

**Accelerating Digital Innovation in Schools
through Regional Innovation Hubs
and a Whole-School Mentoring Model**

**WP4 / D4.2
INTEGRATED EVALUATION REPORT**

WP4 Leader: UCL



I-HUB4SCHOOLS





iHub4Schools - Accelerating Digital Innovation in Schools through Regional Innovation Hubs and a Whole-School Mentoring Model

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Executive summary

The main scope of this document is reporting on the first results of the implementation of the proposed school mentoring model developed in the WP3. Through dynamic and iterative evaluation and involvement of multiple stakeholders, we draw our first understanding about the aspects that have an effect on whole-school level adoption and the sustainable development of digital innovation in different educational systems.

This deliverable illustrates how our evaluation framework (D4.1) and the first version of the evaluation toolkit were applied. Different instruments developed for a variety of stakeholders are included in the deliverable. The second section of this deliverable briefly introduces our evaluation framework and its four main components. The evaluation toolkit, procedure and data collection processes will also be introduced in the second section. The third section will introduce the evaluation results from the different perspectives: school teams, teachers, mentors and teachers' communities.

Variety of viewpoints enables us to understand the holistic view on how to support the evidence-informed whole-school level adoption of digital innovation through mentoring model and aspects that support and hinder it.

1. Introduction

The objective of WP4 is to assess the effect of the proposed iHub4Schools methodology on individuals and organisations involved. The project mainly follows a formative evaluation approach that enables us to understand the adaptation mechanisms, and improve the methodology as well as the implementation process to monitor the whole-school level digital adoption. The main goal of this deliverable is to introduce the evaluation approach of the iHub4Schools project and the initial results collected from the first phases of the project. This version of the evaluation report aims to understand:

- the extent to which the model supports mentors to help schools raise awareness about the whole-school adoption of digital innovation
- how iHub4Schools approach supports the creation of sustainable multi-level Regional Innovation Hubs to foster the scaling of digital innovation
- aims to enhance the teachers' knowledge of meaningful pedagogical strategies in technology-enriched learning scenarios and to raise the know-how of the school management teams on implementing and scaling digital innovation.

It is noted that all the evaluation procedures were developed and will be implemented in accordance with the ethics and data policies of the project, as presented in the D6.3 and D7.4 of the iHub4Schools project.

2. Evaluation approach and the process

2.1 Overall evaluation approach

As described in the Deliverable 4.1, the overall evaluation of iHub4Schools will focus on two major goals: The first aim is to inform the development of activities under WP2 and find out how the iHub4Schools approach supports the creation of sustainable multi-level Regional Innovation Hubs to foster the scaling of digital innovation. The second aim is to inform the activities of WP3 and to analyse to what extent the proposed whole-school mentoring model enhances teachers' and school teams to adopt digital innovation through different proposed methods.

The evaluation framework of iHub4Schools is not a linear process, but a **dynamic and iterative process** to understand the innovation adoption processes by collecting a **variety of data** from different processes. While developing a framework for evaluating outcomes of the educational development implementation, Miller and Poth (2021) have pointed to the challenge of accounting for dynamic relationships and interactions between different stakeholders. Similarly, as Cukurova and Luckin (2018) state, change is at the core of technological innovation adoption, precisely because their *raison d'être* is to transform students', leaders' and teachers' experiences and practices (p.3). Moreover, change connected to innovation adoption does not merely happen by means of introducing a new digital tool for learning at the classroom level, rather, it is profoundly connected to novel teaching practices as well as school leadership, teachers' vision and perception and the infrastructure and technical pedagogical support (Ilomäki & Lakkala, 2018). These make the work of evaluation a particularly complex task. Our evaluation framework focuses on the following aspects:

- **Governance** - whole-school level leadership and change management for sustainable and evidence-informed adoption of innovation.
- **Interaction** - teachers' collaborative culture to co-create, share and adopt new pedagogical approaches with the aim to transform teaching and learning in the classroom.
- **Pedagogy** - the current state of the school's technology adoption and integration, focus on curriculum, teachers' practices, and assessment.
- **Digital maturity** - current state of the school's technology adoption and integration, focus on the infrastructure and digital capacities.

All these aspects can be evaluated through different data collection methods combining more traditional interviews and surveys with novel analytics-enriched methods. However, it is important to note that the project is based on the premise that if there are prerequisites at the level of leadership, collaboration and infrastructure, there should also be a certain level of acceptance in teachers' practices. However, a strong feature of the iHub4Schools project is the content-wise focus of digital innovation that the school deals with during the mentoring process (i.e. change that will take place at the school level or in teacher practice), is for each school and mentor to choose. Secondly, the iHub4Schools project is built on the assumption that social practices play an important role in teacher professional learning. Accordingly, the focus of project evaluation brings

in the dimension of co-creation and its role in teacher adoption in general, but the pedagogical focus in each case could be different as described in our pilot plan (as submitted in D4.1).

2.2 Goals of the evaluation

The first phase of the evaluation in our project had several aims:

- a) To pilot our methodology to what extent it enables us to understand the effects of the iHub4Schools approach on different levels of stakeholders (mentors, leaders, teachers).
- b) Pilot our toolkit tools to understand their applicability for evaluating the adoption of innovation.

Especially we aimed to find answers to the following questions:

- a) How do mentors perceive the implementation of the school mentoring model in collaboration with school teams and teachers?
- b) How did school teams'/teachers' perceptions of the evidence-based adoption of innovation in the whole school change as a result of mentoring interventions?
- c) What learning opportunities do national stakeholder networks offer and what value do they produce for the network members?

2.3 Evaluation toolkit

The specificity of the project is to develop a toolkit with the evaluation tools designed for different stakeholders. The evaluation toolkit is developed with the aim to:

- Propose instruments for the mentors, school leaders, researchers and policymakers to evaluate the impact of the iHub4Schools School mentoring model on the adoption of digital innovation.
- Propose instruments to monitor the Regional Innovation Hubs.
- To provide methodological guidelines for the stakeholders to apply instruments during the implementation process.

The toolbox collects instruments in several ways a) existing instruments to evaluate teachers' digital competences and schools digital maturity as mapped in D1.1; b) existing instruments developed by the iHub4Schools partners in earlier initiatives and c) instruments and tools

identified based on the needs of iHub4Schools project. Toolkit tools will be made available in our pan-European platform [Graasp](#) in a way that allows different parties to understand what one tool or another is helping to evaluate from the perspectives of our evaluation framework (D4.1) - **governance, interaction, pedagogy and digital maturity**. All the stakeholders might have different needs while monitoring the mentoring and innovation adoption processes. Our dynamic approach of iHub4Schools helps different stakeholders to choose from the toolkit suitable instruments and data collection tools based on their needs. For instance, our main stakeholders - mentors - need tools that help to reflect the effect of the mentoring to school teams and teachers practices and share it with the leaders and trainers for further planning purposes (see Figure 1).

Effect of the mentoring practices

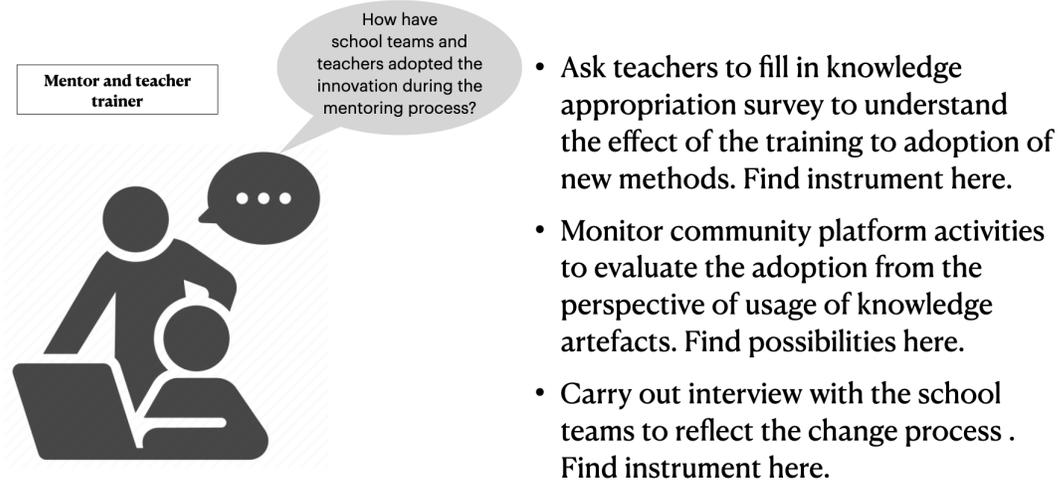


Figure 1: Toolkit tools for the mentor to reflect the effect of the mentoring and training

A major focus of iHub4Schools is the whole-school level change, for which school leaders and teams should be aware of the possibilities to identify the development needs and to reflect the change process across the school. Figure 2 illustrates the possibilities for the school leaders to identify the development needs of the schools, which is the basis for entering into the mentoring process and participating in individual methods proposed in WP3.

Whole-school level adoption of digital innovation

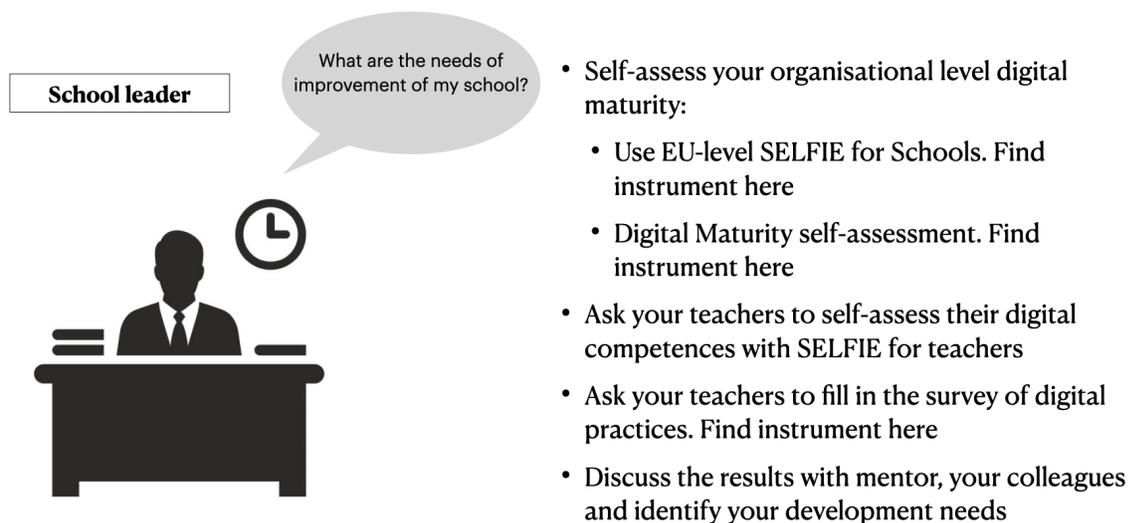


Figure 2: Toolkit tools for the leaders to identify the development needs of the school

Table 1: Instruments of iHub4Schools evaluation toolkit

Focus of the instrument	Description	Stakeholders
Evaluation instrument for mentoring practices (Annex 1)	Reflective questionnaire designed for the mentors to understand mentoring experiences and feedback for the iHub4Schools school mentoring model	Researchers and teacher trainers who develop mentoring models and interventions
Knowledge Appropriation Survey (Ley et al, 2021) (Annex 2)	Self-reporting pre-post measures for evaluating teacher level innovation adoption in teacher training intervention	Mentors, researchers and teacher trainers who need to investigate the effect of the training to teachers' adoption of innovation
Digitally-enhanced pedagogical practice survey for the teachers (Annex 3)	Self-reporting pre-post measures for evaluating teachers' digitally-enhanced pedagogical practices after the mentoring of the whole-school level adoption of digital innovation	Mentors, researchers and teacher trainers who need to investigate the effect of the training to teachers' adoption of innovation
Value-creation in professional networks (Annex 4 and 5)	Based on the work of Wenger et al (2011) qualitative instrument was developed to understand the stakeholders' professional learning opportunities in professional networks and value creation approach	Researchers, policy makers, teacher trainers who aim to understand how to sustain teachers' networks and provide meaningful professional learning experience

SELFIE for teachers	A self-assessment tool based on a framework provided by the EC describing what it means for educators to be digitally competent.	Teachers and school leaders to understand the level of teachers' digital competence
pdfK	A framework for Norway educational system to define what a teacher's professional digital competence entails.	Teachers and school leaders to understand the level of teachers' digital competence
OPEKA	OPEKA is an online tool for teachers and schools to evaluate their usage of information and communication technology in teaching. It is developed at the University of Tampere and it is widely in use in Finnish schools	Teachers and school leaders to understand the level of teachers' digital competence
Digital Mirror	A framework and web-based application designed for the schools to evaluate their digital maturity from three perspectives: pedagogy, change management and digital infrastructure	School leaders to understand the level of schools' digital maturity
SELFIE for schools	A framework and tool developed for the schools to reflect their level of digital innovation and define the development needs	School leaders to understand the level of schools' digital maturity
Quester	Web-application developed for the teachers to collect students' self-reports about their engagement in the classroom	Teachers to understand the effect of new pedagogical practices to students' engagement

During M3-M18, various tools were developed and piloted in the project. However, not all the results are part of the evaluation. For instance teachers and school leaders assessed their digital competences and digital maturity, but for identifying their own development needs not for evaluating the project.

2.4 Evaluation process and data collection

The first phase of the implementation of the iHub4Schools project was considered to be a pilot phase in order to improve the evaluation framework, process and toolkit for the final part of the piloting. A mixed-methods study design was applied to create a more comprehensive and deeper understanding of the implementation of the mentoring model for sustainable and scalable adoption of digital innovation by the teachers and schools. In the next phase, the greater focus is on process-oriented data collection with technical solutions during the piloting activities (Learning Analytics toolbox, Graasp) used by the students and teachers for monitoring the implementation of practices.

2.4.1 Mentors' perceptions about the school mentoring (Interaction)

Mentors' experiences were collected in two phases. The first phase - pre-pilot mentoring - focused on the evaluation of the mentoring model to inform the development of the school mentoring model (D3.2). It was conducted by sending a questionnaire to potential mentors and other target group representatives in Finland and Estonia (see Annex 1). In Finland, the evaluation was conducted through the Finnish National Agency for Education and their project to tutor teachers in November-December 2021. The responsible person sent the request to reflect the model and individual methods which existed on the project website. In Estonia, the evaluation was conducted through Harno and their mentors in the Digital Acceleration Program. The reflection was voluntary and we got more than ten responses.

The next iteration of the evaluation of the mentorship focused on understanding mentoring practices. As a central element in the iHub4Schools project is the mentor who is supporting schools and teachers to adopt whole-school level evidence-informed digital innovation, the insights of the mentors are essential. In this phase, the goal was to understand how the mentors perceive the values of the mentoring to different stakeholders and how the support provided for the schools and teachers could be even more meaningful.

9 mentors were involved in the project from five partner countries during the M3-M18 and all filled in a web-based survey (see Annex 1). Data was collected in June 2022, while some of the pilots had finished in the pre-piloting phase and some of them were still running.

2.4.2 The values of the members of the National Stakeholder Networks and support mechanisms (Governance and interaction)

This phase of the evaluation aimed to understand the stakeholders' professional learning opportunities in National Stakeholder Networks, what individual and community level values such networks offer and what are the support mechanisms needed to turn the networks into sustainable Regional Innovation Hubs.

To achieve this goal, interviews and surveys with the members of the national stakeholder networks were carried out in each piloting country to understand the underlying mechanisms of

the partnerships. Value-creation framework (Wenger et al., 2011) was used to design the instrument, which consisted of five main interview questions, which were divided into the sub-questions and directing questions (see Annex 4). Interviews were conducted with 14 stakeholders from Estonia and Lithuania during the M16-M18. They contained answers from four teachers, two educational institution leaders, two educational technologists, four mentors, one head of studies and one policy-maker. The survey was conducted on the same bases of the value-creation approach. During the M16-M17, 12 stakeholders from partner countries filled in a web-based survey (see Annex 5), which was also translated into Lithuanian, Norwegian, Finnish and Georgian languages. The survey contained answers from 10 teachers, one educational technologist and one researcher.

2.4.3 School teams' perceptions of the mentoring to school-level change (Governance, pedagogy, digital maturity)

Depending on the individual method (proposed in WP3) used during the piloting, instruments used were also differentiated. Program designed for the school teams in Estonia - Digital Acceleration - focused in its evaluation on understanding to what extent school teams and teachers were more confident to implement digital innovation after the participation in the whole-school level mentoring program. Digital practice survey (see Annex 3) was used in 2021 among 5 Estonian schools and 94 school members who participated in the intervention program.

2.4.4 Teacher practices (Pedagogy, interaction)

As stated earlier, the evaluation in teacher level is not focusing on any specific pedagogical approach (e.g. computational thinking in the Lithuanian pilot), but the focus is more broadly on teacher competences and adoption of digitally innovative pedagogical practices during the mentoring process.

For this purpose - to understand the adoption of technology-enhanced pedagogical practices - a validated Knowledge Appropriation Survey (see Annex 2) in the context of Estonian Teachers' Innovation Laboratory was implemented. This instrument is built on a philosophy that teachers' learning is a social process and through co-creation shared ideas and understandings are built. The

questionnaire is administered before, during and after the training of the teachers to understand how the training intervention and mentoring supported teachers to adopt digital innovation. Instrument consists of 22 items rated on a five-point Likert scale ranging from 1 (=strongly disagree) to 5 (=strongly agree). Five dimensions of knowledge appropriation are evaluated through this questionnaire which are as follows: adoption, individual motivation, Knowledge Appropriation Practices, Knowledge Maturation practices and Scaffolding practices (Ley et al, 2021).

The survey was piloted with 17 Estonian teachers, next it will be translated into Georgian, Lithuanian and Finnish with the aim to use the same survey in each of the cases to carry out a cross-country multi-case study evaluation.

3. Evaluation results - pre-piloting experiences

In this section the results from the pre-piloting phase will be presented from the perspective of the four cornerstones in our evaluation framework: **governance, interaction, pedagogy and digital maturity**. As we have emphasized, iHub4Schools is not traditionally built where all pilots benefit from the same interventions that are evaluated across countries. Rather some of the pilots are focusing on individual level aspects (e.g. teacher practice and pedagogy) while the other pilots focus more on the governance and interaction aspects. Such a focus is necessary because schools in different education systems are relatively autonomous and a one-size-fits-all approach may not be meaningful, which in turn affects the sustainable implementation of innovation. Next we will introduce the results from different pilots.

3.1 School teams: Mentoring of the school teams to accelerate their digital innovation (governance, pedagogy, digital maturity)

The aim of the pilot “*Digital Acceleration*” was to mentor the schools to implement whole-school level change to support their digital capability through intensive training.

5 Estonian schools participated in the training program over 5 months in 2021. Digital practice survey (Annex 3) was distributed among all the members included in the program. 94 school

members from five schools submitted pre-questionnaire. There were 64 respondents to the post-questionnaire and 59 respondents to both the pre- and post questionnaires. For the latter, the changes in the pre- and post-questionnaire ratings are calculated.

Feedback to the mentoring intervention

In the follow-up questionnaire, respondents indicated which programme activities they participated in and, if so, how they rated the usefulness of the activity on a 5-point scale (5- very useful... 1- completely useless). While the average rating for most activities was above 4, the exceptions were the opening and closing seminars and the virtual tours, which were rated slightly lower (see Figure 4). However, there were no respondents who rated the tailoring training and/or the management training as useless or completely useless.

Program activity	Participants (%)	Useful or very useful (%)	To some extent useful and not useful (%)	Useless or completely useless (%)	Mean
Opening seminar	58 (91)	33 (57)	18 (31)	7 (12)	3,6
Main training	45 (70)	40 (89)	4 (9)	1 (2)	4,3
Tailored training	34 (53)	30 (88)	4 (12)	0 (0)	4,2
Educational technology counselling	41 (64)	37 (90)	1 (2)	3 (8)	4,3
Leadership training	18 (28)	16 (89)	2 (11)	0 (0)	4,2
Virtual tours (knowledge exchange)	20 (31)	12 (65)	6 (30)	1 (5)	3,7
Final seminar	54 (84)	36 (67)	14 (26)	4 (7)	3,8

Figure 4: Participation in and evaluation of the programme's activities. % taken from respondents who participated in this activity.

Respondents were also asked to rate the usefulness of the digital acceleration, its suitability to their needs and its affordability. The most commonly agreed view was that the programme was affordable and useful. There was no statistically significant difference between these two ratings ($Z=-0.703$; $p=482$).

Participants who rated the mentoring activities during the training as more useful, also rated the programme itself as more useful and better suited to their needs (correlation with ratings for all activities $p < 0.01$), which is the expected result. Surprisingly, however, teachers who rated the virtual tours to digital-friendly Estonian schools as more useful did not rate the whole programme as useful and suitable for their needs (correlation $p > 0.05$ in both cases). Also, the assessment of the programme's affordability was not related to the usefulness of any of the activities ($p > 0.05$). Thus, it cannot be argued that those who rated the activities as more useful also rated the programme as more according to their level of development, which suggests that even those teachers who found the programme difficult may still have rated it as useful.

Participants in the mentoring programme were asked what supported them and what hindered them in finishing the mentoring programme. The analysis showed that the most support came from the mentors, some specific colleagues and the school team (see Figure 5). Parents and learners were perceived as the least supportive. However, when calculating the covariance score, it cannot be argued that those who perceived more support would have rated the programme as more affordable and executable ($p > 0.05$). On the other hand, teachers who perceived more support rated the mentoring programme as more useful and more appropriate to their needs ($p < 0.05$).

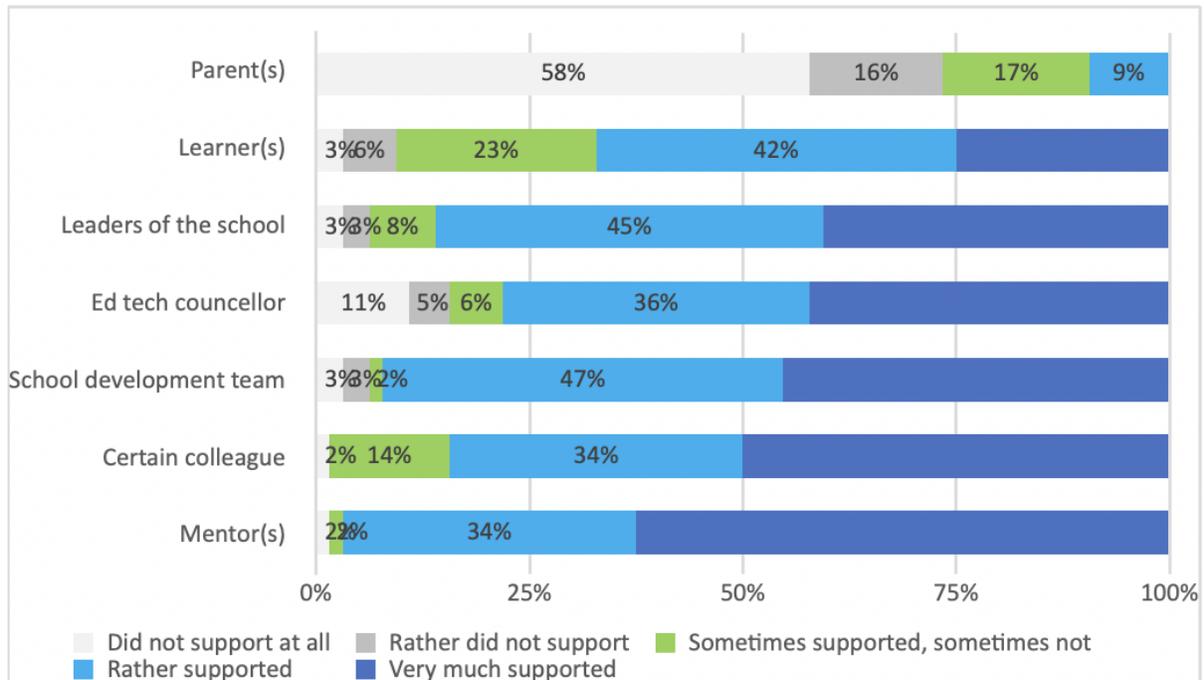


Figure 5: Supportive aspects to participate in mentoring program

Participants were also asked to assess the barriers to participation - health, personal life, motivation and time. Of the barriers, lack of time was rated as the biggest - 38% of the staff members participating in the mentoring programme agreed or strongly agreed that time was hindering their successful participation. However, 8% of teachers also rated lack of motivation as very or somewhat hindering and 27% rated it as sometimes hindering. Teachers who indicated more obstacles also rated the programme as less useful and less relevant ($p < 0.05$).

Changes in pedagogical practices

In the pre-questionnaire, teachers self-assessed the extent to which they use digital technology in 11 different learning and teaching activities. The three activities in which the use of digital technology was most frequently mentioned were lesson preparation, presentation of new material and assessment of learning. More than a fifth of teachers did not use digital technology at all in communicating lesson objectives and nearly a fifth in consolidating and generalizing.

In the post-questionnaire, teachers self-assessed how the use of digital technologies was changed in different learning and teaching activities after the mentoring experience. There were no respondents who indicated that the use of digital technology decreased in any of the activities. However, the results did not clearly show that teachers had significantly changed their practices or used technology more than in the past, but this may also have been due to teachers' increased awareness that 'more is less'. Analyzing the correlation between ratings of changes in the use of digital technologies and the overall evaluation of the programme, it can be argued that teachers who rated the programme as suitable for their needs also rated an increase in the use of digital tools in all 11 activities listed. Teachers who indicated that the programme was useful to them indicated an increase in the use of digital tools in almost all activities except for capturing pupils' attention. However, it was surprising that those teachers who rated the programme as more according to their development level only saw an increase in the use of digital tools for lesson preparation and assessment, which may indicate that training might include more challenges and for the teachers and for some of the teachers it was too easy. Teachers who perceived more support during the programme rated an increase in their use of digital tools in all activities ($p < 0.05$).

Comparing those teachers who participated in the different activities of the programme with those who did not, it appears that those who participated in the basic training indicated a greater use of digital tools in making students aware of the objectives of the lesson, in motivating them, in reminding them of what they had previously learned, in giving feedback and in giving assessments ($p < 0.05$ in all cases).

These results highlight the importance of mentoring to foster the school level change in those schools who are often lagging behind the innovation. In digital acceleration interventions, which is designed for supporting less-innovative schools, mentors work differently with the leaders and teachers and additionally educational technology mentoring is provided. The importance of all these aspects was highlighted in our evaluation. Such an intervention is resource demanding and assumes policy-level support, but it contributes to the spread of innovation.

3.2 Teachers' view: Fostering teachers' adoption of novel technology-enhanced learning practices (pedagogy and interaction)

The aim of the pilot “*Teacher Innovation Laboratory*” was to support teachers through iterative co-creation and reflection to adopt novel technology-enhanced learning practices in their lesson.

The teacher innovation laboratory is based on the idea that teacher trainers (researchers and didactical experts) form the group where new pedagogical practices are co-created and iteratively piloted, reflected and improved. During 9 months, 20 teachers participated in the training where new learning designs were created based on the didactical principles, foundations of learning processes and possibilities of learning technologies. Combining such interdisciplinary knowledge, tasks for the students were created and lessons designed. Between the training days, teachers piloted new methods, collected some data with learning technologies and later the experiences were collectively reflected in the next co-design session.

Pre- and post measures were collected from the teachers with the knowledge appropriation survey by the mentor of the training to understand to what extent the training intervention enhanced teachers' understanding of the method and their intended adoption of this method in the future, but also to how the training promoted knowledge appropriation, maturation and scaffolding practices.

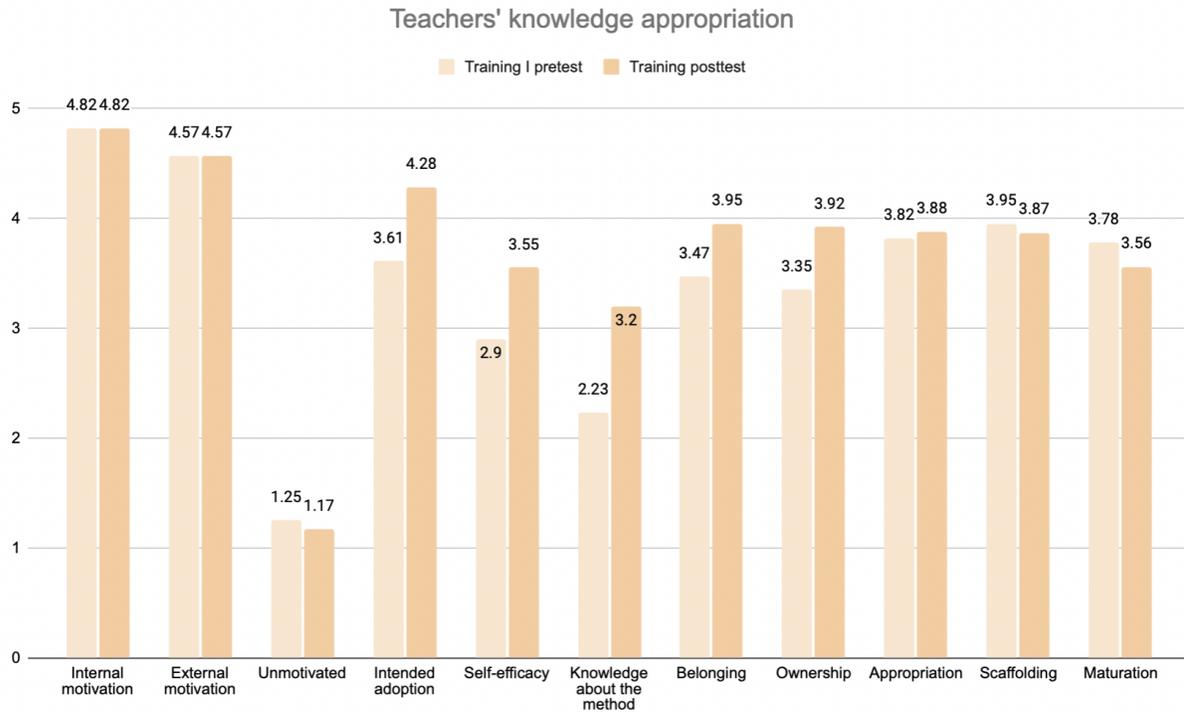


Figure 3: Knowledge appropriation of teachers

Training had no effect on motivation, as shown in Figure 3. It is noteworthy that teachers' internal motivation (willingness to develop) and external motivation (participation due to the expectations from management) were rated rather high in the beginning of the training. So, the result of no effect might be to a certain extent due to the ceiling effect. There was an increase in teachers' perceptions about the intended adoption of the new pedagogical practices and also in their understanding of the method - how to apply it, how to monitor its effect on students. For instance, learning technology used in the training *TeacherDesmos* provides a possibility for the teachers to reflect on students' progress in the lessons. Additionally teachers were asked to collect, at the end of the lessons, feedback from the students about their engagement in the lesson and reflect the outcomes. Therefore, teachers were not only introduced to use novel Technology-enhanced learning practices, but also to use the possibilities of Learning Analytics to enhance the reflection and inquiry skills, which is an important aspect in the iHub4Schools project.

The questions related to social practices embedded in the training program indicated that teachers did not perceive the scaffolding and maturation practices at the end of the training as at the

beginning of the training. That could be explained by the design of the training intervention. Because, due to the distance learning situation, it was difficult for the mentors to promote activities outside the training (inter-training situation) where the knowledge would be formalized for other teachers and study participants could act as mentors to support their colleagues. However, this activity will be promoted in the next iteration.

Despite the fact that the intervention did not fully support the knowledge appropriation practices and it was affected by the Covid19, it can be still concluded that the mentoring approach, where teachers co-create new pedagogical practices, which are iteratively piloted, has an overall positive effect on teachers' adoption. Social practices in teacher professional learning play an important role and it should be considered when planning interventions to support teacher professional development.

3.3 Mentors' view: school mentoring experience (governance, interaction, pedagogy)

Mentors are the main stakeholders in the iHub4Schools project which aims to support the schools and teachers to adopt whole-school level evidence-informed digital innovation. Mentors are the target group who help us to improve the school mentoring model, individual methods, and the toolkit tools. They have been included in the evaluation until now in two iterations.

Pre-piloting phase

The first iteration was aiming to improve the mentoring model in general. The feedback was collected through a web-based short survey from 20 mentors who were involved in the project during the pre-piloting phase from Finland, Estonia and Norway. Mentors were asked to reflect on their mentoring experience and the mentoring model and provide feedback on how feasible the implementation of this model could be, which were discussed in D3.2. The overall feedback was positive and encouraging. For instance it was said by one of the mentors that *the approach sounds good and the school can also choose what method to use*. Or it was also considered an important approach *to make better use of resources*.

As part of the mentoring process, the iHub4Schools project introduced individual methods, which are research-based interventions whose implementation has demonstrated a positive impact in

increasing the digital maturity and the competencies of teachers, school leaders and other stakeholders. Some of the methods are considered as long-term interventions (e.g. Teacher Innovation Laboratory from 6-9 months or the Digital Acceleration program for 6 months) and the mentors perceived that the large methods were too resource-demanding for everyday school mentoring. On one hand, change takes time and effort and these are the methods that have been provided to be efficient. On the other hand, each of the methods could be divided into smaller units, which are used for some specific aims of the school. That was the feedback which is used for creating shorter and more flexible methods for the mentoring process.

Piloting phase

The second iteration was focusing on the mentoring process with the aim to understand how the mentors involved in the iHub4Schools understand and experience the mentoring process. Mentors from all the partner countries reflected the importance of school mentoring, the values they experience as the mentors, the perceptions of the schools' incentives to motivate schools to participate in interventions to become digitally innovative and also the challenges mentors perceive in this process.

The importance of school mentoring - From the mentors' reflections, we can conclude that one of the important reasons to mentor schools in their way to become digitally innovative is to **avoid the inefficient way of using the technology** (*It is so easy to use digital tools inappropriately, digital innovation is about using the digital in a good way, to provide more mastery, motivation and learning experience for our students*). Especially during and after the distance learning situations caused by Covid19, teachers and leaders often believe that there is a need to use digital tools a lot and this is enough. The role of the mentor is **to support teachers and leaders to understand that digital innovation is about using the digital in an effective way**. From the mentors' perspective, they help to change the mindset of the school teams and school culture not to show how the tools are working with the ultimate goal to provide the best possible learning experience for the students (*The mentoring process is important for schools because in this way we help teachers apply theoretical knowledge in practice and in their professional development; I am interested in improving the pedagogical quality of teaching practices, and that seems to be very difficult if teachers do not get support or if only individual teachers are trained or guided.*

The focus should be on school level change, and the role of principals is central). Additionally, mentors pointed out that the research claims that **mentors are taking an external view and role to support schools to change** (*The external support for improvements has been proven effective as adopting digital technology into existing practices, which is always challenging without external support and reflection*).

Benefits of the mentoring for the mentors in school development initiatives - Some of the mentors reflected that mentoring **provides them possibilities to learn and develop** because through the mentoring process you see how things are done in different schools and there is a need to constantly adapt to the different situations and cultures (*It was helpful in this process to get acquainted with the mentoring and coaching strategies and the specifics of its use; For me it was useful to see how are things done in different schools*). According to mentors, **readiness to change, openness to innovation and a basic level of teachers' digital competence**, were the aspects that were considered supportive for the mentors (*The school(s) are already on a good / basic level with digital technology and they were ready for new ideas and change; it was good to see how teachers improve their teaching methods; During the mentoring teachers readiness and being open to innovations was useful*). Also, mentors' **professional knowledge, research-based methods and ability to answer questions** were perceived as aspects that have supported their mentoring process (*What has been useful for me is that I always have to have an answer as to why I do something, as well as how*).

Challenges of mentoring in school development initiatives - all of the mentors agreed that the biggest challenge is related to the **mindset and the willingness to change** and this applies to individual teachers as well as to the school leadership and the organisation in general. According to mentors, it is not enough for leaders to implement change in the school if teachers do not come along, nor is it enough for teachers to change their practices, but leaders do not support them (*it is difficult to change those who don't want to be changed; If there is no innovation, motivation, encouragement from the leaders, then these kind of projects are only the thing of some individual enthusiasts. Needs someone who is leader and it is most successful if the leader is from the school management; Involvement in such initiatives should be supported by the school administration, without which the school can not develop; It is also important that the principal is willing and*

encouraging, and good experiences from the past.). Such results highlight the importance of systematic leadership and change management for implementing whole-school level change.

Schools' motivation in school development initiatives - mentors shared their insights on what is the possible motivation for the schools to participate in mentoring initiatives. One of the incentives from the mentors' perspective is the **external recognition and acknowledgement** from the university or teacher training institutions (*Many of schools are motivated by the recognition of outer sources like university or programm etc; Schools and teachers, in addition to gaining experience, are focused on obtaining the relevant proof (certificate)*). Mentors also perceive that as the external pressure (national curriculum, nation level strategies) set high expectations for schools and teachers, then **mentors support teachers and leaders in their challenges** (*We help schools and teachers do what they need to do anyway but feel challenging to accomplish alonef, or example, the our national curriculum is rather advanced pedagogically and many teachers struggle with implementing all that they should*). From the practical perspective, **collaboration with the mentors gives the schools new ideas, knowledge, tools and resources**. Good practices and examples that can be re-used in the classrooms are highly valued by the teachers not only by introducing the innovation, but helping teachers to try out new ways of teaching and learning, providing practical co-creation type of events helps teachers to reconstruct new knowledge (*it is important that we do not only introduce the innovations but it is about showing in practice how can teachers use different tools for different purposes and subjects, and teaching different skiils*). Finally, participation in mentoring initiatives **provides networking and peer-to-peer learning opportunities** for the teachers and leaders, which was considered by the mentors as a motivating factor (*It is important for the schools to learn about the experiences of other countries; it is very important to some teachers to have a possibility to share what they have been achieving; I have an experience that the majority of teachers always get much more that they expected from the projects and for rmany teachers participation is a nice possibility of learning from research and other schools and teachers*).

Schools' challenges in school development initiatives - similar to previous topics, schools' challenges are often related to the **culture, leadership practices and support**, according to the mentors (*there must be the support from the school-leaders, otherwise it is very difficult for*

teachers to participate. I think the most important part is to work with the school-leaders first; Principal is the key person and if they are not interested in advancing digital innovations, it is much more difficult to affect the school. We should listen to the schools but have convincing arguments for taking digital innovations as a focus for development. Develop special methods to convince and support principals?). School improvement and implementation of digital innovation have to be meaningful for all of the staff members, top-down approaches very often do not lead to change (If the project ideas are strongly top-down and it is difficult to find out any use for teachers and daily practices, then it will not have an impact).

Another challenge faced by the mentors is **time**. When something is prioritized, something else must be de-prioritised. Often schools jump between different initiatives and projects and such decisions are not always goal-oriented or based on the needs and gaps. Therefore the competence to understand why one or another initiative or intervention helps school to improve, has to be supported (*Having no time, being too busy - the seminars, webinars, meeting should be as practical as possible; We consider the lack of time to be the biggest problem. Teachers have a lot to do, some of them even teaching in two schools; Time is crucial. When prioritizing something, something else must be prioritized away. What you are offered must be goal-oriented, practical and constructive. A teacher must be able to take what he has learned right back to the classroom. Then it is relevant to set aside time for that*). It is also important to **give teachers time to validate new knowledge in their practice** without worrying about whether post-curricular material will be taught. Innovation takes time and teachers need to be given time to innovate. Time is also associated with opportunities for teachers to participate in seminars, document their innovative approaches etc. Mentors suggest that participating in such initiatives should be part of the normal workload or it should be additionally paid. Teachers' lack of time may cause the situation where only very practical tools and tips are valued, but no time for co-constructing knowledge or interest in theoretical research-based knowledge.

3.4 Value-creation in teacher communities (interaction, pedagogy, governance)

Studying the members of teacher networks gave us the opportunity to understand what individual and collective values its participants create and what impact this has on their professional development. Based on the results of this evaluation phase, we have proposed an initial set of

support mechanisms (D2.2) that can guide stakeholders to establish sustainable and scalable Regional Innovation Hubs.

We will not repeat here the results, but shortly summarize the main messages:

- **Teachers as change agents:** The opportunities for knowledge exchange and co-construction of new knowledge are highly valued by the teachers. Networks provide possibilities for professional growth - to learn about concrete methods but also to become a leader. Networks often contain stakeholders with inner motivation to evolve and learn and an inner need to act as change agents.
- **Transfer between individual and collective knowledge:** Knowledge transfer between the teachers as community members and school is supporting school development and capacity building. New knowledge is spread to the collective level and often, schools become regional leaders who share their experiences with other schools.
- **Supportive leadership:** Support from the school leaders for the teacher participation in communities helps teachers to develop an understanding and confidence that their professional interests are meaningful and necessary for the school as a whole.
- **Accumulated knowledge:** Documentation of new practices, sharing them in online networks provides the possibility for re-using and re-constructing the pedagogical knowledge. In some cases, acquiring new knowledge and skills can lead to a new form of formalized knowledge embedded into the curriculum or even organizational changes like establishing new positions or rearranging existing ones.

By following the value-creation approach, it enabled us to identify the key dimensions of teachers' networks which contribute to making teacher-to-teacher learning meaningful, benefiting the school as an organisation, sharing knowledge and developing a motivation and incentives system.

Conclusions

In this deliverable, the initial evaluation results were presented. Due to the delayed launch of cases for piloting, at the end of M18 we can not report the evaluation results from all of the pilots, yet. However, evaluation carried out with the mentors and national stakeholder networks has finished and the next version of the evaluation report will focus more deeply on the evaluation of the cases. The first version of the toolbox has been developed, which will be further improved and presented in the final evaluation phase of the project.

Our initial results highlight the importance of a systematic approach to mentor the schools, which is addressed in our WP3 by proposing a dynamic school mentoring model. But in addition, it is even more important to pay attention to leadership and school culture dimensions that allow and encourage change and innovation. As change is a complex and complicated issue that is difficult to implement at a large scale and in a sustainable way without external support and guidance, we argue that the iHub4Schools approach of mentoring schools and creating school-to-school learning opportunities can contribute to change management. As results presented in above indicate, mentoring is not only a one-directional process. Mentors pointed out that through mentoring school teams and teachers, they - the mentors - also develop their own professional competence.

Our preliminary results show that even very systematic mentoring does not always lead teachers to use technology more. On the contrary, as our mentors said, it is not important to use technology a lot and use it often, but to use it well. This, in turn, highlights the importance of mentoring, as it is mentors who help teachers to understand what is effective use of technology, what are good practices and what change we want to see in the learner when implementing new practices. An evidence-based and reflective way of thinking about what changes in the school and classroom when implementing digital innovation is important, which we also brought into our mentoring model and the idea of evaluation toolkit, which is designed for different stakeholders. Our first version of the toolkit includes a variety of tools for the teachers and schools, mentors, researchers and teacher trainers for summative and formative evaluation purposes.

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Annex 1: Survey for the mentors

I iteration

Dear mentor

With this survey we aim to evaluate the iHub4Schools mentoring model. Please find a moment to answer the questions.

iHub4Schools team

1. At what level are you familiar with the models and methods?

- I have examined the materials
- I have participated in an event where the models and methods have been introduced
- I have made plans about mentoring applying the models and methods
- I have used some of the models and methods in a school mentoring process

2. What is good and useful in the models and methods?

3. What is not understandable or difficult to use in the models and methods?

4. Do you have suggestions about how to improve the models and the methods?

II iteration

Dear mentor.

You have been piloting a mentoring model developed in iHub4Schools for some time. We would like to gather your mentoring experiences in order to improve our approach to accelerate digital innovation in schools

iHub4Schools team

- Please mark your professional occupation
- Describe shortly your background of mentoring: for how long have you been working with the schools and teachers to support the adoption of digital innovation?
- Why do you consider it important to mentor schools, school teams and teachers to support them in adopting digital innovation?
- Think about the period when you were mentoring the school to become more digitally innovative. What was useful for you, as a mentor, in this process? And what was difficult?
- What do you think is the most motivating for the school teams, leaders and teachers to participate in such school development projects? How could we support such a motivation system and incentives from the project side?
- What do you think are the hindering aspects for the school teams, leaders and teachers to participate in such school development projects? How could we support such challenges from the project side?

Annex 2: Knowledge Appropriation Survey

CONCEPT	DIMENSION	ITEM
Adoption	Intended Adoption of a new learning and teaching method	<ul style="list-style-type: none"> * I am certain I will use the new teaching and learning methods after the training has ended in my own teaching * I am certain I will promote the use of X (the new teaching and learning methods) in my school more widely * X (the new teaching and learning method/innovation) will influence my teaching for a long time * The X (new teaching and learning method/innovation) is very effective means to teaching xxx subject * I am using X method/innovation frequently in my teaching practice
Individual Motivation	Self-efficacy	<ul style="list-style-type: none"> * I feel confident to carry out X (method, innovation) in my classroom * I can evaluate how well X (method/innovation) is working in my class
	Belongingness	<ul style="list-style-type: none"> * I feel I am a part of the learning community consisting of teachers and researchers who work on this X (method/innovation) * I enjoy belonging to the X (method, innovation) community
	Ownership	<ul style="list-style-type: none"> * I feel the need to defend this new X (method/innovation) if it would be criticized * I feel the success of this X (method/innovation) is also my own success
Knowledge Appropriation practices	Create awareness	* Through X (method/innovation) I was made aware of new teaching and learning methods that I did not know before
	Build shared understanding	* I have developed a common understanding about the X (method/innovation) with other participants
	Adapt	* When I carry out lessons with X innovation, I make changes in X materials and methods based on my need and my own wish
	Validate	* I have developed an understanding of the effectiveness of X (method/innovation)
Knowledge Maturation practices	Appropriate an idea	* My own experiences and ideas were considered when developing X (method/innovation)
	Share	* I have often shared my own experiences and materials with other participants inside and outside the innovation lab trainings
	Co-create	* I have been an active participant in group work in which we developed new teaching and learning materials with other participants
	Formalize	* We have documented with our group the new teaching and learning methods and materials in such a way that others outside the group of training participants would be able to use them
	Standardize	* X (method/innovation) and related materials we developed in the trainings has become regularly implemented in the school
Scaffolding practices	Seek help	* When introducing X (method/innovation) for the first time in my professional practice, I could ask for help or support when I did not know what to do
	Guide	<ul style="list-style-type: none"> * When introducing X (method/innovation) I had sufficient guidance by other people or through the materials that were provided * I offer guidance and help to my colleagues when introducing X (method/innovation)
	Fade	* I have felt more confident over time to introduce X (method/innovation) without outside help

Annex 3: Digitally-enhanced pedagogical practice survey for the teachers

The purpose of this questionnaire is to collect information on the daily practice of teachers and leaders of schools in the use of digital technology. There are 17 questions in this survey.

- Mark your school
- Please list all the subjects you teach in the school. If you are elementary school teacher, just mark ‘elementary school’
- Please rate the relevance of the following items to you

I am a teacher who feels confident using digital technology	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
I am a teacher who feels confident in teaching students how to use digital technology	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
I use digital technology for personal, private purposes (e.g. reading news, online banking, e-tax office, e-shop, buying tickets, national services)	1 -Don't use	2- Seldom	3- Sometimes	4- Frequently	5- Daily
I use digital technology professionally in my teaching	1 -Don't use	2- Seldom	3- Sometimes	4- Frequently	5- Daily
I use digital technology professionally during general working hours, e.g. By filling in e-diaries, other documentation, communicating with colleagues and / or parents, etc.	1 -Don't use	2- Seldom	3- Sometimes	4- Frequently	5- Daily
I use digital technologies in my teaching for preparing lessons	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies in my teaching for holding students' attention	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies in my teaching to support students in becoming aware of the objectives of the lesson	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies in my teaching to motivate students to focus on the topic	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs

I use digital technologies reminding students of what they have learned before	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for presenting new topics for the students	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for guiding students to learn	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for checking what has been learned	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for giving feedback to students	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for assessing students	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I use digital technologies for consolidating and generalizing what has been learnt	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for information retrieval	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for reading about new topics	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for watching/listening to about new topics	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for solving tasks	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for collaboration	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies in my lesson for communication	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
Students use digital technologies	1 - Not used	2 - In some	3 - In about	4 - In most	5- In all of my

in my lesson for tests		of the lessons	half of my lessons	of the lessons	lessons based on the needs
Students use digital technologies in my lesson for giving feedback and expressing own opinion	1 - Not used	2 - In some of the lessons	3 - In about half of my lessons	4 - In most of the lessons	5- In all of my lessons based on the needs
I think that using digital technology saves me time	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
I think that using digital technology helps me to make teaching more efficient	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
I think that using digital technology helps me to organize my work better	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
For me, using digital technology is easy	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
For me, learning to use new digital technology is easy	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
I understand well the logic digital technologies	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
Teaching by using digital technology allows the individual needs of learners to be taken into account	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
The use of digital technology helps to develop learners' creativity and imagination	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
The use of digital technology helps to improve collaboration between learners	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
Digital technology makes teaching and learning more interesting for everyone	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
Every teacher should use digital technology in their teaching	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree
Learners are more motivated to use digital technology	1- Completely disagree	2	3 - Hard to say	4	5 - Completely agree

Annex 4: Interview questions for the network members

1. Immediate value: Activities and interactions which can produce value in and of themselves.

Main Question: What happened during the participation in the network and what was the experience of it?

- What were significant events during the participation in the network? What happened there?
- How did you feel during those events? Was it fun to participate? Inspiring, convivial, something else?
- How relevant to you is/was the activities/interactions in the network?
- Whom did you interact or make connections with?
- Which connections are most influential on your own personal or professional development?

2. Potential value: Knowledge capital. Main question: What has all this activity produced?

2.1. Personal assets (human capital). Main question: How has your participation changed you?

- Have you acquired new skills or knowledge during your participation in the network?
- Has your understanding of the domain or your perspective changed?
- Do you feel more inspired by your work after you started participating in the community's activities?
- Have you gained confidence in your ability to engage in practice?
- Are the following opportunities important to you?
 - Networking opportunities
 - An opportunity to be heard
 - A chance to learn about current issues
 - Be part of and contribute to positive change
 - Share your expertise or unique perspective
- What motivates you to participate in the network's activities and what are the goals and expectations you want to achieve by participating?

2.2. Relationships and connections (social capital).

Main question: How has your participation changed your social relationships?

- What access to new people have you gained?
- Do you know them well enough to know what they can contribute to your work/practice?
- Do you trust them enough to turn to them for help?
- Do you feel less isolated?
- Are you gaining a reputation from your participation in the network?

- How do you see hierarchy within the network (stakeholder characteristics)?
- What do you think, what is the knowledge you bring to the network that others can learn from?
- What do you think is the most pleasant way of exchanging information inside the network?
- What other activities and initiatives are you also engaged in?

2.3. Resources (tangible capital). Main question: What access to resources has your participation given you?

- Do you have new tools, methods, or processes?
- Do you have access to documents or sources of information you would not have otherwise?

2.4. Collective intangible assets (reputational capital). Main question: What position has the network acquired?

- Has the community changed the recognition of our expertise?
- Have you acquired a new voice through collective activity?

3. Applied value: Changes in practice. Main question: What difference has it made to your practice/life/context?

- Where have you used the products of the network?
- Where did you apply a skill you acquired?
- When did you leverage a network connection in the accomplishment of a task?
- Were you able to enlist others in pursuing a cause you care about?
- When and how did you use a document or tool that the network produced or made accessible?
- How was an idea or suggestion implemented? At what level - individual, team/unit, organization?
- Do you feel the need to defend the network and its activities in the event of any criticism?
- Do you feel that the success of the network and its other participants is also your success?

4. Realized value: Performance improvement. Main question: What difference has it made to your ability to achieve what matters to you or other stakeholders?

- What aspects of your performance have your participation in the network affected?
- Did you save time or achieve something new?
- Are you more successful generally? How?
- What has your organization been able to achieve because of your participation in network?

5. Reframing value: Redefining success. Main question: Has it changed your or other stakeholders' understanding and definition of what matters?

- Has the process in the network led to a reflection on what matters?
- Has this changed someone's understanding of what matters?
- Does this suggest new criteria and new metrics included in the evaluation?
- How has this new understanding affected those who have the power to define criteria of success?
- Has this new understanding translated into institutional changes?
- Has a new framework or system evolved or been created as a result of this new understanding?

Annex 5: Survey for the network members

Dear participant!

We kindly ask you to take the time to answer the following eleven questions. You have been selected for our research as a member of the local teacher network and your insights help us better understand how teacher professional networks function and what makes them sustainable. Our goal is to examine your values and build a deeper understanding of such communities of practice and/or networks. While you are answering the question, please think about your network's experiences (which was also mentioned to you while you were contacted by iHub4Schools' project members).

Questions are mainly open, which means that we are very much interested in your deeper insights and answering the questionnaire might take about 30 minutes. Most of the questions also include sub-questions, which help you answer the main question.

All your answers will remain anonymous. The data will be stored in Tallinn University servers during the iHub4Schools project and will not be shared publically. Analyzed versions of this data are used for the purpose of the project, and findings could be made public in research papers and project reports.

Thank you very much for your cooperation!

iHub4School's team

What is your role in the network/community?

Teacher

Mentor

Policy-maker at the state level

Policy-maker at the local government level

School management member

Educational technologist

Tutor

Other:

1. When thinking about your participation in the network - describe the activities that have happened there and how was your experience of it?

- What have been the significant events during the participation in the community/network? What has happened there?

- How did you feel during those events? Was it fun to participate? Inspiring, convivial, something else?
- How relevant to you is/were the activities/interactions in the community/network? What do these activities provide you professionally?
- Whom did you interact or make connections with mainly in this network?
- Which connections are most influential on your own personal or professional development?

2. How has your participation in this network changed you?

- Have you acquired new skills or knowledge during your participation in the community/network?
- Has your understanding of the domain or your perspective changed?
- Do you feel more inspired by your work after you started participating in the community's activities?
- Have you gained confidence in your ability to engage in practice?

3. To what extent do you agree with the following statements' importance for you during your participation in the community/network (Scale: Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree)

- Networking opportunities are important to me
- An opportunity to be heard is important to me
- A chance to learn about current issues is important to me
- Being part of and contributing to positive change is important to me
- Sharing my expertise or unique perspective is important to me
- Networking opportunities are important to me
- An opportunity to be heard is important to me
- A chance to learn about current issues is important to me
- Being part of and contributing to positive change is important to me
- Sharing my expertise or unique perspective is important to me

4. What motivates you to participate in the community's activities and what are the goals and expectations you want to achieve by participating? What do you aim to bring to the community to support others?

5. How has your participation changed your social relationships?

- What access to new people have you gained?
- Do you know them well enough to know what they can contribute to your work/practice?
- Do you trust them enough to turn to them for help?
- Do you feel less isolated?
- Are you gaining a reputation from your participation in the community?

- How do you see hierarchy within the community (stakeholder characteristics)?
 - What do you think, what is the knowledge you bring to the community that others can learn from?
 - What do you think is the most pleasant way of exchanging information inside the community?
 - What other activities and initiatives are you also engaged in?
6. What access to resources has your participation given you?
- Do you have access to new tools, methods, or processes that you did not have before?
 - Do you have access to documents or sources of information you would not have otherwise?
7. What position has the community acquired in the educational landscape?
- Has the community changed the recognition of our expertise? Is the contribution of the community valued in the community of teachers? Why do you think so?
 - Have you acquired a new voice through collective activity? Can you bring some examples?
8. What difference has it made to your practice/life/context?
- Where and how have you used the products of the community/network?
 - Where did you apply a skill you acquired through community activities?
 - When did you leverage a community connection in the accomplishment of a task?
 - When and how did you use a document or tool that the community/network produced or made accessible?
 - How was an idea or suggestion implemented? At what level - individual, team/unit, organization?
 - Do you feel the need to defend the community and its activities in the event of any criticism?
 - Do you feel that the success of the community and its other participants is also your success?
9. What difference has it made to your ability to achieve what matters to you or other participants?
- Have you saved time or achieved something new?
 - Are you more successful generally? How?
 - What has your organization been able to achieve because of your participation in the community/network?
10. Has it changed your or others' understanding and definition of what matters?
- Has this changed someone's understanding of what matters?
 - How has this new understanding affected those who have the power to define criteria of success?
 - Has this new understanding translated into institutional changes?

- Has a new framework or system evolved or been created as a result of this new understanding?

11. Please write here your thoughts on what can be done by whom to support the activities of your network, and what would make your network stronger and more sustainable.



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