority to having their children participate in the lesson [connecte] with a good computer rather than having them actually doing the homework...We had too many cases of people who felt exhausted and without the corresponding result of the effort they had put in. Probably because the way they did it was not the appropriate way'

'We made a great effort all of us, the Regional Centre for Educational Planning of Western Greece (RCEP), the coordinators and the IT teachers and other people. I remember personally I had put out a guide of questions in the first few days because of the ambiguity and how to do everything that S had put out and we had promoted them all over Greece and informal networks of cooperation were created overnight very quickly. And there were Facebook groups that helped. The group 'Distance education' became very quickly famous and had thousands of members....'

From Greek **parents' testimonies** two are the main issues that were raised: i) **students' optional attendance** and ii) **lack of a pedagogical framework and technical provision.**

Students' optional attendance was a significant obstacle that parents expressed in their arguments for the unsuccessful provision of distance education. They found this issue should have been handled more efficiently by the state and certainly not left it to teachers' or students' availability because many side effects in the learning process emerged. Moreover, the lack of a pedagogical framework and technical provision was another major obstacle highlighted and linked to students' difficulty in being involved and motivated to learn. Teachers had no pedagogical framework to organise their lessons and faced no technical provision through the schools' closures either from their own or students' side.

'...the main problem there was the unclear framework, [regarding students' participation/attendance] the organisation was in the choice of both teachers and students whether to participate or not ith their lessons. I perceived this as a mother and this resulted in giving people a freedom to participate or not to participate. So there I saw that the classroom situation was moved online resulting in teachers who wanted the children to attend making sure that they were involved while those who did not want to participate even in the face-to-face classes, had the freedom not to get involved. In the public school, my son was really.... Grade 3 in Upper Secondary education in preparation for national exams who had the choice not to participate at all. This was of course not so evident in the private school where the framework was more rigorous, and support and instructions came directly to the teachers'

'My son was not the most diligent student. That is, he was the child who, if we told him to stop school for a week, wouldn't be upset. So overall, the whole lockdown situation hurt him...my son having not a good computer, didn't want to participate in his classes. Although I think this was an excuse and literally wanted to take advantage of it. And as a student he got a lot worse. Of course, he wanted to get worse'

'What I noticed in the whole effort was a difficulty and technical difficulty. What you and all the others have said and analysed very well because having one computer for each person in the house was very, very difficult and not easily found. Difficult to have internet enough to sustain four computers many times in parallel and online...it was too difficult for any teacher to keep the children's attention all the time in the lesson. Although everyone may have organised their lesson differently still they faced difficulties. And this resulted in the children and because there was this ease of having a closed camera not being seen and the stress of attention was too easy and the children relaxed, relaxed their attention with the result I think that too much of what was becoming

an attempt to implement in those days by the teachers was lost. It was too difficult for children to participate and attend'

From **students'** point of view major obstacles and difficulties were: i) **lack of interaction** with subsequent ii) **lack of motivation** and iii) **lack of teachers' training**.

Students found it very difficult to participate in lessons without interacting with their teachers as they used to have before the pandemic. They expressed their disappointment and lack of motivation by emergent distance education and the way teaching was shaped.

'...the most difficult thing for us today is the fact that we didn't have the teacher in front of us. That is, since face-to-face education was abolished, we found it difficult to attend class and participate because some elements such as body language, looking into the eyes of the teacher and paying attention to the teacher were lost... we lost our motivation to participate in the class and we didn't enter or we just entered and didn't answer we didn't participate so that was it for us'.

'I have to say that very often there were issues with the connection interrupting the lesson. Many teachers had chosen to do the lesson with some methods that let's say showing what they were writing on a piece of paper on the camera and it was almost not visible and we couldn't understand what they were writing, as Alice said, it was too many hours and then I had so many hours and private tutoring and it was just a daily headache'

'If a teacher had a bad internet connection then throughout the whole class we just couldn't understand anything because they might just have got stuck when talking ,they might have asked a student and the student might not answer...after the 7-hour schooling we definitely had private tutoring also staying behind a screen. So we ended up every day having an interval for an hour to the balcony to get some air. It wasn't anything else'

The lack of teachers; training on how to use synchronous and asynchronous digital tools in their planning was evident to a large extent.

'Most teachers needed to become more familiar with the technology. So there was a very transitional period that lasted a long time, and we had a lot of difficulties teaching (...) the teacher would often write a paper and show it to the camera. That was how it was delivered, and if there was no excellent connection, so we couldn't watch'

'In the first period of quarantine, there was absolutely nothing going on. The transition period until teachers and such were organised, I meant the second period. Then started, asynchronous e-learning education was not used, at least in our school, only Webex. And in the first period, when we did nothing. Not a single teacher had tried to send some exercise asynchronously as all was optional. We started synchronous in the second term and there was no asynchronous respectively there. Both tools existed but were not used by teachers or by students'

POLAND

In Poland, especially during the first lockdown, all involved in education experienced chaos. Even though some schools had a significant change during the second period of lockdown, **there were schools where problems still existed, as in the first lockdown in 2020.**

'At the beginning nobody knew anything, there were just a few emails from the school. We only used Librus (electronic school register, not a tool for active interactions) and through Librus children were sent tasks to do'

'And I'll add (that there was) a general chaos, but I'm not just talking in the context of the high

school my children attend, but also about the chaos in communicating with teachers.(...)because a lot of teachers were unorganised. (Some teachers couldn't change the way they used to teach) And they just couldn't change right away, immediately, they couldn't conduct classes'

'There was big chaos. Instead of making it so that classes were exactly on schedule (known beforehand), there were some strange schedules/plans where classes were done in half of what was on schedule or at a different time'

'However, as a parent, I can say that many teachers used different methods. There were different platforms, different methods for reaching teachers and this also "caused the chaos, that some information was on Librus and others sent it by email, still others sent in some completely different way as well'

Polish **students** mainly experienced the following obstacles: i) **lack of contact/communication**, ii) **lack of policy for a pedagogical framework**, iii) **lack of motivation**, and iv) **lack of equipment-infrastructure**.

Students completely missed contact with peers and staff and lost their school routine from one day to the other. Some schools did not have established communication channels beyond face-to-face meetings, and automatic information was sent via the electronic diary in their emails. As a result, communication, on the whole, took a new shape and the 'school routine' eventually became part of the 'family routine'.

Students explained more that due to lack of adequate policy, there was about planning and structuring teaching, different timetables than before the pandemic was set up, lessons cancelled at the last moment or rescheduled or only materials were sent digitally for independent work—no instruction on the new lesson formats. On top of that, students experienced difficulty grasping new knowledge to handle digital tools,

which of course, was mainly linked to inadequate equipment. Thus, their participation in remote teaching was affected by the digital tools their teachers used, and this was not an easy task as the variety and efficacy of tools differ. There was no single platform, no single type of solution, and many channels of communication. So sometimes students didn't know they should connect or via what platform/application they should have been connected. Each teacher tried to run a remote lesson differently. Parents said it wasn't easy, but some were proud that their children managed it quickly.

'The other thing was that there was a great dispersion of tools that the teachers were trying to work with and I am full of admiration for the children, that they somehow grasped it, because it was very difficult. '

'Older children (high school pupils) dealt much better. They are used to communicate almost exclusively electronically. The younger ones were actually learning from the older ones, because, for example: the Teams learnt to operate from them, I didn't know how to because I didn't use it at work. The children helped themselves how to do something'

Another point students raised was a weakness in general in the **form of the classes** conducted, which did not take into account the fact that it was, however, a lack of direct contact. The online form compounded the effect of fatigue, also through the underrepresentation of stimulating methods - the disconnection from relationships and traditional stimuli harmed the learning process. The poor content level of lessons, in many cases, unattractive form - usually in an informative method, lecture, or instruction - gaps in knowledge after the pandemic, and only some things can be made up. Also, lack of interaction, relationships, and some pupils from the first classes, needed a place to get to know each other.

'There were also situations where a teacher of an extended level subject, maths, was able to teach 3 maths in a row, online, well the effect of this is now that there are gaps (missing pieces in the knowledge), my daughter was not able to concentrate in front of the computer, for such a long time to keep her attention on a science subject.'

'Well, there were also such cases of very poorly conducted lessons. A weakness in general was the format of the classes, i.e. not taking into account the fact that it was a lack of direct contact with the teacher.'

' I think it is every day, to some extent, and the online form has intensified the effect, the boredom. My older daughter (high school) needed more stimulation, some sort of life, contact, relationships and this disconnection from stimulus had a negative effect on even such cognitive abilities.'

'There were too many lectures in online teaching, which were tiring, boring, they may be great in terms of content, but it is difficult to focus attention.'

They also discussed the problems with equipment for remote lessons, with the availability of cameras, and printers, lack of a sufficient number of computers or tablets if there was more than one person at home participating in remote education, for some people a problem with an isolated place to study and sufficient internet speed. It was an enormous stress for the children, students in particular, that the internet did not work when they needed to connect, and this happened at home when everyone had to use the network simultaneously. So lack of equipment and infrastructure was a major issue throughout the lockdowns and obviously measures to overcome it were taken later than expected.

'Problems with lack of a working microphone, so (as parents we decided) quick shopping was done

to install (those devices that were suddenly needed)'

'I have to say it, because apart from (having) 2 children in high school I also have 2 in early stage education, so just at the beginning of the pandemic, there were four school children in my house at the same time. So the problem was to provide these children with some (suddenly needed) devices, and also 4 people at once on computers/mobile phones had to have access to (good) Internet connection, because at the beginning a webcam was required and there were 4 people on the webcam plus I still worked remotely. Well, it killed everything. (The net connection at home was too weak.) And what's more, the school tests were the most demanding, because the teachers said that nothing could be heard in the background and finding a quiet place in a flat where 4 children are using online lessons is a challenge'

'I can't forget how we were running around the house with laptops, four people, in order to get a good connection, because here it didn't work, there it got disconnected - four people working and studying at the same time, we weren't prepared, i.e. we had the equipment, but we didn't have good internet. It was a lot of stress, especially for them (the students). Because they would miss lessons, they didn't know what was going on, they couldn't join in later. '

On the other hand, Polish **parents** testified the following obstacles: i) **lack of policy**, ii) **lack of motivation**, iii) **poor attendance**, iv) **lack of classroom management**, v) **lack of educational digital content** and vi) **mental and physical health**.

Parents pointed out that, among others, due to technical problems, and lack of policy teachers rarely conducted classes with the camera on. There was no ordinance (no directive) and no possibility to require students to do so. So many students abandoned simple everyday basic activities, such as getting dressed or making the bed in the

morning, brushing teeth or hair, because they participated in the lessons while sitting or lying down in bed, in their pyjamas.

'Fortunately lessons started from the very morning and fortunately my son has his own room. But the whole day the lessons were in bed (he was in bed), because these cameras just didn't work. Nobody (from the school side) checked it. (so for my son lessons were done) lying in bed using the cell phone'

'I have very negative feelings when it comes to this situation (how it was organized by school and how my son not participated in any special lessons), because it was practically the same the whole period of the pandemic.

Not to mention the bed (being constantly in bed), phone... the child lies only the speaker turned on because the cameras were not needed, because no one including the teachers used the camera, so the children also had no motivation to use (the camera). So somewhere there was a lesson, and he was just in bed and doing something else or actually looking something up or playing there.'

The secondary school curriculum is more rigid, as it is overloaded, so that was an added difficulty raised by parents. Students had to engage themselves more, online, a lot of the learning shifted to the student, and some students did not do it. As a result, there was **poor/ low student involvement** and **motivation** in online education.

'There was so only this much motivation when/ if the parent who was at home (checked) the principles/forced to get up, "please sit down to this computer I want to see, that you are learning something, open the notebook ect.'

'In secondary school is also much more rigid (more rules) and there is less space to try to engage students. There is also a greater focus for teachers to present/work through the whole curriculum of a subject with their students.'

'I also noticed that a large part of the material was passed on to the students, that they had to organise themselves, read the necessary material on their own, and not everyone could cope with that, having both lessons and access to other activities, chat groups...'

'I'm thinking that my son's conditions were very poor, because his class was specific, everyone there had some idea, not necessarily related to science, they were very creative, but they didn't necessarily motivate themselves to get good grades, this also resulted in low attendance at lessons, some decided that they didn't need the online lessons, some decided that they didn't need the final exams.'

In some schools/regions, there was little equipment or Internet access, so students only sometimes had the opportunity to participate in online lessons. Some schools did not check attendance on the argument that young people at this stage of their education were mature enough to control themselves, nor were parents aware of this. It was only when giving mid-year grades that it became evident that some students could not pass a particular course due to poor attendance or absence from assessed classes or tests.

'I am also a witness that at my son's school, e.g. during a history lesson, the teacher told a very interesting story, but he was very poorly heard, or not heard at all, and I reported to the school several times that the teachers had poor equipment, that they simply couldn't hear them, so what if the subject was superbly taught, when the student had to concentrate very hard to hear anything, and couldn't stand so long on the headphones. Poor equipment on the part of the teachers'

'It's also a question of the teacher's settings, not everyone knows how to set up the microphone, and if the teacher doesn't have the right equipment, and/or the student doesn't have the right equipment and the teacher can't see if the students are falling asleep, he/she can't react.'

'... it was very difficult at the beginning, teachers had various problems, e.g. with seeing if a student was in the lesson, they implemented that the students should have a camera and they didn't have one themselves, they worked together on one monitor (then they could only see their own presentation and they couldn't see the participants, they didn't have one themselves). It was very difficult at the beginning, the teachers had various problems, e.g. with seeing if a student was in the lesson...'

'And somehow classes were held regularly whereas the problem was (although not for my son) attendance. It happened that he was alone in a lesson, or two or three people only. This was not checked, controlled.'

Many parents also pointed out that students and their children often used a computer, tablet or phone to do things other than actively participate in the lesson, which the teachers probably needed to learn. Some children played games, listened to music, and watched videos on YouTube, while joining their classes. Tests were also a problem as some students used whatever they could get their hands on. In other schools, the requirements for time, place, and camera were specified in detail - whoever needed better internet or independent spaces to work, suitable equipment was sometimes graded lower (suspicion of downloading, etc.).

Some parents noticed problems with the material to be studied; in the second period of the pandemic, two parents decided to pay for extra classes for their children to compensate for the deficiencies created during the first lockdown. All these **classroom management issues** lowered the degree of learning acquisition and created different profiles of insufficiencies within the same classroom.

'It was such a struggle to get him to separate his studies from his rest, to change where he sat, where he studied, where he ate, even if he

played games, to at least keep his school time at his desk and not in bed. In addition, at some point, there were tutoring sessions (paid extra money), because the learning deficiencies were enormous - he took the tutoring sessions more seriously, even if they were online, he turned on the webcam, participated actively ... and maybe that was the difference, that he himself already saw that he did not understand the material that was taught at school, that he needed help, because at school he did not see the key of instruction on how to understand something. And any material that was sent through the school was difficult and the son didn't know how to do anything with it. I controlled the lessons as much as I could, when I wasn't at home I couldn't always react in real time, because at some point he even started to avoid going/joining those lessons, because in them he would only get another material with which he couldn't cope on his own.'

One parent indicated that it was a unique experience to listen to the lessons, to what happens in them, and to how the teacher interacts with the students. Some classes were interesting from a parent's perspective because the form of teaching was interesting. Still, unfortunately, this new form was inappropriate for the student, who, after some time, switched off, did not focus, and did not listen (students were not able to concentrate for more than 15-20 minutes). Lessons in a subject taught in a row resulted in insufficiencies in knowledge or skills for some pupils, as they were disengaged during long, single-topic studies. In some schools, online lessons could have been more exciting and challenging.

' (another issues) The fact that I do not quite agree with the content presented during the lesson. For example, history lessons (in primary school) were very simplified, (so for me a parent who was at home, and listened to some lessons

and this simplification.) it was interfering my work'

'It was indeed interesting that parents could hear what was going on in the lesson, it was a unique experience and I have this impression that some of the activities were interesting but from my perspective as an adult who already has some knowledge of the world, because something was shown in a new way, but the form of teaching completely lost the attractiveness of the content. There were even conversations about it at home "You have a nice conduct of these online lessons" "But after half an hour nobody was listening to it anymore".

Furthermore, parents significantly raised the issue of a problematic **mental and physical health** situation that emerged. Emotions of loneliness, feeling trapped, low self-esteem, suicidal thoughts, and helplessness emerged in their children without them knowing how to deal. Suddenly, due to the restrictions, a young person who had until then spent time away from home, with friends, or simply outside the space of shared accommodation with siblings, grandparents, or problematic parents (with addictions) had to sit at home. Lack of physical exercise, active games and movements with partners led to lessening peer interaction among students, which caused tiredness in their concentration skills. Some students also gained weight.

'And still in the first year of the pandemic there was an engagement on the part of the students and a willingness to participate, whereas it sort of diminished in the second period of the closure of the schools, the longer the remote learning, the fewer students were active, the fewer teachers got involved. You could see this pandemic fatigue and I think it was a result of the lack of willingness to do the work together....and the lack of physical education classes, that was also a problem, because these classes are usually the time when students

integrate, when they do something together...and when these classes are not there...jumping in front of the cameras is not the same.'

'Lack of physical activities, movement...extra pounds also appeared'

'(...)because there were extra kilograms, but also pain in the spine from sitting, his back hurt, os many hours in front of the computer - lessons and entertainment ... all day long at home staring at the computer(...)'

'Lessons in bed - physical education classes in bed....'

'This time was still very difficult because teachers, pupils and parents had to deal with the emotions that arose, because in the pandemic there were restrictions and such a 16-year-old couldn't leave home without an adult, suddenly such a sense of incapacitation, it's tragic in its effects, such was the moment that young people couldn't move from home...it was devastating for them.'

'(...)there were also absurd moments when such a young person could not even go out alone with the dog. (...) but it was really a problem: no need to go to school, no PE classes...my son got totally lazy, he spent a lot of time in bed, do something I can't because I'm waiting for lessons and when they start, I don't know, but maybe anytime...and practically all day in one room, one room and he got lazy to the extreme.'

The Polish **leaders and experts** appeared to share the same thoughts despite coming from different areas of the country. So they pointed out the following obstacles: i) **lack of equipment & infrastructure**, ii) **exposure of students' private space/embarrassment of students**, iii) **exposure of teachers' private space and profession/embarrassment for teachers**, iv) **uncertainty** and v) **lack of digital skills**.

The main obstacle was the school and teaching staff's need for more equipment and infrastructure. They needed more equipment, or their devices needed to be better, they couldn't connect or use a camera, or their microphones were broken, or they were not good quality etc. The teachers themselves (most of them) did not know how to use specific equipment, how to connect something, or how to adjust something (e.g. the volume of a microphone). Teachers' lack of equipment also interpreted into whether they could control how students perceived them and who was actively listening or in the lesson - having only one computer with a presentation running, they could not interact (could not split the screen etc.) with students.

'It was very difficult at the beginning, the teachers had various problems, e.g. with seeing if a student was in the lesson.'

However, more obstacles arose from different situations leaders & experts experienced in their areas of responsibility.

Students' private space and private life were exposed to their teachers and classmates, causing embarrassment and annoyance. Many computers had too little computing power to switch on the virtual background. **Embarrassment** not only related to the fact that someone did not want to show their room, but some shared the room.

'The other thing that came up was the embarrassment of the pupils having to turn on the cameras and they didn't have the facilities to do so, many of the computers didn't have enough computing power to turn on the virtual background so they had to show their room, which was often shared with someone (everyday situations were seen on camera, like a half naked father walking behind, someone calling out, someone talking/ arguing/ mum coming in with food, around 1pm eating lunch it was

almost always, parents didn't take into account that it was a child in the classroom.'

On the other hand teachers' space and private life were suddenly widely exposed which have caused embarrassment and disturbance to their professional identity. Their profession started balancing between their skills (teaching style) and their appearance (dressing code). Students took photos, recorded parts of the class, and sometimes some other people attended or listened to the lesson, commented aloud or asked awkward questions, etc., and teachers felt insecure or even ridiculed. It wasn't easy for teachers to act normally.

'But knowing that if I make a slip of the tongue online and don't know how to explain it, with my parents listening in the background or to the side, it's very stressful and makes me more rigid, and I think I'm not the only one, and it takes a few lessons to behave naturally(...).'

There was also uncertainty among teachers and headteachers. Some teachers needed to learn how to move quickly from the traditional teaching mode to the remote one. Some teachers and principals thought this was a temporary but short-term situation and did not get involved in organising and conducting proper lessons.

'in my opinion, in March, everybody was treating it in terms of short-term measures, because we got the information that schools would be closed for only 2 weeks and then for another 2, and that's how it was announced, that's how the government started to tell us. And if someone is in 'temporariness' then they are not paying attention to what is going to happen next'

Some teachers had never previously used computers or digital tools to plan their teaching so their **skills were way below average**. There was a considerable difference between teachers. Those who were already actively using ICT before (before the pandemic) quickly got into remote teaching

mode and created their versions of the digital school. Those who had practised teaching skills on ZOOM, Discord taught on ZOOM or Discord. Some teachers just sent assignment files to be completed week by week. And some slowly tried to combine their knowledge with solutions recommended by other teachers.

'But the problem was that the chaos was gigantic at the beginning, and the other thing was the hardware problem. The teachers also had a gigantic problem, especially if there were teachers who were a little bit older, just uploading information, going on some platform was a problem. I had colleagues who would send a file of material that the student had to go through with the parent, once a week a file, no conversation, no contact and just the material sent'

'A lot of secondary school teachers are older, of retirement age, and moreover a lot of them have combined jobs, i.e. they work in two or more places, in different schools (they are very busy). These older people were at a loss, unable

to make up for their lack of ICT use, even if they tried. I know of a story from an IT specialist who, in a pandemic, was asked to help an older teacher because someone told her her webcam wasn't working. And it turned out on the spot that the teacher was using a desktop computer, for which she needed to buy a webcam (and the teacher was convinced that all she needed to do was click on something, because that's what her friend was doing). She didn't have the foggiest idea about the equipment and tools, and it's really sad that such people were thrown in the deep end.'

'(...)some teachers did not do so well and that for some teachers, remote teaching was an examination, an evaluation of who was a good teacher and who was not. If there was a good teacher, he or she excelled, and what's more, his or her online lessons were better than his or her in-school lessons, and whoever was doing average or badly before the pandemic, the switch to remote learning compounded his or her problems'

Indicator 2: Support and management

What **kind of support** did you **receive or implement** regarding the challenges that you faced?

Were there **needs** that couldn't be met?

Could you describe some **positive initiatives** that help you to **overcome** the **difficulties** you faced?

BELGIUM

From the Belgian **parents' side**, it was raised that the kind of support and needs they faced could not have been met during distance education. As was expected, that was about the **lack of support and communication** they received from their childrens' schools. However, they did not comment on any positive initiative that helped them overcome their need for support and communication.

During the period of the lockdowns, the trusty relationship between parents, parents and teachers, and parents and headteachers became more and more tenuous. It was evident from the first weeks the difficulty established in creating a more supportive and communicative environment. So it was often challenging to talk about the difficulties that distance education brought because everyone was in their family environment and knew much less about other parents. And so it took much longer, in fact, before being able to communicate, to have confidence, and to have the cultural mode of appropriation of how to react. As a result, even today, they have arrived at situations where there is almost a deculturation concerning the school, not only of the students but also of the parents.

On the other side, Belgian **experts and parents** stated that **school leadership** was crucial and really made the difference, as no clear guidelines and support were in place at the time of the outbreak. In terms of coordination, bringing people together,

bridging needs, inspiring the school's staff, ensuring a strong team with clear communication and the same vision within an organisation that shares the same values is what leadership is about. However, that was a fragile and crucial point to be met as there were considerable differences among schools.

'And, we did see that the schools that were strong in that, where there was a clear strong leadership, where there was clear communication and organisation, that those are also the schools that were best able to cope with the situation, that were best also able to take care of their teachers, which also allowed teachers to take care of their students more. Because of the stress that teachers felt and students dropping out, yes, of course, this is also a factor in student learning. So I wanted to add the importance of school leadership'.

The school's leadership, so the school's direction, was also essential from the parents' point of view.

'My children went to two different schools and in my son's school I saw that all the teachers had the

same way of working. They were heavily supported by their principal. And that it was very clear to the pupils what they had to do. For each lesson, it was more or less the same. How to follow the lessons or how they were going to be assessed. I mean, everything was very clear for the students. Whereas at my daughter's school, all the teachers

did a bit of what they wanted and so there were different tools, there were teachers who gave live Lessons, others who didn't. And in the end, it was not clear for the students what they had to do, it was always different for each course. So I saw as a parent that leadership is very, very important actually'

FRANCE

The French **group of parents** expressed their concerns about the following issues: i) kind of support – **inconsistent guidance**, ii) needs that could not be met – **instructions and guidance** and iii) positive initiatives – **personal effort**.

Regarding the kind of support that parents received, we can say that was not provided consistently and even when given was without explicit guidance:

'I got in touch with my son's primary school teacher, I phoned her to ask for guidance, ie. What was the homework to prioritise, most important to get done within a week? I did not get a helpful answer'.

So if we flip the coin of support to the needs that parents felt that education could not meet, we can see apparently a lack of instructions and guidance:

'I did not get a proper answer from my child's teacher. I had to deal with my son who has special needs with no help or guidelines from his primary school teacher.

However, in all the negative an unpleasant environment by the pandemic, which created

GREECE

The Greek **group of parents** raised the following issues regarding the support they received to deal

much inconsistency in communication and guidance, it was the personal effort presented without hesitation that made parents more relaxed and children more confident:

'One special needs teacher kept in touch with my son every week and that did really help'.

The group of French **leaders** raised the following issues that they faced: i) kind of support – **teachers' training**, ii) needs that could not be met – **equipment and infrastructure** and iii) positive initiatives – **teachers' digital skills**.

Leaders testified that the teachers' training for primary school and secondary school teachers was necessary from the very beginning of the first lockdown however started only ... or didn't happen at all.

Moreover, leaders found it very difficult to cover the needs in equipment and infrastructure that the educational community faced especially in primary schools where no digital workplace was available at the time.

As a positive initiative of this overwhelming situation leaders pointed out how this helped and improved teachers' digital skills. A free school phone number was made available.

with the needs of their children's learning: i) kind of support – **technological solutions**, ii) needs

that could not be met – **facilities/infrastructure, mental health, academic continuity.**

Unfortunately, no positive initiatives were mentioned that would have acted as recommendations for future similar situations in education.

It is noticed a difference between public and private schools and the technological solutions they provide to their staff and students.

'The private one [school] is the one which took the initiative in terms of technological support. They changed platforms and we gradually moved to another platform. They also made sure they bought their used computers and covered half the money for the school and half for the teachers, for the teachers they bought equipment. So there the issue of technology was dealt with in that way and of course they all had access to the school to do lessons from the school'

Some parents faced a hard time leaving in small places with all family members simultaneously connected to school or work digital environments, bearing in mind the lack of space or equipment.

'As a parent the difficulties were the internet we had at home. The resources we had, we had to buy computers to cover all 4 of us...the house wasn't huge so they couldn't hear each other'

Also, most parents extensively described the needs they could not meet, mostly towards keeping their children mentally high and having academic continuity during the emergent distance education.

'Yes on the question of whether we can generally keep children active in the case of distance education. I think that we can't keep them as active as we would like, I mean I am talking as a mother now, the children were taken out of

context, so it is very difficult for the role of the parent to put them in that context and we found out after the pandemic that there were a lot of learning gaps in the children...Now in terms of the school this particular school of children did not do anything special as a school I mean not individually as teachers. I imagine in cases of children who didn't have access maybe they gave some devices but I think that's about it'

Schools needed to make more to meet their students' needs and thus facilitate their learning, especially for higher grades who were about to participate in the national examinations for higher education. As a result, parents experienced their children's inconsistency and gaps in their learning and mental health issues.

'So the school tried to turn its function into an internet mode. Seven hours in front of a screen 28 students to each teacher. What to do to keep the attention of 28 kids who had access to their cell phones, were free to choose whether to have their screens on ... And of course we as parents took care anyway with tutoring to fill that school gap which of course did not arise because of a pandemic. It is a standard policy for the third grade to support the children. What more can I tell you about support. I was trying to talk to my daughter who was a third grader and explain to her that this year will not be made up in any way. Meaning if you miss third grade now then she will not be able to attend high school. These were conversations we had all the time so that I could keep her both emotionally present and practically present in class'

A parent expressed that they felt unsuccessful in meeting their children's **mental health** needs and raised the different effects and the kind of support they had to give their two children. So it is essential to remember that if parents had more than one child, it would have been more challenging to address their psychological needs and always find the right way to do it, bearing in mind their battles to cope with work and family

life. It was a multi-factorial situation; indeed, it did not affect all the children similarly.

'But the issue of keeping children interested and involved was indeed a huge issue. So I was really sympathetic to the teachers trying to get something done but as a parent... I must admit I failed... It depends on the child. And I realised it more there because I have two children who are involved, they had their own learning pace. And I saw how much and how differently distance education affected them. Indeed a child who is more shy and doesn't participate, wants to be quiet in the classroom, thus was invisible in distance education. On the contrary a more participatory child indeed may have wanted to talk more to participate more and from there this and again however it depended on how the teacher had organised the lesson and whether they kept the children's interest and whether they had opportunities to participate actively in the lesson. So I saw huge differences in that regard'

On the other hand, the Greek **group of leaders** raised the following issues regarding how they managed to deal with the needs of their areas of responsibility: i) kind of support – **technological solutions and training**, ii) needs that could not be met– **facilities/infrastructure, pedagogical framework and mental health (exposure to parents)**. But unfortunately, no positive initiatives were mentioned that would have acted as recommendations for future similar educational situations.

The kind of support leaders needed to provide was mostly about technological solutions. Unfortunately, in most cases, schools were technologically unequipped, or resources were delayed due to insufficient planned provision.

'The lockdown was in February, the first tablets in schools arrived in April. That is if they didn't already have tablets to give out the new ones that were provided and each school got usually

10 tablets. Who 1st got out of the 10 that came in April and in May when schools reopened. It takes time to put things in place, to set up a different system that works you need months to complete it so then the problem is over'

'For me the wrong thing was not what happened in the considerable part that is from February to June 2020 but what didn't happen so that we could get things done from September to October 2020 when the schools closed again and then. And I am always speaking from the point of view of the state, which unfortunately has very little to offer us. I will tell you that I am sorry to say that the Regional Centre for Educational Planning of Western Greece, the largest RCEP in the country, still do not have a telephone. We were not even granted a telephone, and fortunately, the education staff paid for packages with unlimited calls so that we could support the teachers even late at night. This is, of course, true with tablets and several other things, as described before'

Leaders also tried their best by organising pieces of training for different subjects and especially about presenting hands-on activities and teaching practices planned for distance education.

'With the massive training we did, we managed to support the schools. It wasn't sufficient and could meet all the needs, but it was a step that at least achieved the objective of not losing the pupils' contact with the school. But in no way can we say that all learning needs were met. On the contrary, we can see even now that the children have gaps in their learning because they were not as effective as they could have been if they had been anticipated, particularly the second time. I repeat, the pandemic was not an emergency; we were aware of it'

The lack of a pedagogical framework was another issue that was raised and that could not be met quite easily as was also linked to the absence of relative pieces of training.

The most challenging part was convincing teachers that distance education does not mean transferring what I have been doing in school so far in person to be done remotely. This was a piece that we tried to work on, especially in the second year, and I think some steps were taken but of course, with very few resources, it was impossible just by doing mass pieces of training, which were done by the education staff in many, many doses to support in such a short time so many people and even exhausted people and even angry people... They tried things. But they worked, too many worked and in the wrong way. And those who were able to get students on board were able to do their job much better'

Leaders received many concerns from teaching staff about their role and its transformation to something else they could not handle, making them feel very uncomfortable and not following any pedagogical principles.

POLAND

From the Polish **parents' side**, those are the issues that were raised i) kind of support – **governmental financial support**, ii) needs that could not be met – **lack of equipment**, and ii) positive initiatives – **social skills**.

The main issue parents raised regarding the kind of support that would like having but did not, was **governmental financial support** either to get schools infrastructure or to help students cope with **mental health issues**. In time (during the second phase of the pandemic), the government launched a programme of financial support to deprived areas for purchasing laptops. On the other hand, some schools and private organisations lent devices to their students. In some schools, there were spaces to provide classes or participate in classes. In addition, some teachers organised additional meetings with their students,

'One of the problems that the secondary school teachers had to deal with was the keyhole [effect], that is, the parents were in class, they were trying to intervene and intervene in any way. This was a problem that was brought to us in the office in the administration and we were also trying in our own way to support them, especially psychologically'

'And of course, we were not trying to convince the teachers that they have to teach the students about how to participate in distance education and how I do my job differently because the parents, especially in the younger levels of education where parents were needed i.e. in the primary and kindergarten. This was also changing the freedom of the teacher from where teachers worked, especially in primary school, from a real classroom and a safe environment to a virtual and more exposed one. Suddenly they didn't know who else was watching them'

like, e.g. online breakfast/watching films/ theatre plays to spend time together and raise their spirits.

'At school there was not this top-down support, the teachers of this school themselves did not receive support, maybe then their involvement and the effect would have been different if they had support.'

'(The)schools behaved in very different ways, I have this perspective of a few schools in the pandemic, it just so happened... at that first stage some schools, they did so that they checked what equipment was in the students' homes and it was possible to borrow laptops from the schools, the schools were formally working, and some teachers who didn't have the conditions to teach from home could come to the school and connect with the students from the classrooms, which from the perspective of the quality of teaching was a support for the teacher and the student. There were also situations where

parents asked if students could come to the school for remote lessons and physically sit in the school, because, for example, it was a large family and at home the student did not have the conditions to participate in an online lesson. Also such situations happened, and such support also took place.'

'There were teachers, someone who was liked by the students would organise additional online meetings, such as eating breakfast together, or sharing a story about what went on at the weekend, or even watching a film together, and it may not have been teaching, but it was an integrative practice.'

As a result, to the previous point the biggest need for parents was to be given governmental support for getting equipment. The lack of equipment was a real problem, surveys were done in some schools, discussions were held with parents to identify students without access to equipment, and collections of computers and tablets were launched in some places. But yet the problem was not solved as there was not a central decision.

'I would like to say that from the perspective of a teacher educator it was the first challenge of this first phase to check what was the state of this (what equipment students had). We had a survey at school " what do we have, is there a good enough Internet (to join classes) and if had opportunities to compensate for the differences/missing devices among the students, and I remember from my perspective that while working in the foundation we received a lot of inquiries from teachers who wanted to help their students. And in fact there was such a collection/ gathering of computers , distributing them to different locations because it was a real problem, maybe not concerning us as we sit here, but in schools.'

Parents acknowledged that some students met face-to-face despite the bans and that some meetings took place in the homes of some

students, allowing those young people to establish relationships, stay in contact, talk and support each other (which was not the case when students only 'met' each other online). Parents also supported such bottom-up initiatives (even though they were not allowed by government regulations). In the household where there were younger and older students, those younger ones learnt from those most advanced (not from school or teachers). There were families with more than one child/student and usually the older child (more advanced in learning at school) taught his/her siblings how to use computer/ or some online tools. Some parents organised additional classes or paid for private tutoring to catch up with the school requirements/to fill in the gaps. Also, some parents organised themselves in a supportive group to discuss common problems and to help each other. They tried to communicate with teachers asking them for help and providing more engagement.

'Unfortunately I have only negative memories, because at my son's school the activities consisted mainly of the teacher getting involved, checking attendance, and lessons were not taught. Parents got together and wrote a petition to the school to make sure that lessons were actually taking place, especially in the key subjects for the final exams, that we would like them to take place, and the response from the school management was that we are in difficult times and we all have to deal with the situation somehow.'

From the Polish **leaders' side**, those are the issues that were raised: i) kind of support – **technological**, ii) needs that could not be met – **lack of equipment and resources / teachers' digital skills**.

'The role of the local authority was huge, in very different local authorities, it varied, and when there was a second pandemic period in some of

the schools there was one platform for classes, and teachers were given a specific plan by the head office, or worked out by other teachers, or by the local authority.(...) Some teachers were also supported with equipment, which depended on the school, on the location.'

Leaders made everything that was possible from their side to ensure technological support to the best of each area of their responsibility. The government agreed with the representatives of the mobile companies, and they made most of the network capacity available to private consumers. They increased coverage in smaller towns (where possible) - there are towns in Poland with no internet or weak signal. During the pandemic, this improved, and this was a significant support to schools. Governmental, systematic support depended on the wealth and awareness of the municipality, e.g. the City Hall of Warsaw bought access to the entire Teams package for all schools, so after a few weeks of the pandemic, someone unified the learning platform top-down (important was the speed of reaction and funding of a single solution), while in a small town in the Podkarpacie region, the lack of a common platform for learning and communication remained until the end of the pandemic (also the latter period). Each teacher acted as best they could, and nobody from the institutional side of the municipality concerned cared. During the whole pandemic period, there was a **lack of psychological support for teachers.**

'And there was a support group of teachers, teachers for teachers, they didn't wait for what the ministry would give, because it was poor with that, but those who knew how to organise remote teaching helped others.'

'Some teachers also had access to psychological support, which was also extremely important, because it was not at all easy to cope.'

There were also difficult situations without support, where a teacher who was also a mum of a pre-school child had to teach remote lessons with her own child who could not be in pre-school - not every area could be supported.'

However, a major need they thought could not be met was teachers' different level digital skills. Most teachers had to organise a new way of teaching and to communicate themselves without instruction or training. Some teachers throughout the pandemic found it challenging to teach at a distance and to keep in touch with students or teachers. So, they didn't do much. There were gaps in knowledge and skills on the teachers' side – that influenced the students' knowledge and skills. As a result, there are still areas of the curriculum that still cannot be covered. Another result was that in some schools, attendance was not checked, therefore low participation of students in some classes was noticed.

'Also the support depended on the school, because some of my son's lessons were taught by teachers but from the school premises. There was also information on Librus about the operation of various support groups organised by the school, that if children or parents wanted to come and talk, there was also a school psychologist available. Although at this school there was no support in terms of equipment, the teachers had to use their own, and they did the printing and preparation of the activities at their own expense.'

Another aspect of needs regarding **parents'** copying their children's learning was the lack of equipment and resources in families. Parents mainly had to organise the space and equipment for their children's learning. Whoever could afford it bought a kit, but not everyone had suitable premises or fast enough internet so parents ended up buying data packages. Even so, for some children, the conditions at home were not conducive to learning and concentration. Some

parents did not have enough resources for purchasing equipment and most importantly a

main problem was lack of space for students to have their own space while teaching.

Indicator 3: Teachers' practices

What is your opinion about the **teaching practices** that the teachers used during remote teaching?

What were the **practices the teachers applied** in remote teaching?

What **teaching practices had you experienced** during the pandemic were innovative*, and why?

Did you participate in **making choices and co-designing** the lesson?

Did you **influence/change the proceeding** of a practice?

Did a teacher **propose an evaluation** made by students?

What **teaching practices had you experienced** during the pandemic were **effective**, and why?

BELGIUM

The Belgian **group of students** provided evidence about their teachers' teaching practices in remote teaching, although we do not draw evidence that they were innovative and it seems that their voices were not heard in co-designing their lessons. Furthermore, they did not talk about a specific form of evaluation of their learning. The main teaching practices they highlighted were: i) **use of digital boards** and ii) **differentiated planning**.

One effective teaching practice that was highlighted was the use of digital boards.

'more to be recommended, is the use of digital boards, so, which are projected directly onto the screen, there is really a difference between the courses that use a projected digital board and a chalkboard in terms of quality'

Another effective practice was a differentiation on the school's timetable.

'We actually had quite often that teachers said, okay, 'We're just going to keep it short. Instead of 50 minutes, we'll do 30 minutes, first 10 minutes intro and explanation. 20 minutes of independent work or you work on those exercises and if there is a problem, jump back into the call. And then another 5 minutes, mainly to wrap everything up and see if there are any questions. And then you can either study on your own for another 20 minutes or just relax before the next lesson'. Which I personally thought was very good'

On the other hand, a teaching practice that was absolutely appalling was the fact that some teachers filmed the boards with laptop front cameras, so students could see absolutely nothing.

That it's quite hard when being taught any subject and especially maths.

'This was really one of the most complicated practices that there has been.'

Students were hesitating about the need to put on cameras during live lessons.

'Some students who absolutely did not want to have the camera...these students wanted to stay in their beds and that was not a problem as they didn't want to show their living space. And I thought it was important for self-discipline, because when you put the camera on, you are a bit more present in the class, and also for the teachers, it's easier to see if the students are physically and mentally present'

'So, I'm quite against the obligation of cameras in online tools because...I call it an invasion of privacy. It's not like when we're at school, we're only seen each other at school and then we go straight home and that's our private space'

This seemed to also be the case for some teachers, who didn't dare to put on their cameras, which parents thought was not very engaging for the learning process.

'I remember one day I went behind my son and I saw his screen and I said to him a bit stupidly: 'but all the cameras are closed in fact?' He said: 'yes, all the cameras are closed'. I said: "and the teacher, he doesn't turn on his camera?", he said: "Well no". The teacher is actually afraid of the screen captures, with the faces he might make or the faces of the pupils. And so it's to avoid harassment. And to avoid broadcasting on social networks. And I admit that when he gave me the explanation, I understood, but I just thought, well, it's just impossible to cope. I found myself with my son who, at 8.15am, opened his computer and stayed in bed to listen to the first hour of class or the second hour of class. And I must admit that I also thought 'well, if even the

teacher doesn't turn on his camera, what the hell.'

On balance, Belgian **group of experts and parents** agreed on the following effective and innovative practices. Again, it was not mentioned whether students' voices were heard in co-designing their lessons or if a specific form of evaluation was employed. However, the highlighted teaching practice was **the use of collaborative digital tools (games, platforms)**.

Some teachers completely changed the rules of the game of the school lesson and went beyond and above using collaborative digital tools.

'So they worked like crazy because they had to revise their whole pedagogy.'

'They also made the pupils work together in synergy at a distance, and then they could come and present. In short, they changed to be in a much more collaborative logic. This made it possible to compensate for the lack of presence and the lack of group spirit'

'I think that these are promising avenues that we can really develop. When you're in the digital world, you have to totally change your way of being and the transmission is done differently. We get tired much more quickly, so we can't give lessons as we usually do, when we have had our pupils following for 6 to 7 hours like that on a screen...Imagine 12 or 13 year olds, it's just unthinkable for them'

'There have been many bad things, but there have also been incredible and passionate teachers, who have in fact, through this interactivity, through the introduction of playful logic... And playful logic also maintains motivation'

Some teachers employed more interactive and collaborative digital tools in their teaching, i.e. use of games for subject-knowledge.

'We have a generation of young people who are also gamers. They are, we know it very well, into YouTube streaming and gaming. Within the games, there are codes that speak to them in fact and we know perfectly well how to direct the playful logic to be able to make learning. And I think that these are even good practices that should be extended from digital to the classroom. I think that the advantage of these codes is that they are trans-social class, which means that you are a gamer as much when you live in Uccle as when you live in Molenbeek or Saint Josse, to take Brussels as an example, and so it is an advantage, it is that there is a logic of inclusive culture in fact, which is shared by a whole generation of young people'

The use of digital accredited platforms with resources was also mentioned:

'...most teachers also pointed out to Khan Academy. If I'm not mistaken, that's actually for maths. That's actually a way to differentiate, where students can actually do certain things independently and through algorithms - I don't know it very well myself - but I know that's

something that comes up with our teachers very often, and they actually get a lot out of it.... (A student mentions in the chat that it is indeed a nice platform) Ah voilà, I see it's known to students'

Finally, one parent was enthusiastic about timetable pedagogical adaptations right after the first lockdown (dividing the classes and teaching and bonding with smaller groups) as it was a good way to preserve mental health and foster motivation.

'...in two of my children's schools, two secondary schools, they had a modulation of school rhythms, which meant that they were put together in smaller class groups, because it was necessary to meet health regulations, and so they had classes every other week or every other day, depending on the school. But this really allowed to reduce the size of the groups and therefore to do much more in-depth work in terms of learning and personal contact. For me, this is really a key element in fact, a major one, it really allows to work with quality in the pedagogical relationship and it was much better in fact... I saw it in the motivation of my children. In fact, it really had an impact quite quickly.'

FRANCE

The French **group of students** agreed that they did not experience an organised and solid set of teaching practices during their distance education period, but they pointed out that mostly were i) **lack of contact** and ii) **lack of communication** what they experienced. They thought that teachers could have included their voices in making choices and co-designing the lesson or could have used more innovative and pedagogically adequate practices for learning. Furthermore, students increasingly felt that only a few video conferences took place. Even in those instances, teachers were more interested in academic development (loads of homework without feedback) than students' wellbeing.

'I felt isolated. There was little communication with my teachers. Video Conferences were few and far between'

'I told myself that fortunately I was with my family. I really wanted to quit because it was already my first year in a master's program like this. And there were many of us who were fed up among the students. In fact, we really felt abandoned by the teachers and we were really fed up.'

GREECE

The Greek **group of students** provided evidence about their teachers' teaching practices in distance education, although it seems that their voices were not heard in co-designing their lessons as Belgian students also pointed out. Furthermore, they did not talk about a specific form of evaluation of their learning. The main teaching practices they highlighted were: i) **use of stylus**, ii) **use of videos**, iii) **use of music**.

'I only caught the first period as I was in the 3rd Grade when they only used Webex [synchronous]. However, I don't have anything particular to say. It's not that anything struck me. It was just a lesson that a teacher could do and a few kids were attending'

'Teachers adopted the stylus method after a while, which made it easier for us because we could clearly see what he was writing and what we were doing very innovatively. It was exciting, especially in the theoretical and easier ones, where many teachers prepared the presentations and accompanied their lessons with videos. The practice that I remember most vividly is in the essay lesson where the teacher had us while we were writing an essay summary had put music in the background'

'My teachers tried to send me some exercises, some chapters of history or the Odyssey. Until, in one class, a teacher tried to do a zoom call. He just made a video call to tell us two or three things for an hour or two. Then in the second quarantine, I was only on Monday which was 'obligatory' as it had a lot of foundation lessons. Some teachers would write on a piece of paper, and then would turn on their camera to show to us but usually it was poor quality result as it came out lame and crooked'

The Greek **group of parents** agreed on the following effective and innovative practices. Again, whether students' voices were heard in co-designing their lessons was not mentioned or if a specific form of evaluation was employed. However, the highlighted teaching practices were: i) **use of electronic mail (email)**, ii) **use of stylus**, iii) **use of camera and whiteboards** and iv) **use of Open Educational Resources (OERs)**.

For the Greek educational reality, the main innovation pointed out by all parents was the use of electronic mail (email), which was not in place before the pandemic.

'The innovation was that we were receiving then and have been receiving emails ever since. The school communicating with every parent for Greece is an innovation and it was done during the pandemic'

'The innovation was that everyone finally used the Panhellenic School Network's platforms after all the phases. Webex was an extraordinary thing. That is, it entered our lives as an exception, there is a counterpart in the PSN that perhaps not everyone knows, but at least the modern PSN of the Panhellenic School Network everyone knows it; parents of students have all the children have all email accounts. These are positive for Greece and were and are innovations.

Again, we have the use of the stylus pointed out as innovative, although it was mostly a tool to facilitate the learning process and not a teaching practice grounded pedagogically.

'Several people worked on physical mathematics with a stylus in the second phase. But, again, I don't remember anything special, something very different or that it was something that impressed them. But in general, I will speak now that

colleagues used practically what we did in our course, some others working in groups utilised the rooms within Webex. So, there wasn't much change in how each of us taught. The means changed but not the way essentially. That's the general feeling I have.'

prepare for the best use, but it gave us a form of communication'

Finally, a considerable number of Open Educational Resources (OERs), introduced by the Hellenic Ministry of Education and Religious Affairs for all educational levels, proved to be a great advantage to teachers planning, although they should have been taken under consideration in face-to-face mode.

The Greek **group of leaders** highlighted the elements that teachers invested in as there was **time, and money** that led to effective and innovative teaching practices although this was a small part of the teaching staff population. Again, whether students' voices were heard in co-designing their lessons was not mentioned or if a specific form of evaluation was employed.

'The fact that all the material on Photodentro used and it was used nationally. In other words, we have considerable resources in Greece that are, of course, used a lot but unevenly, not by the whole community, however my child has benefited from these innovations'

'And a very big positive is the training of teachers that multiplied during the pandemic period; I will say that the seminars that were held online increased massively, and a great opportunity was given to teachers who are far from the city centres. They attend, experience, and are happy to participate, which is still happening. At the same time, the teachers I believe exceeded themselves some as far as possible, but work was done, and I see too many teachers who have been developed very quickly in a short time even though this is 10 to 20%, and now they know it and can build on it hopefully, others will come along so that we don't stay at this small percentage'

Lastly, a parent expressed a positive statement and a very rewarding attitude towards technology and its use for keeping people connected at this challenging time.

'I need something to add as good practice. But as a parent, listening to all of you parents who have spoken before me, I would like to say that perhaps we can judge as good practice the use of the computer medium of the internet, how it has allowed us to have communication even in this form, with all the mistakes, with all the difficulties, we have managed through it to have contact with our children, not the best, to have a teaching practice, not the best. So it is a form of communication that has problems that we had to

'Over 60% of the delegates, 10 were pioneers, and when we say pioneers, it is usually 3,4%. So here we had at least 20% who tried things no matter how successfully they applied them but dared to do something and took steps in the second phase. At first, okay, it was very frustrating that things were not there and the time, resources, and means, but teachers invested both in money and especially in time to do something.'

POLAND

The Polish **parents** expressed their opinions of the teaching practices shared during the remote teaching. However, they could not judge the effectiveness of those practices as they needed to

have adequate knowledge of practices and digital tools and their pedagogical adequacy.

'I heard what the teacher said to the students as he presented the material, and it was, highly

simplified material, a very simplified interpretation of the facts (the parent did not interfere but was offended)'

'In the beginning, most of the teachers didn't have any idea about these remote lessons - they tried what they usually did in the lesson remotely and it came out poorly.'

'Because I also experienced that later on in meetings with teachers, parents reported that lessons with that person are not the best, because they heard it, parents already knew what was going on and they tried to interfere, I don't know if teachers did something about it, but I think a lot of people made positive or negative comments.'

'I have the impression that the teachers have gained or lost something, because normally at school when the teacher enters the classroom he is the owner of the situation, but here in the situation of online education, it has been made public, what they are doing (they have never seen who is listening or watching it), I don't know if they realised it and how it affected them, because the reality of the classroom is no longer the property of the teacher and the students.'

To parents' minds, innovation comes along with the use of digital tools that some teachers used to create a more interactive learning environment (interactive quizzes, puzzles, online tests and games in Kahoot, Quizizz, Mentimeter). Moreover, the collaborative technique of simultaneous writing on an online board was well appreciated by parents.

'...the students were asked to write essays based on their physical education knowledge. Watching sport games on YouTube to observe and present the rules during online classes, to prepare presentations on sports. Innovative were different advanced forms of testing online, with a fixed timer adjusted to the questions and level of difficulties. Innovative and funny forms of testing the knowledge with some games and funny grades – forms of gamification (that gave immediate evaluation of the progress)'

'I think it was innovative to introduce a form of knowledge test, which ended at a certain time, and if someone handed something in a minute later, it didn't count anymore. I haven't used it myself (TestPortal is a bit like that), a question or task expires at a certain time. I have not encountered such a time regime for teacher-prepared assignments and tests before.'

'Some teachers also used elements of gamification to test knowledge in a more playful way, we mentioned Kahoot or Quiziz earlier, where if you don't know, you don't download because there is some short time to answer the question (there was no way to give someone else a hint, write the answer in the chat).'

For the teacher, such tools were also an example of self-evaluation of their own work, because within the results you could see which children answered well, which question, whether there were questions that no one answered (which could mean that maybe the students didn't understand something, that maybe the wrong method on the teachers' side of presenting the material).'

Lastly, parents expressed reluctance about the evaluation process and summative assessment that might have been issued to their children's learning. However, one participant in the group pointed out that remote teaching was a kind of evaluation of teachers' skills and their openness to new solutions and their ability to learn new things and adapt to change. Some teachers taught more interesting lessons online than in person, and some struggled to teach remotely until the end of the pandemic.

4.2 Meso level – Local level

Focus Group 1 Results⁴

The aim of the Focus Group 1 was to identify the socio-economic background (early leaving, dropout) of students - digital divide, support resources for engagement in learning (learning engagement and communication with students), online/digital tools and teaching practices in distance education.

Summary profiles for FG1 per each country			
Belgium	France	Greece	Poland
FR speaking economics teacher in very deprived school in Molenbeek (Brussels), vocational-technical education, without any digital environment	Spanish Teacher Collège (Lower secondary education)	Maths Teacher Gymnasio (Lower secondary education)	English Teacher (general secondary school)
FR speaking geography teacher/digital coordinator + principal in Wallonia (general, vocational, technical education), who had already put in place some kind of digital environment	Spanish Teacher Lycée (Upper secondary education)	Computer Science teacher Lykeio (Upper secondary education)	English Teacher (general secondary school)
Dutch speaking French/Spanish teacher in school in Brussels (but not deprived), general education	Teacher for special needs pupils - Collège (Lower secondary education)	German Language Teacher Gymnasio (Experimental)	Vocational Teacher - Food technology (gastronomy and hotel vocational technical)
Dutch speaking teacher of STEM/physics in school in urban area in Flanders, general education	History and Geography teacher - Collège (Lower secondary education)	Greek Language/ Philology teacher Gymnasio & 3rd grade Lykeio	Spanish Teacher (general secondary school)
Dutch speaking teacher of Dutch in semi-urban area in Flanders, vocational-technical education	Marketing and management teacher - Lycée (Higher secondary education)	Maths teacher Lykeio (Exceptional)	German Teacher (vocational technical school)

⁴ FocusGroup 1 - composed by teachers who had participated in the survey but were not selected to be interviewed.

Indicator 1: Socio-economic background of students / Digital divide

How would you describe the **attendance rate** at your class (lower than in face-to-face teaching or normal as usual)?

How did you get information on your **students' family situation/background** and **their access to remote learning**?

What were the **obstacles** your **students faced to attend lessons** in remote learning?

What were your **students' needs** in order **to participate remotely** in their classes?

BELGIUM

In the Belgian Focus Group there were teachers teaching in very different schools.

There is a difference between Dutch and French speaking schools, which have different starting positions regarding digital infrastructure. But it also depends greatly on the kind of school (vocational/technical or not), region (deprived urban or rural regions), and the digital environment they already had in place.

For example, for the teacher of the French-speaking school in Molenbeek (vocational/technical education), which is classified among the disadvantaged Belgian settings, there were many significant obstacles for the students to get equal access and participation in remote teaching. In the first place there was a huge lack of digital infrastructure and equipment in the students' homes.

'It was very complicated and I lost three quarters of my students because many of them didn't have a computer, that was the main problem. Others had smartphones but no Wi-Fi at home, so 4G was much, much too expensive.'

'The following year in September, at that time, we were able to find some equipment, so we called on companies, businesses... The Brussels-Walloon Federation also helped us and we received PCs that we lent to the pupils. And we received Wifi codes from Proximus, so that the pupils could connect, but even now, it's difficult ...'

But also in the school's environment:

'In our school we have a wifi that works once in 15 times, even now we barely have wifi in all the

classrooms, so we didn't even have the infrastructure to give online courses. ... And teachers have to buy all their (digital) material themselves and some just didn't have the necessary tools when COVID hit.'

Secondly the pandemic was hitting disadvantaged students, who already were having hard times before COVID, more than others, so it exacerbated inequalities. A lot of their students were severely sick, some parents died of COVID, poverty increased, since a lot of parents and students couldn't work anymore.

'Most of the pupils have extremely urgent personal problems to solve. So we already have a significant drop-out rate in a normal situation, but when COVID arrived, there was an explosion and indeed when we learn about the pupils ... we have two pupils who have lost a parent. And then a lot of people who were sick and above all many of them could no longer eat because they could no longer work. So that's the reality of our school...'

'The school is really with pupils who are socio-economically extremely disadvantaged. Some of them have been subjected to very strong social pressure because many of them work, and obviously they lost their jobs at that time, so they could no longer pay the telephone subscription, etc., because they had to pay for it themselves. Some of them are even supporting their families in their own homes.'

The teachers had to testify to very unpleasant situations that their students went through. Thus, their role was mostly supporting them in every means they could but firstly psychologically and secondly academically.

'For many the first concern was to eat. [...] I adapted to their time schedule, so at 11 o'clock in the evening, midnight, I would call students during lockdown. A pupil would say to me, 'Madam, this is the third time I've been arrested by the police or fined €275 because I have to work'... that was the reality we had to face. So the priority for the majority of our students was not to attend classes but first to eat and survive'

Having the above situation in mind, teachers can say that remote education was difficult, since students lacked the digital skills, had a lot of personal problems and needed much more support from teachers to cope with all this.

'We have pupils who, for them, distance learning, following a tutorial on Youtube or whatever, is really extremely complicated. These are students who really need the teacher to support them, they need this supervision, this presence of the teacher. To encourage them, they really need it'

This situation will have a long-term impact on the learning of deprived youngsters.

'After the lockdown, we had this phase of half face-to-face and half remote classes which was really a disaster, because in face-to-face, we had almost no one and... So now we're still suffering the consequences of the two-year school dropout. So we now have pupils, especially in the senior classes, who find it very difficult to focus on learning because they have developed this habit of disappearing for days on end. So they've completely lost the habit of staying in class for several hours'

The other teachers of the Focus Group taught in schools that had a more mixed public, where the lack of devices was taken care of more easily. For example, in the Walloon school, teachers also noted that a big obstacle to their students' participation and access to lessons was the lack of equipment. However, the school tried to act quickly and deal with that provision in sufficient time.

'Honestly, we had to be very creative. But I think that here, we don't get enough help from the government. When you have a digital strategy, you have to be able to implement it in practice, and it must not depend on parents. We have succeeded in meeting the challenge that it does not depend on the parents to equip the pupils, so it's still a great challenge that was made possible. But then, we have 450 pupils in secondary school, so I suppose it's not the same challenge for a school with 2,000 or 3,000 pupils in Brussels.'

Besides the lack of digital equipment, a number of other obstacles were mentioned in the schools. A big obstacle that teachers noted for their students' participation and access to lessons was the lack of motivation, a lack of autonomy, and an increase in a passive attitude regarding the learning process. This affected their self-esteem and confidence, which in turn affected their academic development. Students seemed to especially miss real contacts with teachers to motivate and encourage them. The lack of structure also had a negative impact: students were getting up later, not preparing them to go to school, as in normal times.

'Well, we didn't really lose any students...but the motivation was really very, very low, so we could see ...during the exams there were students who normally had good points and all of a sudden the points had dropped from 80% to 55, 60%. You could really see the drop in almost all the students, and it was especially the motivation that was much, much lower because the students no longer had contact with the teacher, they no longer had the teacher who motivated them, who said them what to do as in real life. Giving lessons in real life is still much more motivating, much more effective than digital lessons. So the students... it was mainly their motivation that was down'

'it was also that the self-esteem of the students was starting to get very low, because they no longer had the structure of being there from 8am to 4am at school, and we noticed that they had a lot less structure and that the self-esteem and motivation were going down'

Teachers talked about the passiveness of their students to be fully involved and participate in

remote learning. They tended to have cameras off so they could be distracted from their hobbies. Luckily, teachers realised the situation early and put all their effort into motivating and supporting students in that new transition.

'At the beginning we experienced the difficulty of students who didn't turn on their cameras. Well, the pupils when they are in bed... It's perhaps more difficult to follow lessons when they are in their room, there are other forms of distraction. A school that introduces a digital project may very well end up with a passive dropout, with pupils in class who are there, who seem to be paying attention but who are not. So, obviously, we also had to try to find solutions to problems of this type, but in any case, we ensured classes with a school rhythm and by trying to maintain attendance. And so the educators made sure that the absences were taken and that we were worried as soon as there was an absence. And the coaches could get in touch with those students, to see whether they were doing fine, so frankly everyone was mobilised'.

Teachers also pointed out a lack of autonomy with their students. In remote teaching and learning students can't just sit in class, but have to do more themselves, which appeared to be difficult for a lot of students. They have to be more concentrated and motivated.

'They prefer the teacher who is there in live, who interacts...it's very difficult for the students, for the parents, to accept the new way, the modern way, the modern pedagogy, because they don't know and above all they have to do more by themselves. It's not just sitting back and letting the teacher do his job. No, they have to work and it was very difficult in the lockdown'

'And also the motivation... The computer is there, but what does the pupil see on the computer? We don't know. We had the problem also and especially also... we made videos, video lessons, we made live lessons, but the problem or pupils is to concentrate on them. Even for the students who wanted to follow the lessons, it was already difficult for them to concentrate'.

One crucial need that emerged from distance education was indeed that students had not yet developed skills on working independently and

planning around their working timetable. Although teachers thought they had prepared them adequately for that role, emergent distance education proved that students had insufficient skills.

'These are the skills that a student needs: to start his work, to concentrate, to forget what has passed, to organise himself to do his work, a kind of autonomy, that's it. And we discovered in this period that this is the big problem with the students and when they are at school, the teacher does it for them. And we discovered that it's... well a fault of us teachers, that we don't teach them to do that, and maybe that's a lesson for us from the lockdown'.

Secondly, another big set of obstacles, are related to a lack of consistency in digital tools used by the teachers:

'At the beginning, it was the 'Wild West' so to speak, every teacher did what they thought was best, and there was no uniformity, and we did lose a few students, and it lasted a month and a half, before everyone was more or less aware of the systems that existed'.

It was only when the management put in place some directives and strategies, that things went better:

'But at the beginning there wasn't exactly an order from the management, so it was a little bit of individual initiative of the teachers. But after some time, there was someone at the school who also dealt with digital technology, and with the monitoring of pupils, who took things in hand, who started to centralise all the information, the ways of acting, what was possible. And so it went pretty well in the end and we got back a lot of students that we had lost'

Teachers evidenced that just transposing a face-to-face education to remote education, which a lot of teachers did in the beginning, was not working at all.

'...that online was not at all suitable because there is the problem of the concentration of a pupil, of a 16-year-old teenager... And on top of that there are the practical problems, as mentioned earlier, that there are 3 or 4 of them in a house, there are only 2 computers lying around and if they have to

follow the same rhythm and all 3 kids on the computer, while they don't have them, it's not workable'.

Teachers in one school established **differentiated pedagogical strategies**, where some teachers would take up a coaching role, and timetables that would enable inclusiveness and a certain pace of learning for each student.

'And we set up a lighter schedule. We tried to focus on courses where the subjects had to be continued in order to allow certification. And the other teachers (e.g. teachers of physical education), were asked to do some coaching. So, to maintain this motivation. So all the teachers were mobilised every day, there were some teachers who were there, more to do individual work with the students. We also tried to guide the students who had more difficulties with computers, and we tried to set up an alternative timetable, so not the regular timetable. So we had 4 periods of one-hour lessons a day, and coaching periods with teachers who were not teaching'

Teachers also experienced that on a personal level, their students desperately needed to socialise and be with their peers and friends. This affected their mental well-being.

FRANCE

French schools evaluated their students' family situations and backgrounds and their access to remote learning by using all means they had and without any hesitation. Headteachers did their best to keep in touch with families. They lent tablets, when necessary, after assessing families' access to digital resources and equipment. Teachers knew their pupils and their family situation. They kept in touch with parents via phone calls or texting. They also had access to all the information headteachers gathered. However, from the teachers' point of view and how they dealt with their students' needs, they pointed out the following issues:

'I think that for the students it was the rhythm, it was the fact of not seeing each other that was a big problem'.

'We were getting a lot of emails and phone calls from parents saying that their children were not happy and that they missed the contact with the pupils and the structure of a normal week at school'

Finally, teachers also raised that lessons were sometimes interrupted by parents who intervened for several reasons. This situation affected both students' learning - they felt embarrassed and teachers' teaching and professionalism - they were not respected. In addition, most of those families were deprived of a low income, many children and no spare room to work at home.

'During the lockdown, one of the problems that we had was the parents...who sometimes intervened, because they were also at home. And so it's another dimension for the teachers to have to manage the family framework'

They had a lack of equipment and internet connection-free space to study. Students needed to get training as they weren't familiar with digital tools such as Moodle, for instance. Their Internet connection was an issue for some of them.

'We knew each family's situation, economically too. So, it's true that some people couldn't connect because of a lack of equipment at home or because of one connection only.'

'First of all, some pupils lived in rural areas where they had no possibilities to connect. Or there were hardware problems.'

The lack of a cohesive school planning for communication and the minimised attendance rate was discussed as students lacked an actual

timetable. Videoconferences had to be organised in the afternoon, not in the morning. All teaching materials that were used were not designed for remote learning. On top of that, parents were absent to support their children's learning needs, so all the burden was on schools and teachers. Students lost their daily routines and timetables with a vast and long-term effect on their learning. Contact with students was lost right from the start, which created confusion and distraction from education. Digital workplaces were not set up for the first few days of lockdown, resulting in a lower attendance rate than face-to-face teaching; however, that also depended on the school's profile. The attendance rate was 20% as far as attentive pupils were concerned but went up to 80% in some other schools.

All the above had the following consequences for students' learning and are, in turn, the needs students would have had in a future similar situation.

'(My son) had the weekly schedule that he should have had in class. So it was very difficult. And I

came to realise that if parents were not behind their children, children would end up not getting up on time. My son skipped morning classes. He is dyslexic and it was impossible for him to copy all the lessons that were sent. So it was really hard on pupils'

'There was a rhythm issue, that is to say that most of the students took up a different rhythm during lockdown. For example, it was impossible to have videocalls in the morning. Students had difficulties with morning lessons, they couldn't get online early. But we accepted them in our classes even if they were late... They were there, so that was good enough for us'

Students would like to have been more motivated in their learning. Some of them expressed their wish that they should have been more motivated by their teachers.

'The main reason was the lack of motivation; they were all alone at home. So, they didn't necessarily want to attend the class.'

GREECE

The obstacles students faced to attend lessons in remote education were: i) **lack of equipment or, inadequate equipment (mobile phones)**, ii) **inadequate connection or lack of connection** and iii) **lack of personal space**. The attendance rate was formed to seventy per cent, (70%) of the traditional mode of teaching. This percentage of students was also present when education moved to face-to-face after the 1st lockdown. However, a significant difference in schools' access to the internet and stable connections for teaching staff is notable, affecting teaching overall.

'Pretty much the same thing with us. That is, when we came back (June 1, 2020), which was optional, the same students who participated remotely also came to school, maybe only an extra 5% we had in school. However, there is also the issue of internet connection here in the region. Some children did not say it as an excuse because colleagues told us there was a massive problem

with the network connection. Maybe some people did not even have the money because some families are not well-off. It was probably 50-50 those who wanted to and those who could not to'.

'I chose the computer science course, which is optional. I noticed a 'miniature' of the classroom, especially in the first period of the pandemic. The students actively participating in the face-to-face were, respectively, and the students who had made sure to get equipment in time were participating through eclass and distance learning. In contrast, students who did not actively participate in face-to-face instruction had found enough excuses not to participate in distance learning—for example, lack of equipment, inadequate equipment, inadequate connection, etc'.

'I would like to point out that most students were connected to a mobile phone. Very few students used computers and later tablets to attend, creating major problems in literature classes working with texts. I could not find texts, and

students kept saying they could not open the screen and could not see, as well as text editing was not easy when using mobile phones. Another problem that the same students conveyed was the lack of personal space. Inside their houses, when they were large families with three children, there was not a quiet space for them to attend the lesson. I saw it many times because I asked them to have the cameras on in the first phase so that other people could pass behind the children'.

'However, in Experimental schools which is another category of schools [more innovations are introduced in those by the Ministry of Education] we have had no connection problems at all. The kids were all involved. Active participation, of course, we only partially had. A percentage of 70% participated. What I want to point out that was not heard is that many students seemed to be okay, whether we were in the face-to-face or distance mode. At least, that is how I received it. Whether we were on the board or Webex, I saw no difference'.

The main point for the Greek teachers in drawing information about students' attendance was the Mychool online administrative information system supplied by the Hellenic Ministry of Education and Religious Affairs. In some cases, data was exchanged with schools by the Directorates of Education in each prefecture.

'I had the privilege of being the Principal. Therefore, I automatically knew our students' economic-social-cultural profile based on their

geographical distribution. So, for example, Pr. Komis, as you are familiar with the area, you may remember that our school has children from a middle-class area, but we also have working-class living in flats provided by the state'.

'The school got data from the Directorate of Education. So, we knew for each child whether they could have access or not. We had no problem. We were informed promptly. If there was a problem, the parent informed the school's Principal, and the Principal informed us, or we had access to Myschool [schools' state management system]'

'It does not matter what the information gives since the main thing we could draw from it is whether the children have access to the internet, i.e. whether their area has a problem. During the first lockdown, the connection did not work some days per area. Children could not connect. Sometimes when there was no connection for many days, and they could not connect, parents would come in and tell the principal: "You know we have a problem, we don't have a network, we don't have a second and third computer, we are a big family too." Alternatively, when we knew that there were two children in the family and the parents were teachers, there was a problem with the network. And all this in an Experimental School. There were such practical problems'.

POLAND

Polish schools evaluated their students' family situations and backgrounds at the beginning of the lockdowns. Their access to remote learning was sent only through the electronic register, with students writing what they would like to know more about their needs regarding connectivity and infrastructure. Classroom teachers called directly to the parents of students who were not connecting or using the register and asked what the problems were and how they could be helped to get students back to regular learning. In some schools, once there were online lessons, the

students participated and were visible, they connected, and it was easy to register. Although even then, attendance varied and there needed to be a way to verify whether someone was attending or 'pretending to attend'. However, there was no response and no interaction on their part. Thus, the attendance rate was lower than in face-to-face education.

As evident so far, the Polish educational system between students and teachers can only be characterised as chaotic, lacking information on what was happening. However, from the teachers'

point of view and how they dealt with their students' needs, they pointed out the following issues: i) **lack of equipment-internet connection-free space to study** ii) **lack of a cohesive school planning for communication – minimised attendance rate**, iii) **lack of digital textbooks**, iv) **lack of instructions and pedagogical framework**, v) **motivation for learning**

What teachers testified about their students' needs to participate remotely in their classroom was, in most cases, the lack of equipment and good internet connection. Moreover, in several cases, the need for their own space to study emerged. Furthermore, some of them mentioned their students' low digital competence. In addition, some students lived in areas with poor internet broadband. As a result, they could not connect to the camera and were 'kicked out' during lessons.

'We investigated after such disappearances, after this monitoring of their attendance, we investigated what their case looks like related to equipment and Internet connection. Well, there were some students who, for example, after the first 2 weeks did not show any communication'.

Another problem was the lack of cohesive planning established by the school to communicate with their students - especially in the first phase of the pandemic. Staff came up with several ideas how to run the classes to reach these students, to stay in touch (on Messenger, on GClassroom etc) as many subjects and teachers there were in the school (everybody offered something new and without being linked to other teachers).

'It was necessary to investigate as soon as possible to find out why. And then our teachers divided the divisions, calling parents directly and asking, simply we asked directly if they needed help and how to provide it. And we were looking for a solution as soon as possible to bring them back to learning'.

This situation got on more problematic for students as they set up different accounts for different applications or systems of varying subject-teacher, finally made them more confused

than resolved the matter (e.g. they thought they had another lesson at that time, another hour was scheduled than the one they thought in the first place). Consequently, students withdrew from classes without caring about their attendance rate. As a result, attendance varied, and there needed to be a way to verify whether someone was participating or 'pretending to participate'. Moreover, when schools started to use platforms like Teams and fixed online lessons at a given time, there was a problem with equipment and free space on the students' side.

'It was also not really possible to verify whether the student is for sure, as you said, at the time when the lesson is scheduled, whether he deals with this subject or does something else and makes up for that at other times (...). So, it was really hard to verify who physically participates in this remote teaching and who, let's just say, pretends'

Some students faced a lack of digital textbooks as, until then, textbooks were paper-based and in shared use. Consequently, for those students it was expected that they would withdraw from their learning.

All the above had the following consequences for students' learning and are, in turn, the needs students would have had in a future similar situation. During the first period of the pandemic, only a few schools had real online lessons. For the first two weeks - and in some schools for the first two months after the announcement of the lockdown - teachers usually only sent assignments to be completed via asynchronous mode. The only thing that mattered was whether the assignment was sent on time and done correctly. Also, the measurement of participation in activities organised this way could have been much better. Students managed their own time and equipment. In the first period, some students disappeared; after the first two weeks, they showed no activity. However, after some time, the management of some schools had the attendance checked at presumed times, as these lessons fell according to the timetable before the schools were closed - when they started to organise classes, e.g. on Teams, then someone from the management also

received an invitation to each lesson - and sometimes such a person connected to the lectures and checked how many people were connected.

'Disappearing souls. Well, we searched in every possible way, because the headmaster ordered us to check attendance at every lesson. So, the lessons were at the supposed time, as it should be'

Students needed to be more self-motivated to participate in lessons as less parental control and care was established in their homes during the pandemic resulting in the gradual withdrawal of their learning. They also felt tired of spending so much time in front of the computer screen doing so much online work that they were not used to. Furthermore, some needed more interactive activities with clear and solid instructions, which

would have motivated them more.

Indicator 2: Support resources for engagement in learning

How did you manage to **keep your students on track** with their learning?

How did you **support your students** in providing **equal access** to remote learning?

What **kind of support** (technical, psychological, training...) did you have from your school setting?

BELGIUM

In Belgium, a lot of **schools in Wallonia-Brussels still needed a platform or digital means**. In that sense, it was impossible or very complicated to establish a plan quickly for remote learning, to support students and keep them on track. But schools and teachers put their best efforts together and made it happen by giving students access to school or equipment to work.

'Many didn't have the internet (...) Well, there were some [students] who were working and who were coming ..., they received authorisation from the school to be able to move around in spite of the lockdown and to come and deposit their paperwork in the school's box. So we had to work with paper. But it was very, very complicated, at least in digital terms, we had nothing, and we really focused on the final classes.'

'I know that in our school, some colleagues were asked to go to their neighbours' homes of pupils who hadn't wifi, so that they could lend them connections while the pupils were having lessons. So that's quite nice, but we're in a rural area too, it's very different in an urban context.'

'We allowed pupils who were not equipped to come to school. We equipped some of them, so there you have it, we made sure that everyone had the opportunity to follow, to be able to follow lessons at home.'

'We were lucky enough to have a digital referent (coordinator), who set up a TEAMS platform in one weekend. So obviously, the first thing was to make sure that all the pupils were equipped'

'It's good to have a digital tool, but if you don't know how to use it. So there's software to buy. Here, we invest in controlling the tools in the classroom, and this always has a price. There are

also budgetary choices to be made. And all this is not easy.'

However, the teachers from one school in a much-disadvantaged area stated that the whole undertaking was complicated to organise.

'For us, it was a disaster because from a digital point of view, we were not really ready. So, despite our requests to have Smartschool or whatever, we had nothing, so we were still with our paper versions. So it was extremely, extremely complicated'

Especially for keeping students on track, schools and teachers were asked to set up and use applications that were not previously allowed in face-to-face education. It felt like education at that point had no boundaries for safeguarding.

'we were even asked to set up WhatsApp groups, whereas before it was forbidden to give your phone number to students. I'm a class teacher (titulaire), so I received a list with the students' phone numbers and I had to manage to communicate that to my colleagues. So I phoned everyone on a hidden call to make sure I had their email and the communication was by email (...)'

On the other hand, in **Flemish education** although they had been using for the last twenty years a particular digital platform/system, teachers testified that they **were/felt unprepared for distance education**, and it was not obvious how to organise teaching and learning; or how to support students and keep them on track.

'For the last twenty years we have used Smartschool, a digital system (...) But nevertheless, we were not at all prepared, obviously, for this

digital teaching system which was imposed, so that was very difficult at the beginning, having a certain uniformity in the ways of acting and in the ways of instructing and giving instructions, and so on, which is very important'

Teachers had spent much of their time preparing, despite the barriers or lack of poor governmental decisions, so they eventually got a plan quickly. They acted very thoughtfully, though; they looked after their **students' psychological support** apart from ensuring equal access to remote learning.

'I spent a lot of time with my colleague with whom I teach in the third grade to plan, to plan for the longer term. And so we tried to plan different moments of contact, even if it was only brief contacts so that the pupils (...), so that we could also work a little on their well-being and not just on sending them homework... And I must say that,

for me, it was also a sort of new world which opened up, and I believe that we made a lot of progress in a very short time because we worked like crazy to develop systems which were more or less valid'.

Luckily in those schools, the staff and students had certain digital skills with high levels of willingness to make things work and having the means for digitalisation on their own proved a great deal to that undertaking.

'it's a general education school, with a fairly good public (staff), although we also have a part who is more fragilised (...) but most of them were already computerised, had means at home, computers and so on. So we had a certain facility at that level. So we didn't have to start sharing WhatsApp numbers and so on like you had to do'

FRANCE

In France teachers put in place **management actions** to keep students on track. It was essential to keep in touch, make sure pupils were all right, get them involved in projects, and work differently. Hours of video conferences were reduced as the workload was too much and was a source of school dropouts.

'Face-to-face timetables had no value anymore. Two videoconferences a week were enough. Marking was allowed at first but then, the French Minister for Education made an announcement not allowing marking. Pupils were keen on marking. They thought it was unfair. Homework had no real value then because from their point of view, their work was not acknowledged anymore. They viewed it as an injustice. Marks were seen as rewards. Results had to be taken into account but not graded'.

The solutions teachers employed, and were in line with their school setting, to **support their students'** equal access was calling students on the phone and trying to sort out the sort of support they could have individually.

'We phoned pupils. We used many different ways to communicate. Pupils screened the videoconferences and sent them to absentees'.

Schools were not prepared for what happened so the kind of support they used was not a product quite planned and tested. Thus, support varied from one school to another. In some cases, peer-to-peer training was organised at the local level so that teachers helped one another. They were supportive and resorted to **self-training** as well. For some teachers who did not have a stable Internet connection at home, they went to school to organise **online meetings**.

'So for my part, in fact, we did not have any support. Simply because our administration did not have any knowledge in the field of digital and remote technologies. So they couldn't support us here. On the other hand, they quickly knew how to recognize that they were unable to help us. And so they quickly put together a small team of teachers that they felt were competent. And with a group of three or four teachers we tried to create an organisational architecture in the school'

'I agree with what's been said. Our administration was incompetent because they were not trained. In fact, we, teachers, weren't trained either. And so

we resorted to self-training. I spent a lot of time training almost all the colleagues of my school in video conferencing. So it was also a lot of time spent training my colleagues outside of my teaching hours. The tool used was the CNED one but then I switched to Visio-agents. Even with my

students I used Visio-agents. Then, I also trained colleagues from another school'

GREECE

The Greek teachers mostly managed to keep their students on track with their learning by adapting their teaching to the new digital classroom environment. But, at the same time, they took seriously considering their priority to keep students' mental state healthy.

'Yes, I initially agreed with both colleagues and J with the same things that L said. But, ultimately, I gave more weight to feel that I was not speaking alone. I was constantly trying through questions, i.e. I tried as much as possible to do the lesson through question-answering to motivate my students. That way, I could pester those who had just logged on out of obligation because I had quite a few. I wanted to force them to at least be alert and even say something wrong, but to know that they wouldn't just be connected to the lesson and then go off to do something else. So I felt more important to keep them on their toes, to keep them thinking that I might ask them'

'I sent the children texts, either through eclass or by e-mail and in the same way, the children took pictures with their mobile phones and sent me back the answers. This was too hard for me for Lykeio classes cause I needed to receive quite a vast amount of pages as we were at the time of reviewing the syllabus. So, in turn, I had to print them out at home, correct them by hand and retake pictures of them to send back to the kids. Fortunately, it was a small class in the 3rd grade I was doing this work. Now in Gymnasio, I was giving them assignments more in eclass. However, a few children only answered so that I could see an engagement with the course beyond synchronous teaching time'

'Now I talk very practically. Should I go into that much detail?]' So after we had discussed the exercise, I would have put it on the screen, and

some children tried to give their opinion on an exercise or the content I gave them. Then I would upload it and share it with them on the screen as if we were in the classroom using the whiteboard'

'Sometimes I had the impression that I was acting like a 'juggling clown'. Someone who was not just trying to impart knowledge or to be able to see we reached the other side, what we were talking about before using playful ways. However, there are so many applications on the internet. Kahoot's time was the child's time. There had to be something every time so we could calmly move on. Especially in the 2nd Lockdown, I so enjoyed using the various technology applications that the bitterness of the children was when we had to return to face-to-face teaching. The kids were asking: 'Ma'am are we going to do them in the classroom later on in the intersession?' It was the only positive thing I could do, something that the ordinary day-to-day lesson could not do'

All teachers agreed to the Headteachers' technical and psychological support they had provided to their teaching staff, which is admirable for the time and effort these people invested, especially during the 1st lockdown, to put everything in place and keep teachers and students on track for timely access. In some cases more capable teachers on ICT were self-organised to a group which provided technical support to their colleagues. In some cases, more capable teachers on ICT were self-organised into a group which provided technical support to their colleagues.

'The school allowed us to go there if we wanted to, whoever wanted to, instead of staying home. That is, the school could provide computers to teachers who did not have the equipment—

going to the school and having the lesson there. So that was an efficient option'.

'The same thing was happening to us. Also, the Headteacher tried to support the school from the beginning because we were not using eclass before. (...) we tried to set up e-me, but we had problems because it kept crashing, which wasn't easy. Eventually, we came up with eclass to support colleagues. We ended up being a team of three or four people. Along the way, anyone who wanted support could have contacted us for tech support. Again, anyone who tried to deal with the situation could also come to the school to borrow a laptop. That was happening as well'

'I also had great support from the Headteacher in running the Webex. I was with my Headteacher on the phone, and he explained me step-by-step. Also, in the 2nd lockdown phase, I was given a laptop from the school to support my teaching as my husband was also teaching and my child was in secondary education. Generally, I had a lot of psychological support from my principal to keep going'

'From a Headteacher point of view, I can say that what I provided was an accessible school to teachers. We had the pleasure of having fibre optics, and we could provide a reliable connection as a transmitter. I gave teachers equipment. However, the only thing I could not do was provide psychological support. Because I'm an IT person, I don't have that skill, but logistically wise I offered everything as many Headteachers did. That is to say, almost the majority of the Headteachers became experts in distance learning overnight without even having the additional expertise ourselves, but we tried'.

As mentioned by the Greek group of teachers, they tried to provide equitable access for their students by being creative and drawing help from external providers, especially to resolve infrastructure issues. In addition, other teachers were resourceful in providing information to suit their students' needs.

'Speaking both as a Headteacher and teacher I did my best. When the school received equipment after employing actions such as contacting the Hellenic Association of Shipowners, I sent all parents a message that the

school has in its availability 40 tablets and 5 laptops, so please come and collect them. Your only obligation is to fill out a delivery form. As I said, of course, only 5 parents responded. So I had 35 machines sitting on my desk. Still, most of them are in their packages, as even the teachers were not interested. And some teachers expressed a lack of equipment. Although I was willing to help them (students & teachers), none responded'.

'However, I remember there was a landline: they could not see us, still, they could connect via landline and listen to the lesson. I had cases of such children who either could not connect to the internet or did not have a laptop, tablet, or mobile, or had problems with the connection. Nevertheless, they did so as long as they were honest and wanted to learn. That is, in every class of the ten that participated, maybe two kids in each class did this but only if they wanted to'

At this point, we found it pretty interesting to share information about parents' end and their support of their children's learning process, which was not as expected, but we want to believe these cases were only a few.

'I have to say that there were, or at least I encountered, two or three extreme situations where parents let the children sleep instead of participating in the lesson. Another case I remember very distinctively was telling me: 'madam I have no sound'. I told them to come to the school and borrow headphones. The next day she got headphones and joined the class. I mean, not everything is so lovely and innocent regarding their children, and parents have a significant share of responsibility and not be naive'.

'(...) after we started accepting the first tablets in schools from donations from shipowners and so on, I almost daily appealed to parents who claimed their children had no equipment to come and get it. Of the 40 tablets, I borrowed only 5. It seemed that everyone was pleased with the situation. Looking back, I guess the ones who wanted to hide behind the label 'I don't have equipment and so I won't be at the lesson' were the ones who never got to school to get equipment. I think that what we said at the beginning is what happened. Anyone who

wishes to attend would attend, especially during the first lockdown when it was easier—anyone who did not want to just find excuses for all the

evil coming with distance education’.

POLAND

In Poland, teachers employed **management actions** as in France to keep students on track. At first, many schools did not have any online communication or teaching tools apart from the electronic logbook/register and, for the first weeks, this was the only way to keep in touch - sending information about assignments (without attachments because the logbook did not allow this) and replying to this information. When the teacher realised that someone had logged in but not attended, he or she would try to call them out, and possibly put a minus or an absence - such recorded absences had a stimulating effect on some students, in the sense that they started to pay attention. Checking the attendance list at different times during a lesson and then adopting the difficulty of each activity. Working in teams, joint presentations so that one's attendance is "seen" (through online activity). Over time, teachers created special accounts to receive work/photos of completed exercises, which were then checked. The solutions some schools employed to support students' equal access was to lend computers to the students.

'It just gave them a lot of work to do and then had a lot of work to check. Because attachments did not pass through Librus, so, for example, we set up special accounts to which they could send their work or photos of completed exercises, completed tasks. And it lasted somewhere until May, in the meantime holidays came in there for Easter. It wasn't until May that the city bought us access to Teams'.

'(...) so most often it was that the classes came out with such an initiative, or we simply suggested that students set up such a class e-mail, if they didn't already have one, of course. And on this class e-mail, tasks were sent for them, some guidelines, I also made notes to them very often, something like, let's say, the outline of a given lesson. And, of course, these tasks to be performed, but as if there was still no possibility of such a

more physical contact, but such contact in real time, and I must say that we, as linguists, have gone a bit ahead of the ranks, because we ourselves began to look for such a tool that we could communicate with students. From what I remember, it was in this first lockdown, for me it was mainly Zoom'.

At the beginning of the lockdowns there was no support, the teachers were left with no information, no help, no instruction on how or with what to teach their lessons. However, schools established quickly a rota for lending equipment to teachers (computers and graphics tablets). In one school there was an immediate decision on what to do, and training from Teams was also quite quick, teachers who had specific needs also requested some equipment and it was lent out.

The second period of the lockdowns transition was smoother as there was more concrete information and clear instructions. It was predetermined on which platform the lessons would be conducted in a given school, how many hours of synchronous work, how many in asynchronous form (e.g. sending materials) - systematised information. Moreover, there was a lot of training on ICT, specific on the methodology of using the tools, and on the psychological support side, using different modes (free, online, and tailored to the needs of a particular group of teachers).

'Well, it is known that Teams were the basis. I've been working on Quizizz quite a lot, anyway, I've been using it for a long time in the form of repetitions, lessons, tests. I prepared quite a large amount of exercises with my colleagues in LearningApps, sometimes for relaxation in Wordwall

Later, this access to Teams - we just started to check the tools that are, these Teams gropingly, get to know some trainings from Youtube. Generally, using this home method of catching any opportunities, contact, we sent each other some works, some bookmarks to check how it

worked. This is the "home" version before there was any training on these Teams and how to use them even in a corporation'.

They also discussed that there was a lot of training organised by private individuals. Private companies, external institutions prepared open webinars. Over time, educational institutions such as universities joined in and the Centre for Educational and Social Innovation and Training from Warsaw organised online training courses. Regarding foreign languages teaching there was publishers who supported language teachers with a database of interactive exercises, whole lesson plans, along with links, videos, and puzzles - a huge resource of materials at different levels. Support also came from the state to teachers, and they benefited from an allowance of 500 PLN for purchasing equipment. Though, this came fairly

delayed during the second lockdown, by the Ministry of Education and Science.

'There really was a lot of various trainings in the field of so-called ICT, i.e. Information and Communication Technology. From very general topics, a bit of psychology, a bit of methodology, to very specific, exactly step by step, we were taught how to use Canva, how to use Wordwall, and how to make tests in Quizizz, and how to do something else there. (...) and I really think that I benefited a lot from it. It was also such a huge help. It was of course all free and the online version too, so there was no problem that you had to go somewhere. The hours were fixed in such a way that it was possible to make an appointment with the methodologist in a specific way, as if it was already possible to adjust it to one's own needs

Indicator 3: Online tools

What **technological tools** did you use **for remote teaching**?

Which of the **technological tools** you have used for remote teaching do you consider as **innovative** and in which terms?

Which of those **technological tools** do you consider as useful **in face-to-face/hybrid teaching**?

BELGIUM

Teachers used many different technological tools for either synchronous or asynchronous teaching. In **Flemish schools**, they used SmartSchool Live for synchronous teaching though their disappointment/frustration was the instability of the system and the fact that they had no access to see their students as they had no cameras on.

'All the teachers gave their lessons on the webcam. And the problem with us was that none of the students put their webcam on, so we didn't know what they were doing behind the screen, so that was one of the big frustrations for the teachers, that we didn't know what they were doing.'

Furthermore, they use the material already created on **Bookwidgets** during the pandemic for testing their students now, because they are already familiar with it and aware of its functions.

'What we also do; we made a lot during the pandemic and we reuse them. We reuse all the bookwidgets for example to do tests. We make them do the bookwidgets in the form of tests during the lessons because it's much less work to correct them.'

Language teachers especially highlighted its tool's affordance in making translations easier.

FRANCE

In France the technological tools that were used for remote teaching were mostly i) **Padlet**, ii) **Moodle**, iii) **CNED**, iv) **La Quizinière**, v) **Genially**,

'We already do exams on BookWidgets so, with the safe exam browser, and I'm a language teacher and part of my exam is on bookwidgets. It's the translations, ... the questions that are easy to correct... You don't have to look at all the questions that are right or wrong, and there are quite a few questions like that. So it's a real time saver'

In **Walloon schools**, teachers still use distance learning courses when a student is sick, so they continue to use them. They also mentioned that they are still using **Bookwidgets**, which allows them to differentiate their teaching and provide individualised support for lower-level students. On the other hand, students develop autonomy in their learning and, at the same time, increased their self-esteem and self-respect.

'We were talking about differentiation, I teach in the lower degrees and clearly yes, we're going to get students who should be in the specialised schools and who are..., we'll have to differentiate. We are lucky to have this tool. And there, it was really possible via these learning paths, to make them progress at their own pace'

vi) **LearningApps**, vii) **Plickers** and vii) **Kahoot**. However, when it comes down to effective and innovative technological tools, part of them reported bringing those characteristics

LearningApps, Genially, Plickers, La Quizinière, Padlet and la Digitale.

'So, as I said, I used Moodle. It is a very interesting tool because you can put different resources such as videos, etc. And I used La Quizinière that I had never used with my students before. And I think it was very interesting because it put them in self-learning situations which they had never experienced before.'

And so, a lot of them got caught up in it because they could access the questionnaires and have

the answers already pre-set. They got their score at the end of each activity. So, there was really more detailed work. So, for some students it was very interesting. So, these are the two main tools that I used'.

GREECE

Greek teachers used digital platforms provided by the Hellenic Ministry of Education and Religious Affairs for synchronous- **Webex** and asynchronous-**e-class/e-me** education. However, one teacher mentioned the Wakelet platform that she used in the beginning when the official platforms were not always accessible.

'Well, briefly, in Lykeio, we used Webex. For privacy reasons, we went with the obvious solution, the free one. We heard internationally about Zoom and other applications that they were not safe. And as a Lykeio, we worked with eclass cause, as is already mentioned, eme was not accessible at all times. So those two tools, eclass & Webex, worked better for us'

'Yes we had the eclass, which was very, very, very, very positive and user-friendly, but in the first phase, we didn't have it at all. I would not want to live again that at five and six o'clock in the morning, I might need to be in front of the computer screen to try to upload a photo or a text. That's why personally, in the first phase, I used the platform <https://learn.wakelet.com/> where I could quickly upload what I wanted and thus use it for teaching the next day'

Other technological tools that were used in distance education and were considered innovative: i) **My simple show**, ii) **Geogebra**, iii) **Book Creator**, and iv) **Web-based software**.

'As I said earlier, Geogebra is a software that enables students to understand. In such a way, mathematics can be an object of investigation. It is a programme which, perhaps in some phases, can be linked to daily life activities to do what we call interdisciplinarity—related to other sciences and some things from mathematics. These are things that are of interest to the students. So I think it's very understandable in that way, and it motivates the students. I was using Geogebra and Word to write. I was doing print-screen, putting it into Word and then uploading it to them in eclass because many of the kids, as I said, were connected on a mobile phone, and it was hard to write. In synchronous teaching with Webex, I would write in the space it had, annotate it and then do the same thing again and upload it to the asynchronous eclass platform so they could study'.

'In maths, Geogebra because it's free and they could continue an activity on their own or try things they liked. Meanwhile, the first lockdown that came in March was good with those classes because already in face-to-face teaching, we had used it, and students had learned some basic functions.'

'I will continue to work with the Wakelet. For me, it was not a revelation as I knew it ahead of time, but it was very, very, very helpful. I could upload stuff for the students in an easy way and with a compatible format. For foreign languages so that kids could listen and write in combination. I would say the Book Creator

(<https://bookcreator.com/>), which we used in some projects. But the kids were excited about 'My simple show' (<https://videomaker.simpleshows.com/>). They liked an app that is video production in the outcome. In the beginning, there has to be text they choose, then photos or sketches in the app itself. In the end, they can select some voices from the library, and the final deliverable comes out with sound and images. They were very excited. Something similar they had never worked with before. Recently there has been Canva, a similar tool'.

'We mainly worked with free Web-based software, so what we would do in the computer lab we did again through the Web and screen viewing and so on. What we struggled with from the first phase was that we needed help understanding how to implement distance

learning. How was face-to-face teaching made with tools like eclass? Too many teachers, including myself, realised the usefulness of uploading material and having students access learning in their own time, from their own space. Learning was spaceless and borderless.'

Back in face-to-face teaching digital platform eclass proved an already known medium for dealing with absences and coronavirus health and safety protocols.

'What I used last year when we had a regular face-to-face class was eclass, which means that when students were absent due to coronavirus for a week or two, I uploaded some things there regardless of whether the students then went in and used them. That proved helpful afterwards. I didn't use software, of course'

POLAND

Polish teachers used technological tools either provided by municipalities and cities - most bought access to Teams – or by their initiative to be in contact with their students. The more experienced ones used software to record and process videos familiar to students, like TikTok. However, the most common tools mentioned were:

i) **LearningApps**, ii) **Wordwall**, iii) **Quizizz**, vi) **Quizlet**, v) **Canva** (Interactive presentations), vi) **StepTalk** and vii) **Learning corner by EU** (ready-made scenarios, ideas to use) and YouTube - films, instructions for which the teacher prepared his questions. Those schools that already participated in European initiatives such as Erasmus+ or eTwinning started to use international platforms, webinars (language teachers), and online lectures for teachers and students.

'And also my school is the School of the Ambassador of the European Parliament and we also organize various types of Erasmus, we also have eTwinning, we have such international cooperation quite developed, so then a lot of organizations, including those in Brussels, simply went down to the level of students and started to

use various webinars, conferences, such online lectures now available, well, everywhere throughout Europe and also available to students (...)'

In vocational schools, there were online workshops prepared by companies and corporations outside the school (this was an absolute novelty) - live broadcasts were available after logging in, for free, with the possibility to ask questions and make comments - a very well-liked and appreciated form by students. Some teachers also used selected online lectures from universities in their lessons.

'We teach with Pearson, it's a fairly well-packaged series of textbooks, so they also have such additional materials prepared there, some worksheets, and additional exercises, and they also have Quizlet, so stationary students may have liked to play it more, especially those who were preparing for their final exams. I also made Forms similar to Kahoot, so to get students used to these Teams somehow, to use them more. And finally, I also did Step Talks'

Most of the **tools listed above were not used before the pandemic**, so those were **innovative** technological tools used in education. Therefore,

teachers had to adapt them appropriately to what they wanted to communicate to the students, find the material themselves or build activities based on these tools.

Some schools are still using technological tools tested during the pandemic in cases they need to implement remote education for one-to-one teaching on various occasions (depression, anxiety, school phobias, problems interacting with the group or the teacher, such teaching is often started at the request of the parent). So they use technological tools introduced during the pandemic, such as Teams.

Teams is also still used by project and language groups to meet after school online and exchange materials - instead of the photocopies and paper materials that used to be handed out by teachers in the traditional way. So students have everything electronically, plus links to videos for class discussions or repetition. In addition, teachers upload lesson notes to the Teams platform for students to repeat or supplement information from the lesson.

'In our school, for example, remote learning has been introduced for young people who have individual teaching as part of this response after the pandemic. It's a tool that has worked very well. We have quite a large group of young

people in practically every class team, who for some reason have individual teaching, these are often depressions, fears, school phobias, a cross-section of various issues, such that they do not want contact directly with teacher for some reason (...) students have individual teaching in remote form, and it works for us didactically. Teams are with us every day.'

Furthermore, teachers integrated **some technological tools** into their **face-to-face lesson planning** that counted on their effectiveness for several tasks. So they used Quizizz as part of repetition or test lessons. The competitive aspect of this tool is significant for students. It activates and motivates them. In some cases, Kahoot - as some students just wanted to use Kahoot, language games such as Wordly (for a language warm-up at the beginning of the lesson).

'I won't be very innovative here, but my students love Kahoot (...).'

'I'm shifting to something else, namely there is a very cool application that can also be used in remote learning. This is Wordle. Wordle, which is a warm-up exercise, a lexical puzzle at the beginning of the lesson. But also, of course, Quizizz, I made them once or twice such interactive presentations, for example in Canva'

Indicator 4: Teachers' practices in remote teaching and learning

What **teaching practices** did you use in your **remote teaching**?

What was a **teaching practice** that you implemented and was **'effective'**

What was a **teaching practice** that you implemented and was **'innovative'**

BELGIUM

In Belgium, teachers did their best to fulfil remote teaching's needs especially without having been prepared. Especially, in a **Flemish school** they implemented a **new teaching strategy** that was away from what used to happen in the traditional lesson. It was **a combination and interchange of different strategies**, starting from exploration and tracing ideas of a topic, then passing to practical part (exercises) and finishing up with lecturing or using digital means for getting theoretical knowledge.

'Where there is an alternation of different systems, a short instructional film, some exercises, then back

to the theory, then a short film to be made together to put all the pieces of the puzzle together'.

In cases of illnesses, they used subject explanatory videos made by teachers and sent to support and remediate students' education at home.

'In fact, we are 100% face-to-face, but we still use digital learning paths, and for pupils who are ill, they know how to do that as a remediation. And there are also many teachers who have made videos. So we use this a lot in fact. When pupils are ill or when pupils are behind, as a form of remediation'

FRANCE

In France, teachers used many different practices and tools in remote teaching such as: i) **flipped classroom**, ii) **short videos**, iii) **puzzles**, iv) **videoconferencing**, v) **synchronous quizzes**, vi)

treasure hunts and vii) **differentiated learning courses**.

GREECE

The Greek teachers' group developed some very interesting teaching practices or pedagogical approaches in distance education. However, all realised and testified that transferring practices from face-to-face to distance education was not an appropriate teaching practice; thus, they all agreed that their primary focus was on motivating their students to keep learning. The best way to achieve that was by using techniques such as i) **redesigning subject content knowledge** and ii) **scaffolding**.

'I finally realised after a long time that we all tried different things in our panic. We tried to transfer face-to-face teaching to the distance model. It took us some time personally and from discussions with colleagues to understand that this model was unrealistic. So, if I wanted to describe a teaching practice, I decided to move away from the face-to-face model. At first, I was trying to implement and make all my teaching a bit lighter, possibly realising the limitations concerning remote teaching-as colleagues said-and quite rightly that some students were from mobile phones. And

most importantly, trying through 'question and answer' and other tools such as eclass to engage students in synchronous and asynchronous teaching. In conclusion, my teaching practice was to motivate the students' interest and engage them as much as possible'.

'I would agree with S. All of us in the first lockdown were in darkness, and we were looking for training to deal with distance education. As S said earlier, most teachers moved to distance education without training. So first, the first try was how to transfer face-to-face teaching to distance education. But this type of teaching needs little bits and pieces of knowledge because the kids cannot take it all in after all that transition. So it has to be small little modules and repetition in repetition. The truth is that I did this better in the second lockdown and not in the first lockdown. In the first one, I did as we all did some small or large unfortunate teaching interventions. But in the second lockdown, we had some more knowledge. So I used little bits of theory in a more repetitive approach to make all students understand and also myself to understand what they have understood. Using the questions-answers technique allowed me to motivate and interact even with those students who a little bit in bed were so to wake them up'

The teaching practices that were characterised as facilitative to students' distance learning for adapting to the new teaching environment were to keep them more engaged in synchronous teaching rather than asynchronous. In addition, teachers pointed out the need to support their students primarily psychologically rather than academically.

'Breaking the subject knowledge into small bits and, at the same time trying through this to motivate the students and keep them as active as possible through questions and answers was the easiest way and the least problematic in the new technological infrastructure'.

'And I agree that we used more dialogue in distance learning versus face-to-face teaching. We were trying to motivate them with questions by always addressing another student. What I should have done better in the first phase was that I spent too much time preparing material to send to the children, with the idea that the children would engage with this material beyond the time of the

synchronous lesson, to which there was no response. So that then I didn't use that as much. I did it less extensively in the second period'

'Let's say in mathematics; you write more than you talk. You have to, and you have to balance students who have demands. As I mentioned at the beginning, some students had requirements, and some didn't care much. What I did, in the beginning, was very tedious to write down and upload to be seen again. This helped in hindsight, as we discussed, and when we got back together, they told me it helped many students. For some others, it may have tired them out. Some other activities we did through software, as I said through quizzes, and what my colleagues said about breaking down some theory into pieces as much as possible may have helped this category of students. But the other students were greatly helped, and even though they had no gaps afterwards, I don't think the whole situation affected them—my opinion'.

'In Gimnasio it was not the same. There were gaps; the children were younger. But the time came, and we filled them. But, of course, not all the kids came back in person when we finished the year. And another thing I want to add is that we were out of the way from the time the schools closed on March 5 until we started again face-to-face teaching in May. In the beginning, the children needed to talk more than they needed to get into the process of learning'.

'I wanted to stress the need for psychological support. We wanted the children to express their thoughts about the isolation and the situation they were experiencing and then go into the lesson. You could only start in the first few lessons if you let them express themselves or see their friends through Webex because this is what they missed most, and then you could start the lesson'.

'I tried to assimilate the Webex environment, the remote teaching environment, with the classroom environment. It was a bit laborious, of course, at first. I wrote down some exercises and some theories with my pen or word on my desk, scanned them, put them on a slide and presented them to the kids. Let's say to them solve this exercise. I want to point out that although remote teaching seemed very difficult to adapt, I found it very easy to teach using software in Webex. That

is using Geogebra or learning content from Photodentro, which is not so easy in the classroom when being in face-to-face teaching. Even the children who had little participation in the face-to-face lesson were also motivated. Most of the time, I split them into groups through the facility provided by Webex and using some interactive quizzes. I kept children engaged and active by using the practices I mentioned'.

Primarily innovative practices highlighted by the Greek teachers in meeting students' learning needs in emergent distance education were: i) **project-based teaching approach**-focus on team-working and collaboration and ii) **evaluation and reflection** on learning by using polls.

'When it comes to an end to consolidation one, there is always at least in foreign languages. To see what they have understood from all this, they can apply what they thought of doing as a small project. There was always a bigger presentation of new technologies in school and face-to-face, but in distance learning, it was much easier for them, and that's what they had told me was easier and easier to apply. Everything they heard that they saw done face-to-face, they could apply. They could practice it themselves and then capture it all in the small

projects, mainly using different applications we had shown and analysed. This was the most innovative thing in this process, a distance that the students themselves could create something in a quiet place by working together'.

'In addition to what we said, Webex offered, as we all remember the poll tool, we could do the tests which we didn't do in person. We never did that in school. And the kids liked that. As some colleagues mentioned earlier, I need to remember Kahoot. It's this, and this is very interesting. And it's not easy for kids to use their cell phones in the classroom because it takes two screens. So the process itself was an innovation. Indeed working in groups was easier. Here, of course there is a risk that you need to know what the teams are doing, especially in Webex, while in the face-to-face, you see what they are doing, what a colleague mentioned. The software was used much more than the face-to-face process, i.e. it was straightforward to go into the Photodentro to click on the link and see the children working on it.

POLAND

Polish **teachers** in vocational schools and subject teachers mentioned that **teaching practices in remote teaching** were to **work together and create activities to use in different classes/grades**. However, the challenge was maintaining contact in the class – as the school organised them during the pandemic- to mobilise and stimulate students' participation.

The key strategy towards stimulating participation was setting the rules with the students, listening to their voices, and adapting the activities so that they could do them independently. This is what differentiated pedagogy is based on this particular situation to break down teaching and lesson planning into small steps. In the case of projects, teachers took

extra time to make an individual appointment with the student - an adaptation of time and tools (short presentations).

Regarding **effective teaching practices**, some teachers came up with interesting projects to apply the **project-based methodology**.

'It's not because of any special methods, but because I always try to do a project for each of my groups. (...) they had to leave the house to photograph e.g. signs of spring, put together a poster to write a haiku (...)'

Moreover, practical exercises from the vocational subjects - screenshots and photos of their work, 3D projects from cardboard boxes and other available materials - were used.

'The students, for example, made 3D designs out of boxes that were available in a house: a hotel room, an apartment unit in the right scale, so there were used shoe boxes. Plus videos of how they cooked a soft-boiled, hard-boiled egg. Often parents were involved in my class. I say that our cooperation was quite good, so the parents had to constructively say two sentences about what the child served them for dinner'

Furthermore, in terms of written work that was distributed via Teams, teachers testified that they would prefer having it in digital form, pointing out its affordances (a better form of feedback, online with comments in editing mode, clear and readable, stays with the student and can be compared at a later stage). The same applies to testing and the ways of differentiated pedagogy that could deliver (different test content for different groups).

'I, for example, changed the way of accepting written work and I've maintained it so far, that is, they send it via Teams. In this way, I am able to check the work thoroughly, describe it, point out what should be improved, what is wrong, what should be replaced, they immediately have this kind of feedback'.

Regarding the innovative teaching practices, teachers reported they were primarily based on

developing and enhancing communication skills using lots of language exercises (Learning Apps) and tried to support students' physical activity and develop their motor skills using Wordwall. Word clouds are used for collaboration. New vocational portals thematically linked to vocational subjects using this during classes or as additional material. For example, giving students back the decision of (which online tools) they would use to prepare homework assignments.

'We send each other materials and for example I don't go around with a pile of photocopies anymore. I don't stand for half a day at a broken photocopying machine, they only get the material and it's up to them, they can print it as conveniently as possible, they can use the phone as conveniently, they are supposed to have it. I'm posting them links to movies, some that are not available to watch and for example we will talk about it or it will come out of it, this material will be on the test, so they can watch this movie, I don't know, 57,000 times, as many times as they want and need, when it suits them - with subtitles without subtitles. So, in this regard, I do use these Teams tools so far'.

Indicator 5: ICT training

What was your **prior online teaching experience** before the school closure?

What was your **prior training in online teaching**/distance education before the school closure?

During the pandemic did you participate in **training** for online teaching?

BELGIUM

Teachers in **French and Flemish schools** in Belgium described their prior online teaching experience as **starting from scratch**. They did not get any courses or training on remote teaching and had no contact with anything digital prior to the pandemic and hardly after the first lockdown. However, during the pandemic they self-learned and created their own online community of practice to meet up digitally and support each other.

'We helped each other. So, if there was someone who thought 'ah I found quizlet or I found bookwidgets' they would say that in our WhatsApp group. The teachers helped each other (...).'

Some, teachers did some training that year that education was shifted back to face-to-face.

'We were on a pedagogical day to train us on digital evaluation. I think I was alone last year,

or maybe with one colleague, to do this, and now we had a workshop of 15 or 16 teachers and it's a small group. So, we're evolving, but you have to understand that it can be complicated for some colleagues (...).'

During the pandemic there were some teachers more technologically aware who motivated and supported their colleagues to deal with distance education. These teachers became IT and pedagogical coordinators after the lockdowns when education returned to face-to-face.

'So, we have an IT coordinator, who is responsible for the hardware, the network and the computers, but we also have a pedagogical coordinator. And they form a group that does things together, but in the school, they are the leaders, the people who motivate the others (...). They were the pioneers in the days of COVID and now they are the pedagogical coordinators.'

FRANCE

French teachers reported that they had **little or no prior online teaching experience** and **training in online teaching**. However, during the pandemic, most teachers were **either self-trained** using the DANE website or **by their schools** which organised training or by webinars mainly organised by publishing companies-articles or by short videos on academic websites

but overall by a peer to peer help. Some French teachers complained that they were not equipped for distance learning. They had to use their phone to call parents and use their devices, if any. **Teachers' digital skills improved** a lot. They had no choice but to adapt. The successive lockdowns might have positively impacted pupils' digital skills but with **mental and health consequences**.

GREECE

The picture for Greek teachers' prior online teaching experience varied. Most of them, although they had online teaching training as trainees, it was unclear when planning their teaching in distance education. Some other teachers had developed their technological knowledge, like they knew how to set up Moodle but did not know how to use it pedagogically. However, during the pandemic they self-learned and created their own online community of practice to meet up digitally and support each other.

'As I said, I participated in the training of colleagues because I had finished the PAKE [training for trainers to train in-service teachers in ICT] at the University of Peloponnese. So in the classroom's educational process, I had integrated technological tools (...).'

'My previous experience was a seminar I had attended at the University of Peloponnese, which was asynchronous distance learning and was about literature's teaching. So it was an E-Class environment if I remember correctly'

'Let me speak from the point of view of a computer scientist. I had experience on a theoretical level; that is, I knew how to set up scorm packages, and from various seminars, I had attended as an IT, I learned how to set up moodle. However, what I said, and it is true, is that I needed to learn how to transform technological knowledge into pedagogical to the real classroom environment when the need arose'

'I had previous experience via moodle from eTwinning in the distance education, i.e. asynchronous distance learning. But it is entirely different when you have adults to teach and when you have students. It's a huge difference.'

'I had no previous experience. I had never done anything like this to teach—only a piece of training back on the day on eclass'

For all Greek teachers, it is common ground that no training in online distance education

happened before the school's closure. They may have had training in technological tools and developed their technological knowledge, but their pedagogical content knowledge in terms of using these tools in distance education was not developed at all. A more organised training approach started to happen after the 1,5 months of the first lockdown. Still, the Hellenic Ministry of Education and Religious Affairs delivered no official training courses.

'Now concerning the training at the beginning of the first phase, we had done two hours of online training by some educational counsellors, not necessarily in Greek language teaching. I can recall attending, at some point, a mathematics education counsellor who trained us to use Webex and eclass. However, there was no official training by the Ministry of Education in the first lockdown on using these tools.'

'On a technical level, I knew, as we said, but I had none in terms of the pedagogical use of technology.'

'Technically it was indirectly because the planning was not for distance education. They were tools to use in the classroom and the ideal in the lab. Now on our own, we did 'magic' as all the colleagues said at the beginning, and we even got very deep into it. That is, those of us who did have eclass, or eme, to set up accounts and upload material when the system was most of the time down. We didn't have any instruction, and only much later, there was some training. That is the 1.5 month during the 1st lockdown we had no training. And again, we all see that the generosity of the Greek teachers is massive. Maybe not all of them do it, but the rates are much higher than abroad.'

'(...) I fall into the classic mistakes that all my colleagues made. Although I knew how digital tools work still needed to learn how to apply them to distance learning. So funny things happened in the beginning. That is because I was trying to teach as I used to face-to-face until I realised, I had to readjust to the reality of a lot more than I initially thought'

The Greek teachers have training delivered by institutions like universities and organisations-in Greece or abroad-and education counsellors during the pandemic. The most common was the training T4E organised by the University of West Macedonia. However, it was implemented near the end of the second lockdown (April 2022), so for some teachers, it could have been more interesting, but they lost interest in participating. In contrast, some others did, and one was also a trainee due to his high qualifications.

'I participated as a trainer. I was selected for the T4E training, a partnership of the Ministry of Education with PAKE - Universities. In particular I taught at the PAKE of the University of Macedonia. However, this training practically happened at the end of the 2nd lockdown. Therefore, in the end, it had no use. Now, I can say that it was only made to provide a certificate to those who collected them. It was useless'

I did the same [participated in the triang T4E] as a trainee.

'Here I should say that some Universities, like the Aegean and the University of Crete in Rethymno, the Pedagogical University, held

fantastic workshops and were like 'an oasis in the desert'. Because some education counsellors did try to train as many teachers as they could when we returned to face-to-face in the first lockdown (June 2020). Personally, I benefited the most from the online training that these departments from the University of Aegean and the University of Crete offered'.

'Yes, but in the second phase. I attended some seminars by education counsellors that were more organized, and they might have had two- or three-days duration, especially for the T4E training. I remember we applied in January 2021. Frankly, I am trying to remember which University the provider was. It finally started after the Easter holiday. By that time, I was no longer interested. I was not interested in getting the certificate. It would not have been useful anymore to attend, so I did not, even though I had been selected'.

'(...) I also had to look for extra training seminars in the first period. I don't hide it. I participated in many pieces of training made in the US and stayed up late in the mornings when needed cause of the different time zones. And when the educational counsellors started in Greece, I also participated'

POLAND

Regarding prior online teaching experience, Polish teachers reported **hardly having any**. Also, there was **no training provision** to help them make the transition to remote teaching. However, during the first period, after a few weeks - two months of lockdown - **some pieces of training** with Teams specialists **was available but only in some areas**.

'It's a local government centre in Warsaw (...) the Warsaw Centre for Educational Innovation and Training. That's where there was a huge offer of online training by methodologists, but these methodologists are also teachers, so they had to learn themselves first, but also different specialists. A lot of institutions also switched to this online mode, so the training courses that

were held on a stationary basis, if they could be transferred into cyberspace, then very quickly, they were simply run by our centre'.

On the other hand, the content usually was not adjusted to the teachers' learning needs as it was mostly an introduction to the platform and not based on pedagogical principles applied in distance education. Thus, teachers had to spend much of their time learning and testing different teaching practices until they ended up with the most efficient ones. In addition, they shared activities they had prepared with each other using the online tools of their choice. **As a result, teachers learned more than students.** They took the time to prepare better and more

stimulating lessons or forms of testing. Sometimes they came up with things they discovered by chance, and sometimes a student suggested something. Teachers often also taught their headteachers how to use the tools to organise school meetings.

'(...) the Teacher Education Centre in Gdańsk was left half a year behind, so that... I can colloquially say, it didn't cope with the subject at all. In fact, they woke up after half a year to these trainings, which were already free on the Internet, done by various institutions or private individuals, often free of charge completely for teachers, and there were 1,000 and more of these teachers, so the need was great, and these trainings are still going on. They're being extended to all sorts of Canva, apps and everything to do with ICT. So at that time I think most of us were just looking for information about Teams, Classroom, looking on the internet, looking on YouTube, looking on Facebook, because that's where, I feel, like most of that information was, where you could find free training for teachers. Like one of the ladies said earlier, Teams before was a corporate tool, where even the instructors who were doing some training there were completely unfamiliar with the use of Teams in education'

'We were the ones who were teaching each other, it was often our questions that were troublesome for the instructors, if there was already some top-down training from Teams there, it was often our questions that were troublesome, too inquisitive, because we found some functions there. And I often just perceived it as asking awkward questions about something and dabbling unnecessarily. But I think it was a big part of the role of the teachers and the fact that we wanted to adapt, that we wanted to work and make our work the best it could be'

The enormity of the work and the extraordinary commitment of the teachers meant that they could cope quickly with the demands of the new form of education and did not lose touch with most pupils and their families.

'I have a friend who is 65 years old and she had to adapt to Teams and we sat up more than one half of the night explaining how things worked so she could teach a lesson the next day, but it was just our goodwill. Our willingness to work. I

have this feeling. Because we wanted to, we were learning, and centres such as the Teacher Education Centre reacted to the situation six months after the fact, because six months after the first wave, which started in March, in September the following year there was training in some application at a price which had already been online for free three months earlier'

4.3 Micro level (Local)–Teacher selected from their innovative practices.

Survey results

BELGIUM

Tools, sample and distribution

What tool was used to create the survey?

The Belgian team used two types to create and distribute the survey; thus, a paper form and a digital form via Office Forms.

How was the survey distributed?

For the survey of teachers, they actively searched schools, principals and/or teachers who managed to keep the link with their students during the pandemic. To that end, they consulted the (websites of the) French and Flemish education departments, the media from the departments of education (Klasse and Magazine PROF), the different educational networks, our partner organisations, and the broader media. The principals of schools in interest were contacted to explain the KEEP project's aims and asked to participate by forwarding the questionnaire to interested teachers. A reminder was sent after two weeks if principals did not receive an answer. Teachers could choose to fill in the questionnaire on paper (and send us a scan) or to use the digital form of the questionnaire. They also communicated about the KEEP project on several (online) occasions.

Furthermore, they posted an active call for teachers on their website, social media channels, and newsletter. Unfortunately, the call for teachers was launched when COVID-19 was on the rise, and many schools were experiencing major outbreaks among their pupils and teachers (November-December 2021). Some schools or years/grades went utterly back to digital education; others barely kept their heads above water. Many principals did not want to put extra pressure on their teachers by asking them to fill in a questionnaire, and therefore - despite much interest among the school heads - refused to cooperate during this period. Therefore, they moved back the deadline a little (until the end of January 2022) and strengthened their communication campaign. For example, they launched a call in Facebook groups regarding digital education during the pandemic.

What were the reasons/criteria for this choice?

The Belgian team's primary concern was to reach as many interested teachers as possible who could volunteer for this project.

Data of the sample

In Belgium, with the exception of three competencies which remained a federal matter, the communities are responsible for educational policies. Belgium has three communities: the Flemish (Dutch), the French, and the German. The German community is very small and is not studied in this project. Although educational policies in both the Flemish and French communities are sometimes quite different, the similarities in the structural characteristics of the educational organisation – the characteristics we focus on in this section – are substantial. Moreover, as in the capital region of the country (Brussels), French and Flemish schools are geographically mixed, in practice the policy measures of both communities are to a considerable extent attuned to each other. That’s why we won’t make any comparisons between French and Dutch speaking teachers in the rest of this report.

Overall, the Belgian team **received 49 responses** from secondary teachers from parts of Belgium with Flemish and French community. From those responses three (03) responses were void as no contact details were provided. The remaining **final data was 46 responses** that fulfilled the criterion to provide complete answers to all the questions.

From these there were five (05) teachers chosen regarding their innovative/new teaching practices and technological tools. Moreover, they fulfilled the following criteria:

- i) different level of studies,
- ii) different location, population, and type of school,
- iii) different years of teaching experience and
- iv) different subject.

Data on the final selection (5 teachers)

A: Background – Demographic questions

Especially for the Belgian team there is extra information on the community from which the sample is formed. Thus most of the teachers are coming from the Flemish (Dutch) community. Also, most teachers identified themselves as ‘Male’, and there is a fairly even distribution of less than 35 to over 56 years old (see Table 1).

Table 1
Language, gender & age group

Community	French	Flemish (Dutch)
	2	3
Gender	Female	Male
	2 (1 French – 1	3 (1 French – 2

	Dutch)		Dutch)	
Age	<35	36-45	46-55	56>
	1	2	1	1

Furthermore, the highest level of study for most of them is a Master's degree. Regarding their teaching experience, it seems to have an even distribution from less than 5 to 25 and more years of teaching experience (see Table 2).

Table 2

Level of studies & teaching experience

Level of studies	Accelerated teacher training		Bachelor		Master
	1		1		3
Teaching experience	<5 years	11-15	16-20 years	21-25 years	>25
	1	1	1	1	1

As for the rest of the survey's items, the interest was initially laid on the two periods of schools' closures – from **March 2020 to July 2020** and from **September 2020 to July 2021**. Thus, the analysis is harmonised and presented either in one table, including both periods, or with indication separately for each period regarding the significant difference they presented.

Regarding the school's location and population, most teachers stated that their school is located in areas with 5.001 to 50.000 habitats (see Table 3).

Table 3

Location & population of the area

Location & population	5.001 - 50.000	50.001 – 1.000.000	>1.000.001
	3	1	1

In Belgium, education and training organised by the government is called official public education; education and training organised by a private person or organisation are known as free education (Government-aided private education).

In the Belgian sample three (03) teachers taught in a school from the official public education network and two (02) in schools from the free education network. However, those teachers had students from minority and vulnerable groups (i.e. special needs, Roma and refugees/migrants). The population size of students shows a distribution from around 550 to 2600 students (see Table 4).

Table 4
Type of school & population size of students

Type of school	Official public education			Free education	
	3			2	
Population size	540 students	600 students	1100 students	1350 students	2600 students

Most of the teachers taught in the age group of 14 to 16 years. From the 3rd grade (14 years) students have to choose a course of study within different levels/tracks of education: general, technical or vocational education⁵. Not all schools offer all the tracks. Regarding the type of school that teachers taught two (02) were in a school offering only general education, two (02) in a school offering technical and vocational education, and one (01) in a school with all tracks (source Eurydice⁶) as shown in Table 5.

Table 5
Age group & level of secondary education

Age group	12-18	14-16	15-17
		1	3
Level of secondary education (tracks)	General education	Technical & Vocational education	General Technical & Vocational education
	2	2	1

⁵ A 4th track which is very small is arts education.

⁶ Eurydice: <https://eurydice.eacea.ec.europa.eu/national-education-systems>

Flemish community: <https://eurydice.eacea.ec.europa.eu/national-education-systems/belgium-flemish-community/belgium-flemish-community>

French community: <https://eurydice.eacea.ec.europa.eu/national-education-systems/belgium-french-community/belgium-french-community-overview>

In the case of the Belgian teachers, the subjects' selection was made upon trying to cover curriculum subjects from general education such as Dutch language, Maths and History, and also representative subjects covered in technical and vocational levels such as Hotel and Industrial Technics (see Table 6).

Table 6
Grade & subject taught

Grade	3 rd	3 rd	3 rd	4 th	4 th
Subject taught	Hotel	Maths	History	Industrial Technics	Dutch

B: Online teaching & learning – Distance education

As it is shown in Table 7, none of the Belgian teachers had prior online teaching experience before the school closure. Likewise, the majority reported they had no prior training in online teaching/distance education before the school closure. Furthermore, all the responders agreed that the shift from face-to-face to online teaching was a governmental decision due to this unforeseen situation of the pandemic. However, after the first year of the pandemic, all teachers reported having online teaching experience and training; the latter was self-initiated from free online resources.

Table 7
Online teaching: experience, training and decision making

Before the pandemic		
	Yes	No
Prior online teaching experience	0	5
Prior training in online teaching	2	3
Shift to online teaching was a governmental decision	5	0
After the 1 st year of the pandemic (school year 2020-21)		
	Yes	No
Prior online teaching experience	5	0
Prior training in online teaching	5	0

Shift to online teaching was a governmental decision	5	0
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As shown in Table 8, regarding the institutional support for online teaching, the majority of Belgian teachers reported that their institutions had not a clear vision towards it, and no professional development strategy was established **before the pandemic** (items 1&2). However, the majority agreed they experienced a supportive environment for professional development provided by their institution **when the pandemic occurred** (item 3). For the same period, teachers reported that their institutions supported them by providing an explicit pedagogical framework and teaching practices adapted to distance education along with the role of ICT and infrastructure resources (items 4, 5 & 6).

Table 8
Institutional support for online teaching

	Strongly disagree	Disagree	Agree	Strongly agree
Before the pandemic occurred				
1. there was a clear vision towards online teaching.	4	1	0	0
2. there was a professional development strategy towards online teaching already put in place in your institution.	3	2	0	0
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching provided by your institution.	0	1	2	2
4. there were clear objectives as regards online teaching.	0	2	2	1
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.	0	1	3	1
6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.	0	2	1	2

C: Readiness to teach online – Innovative/new & good/effective practices in distance education

This part included two open-ended questions. Firstly, the teachers were asked to describe the innovative/new teaching practices (pedagogical adaptations) that they implemented and the technological tools used during distance education. Secondly, they were asked to describe the innovative/new practices and technological tools that they implemented were effective and why. Both those items are examined in more depth into WP3, which includes teachers' interviews and had the opportunity to present more on their answers.

FRANCE

Tools, sample and distribution

What tool was used to create the survey?

The French team used Orion, an internal survey tool used by Academie Nancy-Metz to create and distribute the survey.

How was the survey distributed?

They had a call for volunteering during a meeting with teachers whose profile was relevant for the study (approx. 150 people). Next thing they did was to ask the educational inspectors to suggest some teachers who were willing to volunteer. Thus the survey was distributed to all the volunteers. One more attempt made by the French team to find more teachers - volunteers in Paris during the Educatices education show but with no success.

What were the reasons/criteria for this choice?

Their main concern was to focus on teachers who were interested and would volunteer for the KEEP project.

Data of the sample

Overall, the French team **received 13 responses** from secondary teachers from Nancy-Metz school district. From those responses one (01) response was void with more than one uncompleted answer so it had missing data and was left out. The remaining **final data was 12 responses** that fulfilled the criterion to provide complete answers to all the questions.

From these there were only five (05) teachers chosen regarding their innovative/new teaching practices and technological tools. Moreover, they fulfilled the following criteria:

- i) different level of studies,
- ii) different location, population and type of school,
- iii) different years of teaching experience and

iv) different subject.

Data on the final selection (5 teachers)

A: Background – Demographic questions

All French teachers identified themselves as 'Female', and most of them were 36 to 45 years old (see Table 1).

Table 1
Gender & age group

Gender	Female	
	5	
Age	36-45	46-55
	4	1

Furthermore, the highest level of studies for most of them is a Master's degree, whereas their teaching experience seems to have a fairly equal distribution from 6-10 up to 26 and more years (see Table 2).

Table 2
Level of studies & Teaching experience

Level of studies	Master degree			
	5			
Teaching experience	6-10 years	16-20 years	21-25 years	>26 years
	1	1	2	1

As for the rest of the survey's items, the interest was initially laid on the two periods of schools' closures – from **March 2020 to July 2020** and from **September 2020 to July 2021**. Thus, the analysis is harmonised and presented either in one table, including both periods, or with indication separately for each period regarding the significant difference they presented.

Regarding the school's location and population the majority of teachers stated that their school located in areas with 5.000 to 1.000.000 habitats (see Table 3).

Table 3

Location & population of the area

Location & population	<500	5.000 – 50.000	50.001 – 1.000.000
	1	2	2

According to Eurydice⁷ in France secondary education is public and divided to Lower secondary education (ISCED 2), which is provided in collèges for 4 school years and is compulsory and to all students between 11 and 15. The end of the lower secondary education is sanctioned by the Diplôme national du brevet (DNB); however, admission to upper secondary level is not conditional upon success in the DNB. The Upper secondary education (ISCED 3) ('general and technological lycées' or 'professional lycées'), extends over 3 years for students between the ages of 15 and 18 years and provides three educational paths: general path (which prepares pupils for long-term higher studies), technological path (which mainly prepares pupils for higher technological studies) and professional path (which leads mainly to active working life, but also enables students to continue their studies in higher education).

The French teachers seem to belong solely to the category of public schools providing general education with school oriented to vocational education. However, all teachers had bilingual students coming from minority groups (i.e. Roma and refugees from Eastern European countries). The population size of students shows a distribution from around 300 to 500 students in each school (see Table 4).

Table 4

Type of school & population size of students

Type of school	Public general education			Public vocational education	
	4			1	
Population size					
	300 students	370 students	400 students	500 students	500 students

The majority of teachers taught in the age group of 15 to 16 years, so their students were at the Upper Secondary level of education as shown in Table 5.

⁷ Eurydice: <https://eurydice.eacea.ec.europa.eu/national-education-systems>
 French education system: <https://eurydice.eacea.ec.europa.eu/national-education-systems/france/france>

Table 5

Age group & level of secondary education

Age group	14-15	15-16
	2	3
Level of secondary education	Lower Secondary School	Upper Secondary School
	2	3

In the case of the French teachers, the subjects' selection was made upon trying to cover different subjects such as: French language, Physics, History & Geography and have two more from the complimentary ones such as Physical Education and Italian language as curriculum specifies the subjects although all are compulsory (see Table 6).

Table 6

Subject taught

Grade	3rd year (Classe de troisième) Lower Secondary School			2nd year (Classe de seconde) Upper Secondary School	
	Subject taught	Physical Education	Italian language	French language	Physics

B: Online teaching & learning – Distance education

As shown in Table 7, the majority of French teachers had prior online teaching experience before the school closure, even though only one teacher stated that had prior training in online teaching/distance education before the school closure. Moreover, all the responders agreed that the shift from face-to-face to online teaching was a governmental decision due to this unforeseen situation of the pandemic (see Table 7). However, after the first year of the pandemic, all teachers reported having online teaching experience and training in it either provided by their institutions or from free online resources.

Table 7

Online teaching: experience, training and decision making

Before the pandemic		
	Yes	No
Prior online teaching experience	4	1
Prior training in online teaching	1	4

Shift to online teaching was a governmental decision	5	0
After the 1 st year of the pandemic (school year 2020-21)		
	Yes	No
Prior online teaching experience	5	0
Prior training in online teaching	5	0
Shift to online teaching was a governmental decision	5	0

As shown in Table 8, regarding the institutional support for online teaching, the majority of French teachers reported that their institutions had no clear vision towards it, and no professional development strategy was established **before the pandemic** (items 1&2). The majority also disagreed about the institutional support they were provided **when the pandemic occurred** regarding an explicit pedagogical framework and teaching practices adapted in distance education along with the role of ICT and infrastructure resources (items 4, 5 & 6). However, most teachers agreed they experienced a supportive environment for professional development provided by their institution (item 3).

Table 8
Institutional support for online teaching

	Strongly disagree	Disagree	Agree	Strongly agree
Before the pandemic occurred				
1. there was a clear vision towards online teaching.	1	3	1	0
2. there was a professional development strategy towards online teaching already putted in place in your institution.	1	3	0	1
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching provided by your institution.	1	0	3	1
4. there were clear objectives as regards online	1	3	1	0

teaching.				
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.	1	2	2	0
6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.	1	3	1	0

C: Readiness to teach online – Innovative/new & good/effective practices in distance education

This part included two open-ended questions. Firstly, the teachers were asked to describe the innovative/new teaching practices (pedagogical adaptations) that they implemented and the technological tools used during distance education. Secondly, they were asked to describe the innovative/new practices and technological tools that they implemented were effective and why. Both those items are examined in more depth into WP3, which includes teachers' interviews and had the opportunity to present more on their answers.

GREECE

Tools, sample and distribution

What tool was used to create the survey?

The tool that was used to create and administer the survey was the Survey Monkey. Survey Monkey is an online tool for surveys and the University of Patras provides it to its researchers. A Survey Monkey online questionnaire was an efficient way of getting online to the bottom of all the activity teachers took during the pandemic as it is online and has many different options for organising questions and presenting results.

How was the survey distributed?

Between December 2022 and January 2023, the survey was launched via Survey Monkey and aimed at collecting secondary educators' innovative teaching practices and technological tools they used in response to the COVID-19 pandemic. The questionnaire was distributed through the Facebook group named 'Distance Education' (in Greek 'Εξ αποστάσεως εκπαίδευση'). This is a well-known and established community of practice for secondary teachers and the integration of ICT in their teaching practice. It was firstly launched the 1st week of the 1st lockdown (March 2020). It has approximately 50.9 thousand members. The person behind this idea is a very active secondary science teacher familiar with ICT and trained as ICT trainer and facilitator. Participants were fully informed about the intentions of the research

project before providing tacit consent (by clicking through the questionnaire) for their data to be included in the project.

What were the reasons/criteria for this choice?

The criterion for choosing the 'Distance Education' facebook group was mainly its relevance to the project's purpose and objectives. Another prospect was that its members would have been more aware of using technological tools in education or more enthusiastic to participate and share their opinions about their teaching practices during the pandemic as not much research took place locally. In other words was a target group which fulfilled the conditions of an easily accessible and convenient sample in accordance to the methodology which was suggested.

Data of the sample

Overall, the Greek team **received 56 responses** from secondary teachers from all parts of Greece. From those responses thirty (30) responses were void with more than one uncompleted answer so those were taken it as missing data and left out. The remaining **final data was 26 responses** that fulfilled the criterion to provide complete answers to all the questions.

From these there were only five (05) teachers chosen regarding their innovative/new teaching practices and technological tools. Moreover, they fulfilled the following criteria:

- i) different level of studies,
- ii) different location, population and type of school,
- iii) different years of teaching experience and
- iv) different subject.

Data on the final selection (5 teachers)

A: Background – Demographic questions

Most of Greek teachers stated themselves as 'Male' and one as 'Female', and all of them were 46 to 55 years old (see Table 1).

Table 1
Gender & Age group

Gender	Female	Male
	1	4
Age	46-55	
	5	

Furthermore, the highest level of studies for most of them is a Master's degree. Regarding their teaching experience, most of them had 21 to 25 years teaching experience (see Table 2).

Table 2
Level of studies & teaching experience

Level of studies	Bachelor	Master
	1	4
Teaching experience	16-20 years	21-25 years
	2	3

As for the rest of the survey's items, the interest was initially laid on the two periods of schools' closures – from **March 2020 to July 2020** and from **September 2020 to July 2021**. Thus, the analysis is harmonised and presented either in one table, including both periods, or with indication separately for each period regarding the significant difference they presented.

Regarding the location and population of the school the majority of teachers stated that their school is located in areas with less than 1.000 to 50.000 habitats (see Table 3).

Table 3
Location & population of the area

Location & population	<1.000	1.001 – 5.000	5.001 - 50.000	50.001 – 1.000.000
	1	1	1	2

As shown in Table 4 all teachers worked in public schools. The Greek sample did not include private or special schools or schools with migrated/refugee students. However, those teachers had students from minority and vulnerable groups (i.e., special needs, Roma and refugees/migrants). The population size of students shows a distribution from around 15 to 570 students.

Table 4
Type of school & population size of students

Type of school	Public general education	Public vocational education
----------------	-----------------------------	--------------------------------

	4			1	
Population size					
	15 students	100 students	275 students	300 students	570 students

Most of the teachers taught in the age group of 14 to 15 years, so their students were at the Gymnasio which is compulsory, provides general education and corresponds to the last grade of lower secondary education (source Eurydice⁸). It is also a prerequisite for enrolling at Lykeio upper secondary schools, general or vocational, and the age group of 15 to 16 years corresponds to its first grade (see Table 5).

Table 5

Age group & level of secondary education

Age group	14-15	15-16
	3	2
Level of secondary education	Gymnasio lower secondary education	Lykeio upper secondary education
	3	2

The main intention for the Greek sample was to cover subjects following the curriculum's classification as it would have given a representative picture of the educational reality. Hence, most of the subjects covered the core ones such as Greek language/Philology, Maths, Science and two more served the complimentary such as History and Music. However, all are classified as compulsory subjects (see Table 6).

Table 6

Subject taught & grade

Grade	1st – 2nd – 3rd Gymnasio			1st – 2nd – 3rd Lykeio	
Subject taught	Science	History	Music	Greek language	Maths

B: Online teaching & learning – Distance education

⁸ Eurydice: <https://eurydice.eacea.ec.europa.eu/national-education-systems>
Greek education system: <https://eurydice.eacea.ec.europa.eu/national-education-systems/greece/greece>

As it is shown in Table 7 all Greek teachers had prior online teaching experience and almost all were trained in online teaching/distance education before the school closure. Moreover, all the responders agreed that the shift from face-to-face to online teaching was a governmental decision due to this unforeseen situation of the pandemic.

Table 7

Online teaching: experience, training and decision making

	Yes	No
Prior online teaching experience	5	0
Prior training in online teaching	4	1
Shift to online teaching was a governmental decision	5	0

As shown in Table 8 regarding the institutional support for online teaching, the majority of Greek teachers reported that their institutions had no clear vision towards it, and no professional development strategy was established **before the pandemic** (items 1&2). The majority also disagreed about the institutional support they provided **when the pandemic occurred** regarding an explicit pedagogical framework and teaching practices (items 3, 4 & 5). However, most teachers agreed that known infrastructure shaped their planning during the second period of school closures (items 6a & 6b). A possible explanation might be that those three teachers influence the institutions' decisions through their role (Deputy Headteachers).

Table 8

Institutional support for online teaching

	Strongly disagree	Disagree	Agree	Strongly agree
Before the pandemic occurred				
1. there was a clear vision towards online teaching.	2	2	1	0
2. there was a professional development strategy towards online teaching already putted in place in your institution.	1	3	1	0
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching	1	3	1	0

provided by your institution.				
4. there were clear objectives as regards online teaching.	2	1	2	0
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.	0	4	1	0
March 2020 – July 2020				
6a. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.	1	3	0	1
September 2020 – July 2021				
6b. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.	0	2	3	0

C: Readiness to teach online – Innovative/new & good/effective practices in distance education

This part included two open-ended questions. Firstly, the teachers were asked to describe the innovative/new teaching practices (pedagogical adaptations) that they implemented and the technological tools used during distance education. Secondly, they were asked to describe the innovative/new practices and technological tools that they implemented were effective and why. Both those items are examined in more depth into WP3, which includes teachers' interviews and had the opportunity to present more on their answers.

POLAND

Tools, sample and distribution

What tool was used to create the survey?

The Polish team created the survey on the online tool of Google Forms distributed it online.

How was the survey distributed?

The survey was distributed with help of the Foundation of Educational System Development (Fundacja Rozwoju Systemu Edukacji, FRSE). FRSE is a Polish National Agency for Erasmus+ and European Solidarity

Corps. The FRSE distributed the link to the questionnaire per email to more than 600 secondary teachers and made announcements about the KEEP project on Facebook and Twitter.

What were the reasons/criteria for this choice?

The FRSE has established a national network of teachers, so the Polish team found that approaching it would provide an entirely approved liaising to the teachers' community. More reasons for supporting that decision were: 1) the size of FRSE teachers' database - possibly the biggest in Poland and 2) the activity of teachers who are connected to FRSE, as most of them are involved in European initiatives and they are technology users, keen on innovative teaching/learning methods.

Data of the sample

Overall, the Polish team **received 136 responses** from secondary teachers. From those responses seventeen (17) were void as no input was provided on teaching practices or technological tools they used. The remaining **final data was 116 responses** that fulfilled the criterion to provide complete answers to all the questions.

From these there were only five (05) teachers chosen regarding their innovative/new teaching practices and technological tools. Moreover, they fulfilled the following criteria:

- i) different level of studies,
- ii) different location, population and type of school,
- iii) different years of teaching experience and
- iv) different subject.

Data on the final selection (5 teachers)

A: Background – Demographic questions

All teachers identified themselves as 'Female' and most of them were 46 to 55 years old (see Table 1).

Table 1
Gender & Age group

Gender	Female	
	5	
Age	36-45	46-55
	2	3

Furthermore, the highest level of studies for most of them is a Master's degree. Regarding their teaching experience, most of them had 21 to 25 years teaching experience (see Table 2).

Table 2
Level of studies & teaching experience

Level of studies	Postgraduate diploma	Master	PhD
	1	3	1
Teaching experience	16-20 years	21-25 years	>25
	3	1	1

As for the rest of the survey's items, the interest was initially laid on the two periods of schools' closures – from **March 2020 to July 2020** and from **September 2020 to July 2021**. Thus, the analysis is harmonised and presented either in one table, including both periods, or with indication separately for each period regarding the significant difference they presented.

Regarding the location and population of the school the majority of teachers stated that their school is located in areas with 50.001 to 1.000.000 habitants (see Table 3).

Table 3
Location & population of the area

Location & population	5.001 - 50.000	50.001 – 1.000.000
	1	4

As shown in Table 4 the majority of teachers worked in public schools. The population size of students shows a distribution from around 100 to more than 500 students.

Table 4
Type of school & population size of students

Type of school	Public general education	Public school of arts	Public migrant integration	Private
	1	1	1	2
Population size	100 - 150	100 - 150	100 - 150	more than 500

	students	students	students	500 students	students
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Most of the teachers taught in the age group of 15 to 16 years, so their students were at the General secondary school (liceum ogólnokształcące) (source Eurydice⁹) (see Table 5).

Table 5
Age group & level of secondary education

Age group	14 - 15	15-16
	2	3
Level of secondary education	General secondary school (liceum ogólnokształcące)	

The Polish sample covered subjects taught from first to third-grade secondary education. Therefore there is an equivalent number of subjects from social sciences and science education. However, all are classified as compulsory subjects (see Table 6).

Table 6
Subject taught & grade

Grade	1st - 2nd - 3rd				
Subject taught	Polish language	Polish language	Physics	Computer science	Spanish language

B: Online teaching & learning – Distance education

As shown in Table 7 the majority of Polish teachers had prior online teaching experience and almost all were trained in online teaching/distance education before the school closure. Moreover, all the teachers agreed that the shift from face-to-face to online teaching was a governmental decision due to this unforeseen situation of the pandemic.

Table 7
Online teaching: experience, training and decision making

	Yes	No
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⁹ Eurydice: <https://eurydice.eacea.ec.europa.eu/national-education-systems>
Polish education system: <https://eurydice.eacea.ec.europa.eu/national-education-systems/poland/poland>

Prior online teaching experience	3	2
Prior training in online teaching	2	3
Shift to online teaching was a governmental decision	5	0

As shown in Table 8 regarding the institutional support for online teaching, the majority of Polish teachers reported that their institutions had no clear vision towards it, and no professional development strategy was established **before the pandemic** (items 1&2). It is interesting, though, that **when the pandemic occurred**, the majority agreed about the institutional support they had been provided for professional development opportunities and an explicit pedagogical framework (items 3&4). However, at the same time, it is reported that only some institutions used teaching practices adapted to distance education ICT and infrastructure to their staff benefit (items 5&6).

Table 8
Institutional support for online teaching

	Strongly disagree	Disagree	Agree	Strongly agree
Before the pandemic occurred				
1. there was a clear vision towards online teaching.	1	3	0	1
2. there was a professional development strategy towards online teaching already putted in place in your institution.	1	4	0	0
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching provided by your institution.	1	0	2	2
4. there were clear objectives as regards online teaching.	1	0	2	2
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.	1	1	1	2

6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.	1	1	1	2
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C: Readiness to teach online – Innovative/new & good/effective practices in distance education

This part included two open-ended questions. Firstly, the teachers were asked to describe the innovative/new teaching practices (pedagogical adaptations) that they implemented and the technological tools used during distance education. Secondly, they were asked to describe the innovative/new practices and technological tools that they implemented were effective and why. Both those items are examined in more depth into WP3, which includes teachers’ interviews and had the opportunity to present more on their answers.

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6. Useful resources

The investigation on useful resources that would assist all partners to proceed with recording and translations of focus groups lead to the following list.

Audio/videorecording

- Zoom
- You tube
- <https://www.audacityteam.org> (Open-source)
- <https://cleanfeed.net/> (Browser-based audio recording)
- <https://www.ocenaudio.com/> (Audio recording and editing, Windows and Mac)
- <https://support.apple.com/en-gb/guide/quicktime-player/welcome/mac> (Audio recording and editing, Mac)

Transcript production

- Trint <https://app.trint.com/plans?tid=1811ed619ed267-015a2a401172e4-402e2c34-1ea000-1811ed619ee8cb>
- Office365 tool for audio

Translation production

- Deepl: <https://www.deepl.com/translator> (Dutch, French, Greek, Polish)

7. Annex 1 - Questionnaire

Introduction – consent

While completing the following questionnaire I am giving the permission for the KEEP project partners to collect and process my responses to this questionnaire. This information will solely be used for the KEEP study on innovative practices in distance learning. The responses will be kept confidential and used internally. Only the KEEP project partners will have access to the responses and data gathered via this questionnaire.

A. BACKGROUND – DEMOGRAPHIC QUESTIONS

1. Select your gender

- a. Female
- b. Male
- c. Prefer not to say

0. Select the age group you belong to

- a. Up to 35
- b. 36-45
- c. 46-55
- d. 56 and over

0. Indicate the highest level of your studies

(every partner can add accordingly and related to their context/options in terms of teaching qualifications either in Further or Higher Education)

0. Select one choice that reflects your teaching experience in years

- a. Up to 5 years
- b. 6 – 10 years
- c. 11 – 15 years
- d. 16 – 20 years
- e. 21 – 25 years
- f. More than 25 years

Schools closures during March 2020 – July 2020 due to COVID-19

0. Provide more details of the educational context you taught regarding the following aspects:

5.1 Location & population in the area in which your school was located.

(Teachers can provide ONE answer for each school they were assigned to)

- a. Area with more than 1.000.0001 people
- b. Area with 50.001 to 1.000.000 people
- c. Area with 5.001 to 50.000 people
- d. Area with 1.001 to 5.000 people
- e. Area with less than 1.000 people

5.2 Type of school – choose as many as you were assigned to teach

- a. public school
- b. private school
- c. public vocational school
- d. private vocational school
- e. public special school
- f. private special school
- g. public school - migrant integration
- h. private school - migrant integration

5.3 Student population size – provide the number of your school’s student population. If many schools please add accordingly.

.....

0. What is the age of students you were mainly teaching? (multiple choice question as teachers may cover more than one school setting)

- a. 14-15
- b. 15-16

0. What is the grade that you were teaching? Please fill in next to each of the following school-ages.

- a. 14-15
- b. 15-16

0. What is the subject/area of your teaching expertise

(partners can add accordingly to their educational context or maybe each teacher can add on their own)

0. Which subject(s) did you teach this year and in which grade?

(each teacher can add on their own)

B. ONLINE TEACHING AND LEARNING or DISTANCE EDUCATION

(adapted to the local educational context regarding with which term is each country familiar with)

0. Have you had prior online teaching experience before the school closure?

- a. Yes
- b. No

0. Have you had prior training in online teaching/distance education before the school closure?

- a. Yes
- b. No

12. To what extent do you agree or disagree with the following statement about the institutional support you received for online teaching?

In our institution ...

	Strongly	Disagr	Agr	Strongly
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	disagree	ee	ee	agree
	0	1	2	3
Before the pandemic occurred				
1. there was a clear vision towards online teaching.				
2. there was a professional development strategy towards online teaching already putted in place in your institution.				
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching provided by your institution.				
4. there were clear objectives as regards online teaching.				
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.				
6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.				

C. Readiness to teach online – Innovative/new & good/effective practices in distance education

In this section, you can provide information about the teaching practices you applied during this period March 2020 - June 2020, that you hadn't used before. It could be new practices that you started to implement either in terms of pedagogy (teaching, assessment and feedback) or technology (digital tools/learning platforms used in synchronous & asynchronous teaching and learning).

We consider very importantly your views on what is your interpretation of 'innovative/new practices' and 'good/effective practices'.

Please feel free to provide information:

- on social media like Facebook or others: if and for what reason you used them
- or messaging media like Viber, WhatsApp or others: if and for what reason you used them
- digital tools/learning platforms if used in synchronous and/or asynchronous teaching
- any other ideas you may share with us.

13. In the following field, please describe the *innovative/new* teaching practices (pedagogical adaptations) that you implemented/tried and the technological tools used during distance education.

e.g. I integrated Voki (<https://l-www.voki.com/>) characters into my lessons to make them more engaging to students.

14. In the following field, please describe which of these *innovative/new practices* and technological tools that you implemented/tried were effective and why.

e.g. Using Voki characters I've noticed students gained more confidence in working independently. Also, some of them gained more confidence in taking turns and giving instructions.

**Schools closures during the school year 2020-21
(September 2020 – July 2021) due to COVID 19**

15. Provide more details of the educational context you taught regarding the following aspects:

15.1 Location & population in the area in which your school was located.

(Teachers can provide ONE answer for each school they were assigned to)

- a. Area with more than 1.000.001 people
- b. Area with 50.001 to 1.000.000 people
- c. Area with 5.001 to 50.000 people
- d. Area with 1.001 to 5.000 people
- e. Area with less than 1.000 people

15.2 Type of school – choose as many as you were assigned to teach

- a. public school
- b. private school
- c. public vocational school
- d. private vocational school
- e. public special school
- f. private special school
- g. public school - migrant integration
- h. private school - migrant integration

15.3 Student population size – provide the number of your school's student population. If many schools please add accordingly.

.....

16. What is the age of students you were mainly teaching? (multiple choice question as teachers may cover more than one school setting)

- a. 14-15
- b. 15-16

17. What is the grade that you were teaching? Please fill in next to each of the following school-ages.

- a. 14-15
- b. 15-16

- 18. What is the subject/area of your teaching expertise**
(partners can add accordingly to their educational context or maybe each teacher can add on their own)
- 19. Which subject(s) did you teach this year and in which grade?**
(each teacher can add on their own)

B. ONLINE TEACHING AND LEARNING or DISTANCE EDUCATION

(adapted to the local educational context regarding with which term is each country familiar with)

- 20. Have you had prior online teaching experience before the school closure?**
a. Yes
b. No
- 21. Have you had prior training in online teaching/distance education before the school closure?**
a. Yes
b. No
- 22. To what extent do you agree or disagree with the following statement about the institutional support you received for online teaching?**

In our institution ...

	Strongly disagree	Disagree	Agree	Strongly agree
	0	1	2	3
Before the pandemic occurred				
1. there was a clear vision towards online teaching.				
2. there was a professional development strategy towards online teaching already putted in place in your institution.				
At the time the pandemic occurred				
3. there was a supportive environment as regards professional development for online teaching provided by your institution.				
4. there were clear objectives as regards online teaching.				
5. attention was paid to the teacher change processes inherent to changing to online or blended learning.				
6. the current ICT possibilities and infrastructure as regards online teaching were taken into account in the planning of online teaching.				

C. Readiness to teach online – Innovative/new & good/effective practices in distance education

In this section, you can provide information about the teaching practices you applied during this period March 2020 - June 2020, that you hadn't used before. It could be new practices that you started to implement either in terms of pedagogy (teaching, assessment and feedback) or technology (digital tools/learning platforms used in synchronous & asynchronous teaching and learning).

We consider very importantly your views on what is your interpretation of 'innovative/new practices' and 'good/effective practices'.

Please feel free to provide information:

- on social media like Facebook or others: if and for what reason you used them
- or messaging media like Viber, WhatsApp or others: if and for what reason you used them
- digital tools/learning platforms if used in synchronous and/or asynchronous teaching
- any other ideas you may share with us.

23. In the following field, please describe the *innovative/new* teaching practices (pedagogical adaptations) that you implemented/tried and the technological tools used during distance education.

e.g. I integrated Voki (<https://l-www.voki.com/>) characters into my lessons to make them more engaging to students.

24. In the following field, please describe which of these *innovative/new practices* and technological tools that you implemented/tried were *effective* and why.

e.g. Using Voki characters I've noticed students gained more confidence in working independently. Also, some of them gained more confidence in taking turns and giving instructions.

8. Annex 2 - Focus Group questions

Focus Group1 - Teachers

1. Socio-economic background (early leaving, dropout) of students - Digital divide

- i. According to research data, the attendance rate was low in many countries during the 1st lockdown (March 2020-July 2020). How would you describe the attendance rate at your class (lower than in face-to-face teaching or normal as usual)?
- ii. How did you get information on your students' family situation/background and their access to remote learning?
- iii. What did you learn about their family situation/background?
- iv. What were the obstacles your students faced to attend lessons in remote learning? What was the most frequent reason for students not being punctual or even not attending class?
- v. What were your students' needs in order to participate remotely in their classes? i.e. devices (computers, laptops, tablets), and/or stable access to a broadband connection and/or a quieter place or sharing with other members of the family?

2. Support resources for engagement in learning (learning engagement and communication with students)

- i. How did you manage to keep your students on track with their learning?
- ii. How did you support your students in providing equal access to remote learning?
- iii. What kind of support (technical, psychological, training...) did you have from your school setting?

3. Online Tools

- i. What technological tools did you use for remote teaching?
- ii. Which of the technological tool you have used for remote teaching do you consider as innovative and in which terms? (They can describe more than one).
- iii. Which of those technological tools do you consider as useful in face-to-face/hybrid teaching?

4. Teaching practices in remote teaching & learning

- i. What teaching practices did you use in your remote teaching?
- ii. What was a teaching practice that you implemented and was 'effective' in facilitating your students' remote learning (adaptation to the context, including the learning environment and the student's readiness, prior mastery, and motivation)? (Give us examples).
- iii. What was a teaching practice that you implemented and was 'innovative' in meeting the learning needs of your students in this new emerging teaching and learning situation? (Give us examples).

5. ICT training

- i. What was your prior online teaching experience before the school closure?
- ii. What was your prior training in online teaching/distance education before the school closure?
- iii. During the pandemic did you participate in training for online teaching?

Focus Group2 - Parents, Leaders & students.

1. Obstacles - Difficulties

I would like for all of you to take a moment and think back on your learning experience during the pandemic.

1. What was the most difficult part/obstacle (can be more than one) from your point of view about the learning experience during the COVID-19 pandemic? (Technical issues, special needs, psychological matters, social and economic challenges).

Suggested questions:

Parents:

- What were the obstacles your children had to attending lessons in remote teaching?
- How did you inform the school about the difficulties your children faced in accessing remote learning?

Students:

- What were the difficulties you faced in participating remotely and having access to your classes? i.e. devices (computers, laptops, tablets), and/or stable access to a broadband connection and/or a quieter place or sharing with other members of the family other issues?

Headmasters/Leaders:

- What were the obstacles students in your area faced in attending lessons in remote teaching? Especially, for disadvantaged groups like special needs, refugees, Roma etc
- How did you manage the difficulties students in your area faced in accessing remote teaching? Especially, for disadvantaged groups like special needs, refugees, Roma etc
-

2. Support - Management

- i. What kind of support (For technical issues, special needs, psychological matters, social and economic challenges) did you receive or implement regarding the challenges that you faced?
- ii. Were there needs that you couldn't meet?
- iii. Could you describe some positive initiatives that help you to overcome the difficulties you faced?

Suggested questions:

Parents:

- What did the school do to support access to remote learning for your children?
- How did you manage to keep your children on track with their learning?

Leaders:

- What did you do in your area to support teachers' needs in terms of remote teaching? (i.e. infrastructure, training ...)
- How did you manage to provide adequate support to all schools' needs?

3. Teachers' practices

I would like for all of you to take a moment and think back on the learning experience during the pandemic. Please think about the technological/online tools that teachers used, their methods and strategies.

- i. What is your opinion about the teaching practices that the teachers used during remote teaching?
- ii. What were the practices the teachers applied in remote teaching?
- iii. What teaching practices had you experienced during the pandemic were innovative*, and why?

* *'education innovation as an idea or technology that is new to a current context, if not new to the world. An innovation that could help provide a broader menu of options for delivering learning, with the potential to help leapfrog education, namely: 1) innovative pedagogical approaches alongside direct instruction to help young people not only remember and understand but analyse and create; 2) new ways of recognizing learning alongside traditional measures and pathways; 3) crowding in a diversity of people and places alongside professional teachers to help support learning in school; and 4) smart use of technology and data that allowed for real-time adaptation and did not simply replace analog approaches'*

Suggested questions (mainly for students)

- iv. Did you participate in making choices and co-designing the lesson?
- v. Did you influence/change the proceeding of a practice?
- vi. Did a teacher propose an evaluation made by students?
- vii. What teaching practices had you experienced during the pandemic were effective*, and why?

* *'A practice is the specific way an instructor teaches or a student learns. **Effective** practices are rooted in principles of learning and adapted to the context, including the learning environment and the student's readiness, prior mastery, and motivation. A standard practice is an effective practice that has been widely adopted'*

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