# Agile EDU Second European Dialogue Lab

SUMMARY REPORT

19 February 2025

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# Contents

## Introduction

The second of three European Dialogue Labs in the Agile EDU project took place online on 19 February 2025. The aim of the event, hosted by European Schoolnet, the project coordinating body, was to enable the 25 participants (down from 37 at the first) to share and discuss perspectives, successes and challenges in relation to common issues arising from Country Dialogue Labs, and, in doing so, to use the dialogue approach to developing mutual understanding in complex policy areas. This summary is based on plenary presentations, transcripts of recordings of discussion groups, feedback from rapporteurs and contributions to the conferencing chat feature.

Prior to the dialogue lab, participants were provided with the EU Dialogue Lab 2 (EU DL2) programme and background information about the project and the dialogue lab approach.

Project manager Alex Kirchberger welcomed participants and Patricia Wastiau outlined the key features of the Agile EDU project co-funded by Erasmus+ running to December 2025, highlighting the increasing datafication in education and the need for responsible and inclusive use of data to improve teaching and learning. The project explores three pillars: data regulation rights and privacy, use of data for teaching and learning and data governance.

Professor Kay Livingston outlined the day's programme and the dialogue lab approach. DLs are one day workshops providing time and space and opportunities for dialogue, knowledge exchange, collaboration idea generation and co-creation between diverse stakeholders. Structured sessions prioritise dialogue through reflective questions. A series of country DLs have taken in project partner countries. The five reflective questions tabled for discussion at this DL are designed to stimulate and focus dialogue between different stakeholders with multiple perspectives.

Participants were automatically assigned and moved to one of four online breakout rooms for the first of two discussion sessions, their composition enabling a good mix of backgrounds and organisations, with a different set of participants in the afternoon session from the first (in addition, some people were able to participate only in the morning or afternoon).

The structure was the same in both sessions: after briefly introducing themselves participants discussed the reflective questions (two in the first, three in the second) after choosing a rapporteur who fed back the main points in a plenary session. Thanks are due to all who contributed experiences and ideas to the discussions.

## Discussion group session 1

The two reflective questions for the first – 60 minute – session covered the topics of data literacy and classroom practice and collaborative multi-stakeholder approaches to creating school data cultures. Speaker names are not given but their organisation mentioned when relevant. Discussion points not directly related to the reflective questions are omitted. Direct quotes (in "") are participants' own words, in some cases lightly edited for clarity and concision.

## Reflective question 1: What does data literacy involve for teachers' classroom practice?

Group 1

UNESCO are updating their 2018 teacher digital competency framework to take account of developments in AI and a recognition of the role of teacher mindset and agency in progressing. Teacher education should "ensure that the pedagogical affordances of digital tools are unlocked"; if not there is a risk now and in the future with ever more powerful tools that training focuses on operational not pedagogical aspects. Even so, it is not easy to consider pedagogy when "staring at the technology". Equitable and responsible data use is another important aspect of data literacy for teachers, as is empowering students.

The question of definitions of data arose. It means different things to different people (teachers and school leaders for example); for some (especially on the policy side) it's numbers (attendance data, grades), for others increasingly it's soft data such as gender, video recordings, interviews or subject-specific data to create resources for learning such as DNA mapping, enabling teachers to adopt data-driven approaches (although one discussant observed "when you scratch on the surface, you don't really know what it means"). Data exists in different places: "in Sweden it can be hard collecting data from all the different resources and platforms". Users' needs should be considered: "I would really love to be able to change the teaching for a student during my course, not after," as a participant in a country dialogue lab said. It can be too late to make a difference when data is analysed later.

Teachers are overwhelmed, they know that they need to be engaged with data; they know that it's about digital literacy, but there are so many different interpretations and possibilities that they do not know where to start or what is expected of them.

The European Commission is developing a data skills space and is supporting teacher education in misinformation and fake news, recognising that "the definition of data is changing quite strongly". It is important to bring data to life in teaching, to create a narrative, "like a story that will stick to your mind." Moreover, "It's too easy to isolate dry statistics and mislead people. We want a narrative that will be checked."

Group 2

As far as Swedish teachers are concerned data handling tools can suddenly appear in their schools in an unplanned way, giving them no time to get to grips with them and no ownership of the data ("you don't own your own data"), and no way of retrieving data. AI is affecting teaching and learning and administration. Data literacy for both teachers and students should be about the pedagogical use of data and learning what to do with it. It should be about the usability of data, knowing what to do with it, how to adopt a more rigorous, 'scientific' approach to it.

There is a lack of strategy and purpose in data use at all levels, for example, knowing what I want to know and which data I need: "What you need in a data strategy is how to start from a specific purpose and from that what kind of data do I need to achieve that goal?" A lot of data is collected for no discernible educational purpose. It is sometimes used as a control mechanism, leading to a

dichotomy: on the one hand are the students who teachers know and on the other a data construct that they do not recognise, and the two cannot be compared. Data literacy levels are "very low" in Italy, but this is not their fault – they did not enter teaching to become data analysts. There is a need to avoid a blame culture and deficit model of teacher competency: help teachers interpret data, with visualisation and dashboards for example: "data should come to them in a format that doesn't require, you know, to have a high level of data literacy."

Group 3

It is important to understand not only the type of information teachers need to improve their teaching but also how to actually communicate that information. "Data is not just numbers" should be the first step in data literacy for teachers; it can also be qualitative and not just quantitative and can also arise from observation and professional judgement while constantly evaluating and challenging data. It is also important to consider what kinds of data already exist, "What is that I would like to improve or develop by using more?"

Teacher education planning should consider relevance (to them, and of data collected) and gaps in current knowledge and skills. Questions such as "What data do I collect and what do I use it for?" can help. Many countries are focused on requiring data to track student improvement but there are other important student outcomes. Teachers need support in interpreting and critically evaluating, data but may miss key points. They often value data gathered externally, from outside school, more than their own.

Group 4

In Italy and Malta some teachers have low awareness of what data or data literacy is; they usually think of data science or skills that will be used in future employment. Their proficiency in managing, storing and interpreting data, especially of young people, is poor, often resulting in not using digital tools at all for fear of making mistakes. If the teacher is not interested the data will not be used. Low awareness and competence exist at policy level too, particularly as regards understanding the impact of AI. Skills in assessing which data is reliable and which is not are low. Malta's data warehouse aims to improve the situation and build trust in data – some "hand holding" is planned to help teachers feel more comfortable and confident in using data literacy strategies in schools and in the classroom.

Spain has developed a certificate of digital competence according to a framework which is based on the European framework for digital competence for teachers. It – together with data literacy training – is intended to promote an evidence-based approach for teaching and learning. Spain has one of Europe's highest dropout rates (13%) and developing digital skills in both students and teachers is seen as part of the solution. Moreover, teachers are "overwhelmed with bureaucracy right now" and digitalisation and the skills training associated with it can help.

In Norway (and Sweden) school is more or less "completely computerized" now for some years but now there is a backlash. There is no certification for teachers' digital competence or data literacy although there is a national framework for professional digital competence, updated in 2024 to

include AI. The data literacy part is a challenge for teachers: to know what to use, how to use it and learning analytics: "There are a lot of programs available and a lot of data available to teachers, but it is not really used systematically." In addition, multinational companies collect data "but it doesn't come back to the classrooms." Until recently there has been "a sort of a naivety in school data use" but now there is growing scepticism about what happens to data. A survey of 2,500 teachers found that data literacy is not in the forefront of their thinking, it's more teaching methods and different kinds of tools for different kinds of students, as well as, of course, screen time issues.

The main struggle in Sweden, "is not the amount of data, because we have the data. It's how we use the data in a smart way. We are not asking ourselves the right question before we start collecting data because it's like drilling for oil without knowing why we should have the oil." Students' experience of technology in deregulated Sweden depends on whether their teacher is pro-technology or not; there is no standardised approach. With 290 municipalities "you can't move information back and forth due to regulations in GDPR and other constraints."

In Maltese schools, digital literacy teachers support teachers. A pilot project looked at AI in the teaching of mathematics. An adaptive learning system stored data on the performance of every student and, based on that, created the next level of exercise that the student needed to complete. "In that case, the teacher did not really need the skills because the system did everything." It was noted that we don't know the algorithms behind such systems developed by private companies, and they may (further) disadvantage certain groups of learners. Critical literacy is needed to understand what is going on.

As AI is developing fast it's not easy to find time to keep track of it. It is a challenge at national or European level to decide what should be the minimum required level, but at basic level data literacy should be to understand both the advantages but also the risks of AI.

### Reflective question 2: How can a collaborative approach involving multiple stakeholders be developed to provide ongoing support for teachers' digital literacy and foster a data culture in schools?

Group 1

At EU level, collaboration is encouraged through, first, working together on a shared document, guidelines and frameworks for example; second, creating networks with a goal and outcome; and third by funding actions. A multi-stakeholder approach (as at UNESCO) is most useful when "everyone very precisely knows how to give inputs and how it would actually get acknowledged".

A Swedish study examined the role of teacher unions in decision making in a decentralised system in which teachers are autonomous, someone representing them. In such systems teachers, as independent professionals, resist top-down steers and recommendations for tools. In these devolved free market systems, each school or municipality may develop its own data framework. Schools may find that, having bought systems, they then must pay to get the data back. In such

cases there is a strong case for collaboration between the national state and the local school or municipality.

There can be a mismatch between guidelines provided and what teachers actually want: help with privacy, ethics, legal issues, governance, security, or pedagogy? Other stakeholders should "tease out" what they really want and "what exactly will they be comfortable with and not see it as a being pressed down and put in a box."

Group 2

Data for school improvement is a collective challenge but there is often little sharing between teachers. A project in New York called Harris certification (now discontinued) provided comparisons of student performance data etcetera and connected all teachers with similar types of demographics and types of students, to enable them to dialogue about how to deal with them. A teacher with the same type of student but who is doing better can start a dialogue." Similarly, in Sweden, "we are trying to get the teachers more involved in self-assessment and collaboratively discussing data."

There may be consequences when different stakeholders look at the same data. In England for example, the inspectorate may use data to confront, judge and possibly fail schools, and school leaders use it to judge teachers, rather than collaborating with teachers and supporting growth. An early warning system (in USA, Chile and New Zealand for example) for student drop out may trigger a multi-stakeholder response leading to expulsion from the school without considering alternative support measures, raising questions about the ethical use of data. In other countries there is a two-level system, government and school, and they do not connect.

Teachers would like more soft data to help them get to know their class, especially at the beginning of the school year.

Education systems are 'awash with data', so select data according to needs, focus on what can be used, bringing together developers, vendors, ministries of education and schools in partnership.

Group 3

To be effective, collaboration needs to be not only top down (directives, policies, regulations, encouragement, conditions for implementation, interoperability), so that teachers have a sense of direction and purpose, but also bottom up, actions driven by teachers.

The first step is collaboration with other teachers in the school, sharing experiences with data, then with parents. School leaders should be involved, creating a culture of collaboration. At training sessions teachers can "do really well, but when they go back to school to implement it they don't have a culture where the school leader is supportive." A different approach from centre-based training may be a solution: "We try to train them and train them and train them. But probably what we would need to do is work with them more on a practical level in the classroom."

The concept of 'data culture' in a school is inked to more general digital literacy and digitalisation. Interoperability calls for collaboration; in Slovenia, "we have tonnes of data, all over the place, in different platforms, and do not effectively link the data." Data teams, comprising people from

different levels, are a promising way forward, working on linking data collection and analysis to school priorities and goals. Some teachers are resistant to data in education, for reasons of lack of trust or fear that data may be used against them. Good practices are seen when teachers work on a topic or action research, working collaboratively systematically to gather data. Effective training involves "small steps, showing them how to actually work on the data, how the data can help them".

Group 4

Stakeholders include universities as teacher trainers, administration bodies, teachers, students, school leaders, parents ("you can't underestimate the importance of getting the parents on board on this journey with data literacy and AI to data-driven education"), private sector, data specialists, procurement teams ("It can be expensive if you get it wrong"). They should collaborate on developing guidance to schools as to which strategies work better for students in different contexts, or, as in some countries, certifying apps that may be used, including how secure they are and how transparent the algorithm is. However, "when schools themselves don't have a clear view on why they are implementing technology solutions at school, it's very difficult to bring in parents on this."

Parental involvement in schools varies between countries and collaboration can be difficult where, as in Norway, different municipalities have their own GDPR assessment of every program used, duplicating effort. Therefore, the kind of collaboration and the kind of stakeholders that should collaborate on this will differ according to the country's governance system working culture.

### Plenary discussion

In the morning discussions, skills and knowledge gap related to digital / data literacy emerged as a common theme, as in CDLs. Collaboration is a second theme. Several groups mentioned different interpretations of data (numbers, narrative, video) and a conceptual difficulty with the very term 'data literacy'. Change of mindset is needed to understand data in a broad way. Many teachers are frightened of data and overwhelmed by administrative and educational data. Students need to be involved as well. Guidelines for interoperability and procurement can help, particularly on ethical issues management, procurement, what can be passed on to parents, what not. Collaboration between stakeholders is vital. The same data can be used by different stakeholders for judging (inspectorate) or developing (teacher mentors), not collaborative but confrontational. Trust is so important, but there may be a lack of trust in government, so people are tempted to duplicate information. Is GDPR too protective? There is a political dimension to data.

## Discussion group session 2

The reflective questions for the afternoon breakout groups (longer at 1h25) focused on initial and continuing teacher education in data literacy and stakeholder collaboration.

## Reflective question 3: How can ITE better prepare student teachers for the digital environment of modern schools?

Group 1

Discussion flowed over the three reflective questions.

Teaching is not as attractive as it used to be. In Spain a "pain point" for newly qualified teachers is that they found initial training very convoluted, and they did not understand it.

Group 2

In France, data literacy in ITE tends to emphasise the risks (security, GDPR, privacy etc.) rather than the benefits of data in education. The AI4T project has been useful for developing data literacy.

In Malta there is currently no framework or policy for data to would help student teachers understand the importance, uses and risks of data. Teachers are divided: some see data as a 'godsend', others are 'afraid'. Student teachers are issued with a tablet which includes an official email account and modules on digital / data literacy including the AI Act and AI literacy (AI is included in the curriculum). The aim is for them to see competence in data handling/analysis as "normal practice, not a box to be ticked", especially as they may well be teaching for years to come. ITE should therefore provide a strategic foresight in this area. Student teachers encounter data issues when they are on teaching practice (placement) and have access to all the different data systems in use in schools in the Maltese education ecosystem.

At EU level there is an Action Plan for data in education but no formal body covering the issues. EU initiatives to support ITE should be leveraged.

There was agreement that strategic action is needed in ITE, especially concerning AI, as well as structures to frame learning about data in education, covering the pedagogical benefits as well as the risks, and a forward-looking approach to prepare teachers for teaching in the coming decades. There is a cost to not investing in data literacy development, including worse outcomes.

Group 3

There is a gap between ITE and the classroom that needs to be bridged, training – based on a standardised digital framework embedding data literacy – should emphasise hands-on experience using data tools as well as cybersecurity and data compliance.

In Italy, preparing student teachers for digital environments is still problematic, shifting from a traditional perspective on school environments to digital environments. Technology use is patchy and lacks continuity. Primary school student teachers follow a five-year course with a nationally set curriculum. Secondary school student teachers have a degree and follow a one-year course focusing on pedagogy, psychology etc. Digital aspects are introduced, "but they are not real, impactful or supportive for the work that they have to do in the classroom, there is a gap between teacher education and the reality that they have in school."

In Norway, student teachers learn about digital competence and how to integrate digital competence in existing courses in subjects. A learning lab has been set up in the library so that both teachers, educators and student teachers could have a place to learn more. Specific days are set aside every year.to focus on digital competence in teacher education, but integration of technology is still a problem. Course plans (five years for both primary and lower secondary prospective teachers, one-year post-graduate for upper secondary) also have digital aspects to make it visible that this should be a focus. AI-focused sessions may amount to just two days in five years: "the programme has to fit a lot of things."

In Denmark, older teachers, "the BG Before Google generations" lack digital skills and interest in developing them. Younger teachers are digital natives, "so they're more willing to learn about technology because they use technology all the time. It's just native to them." There should be a focus on the pedagogy of actually how to integrate the technology "because that is something that I'm having to teach teachers." Data protection regulations are not covered at universities and teachers often want to use an app that is not GDPR compliant and so are not allowed to. "If I could go back in time and go to universities and say, hey, this is actually the stuff that you need to be focusing on because this is what we are struggling with in reality in schools, I think we would see a different landscape for education."

In Norway, teacher educators are undergoing training on data literacy, including data collection and analysis, ethics and the instrumental use of tools, and the use of data in subjects: "When they're not confident enough in using technology in the classroom with their student teachers, we have the learning lab as support. Get the teacher educators on board!"

In Italy the question of data/digital literacy in ITE is maybe "too much to think about," but things have changed since Covid. Teacher educators "have no idea what happens in school nowadays because it's been 10-25 years since they were in school, so they have no contact with reality." Is a solution to certify teacher trainers' expertise in data?

Group 4

In Portugal, using digital tools or using new technologies (let alone data literacy) does not seem to be part of newly qualified teachers' training; the university teachers "just gave lectures", so first provide training for the trainers. The digital transition action plan is slowly improving the situation. UNESCO's approach is to co design ITE programmes with teacher training institutes in multi-disciplinary teams on ChatGPT for example. Power dynamics in classrooms can change if students and learners sometimes know more than teachers. ITE could cover critical inquiry, critical thinking which would then provide frameworks rather than focusing on tools and apps. There needs to be a pedagogical intention for using digital in the classroom. Much money is going into AI in education, "but nobody talks on what do we want from the AI? Just that we must use AI." Most countries (including Sweden) lack a national strategy about the use of data, the use of digital tools in schools, and so teachers and school leaders do nothing or go in different ways, leading to a fragmented approach.

## Reflective question 4: How can CPD better address the knowledge and skills gap of teachers and school leaders to ensure the pedagogical purpose of using data is given prominence over operational and technical aspects?

Group 1

The approach of the Asian Euro Foundation is to create an environment where peers can learn from their peers through peer-to-peer discussion and collaboration; "We try to create a multiplier effect by empowering them so that when they go back then they can empower teachers in their own schools and community." Recent trainings have covered leading digital transformation, integrating AI in an ethical way, learning with AI, learning about AI (raising awareness about the fundamental understanding of AI and also the application of AI) and in-depth learning on effective inclusive and ethical AI design. Training of innovative (and highly motivated) teachers begins with self-learning (one month), then team learning, with an emphasis on enjoyment ("Making sure that actually they're enjoying the training") and autonomy, learning at their own pace: "They can watch session recordings in their own time whenever it's convenient for them."

The European Commission offer broader training and lifelong and lifelong learning opportunities for teachers in sectors outside education such as public administration and journalism, no longer focusing only on how to develop a lesson plan, enabling teachers to gain knowledge, not only specific skills on how to design or how to think. The aim is to give them a helicopter view of other topics that also fall within education "A person, a professional, needs to have a wide variety of diverse qualities and skills. Why should we live isolated in a bubble?" Given that teaching is not seen as attractive by many, it is important to respect work life balance and the risk of burnout and a sense of feeling overwhelmed by so many things when offering CPD: "Maybe the training can take place during the summer break and be a little bit more organised and focused for two weeks? Maybe we need to test a different model of training?"

School autonomy affects the CPD culture in schools: "So for example [in Spain], if I'm a school, I want to create a digital director and I want to create an AI director, I need the autonomy to do it and not be constrained by so much bureaucracy.

In Italy when CPD courses are designed at the ministry of education, many turn out to be misaligned with the actual needs on the demand side "because the demands evolve very quickly and from the moment you design the policy, the training policy and then you deliver it, it becomes obsolete very, very quickly." Each of Italy's 8,300 schools has a teacher nominated as 'digital animator', a digital ambassador paid €2,000 a year. They have three tasks: curriculum development in the school, organise events to ensure that the digital side was always there and to design and engage peers in training related to digital skills "in a structural way within the school, not from outside, not from the ministry, not from regions."

The quality of trainers can vary, especially in peer learning and training schemes where a teacher can become a teacher trainer because they know something about a topic or have a master's degree and assume they can deliver it. But is the trainer a good public speaker? Are they a trainer a good

community manager? With AI new expertise is needed in schools and in teacher education institutions, whether initial teacher education or for professional development.

At European level there are no more than about 3,000 names that reoccur in CPD activities. "Although we talk about teachers being very motivated and wanting to do more what happens to the rest of the 5 million? We are talking about the same people again and again." A few very highly motivated heroes.

Group 2

In France CPD is optional. Primary (but not secondary) teachers are entitled to 18 hours/year CPD. There are two online courses using continuous evaluation, emphasising security rather than the pedagogical or operational side of data in education. Data literacy CPD is not in its infancy and there has been much progress thanks to having a roadmap. Training for school leaders is mentioned in a national data in education roadmap and covers topics such as comparing data between schools and how teachers are using data.

In Malta, CPD is compulsory; approved courses are accredited according to the hours spent on the course. Schools decide on the priority topics for CPD, leading to choices between, for example, green / environmental issues or data literacy. This leads to limited CPD in the topic despite a need resulting from the creation of a national 'data warehouse' (issues such as 'seepage' of data from schools where it should remain to external servers, Google data – "knowledge is power"). It is important to raise school leaders' awareness of what data can do for them, for example, understanding patterns such as indicators of early school leaving, and not misinterpreting data and drawing wrong conclusions (e.g., absence may not mean the school is underperforming).

Sweden is different from France and Malta, with a devolved system and 219 municipalities, making it difficult to see the overall picture, especially as infrastructure varies between schools. School leaders need to see the pedagogical benefits of data use as well as its administrative benefits.

At EU level, given subsidiarity, work focuses on interoperability and mapping datasets.

In France the ministry is working with companies to support open data and ensuring it is available for research purposes. This raises ethical questions and school interests must be safeguarded.

Group 3

A study in Norway looked at lesson study as a way to improve students' learning, observing what happens and then doing it again in modified form. Teachers were asked to pinpoint an issue they have in the classroom that they wanted to fix. As a team they focused on diversity and equity. This can be a good model of CPD and works with different motivational levels.

In Sweden an effective form of CPD involved groups of 50-60 teachers who tried things out and then went back to their classrooms testing what they learnt. "The difficult things for teachers were to be aware of how they could, within their subject within their goal, use the technology tools." Giving and

receiving feedback to other teachers "was really hard, but the innovative, younger teachers loved it." Teachers need to belong to a group where they can learn together at the same level but for some this is within the school and with the colleague in the classroom two doors away. The most sceptical teachers need the support of their local team.

Having school leaders involved, learning with the teachers can break down the us (teachers) and them (school leaders and administrators) divide.

Group 4

The main problem for most teachers is that they don't have the time to train themselves, whether it's professional or if they just want to just want to read a book in some subject on their spare time: "Then you will have a divided workforce because some of them will go into the digital world and some will stay in the analogue world." Consider recognising micro-accomplishments in CPD when someone goes out of their way and does something: "How do you record it? And then how do you acknowledge it? And then how do you create that?"

There is too much data. There's always an obligation to add a comment or add context and so on, not because they want to which all takes time for the teacher: "They say that they are more administrators than teachers."

## Reflective question 5: Which other stakeholders should be involved in teacher education to address the knowledge gaps and what would their roles and responsibilities be?

Group 1

The Asian Euro Foundation bring together designers and teachers to share their voices in terms of designing better. Faculty collaboration is a new track bringing together teachers, trainers, academics and researchers to work on frameworks, learning from each other and empowering each other. Mentors are usually alumni who have been through the training and then they now know about the methodology and can support the newcomers better. When teachers are designing, they're designing with mentors and when they go back to their school, they share everything."

Collaboration begins in the classroom, "maybe even open classrooms. In Spain normally a teacher is isolated on an island with their class." If you're a beginning teacher there is no one to observe you and give you feedback on how you're guiding the class.

In Italy CPD courses have been designed and delivered over one year by the Future Education Institute in conjunction with foundations, stakeholders dealing with data literacy skills, the Confindustria Digital, an association of industries and employers in the IT sector adopting schools. The actual datasets and challenges are designed by the companies. Follow-up research found that students were more committed because they had a link with the reality around them and had a real challenge to solve. For instance, one school worked with a company and the Ministry of Welfare to analyse real data about the gender gap in certain areas or unemployment, so the data sets would come both from the ministry and from this company and they would work on real data. Teachers

benefited too because they are always looking for examples outside "their comfort zone or bubble." Interestingly, it was found that students can be quicker to acquire data literacy skills than teachers, "they become sort of junior data scientists." Therefore, "you can't wait for teachers to have those skills. Although we first train teachers, but when we do the actual course, teachers become students. They change their roles. They are learning themselves together with students, so we don't wait for teachers to have the skills needed to teach."

It is a delicate point how to introduce different external stakeholders in the classroom; they may lack the skills to manage a class for example. Therefore, "teachers have to train the other stakeholders as well, education technology designers for example. They have to know that they are actually taking the pedagogical purpose seriously in their design and then following it through."

When talking about working in cooperation, roles and responsibilities of those engaged in training have to be very clear. Far more consideration should be given to a well-designed team teaching approach.

Group 2

Researchers are one group of stakeholders: they can help schools become aware of the benefits of data in education.

Other ministries than education are stakeholders; the ministry of justice for example can contribute topics to teacher education courses.

Content creators too can play a role in raising awareness of legal issues, rights protection, etc. Private companies may own data created in schools so need to be involved.

In Sweden, very different from other countries represented in the group, companies provide technical training on data systems and this is kept separate from other types of CPD although there is cooperation. 'Everyone is asking about AI' so it could be a catalyst for learning more about data in education (they are not two different things), an entry point.

Peer to peer learning is possible where teachers learn from colleagues in similar schools.

Operational training could be separated from pedagogical training. In Malta there are peripatetic trainers with a technology industry background who move from school to school providing CPD in data literacy.

The European Digital Education Hub provides resources and a community for teachers about AI in education.

Students and parents must be included as stakeholders as well.

Group 3

Policymakers have a role in funding initiatives and ensuring CPD matches priorities.

Experienced teachers can help with mentoring and peer learning, sharing their best practices and real-life examples.

School leaders and administrators can help by creating time for CPD, promoting a professional learning culture and showing leadership in digital pedagogy.

In decentralised Sweden school heads and municipalities are key stakeholders. They have a long history of collaboration, with regular meetings about AI and different apps for example. Such collaboration is particularly important at the current time when there is a political backlash against digital education. "School heads tell us that their teachers are almost ashamed of bringing an iPad or computer into their lessons because that's not the way to do it in Sweden right now - it's paper and pencil that you should use - and that affects everything. The word digitalisation is almost banned."

Students and parents could share how tools and data are impacting on them, talk about the learning experiences students are going through and suggest areas for improvement ("an easy one"). It is important to have the student perspective as their experience with technology is different from younger teachers who in turn see technology differently from older teachers.

By connecting with industry experts, teachers can discover trends and incorporate them into practice. EdTech companies could offer training on emerging tech, include a pedagogical focus. But there are reservations: "One of the stakeholders that has had too much room in Norwegian classrooms is commercial, especially those that do not have a pedagogical foundation for what they're selling. We need to be much wiser but also involving them but in the right way." Companies sell tools or methods which have made it quite difficult for a university provider of teacher education "because we can never say there's one solution for this and there's one solution for that." Researchers and universities should be involved in CPD as stakeholders. In Sweden there are initiatives where teachers work with each other and researchers to evaluate digital products, saving other teachers time.

Group 4

Stakeholders include ministry of education, politicians, administrators, municipalities, school leaders (with a lot of freedom to decide about CPD in Sweden), teacher unions, big tech (Google, Microsoft), textbook publishers (notably in Portugal), employers (skills agenda).

In Sweden because there is a framework set at national it is difficult to steer and develop the school sector because there are so many stakeholders are involved.

Parents and students are also stakeholders in education, their views on data in education need to be taken into account and they need to be "on board" with changes affecting them directly. When education is privatised or there is free school choice (as in Sweden, India), parents are key stakeholders in that they are customers and funding follows parental choice.

With so many groups having views on teachers' development it should be remembered that in many countries (including Sweden and Portugal) there are challenges even to recruit and retain suitable teachers and a general lack of interest among possible teachers in the profession as a career.

## Plenary discussion

Responding to the rapporteurs' feedback in a plenary session, Kay Livingston observed that:

- Learning about tools, when appropriate to use.
- School leader role in hindering/supporting.
- Data decision making, time for dialogue – heads can make time to discuss this.
- Peer to peer but quality issue, so bring in providers too.
- Team approach – edtech plus trainer close to the classroom.
- European approach, down to school level.
- Be specific about roles and responsibilities of stakeholders. Bring in parents and students.

Roger Blamire concluded the dialogue lab by outlining next steps and inviting participants to the third and final European Dialogue Lab in November 2025.

# Annex 1: list of participants

| # | Name | Organisation |
|---|---|---|
| 1. | Maria Gkountouma | European Commission (HaDEA) |
| 2. | Erik Verhaar | European Commission (DG EAC) |
| 3. | Francesca Osima | Organising Bureau of European School Student Unions (OBESSU) |
| 4. | Siw Olsen Fjørtoft | The Foundation for Industrial and Technical Research (SINTEF Digital) |
| 5. | Joyce Grech | Ministry of Education, Sport, Youth, Research and Innovation (Malta) |
| 6. | Jyoti Rahaman | Asia-Europe Foundation (ASEF) |
| 7. | Rikard Ström | Göteborgsregionen (Sweden) |
| 8. | Rasmus Jonsson | Göteborgsregionen (Sweden) |
| 9. | Jenny Sjöstrand | Göteborgsregionen (Sweden) |
| 10. | Henrik Krantz | Göteborgsregionen (Sweden) |
| 11. | Roy Saurabh | United Nations Educational, Scientific and Cultural Organization (UNESCO) |
| 12. | Serafina Pastore | University of Bari (Italy) |
| 13. | Xenia Ziouvelou | National Center of Scientific Research "Demokritos" (Greece) |
| 14. | Synnøve Amdam | Volda University College (Norway) |
| 15. | Stephane Vincent-Lancrin | Organisation for Economic Co-operation and Development (OECD) |
| 16. | Luciano Cortese | European Centre of Studies and Initiatives (CESIE ETS, Italy) |
| 17. | Donatella Solda | Future Education Institute Modena (Italy) |
| 18. | Darren Neethling | Copenhagen International School |

| *Agile EDU project partners and associate partners* | | |
|---|---|---|
| 19. | Annika Agélii Genlott | Swedish Association of Local Authorities and Regions |
| 20. | Justo Quintanar | Empieza por Educar |
| 21. | Laura Gomez | Empieza por Educar |
| 22. | Marisa Lucas | Ministry of Education, Portugal |
| 23. | Paula Martins | Ministry of Education, Portugal |
| 24. | Mateja Brejc | Ministry of Education, Slovenia |
| 25. | Isabelle Dufrêne | Ministry of Education, France |
| 26. | Matti Ranta | Ministry of Education, Finland |

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|---|---|---|
| *Agile EDU external evaluator* | | |
| **27.** | Torbjörn Skarin | Scandinavian Social Analysis |
| *Agile EDU expert* | | |
| **28.** | Kay Livingston | |
| *Agile EDU coordinator* | | |
| **29.** | Patricia Wastiau | European Schoolnet |
| **30.** | Alexandre Kirchberger | European Schoolnet |
| **31.** | Roger Blamire | European Schoolnet |
| **32.** | Milena Horvath | European Schoolnet |


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