Developing pupil's cooperative skills in distance learning: discoveries and challenges

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RESUMEN (Spanish)
Presentamos un estudio de caso de Lituania, en el que los estudiantes participaron en situaciones de aprendizaje cooperativo a distancia. Además, los profesores construyeron las clases en colaboración utilizando la metodología Lesson Study. Presentamos extractos de una lección integrada de matemáticas e inglés en 4º curso (10-11 años), que muestran lo que había que tener en cuenta para la comprensión del alumno y ajustar en las lecciones posteriores. El lector verá cómo cambian las particularidades de la metodología de aprendizaje cooperativo cuando los niños sólo pueden consultarse sentados frente a pantallas sin verse. El estudio demuestra que los jefes de equipo desempeñan un papel especialmente importante, ya que no sólo deben velar por su propio rendimiento, sino también capacitar a los demás miembros del equipo. Además, el artículo presenta las decisiones didácticas tomadas por el equipo docente para que las actividades fueran lo más claras y comprensibles posible para los alumnos, lo que se tradujo en un aumento del número de memorandos, gráficos e instrucciones.

PALABRAS CLAVE
aprendizaje cooperativo; alumnos de 4º curso (10-11 años); aprendizaje a distancia

ABSTRACT (English)
We present a case study from Lithuania, where students were engaged in cooperative distance learning situations. The lessons were also constructed collaboratively by teachers using Lesson Study methodology. We present extracts from an integrated mathematics and English lesson in Year 4 (10-11 year olds), showing what needed to be taken into account for the pupil's understanding and adjusted in subsequent lessons. The reader will see how the specifics of the cooperative learning methodology change when children can only consult each other sitting in front of screens without seeing each other. The study showed that team leaders play a particularly important role, as they must not only look after their own performance, but also empower the other team members. In addition, the article presents the didactic decisions taken by the teaching team to make the activities as clear and comprehensible as possible for the students, which led to an increase in the number of memos, charts and instructions.

KEYWORDS
Cooperative learning; Year 4 pupils (aged 10-11); distance learning

RÉSUMÉ (Français)
Nous présentons une étude de cas en Lituanie, où les élèves ont été engagés dans des situations d'apprentissage coopératif à distance. Les leçons ont également été construites en collaboration par des enseignants qui ont utilisé la méthodologie de l'étude de leçons (Lesson Study). Nous présentons des extraits d'une leçon intégrée de mathématiques et d'anglais en quatrième année (enfants de 10 à 11 ans), montrant ce qui devait être pris en compte pour la compréhension de l'élève et ajusté dans les leçons suivantes. Le lecteur verra comment les spécificités de la méthodologie de l'apprentissage coopératif changent lorsque les enfants ne peuvent que se consulter assis devant des écrans sans se voir. L'étude a montré que les chefs d'équipe jouent un rôle particulièrement important, car ils doivent non seulement veiller à leurs propres performances, mais aussi donner aux autres membres de l'équipe les moyens d'agir. En outre, l'article présente les décisions didactiques prises par l'équipe enseignante pour rendre les activités aussi claires et compréhensibles que possible pour les élèves, ce qui a entraîné une augmentation du nombre de mémos, de tableaux et d'instructions.

MOTS-CLÉS
apprentissage coopératif ; élèves de 4ème année (10–11 ans) ; apprentissage à distance

1. General Observations Regarding Distance Education and Learning Adjustments in the Context of the COVID-19 Pandemic

Even before the pandemic there were proposals to increase blended learning–the combination of face-to-face and distance education to diversify teacher-student connections and to familiarise learners with different forms of learning more responsive to their needs. The aim was not merely a diversification of the usual approaches, but to broaden the understanding of learning by reflecting more deeply on their growing proficiency through the application of digital skills and the opportunities to work in various teams (Depover et al., 2004). The introduction of distance education brings about a fundamental change in the organisation and culture of the educational process. Learning takes place in a particular microclimate, sometimes defined as classroom culture, i.e., the environment in which members of the community are present and act together (Kafele, 2015). It is a set of conditions: the physical, social, and emotional environment; the relationships between members of the community; and the agreements and rules they follow. Lively, open communication, physical and psychological safety, and reciprocal trust foster community growth. Children in the classroom not only function as individual actors but also as members of a group (Zulumskytė, 2006). We emphasise that in a normal setting, where children learn through live contact, group work requires creation of an appropriate learning environment. A positive classroom climate includes an atmosphere that allows students to feel and express themselves freely; acceptance of students' opinions; democratic communication; and mutual respect (Bulut & Iflazoglu, 2016). We were used to creating such communities, but in distance education, teachers are challenged because they do not know how to build groups and how to encourage them to work cooperatively when the work takes place individually in their own homes.

The COVID-19 pandemic interrupted and disrupted the education of 90% of the world's children. The crisis led to school closures in 190 countries and affected an estimated 1.7 billion students (*World Bank*, 2020). The pandemic highlighted severe problems regarding child rights and inclusion: the closure of schools deprived millions access to education, and the neediest even lost the option for free meals (UNESCO, 2020). The usual elements and agreements for building classroom climate were altered by the pandemic–they had to be rethought and re-created for the virtual environment. An entirely new learning culture, conventions and rules had to be created, since children (especially primary school children) usually used technology for entertainment rather than learning. Various authors have made suggestions for creating a virtual microclimate (UNESCO, 2021). In addition to following the rules of polite conversation, it has been suggested that classroom logos and symbols should be created and used in assignments and presentations (Albert, 2020). It is important to strengthen the sense community. If students feel that they belong to the classroom community, we might expect them to be more motivated, more involved in activities, contributing to positive communication, and more willing to give and receive feedback (Cleveland et al., 2019).

The pandemic changed relationships when learning communities experienced physical separation that negatively impacted psychological well-being, learning, academic achievement, and social skills of the learners (Marcal, 2020; Burgess & Sievertsen, 2020; Kuhfeld et al., 2020). The pandemic impelled us to focus not only on academic achievement, but on creating a new classroom culture: a positive atmosphere, a sense of safety and security. It is more important than ever to ensure safety, support, bullying prevention, and support for learning (Youmans, 2020). In distance education safety, comfort, feedback, communication and collaboration are crucial. The IT skills of all participants are also important. Relationships and shared school and classroom

agreements are the basis for building community both online and face-to-face (Cleveland-Innes et al., 2019). However, many educational institutions did not have such conditions in the pre-pandemic period, and once it arrived, there was not enough time to create them. Remote communication and new routines for learning require additional time and effort. We need to develop the ability and willingness to meet on Zoom or another virtual plateforms. This includes more options for group work using tools such as 'chat rooms' (Marcal, 2020). In addition to the traditional function of educating students, the pandemic highlighted another important function of schools as a place for socialisation (World Bank, 2020). Education is a key human link between students, teachers, parents, guardians, leaders and wider communities (Hawkins, Trucano, Cobo, Juan, Twinomugisha, Sanchez, & Inaki, 2021). The UN has also highlighted the need for psychological support for students, but also teachers, as the stresses they experience can lead to 'burnout' and leaving their jobs (Policy Brief: Education during COVID-19 and beyond, 15-16).

Millions of students and teachers switched to distance learning, but most did not have the means to prepare or the time to adapt (Chmielewska et al., 2020). In pandemic times when people are isolated, virtual communities and virtual learning technologies can bring people together to experience a sense of educational community in a virtual world (Kriemadis, Spiliotopoulos, Vassilakis, & Kapnis, 2021). It is also important to develop the social skills of learning communities when online learning is the only option, as the sudden shift from face-to-face to distance learning has had a negative impact on both academic and social skills. Distance learning requires students to be more disciplined and motivated, and to be better able to manage their own learning process, which is something is more characteristic of higher achievers (Joosten & Cusatis, 2020). During distance education it is recommended that teachers provide immediate feedback by asking students to create mind maps from the content they have learned, to answer a few key questions in writing, to record narratives/reflections and send them to the teacher, etc. (UNESCO, 2021).

Digital tools have become extremely important for organising the educational process during the pandemic. Much of schooling in 2020 and 2021 was carried out remotely in Lithuania, so schools were obligated to care for computer equipment for teachers and students. It was important to make sure there was a large screen, a high-quality video camera, and an ergonomic workplace with comfortable furniture (Note de synthèse: L'éducation en temps de COVID-19 et après, 2020; Travailler à domicile: le guide 2020, 2020). Teachers had to collaborate with ICT specialists on the purchase of software (Recommendations to Parents on how to support learning at home during temporary suspension of obligatory regular attendance of Pupils, 2020; Jakavonytė-Staškuvienė, 2020). During distance education, teachers' professional competences were discussed, such as:

- the purposeful use of information technologies, i.e., the use of computer hardware and software, basic internet services for instruction, the preparation of textual and visual information for parents, colleagues or activities for children;
- development of children's informational culture through the systematic development of computer literacy, in accordance with ethical and health requirements for computer use (linked to the stages of child development);
- creating a safe distance education environment that supports children's emotional, social, intellectual and spiritual development;
- safe and effective use of information and communication technologies, tools and instruments;

- creating an environment of tolerance and cooperation, in which the child has the opportunity to show initiative, act independently and find like-minded people;
- create an educational environment conducive to change in which the child feels secure and confident in himself and in others (based on École et travail à la maison: Concilier les deux à l'heure de la COVID-19, 2020; Teacher's Professional Competence Framework, 2007; Reverdy, 2020).

Therefore, before the educational process could be carried out remotely, the first step was to ensure that the necessary tools were available for the students and that teachers had the competences to use them appropriately.

2. Distance Learning in Lithuania

In Lithuania, 96% of students have a computer that can be accessed for learning, above the OECD average of 89% (OECD 2020). In Lithuania, 69% of teachers' recent professional development has been related to improving their IT skills and 24% of teachers felt the need for such training (OECD Talis 2018 average: 60% vs. 18%). Thirty percent of school leaders in Lithuania said that a lack of IT hindered their school's ability to deliver quality education (OECD Talis 2018 average: 25%).

Lithuania was under quarantine for an extended period during the pandemic: Phase I: 14 March to 17 June 2020; Phase II: 7 November 2020 to 1 July 2021. This led to severe fatigue for everyone involved (students, parents, teachers, school leaders). In Lithuania, 1475 teachers planned to leave their teaching jobs in 2021 because they could not cope with the workload, and around 1300 teachers left in 2020. This is being touted as a catastrophe (Dranseikaitė, 2021; Kasnikovskytė, 2021).

A study conducted in Lithuania (2020-2021) noted the following challenges in distance learning (Jusienė et al., 2021):

- Screen time increased: children aged 6-9 years had been in front of screens for over 4 hours on average per day; children aged 10-11 years – over 6 hours per day;
- More than half of the parents of the pupils in the study reported that their child had behavioural or emotional difficulties;
- Children in the study pointed out a lack of social relationships. They missed their peers, teachers, and school events. Parents and teachers of the pupils noted the same;
- School administrators said that teachers were "thrown into the water" without preparation and "had to swim" (p. 128);
- Primary school teachers reported that new learning material was more difficult to explain and students found it harder to understand at a distance; learning difficulties were experienced by more active, mobile students who found it difficult to sit still for longer periods of time and concentrate on learning tasks; also, gaps in knowledge may have occurred by not being noticed in time;
- All teachers reported that it had become more difficult to assess the achievement of primary school pupils. This was due to active parental involvement, even interference in assessment. Lower results were attained by pupils who did not receive adequate parental support;
- The lack of a suitable learning environment at home hindered pupils' success. Not all families were able to provide learning and working spaces for children);
- Child support professionals were often unable to aid families at social risk because they were reluctant to communicate or cooperate. The main cause of learning difficulties was the inability to learn independently.

Advantages of distance learning were also highlighted in this study. Primary school teachers reported that distance learning positively impacted some students' achievement due to learning innovations, such as unusual, more effective, or more interesting tools and working methods. In spring of 2020, many e-resources became free of charge for teachers to try out. It was noted that, distance learning is suitable for motivated children who are responsible learners (Jusienė et al., 2021).

3. Method of Data Analysis

The method of analysis for data obtained from observed activities and interviews is qualitative thematic content analysis (Žydžiūnaitė & Sabaliauskas, 2017; Adams, 2015; Evangelinou-Yiannakis, 2017; Brown & Danaher, 2019). The children we observed had been taught cooperative learning techniques by the researchers and the cooperating teachers when they were in the third grade. Teachers created lesson plans using the collaborative principles of Japanese lesson study (see Jakavonytė-Staškuvienė et al., 2021; Doig & Groves, 2011). Data collection occurred when the pupils were in grade 4 and they engaged in cooperative learning activities remotely. In addition, interviews of students and teachers were conducted after the activities were recorded. During the interviews, both teachers and pupils analysed their learning experiences and how cooperative distance learning worked.

The qualitative research focused on interpretation, process, and experience. This type of research involves self-analysis and reflection by the researchers. We chose this method because it focuses on human experiences, based on systemic and interactional frameworks (Žydžiūnaitė & Sabaliauskas, 2017). Open-ended questions are asked to elicit experiences and feelings of the teachers and pupils when working as a team remotely, and to discuss and analyse how and why the chosen activities were conducted (Adams, 2015; Evangelineinou-Yiannakis, 2017; Brown & Danaher, 2019). This qualitative study revealed meanings and interpretations of constructs that are difficult to examine quantitatively. The qualitative data allows for a better understanding of the context of distance education. This research examines the informants as unique personalities, with their own perception of social reality, without being limited by imposed social frameworks. The analysis process occurred in a spiral fashion–we continuously returned to the data to identify potentially overlooked, but important details. As a result, the data is saturated with increasingly detailed descriptions of the context and examples of responses from the participants.

We should note that this article is a follow-up of our previous study (Jakavonytė-Staškuvienė et al., 2021), when data were collected in a regular school environment. The present article focuses on the specifics of cooperative learning in distance learning, so we are not repeating many of the underlying principles of cooperative learning and lesson study that we covered in the previous article. The present study was carried out within the framework of a three-year Erasmus+ international project: "Cooperation for innovation and the exchange of good practices" that involved 8 countries: France, the Netherlands, Italy, Spain, Hungary, Romania, Switzerland, and Lithuania (Erasmus+ KA201 (Nr. 2018-1-FR01-KA201-047904, 2018–2021).

4. Context of the Study: an Integrated Mathematics and English Lesson in Grade 4

In the lesson students completed two collaborative tasks: Task 1 was designed to deepen their knowledge of area calculation by integrating the content of mathematics and a foreign (English) language. Task 2 was designed to develop their area calculation skills by cooperating in a distance learning setting. The lesson study method was employed by conducting the same lesson three

times in parallel fourth year classes, each time analysing the results and improving the content and pedagogy of the lesson.

The lesson begins with a reminder of the rules of cooperation and the responsibilities of the group members (0.20-0.23 minutes - Lesson 1). In each group there is: an error-checker, a data collector, an English advisor and a timekeeper (0.23-0.45 minutes - Lesson 1). These are additional responsibilities as each student will also have to complete the mathematics tasks. The teacher also points out the tools needed for the activity: pencils and sheets of paper, mathematics notebooks. The children recall the group activities where they learned cooperative agreements, such as helping others to solve (1.08 min M1 Lesson 1); not being afraid to ask questions (1:14 min M2 Lesson 1); listening to others (1:20 min M3 Lesson 1). The teacher also emphasises the importance of negotiation (1:24 min in Lesson 1).
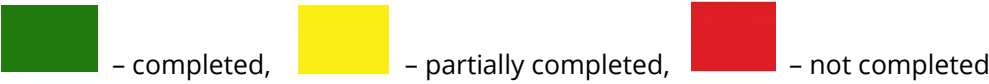
Task 1. At the beginning of the lesson, students watch a video in English which mentions the concepts and rules of area calculation. They then write down the concepts of area calculation in English (4.46-6.41 min - Lesson 1):
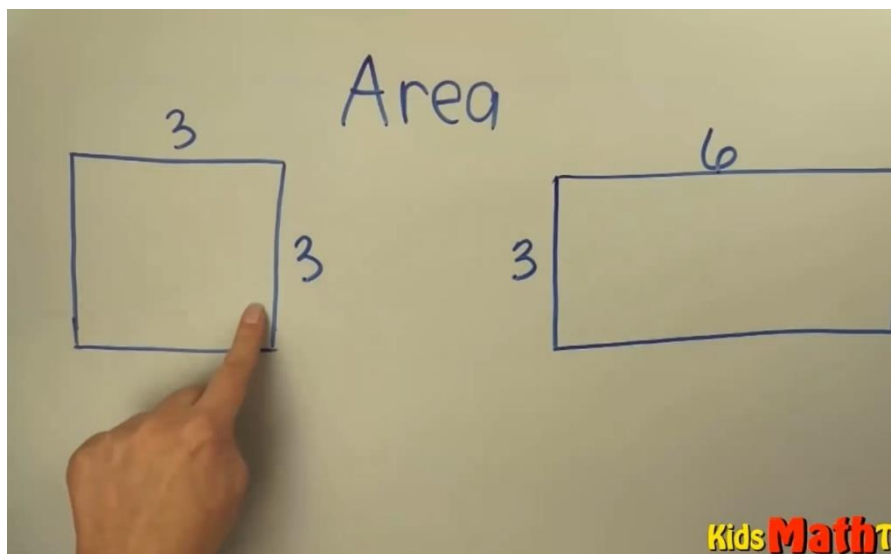
Figure 1. *Watching and analysing a video on area estimation in English* (Open access online: https://www.youtube.com/watch?v=1dqAOKdJmRI)

After watching the area calculation educational film (Figure 1), students were divided into groups with four pupils in each chat room. Working in groups, they formulated question and answers about area calculation in English. The children had 12 minutes to ask each other questions in English (time tracked by the observer). After the task, each member of the group evaluated their own performance in terms of how well the group worked. Those interested in a more detailed analysis of the task by the Lithuanian DICO+ team for all stages of the lesson study may got to the DICO+ project website at:

http://pod.dicoplus.eu/video/0076-seminaire_botosanilituanie_disciplines_integrees/.

| TASK 1 |
| Questions and answers in English |

I asked a question about the area of the figure in English	I answered a question about the area in English	Assistance	
		I received help (additions, advice, etc.)	I helped others (I added something, gave advice, etc..)

■ – completed, ■ – partially completed, ■ – not completed

Figure 2. *Example of task evaluation covering subject content and cooperative learning elements*

In Figure 2 we can see that the assessment form included both subject content - formulating questions and answers about area calculation in English; and the elements of learning to cooperate - giving and receiving help and being a team member.

Working in groups, the pupils calculated the floor area of the entire apartment, but each child had only one part of the data (one room) and had to find out the rest from their group mates. This is a challenging task when working at a distance, as the children had to elicit some of the data needed to complete the task from their classmates. The time allowed was 20 minutes. An example of the task and the different data each group member had to provide is shown in Figure 3:
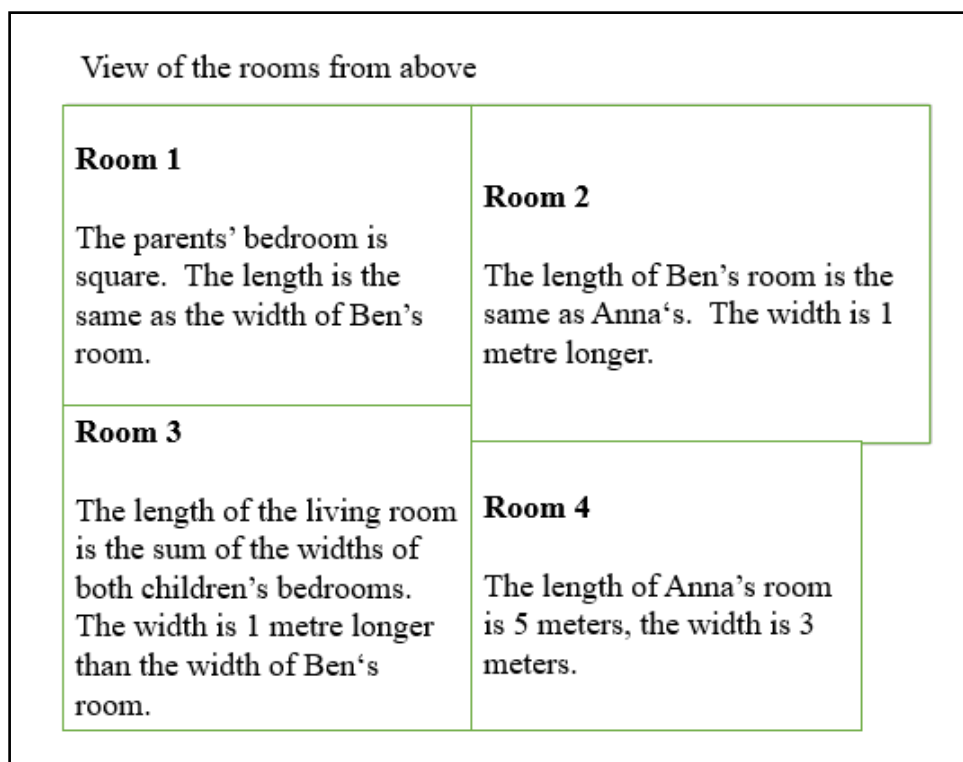
Figure 3. *Apartment layout with instructions for each space*

Note that the difficulty of calculating the area of each room varies. The learning activities were differentiated according to the students' abilities: the most advanced students not only had to calculate the total area, but also had to check whether the other members of the group had calculated their part correctly (this was done by the students who had different roles in the group, i.e. the error-checker and the data collector). It is also important to note that the teachers designed the problem in such a way that students had to ask their group mates for help with missing data. The aim was to ensure positive interdependence and the individual contribution of each group member to the overall result.

The remote organisation of this activity presented unforeseen challenges, as the students started to confuse the concept of a room in their task with their remote chat rooms. After discussing the first lesson the teachers decided to provide additional information to the students by showing the whole area of the apartment on the screen (this had not been done previously), but without the directions for calculating the area of each room. This alleviated any confusion and helped the students figure out whom they need to question to complete their task. They quickly realised that they cannot complete the task if they do not ask questions and provide answers.

Upon completion of the task pupils worked in groups to evaluate both the process and the result.

TASK 2			
Solution to the problem of calculating the area of rooms			
I can explain how to solve the area calculation problem	Assistance		I listened carefully and checked my work
	I got help figuring out how to solve the problem of calculating	I helped figure out how to solve the problem of calculating area	
■ – completed, ■ – partially completed, ■ – completed.			

Figure 4. *Self-assessment after the cooperative area calculation task*

In Figure 4, we can see that the self-assessment covered mathematical skills, i.e., explaining how to calculate the area and solving the problems correctly, as well as cooperative assistance - pupils recall who helped them solve problems, or whether they helped other group mates.

In 2021 Lithuania's children were schooled through distance learning platforms. We can certainly say that in 2021 all participants developed their skills in distance education and information technology, and primary school pupils have become more independent:

- Pupils know how and when to log in to distance lessons, and they do it punctually (Figure 5 shows a working group);
- They understand how to signal and when to speak, when to listen, when to turn off microphones, etc. (lesson studies - lessons 1, 2, 3);
- Participants listen to others, do not interrupt, find learning materials that are posted in virtual space, etc. (Lesson studies - Lessons 1, 2, 3);
- They solved a specially designed problem that highlighted positive interdependency in a virtual environment. Pupils had to calculate the area of a room and the area of an entire apartment, where only part of the data was known, and they were able to find out the rest from their group mates, working together at a distance (lesson studies - lessons 1, 2, 3);
- Children with special educational needs find it more difficult to work in a group in a distance environment (lesson study - lesson 3. Meanwhile, a child with high academic (mathematical) achievement is not able to take on the role of group leader virtually and is a withdrawn and passive observer).

5. Challenges That Needed to be Overcome

The study revealed several challenges specific to distance learning. Virtual learning required more support and additional explanations for primary school students. On the other hand, the presence of teachers and researchers in remote groups could sometimes be disruptive, inhibiting students' independence and leadership. We observed that:

- Students needed more written help (memos, instructions, drawings, diagrams (lesson studies - lessons 2 and 3);
- Pupils were not in a hurry to take the initiative; they seemed to be waiting for the teacher's instructions;
- Once the teacher left the group we noticed the children becoming more active and taking the lead in the task (lesson studies - Lesson 1, role of Kamilė);
- When asked if they liked learning this way, the children responded positively, but "we would like to do the same thing only live and not at a distance" (Lesson studies - Lessons 1, 2, 3).

Sometimes only a few additional comments from the teacher get the activity moving in the right direction. In Figure 6 we provide an excerpt from one group (Lesson 1), which shows the complexity of distance learning and the joy of children when their efforts lead to success.

From the excerpt, we can see that Kamilė seemed pleased when she received an explanation from Renata that they had to get the data from each other to calculate the area of their room. At first, they thought that they would just do one problem together. It was only after this explanation that the real group work started. When they realised that they were missing data to calculate the area of the room, they all started asking questions, but got lost because they were not writing anything down. Daiva, the researcher, suggested that the boys read the terms of their problems out loud so that everyone could hear who had what data. We can see that it took 3 minutes just to find out the conditions (before they even started solving the problem).

Much of the success is determined by the leader of the group, so here is an example of Kamilė's role as a leader. She was very helpful in solving the problem and in eliciting data from her classmates:

A lesson excerpt. Group members: Kamilė, Austėja, Dovydas, Naglis

The role of a group leader (18:26–23:10 min.)

Kamilė: *so everybody read your terms and conditions… Nagli, read yours out loud.*

(Naglis begins reading in English…)

Kamilė: *no, read in Lithuanian…*

Naglis: *Anna's room is 5 metres long and 3 metres wide.*

Kamilė: So, Austėja, Naglis has already told you the information you need. Dovydas, read yours.

Dovydas: the *parents' bedroom is square and the same length as Ben's room.*

Kamilė: *so we only needed Naglis' information. Austėja, have you made a note of everything yet?*

Austėja: *yes, 5 metres is the length, and 6 metres is the width.*

Kamilė: *I have the living room, and its data relates to both children's rooms.*

Naglis: *I'll read it again: Anna's room is 5 metres long and 3 metres wide.*

Kamilė: W*ait, I need to know Austėja's and Naglis' details to find out mine, because the length of the living room is the sum of the widths of the two children's rooms, and the width of the living room is 1 metre longer than Ben's room width..*

Austėja: *I mutiplied and got* <mark>30</mark> *metres.*

Kamilė: *So Austėją has Ben's room? And Naglis has Ana's?*

Austėja: *yes…*

Kamilė: *O.K, Austėja, do you know the width of Ben's room?*

Austėja: *yes, 30 metres.*

Kamilė: *and mine is 1 metre longer. That means* <mark>31</mark> *metres. I still need Naglis' data.*

Naglis: *wait, wait, I'm still calculating.*

Kamilė: *and what does Dovydas need?*
Dovydas: *It says here that tthe length of the room is the same as the width of Ben's room.* **Kamilė: *As wide as Ben's room. That will probably be 30, because that's Austėja's data.***

Figure 5. *Example of group leader questioning*

Analysing the solution of the problem in Figure 5 in distance learning, we can observe that Kamilė had a dialogue with the other members of the group, always telling them what they needed to do, i.e. not only solving the problem herself, but also directing the other teammates in the right direction in their search for information. However, we also note that the girl Austėja initially misheard the information, i.e. the original data (instead of 3 metres, she heard that it was 6 metres), and although there was no mathematical calculation error, she received the wrong answer. We would like to say that the children in this group later revisited the problem by checking the solutions and discovered the error themselves. This is indeed a challenge in distance education, where students can mishear the original information due to internet interruptions.

The pupils' self-assessment is shown in Figure 6:

MATHEMATICS-ENGLISH LESSON   Grade 4C 2021-03-16
SELF-ASSESSMENT FORM
2020-2021

Marking instructions:
Green – completed
Yellow – partially completed
Red – not completed
Mark the a window with an × in the appropriate colour

Tasks	TASK 1 Questions and answers in English				TASK 2 Solution to the problem of calculating the area of rooms				Cooperative behaviour in the group while completing tasks 1 and 2	
Names	I asked a question about the area of the figure in English	I answered a question about the area in English	Assistance		I can explain how to solve the area calculation problem	Assistance		I listened carefully and checked my work	I listened carefully to a group member's ideas	I completed everything we agreed upon
			I received help (additions, advice, etc.)	I helped others (I added something, gave advice, etc..)		I got help figuring out how to solve the problem of calculating area	I helped figure out how to solve the problem of calculating area			
KAMILĖ	🟧	🟧	🟩	🟧	🟩	🟩	🟩	🟩	🟩	🟩
AUSTĖJA	🟧	🟧	🟩	🟧	🟩	🟩	🟩	🟩	🟩	🟩
DOVYDAS	🟧	🟧	🟩	🟧	🟩	🟩	🟩	🟩	🟩	🟩
NAGLIS	🟧	🟧	🟧	🟥	🟩	🟩	🟧	🟩	🟩	🟩

Figure 6. *Group members' self-evaluation of the lesson*

The children were able to communicate more smoothly in the second task, which is evident in the evaluation, as most of them said that they had done a good job, both in helping their group mates and in being helped.

6. Communication in Distance Learning is Highlighted as an Advantage

After the activity, we asked the children why they succeeded and what they liked in cooperative learning. The pupils' views are presented in Figure 7:

An interview excerpt: the group – Kamilė, Austėja, Dovydas, Naglis

Reflection on what they liked, what went well, and what was useful (46:18-49:47 min.)

Daiva: how do you feel after the calculating task?

Austėja: very good.

Kamilė: good.

Dovydas: good.

Daiva: what did you like about this activity?

Austėja: I liked it because we communicated and talked a lot

Naglis: we helped each other. <...>

Kamilė: The teamwork was successful. If we hadn't given each other information, we would not have found the answer. <...> It's important to hear out others and not be afraid to ask.

Daiva: Would you like similar assignments?

Kamilė: Aha (mhh), it was fun

Austėja: yup, it was a whole lot of fun.

Naglis: I think we will be less timid next time.

(All four agreed that they liked learning this way.

Figure 7. *An example of reflection on student performance*

Reflecting on the experience, the children highlighted the opportunity for communication and consultation, which is especially important when working remotely. In addition, the project team, i.e., teachers, school administrators and researchers, worked intensely on adjusting the activity plan, tasks and explanatory material.

One of the team's findings is that by doing the Lesson Study and planning lessons virtually, the project team communicated, consulted, and decided on how to support children's learning in groups to a much greater extent than before. More virtual meetings were organised to plan and discuss the lessons. Teachers were also more open in sharing their experiences and willing to listen to the researchers' observations and advice, and made many specific suggestions themselves to improve the process. The following is an excerpt from the first reflection after the first lesson involving teachers and researchers (0.0-3.22):

Teacher Jolanta*: I think that after watching the video, the children need to write down some terms/concepts in English. The task is somewhat stuck in the air because we never find out: have they heard the terms, have they not heard the terms, did they understand, or not... I think that the first thing the children could do when they get to the rooms is to tell us what words they heard and how they understood them in the video.*

Researcher Daiva: *but maybe after watching the video we can ask everyone to reflect when they are all still together and not in separate rooms in groups. In a larger group it is more likely that the ones who took notes will be a good example for others and will say more. I think about the chat room when in the very beginning there was complete silence, and the children were wondering what activities were waiting for them in this room. They started to ask whether they were in the right place because room three is mentioned in the activity, and here they are in room one* (in the Zoom platform).

Teacher Jolanta: *Children are children, this is not familiar, and they want to find out how it will work here, so they would feel safe, so that they would know what they have to do.*

Deputy Director Renata: *When we plan a lesson, we have our own idea. <...> But when I experienced this lesson yesterday, I realised that when we were planning, it was clear to us, but the children were asking questions about which room, why am I here, maybe I was given the wrong assignment. In a word, they had their own organisational questions.*

From the interview excerpts, we can see that not only the content but also elements of form were discussed. Working remotely, the children had many questions about the organisation of their work. Teachers also prepared more written aids and instructions in the form of handouts for the pupils.

7. Discussion and Conclusions

At the onset of the COVID-19 pandemic, the Lithuanian education system was somewhat prepared for distance learning, as Lithuanian schools are sufficiently computerised, and the IT skills of participants were adequate for distance learning. Admittedly, teachers did not have time to prepare and create a new culture for the virtual learning community, but there were steps in the right direction throughout the period when schools were closed, and learning took place at a distance. In the distance learning environment, pupils experienced

a lack of social relationships, the pressures of academic achievement; a greater need for learning support; and we witnessed growing exclusion of children with special educational needs and children at risk. After years of demanding work, many overworked Lithuanian teachers left the education system.

Developing cooperative skills in distance learning has its own particular problems, since the culture of virtual learning is still emerging. Therefore, the following observations can be made:

- Teachers need to think about many different components that they did not have to think about when working face-to-face, such as where to post tasks, how to present them in detail, how to describe the entire path of an activity so that every student understands it;
- It is more difficult for pupils to understand collaboration when they have to work together in physical isolation;
- Pupils need more explanations, written instructions for tasks, handouts, illustrations;
- Pupils need more adult support but at the same time this may limit their independence and leadership in completing tasks;
- Pupils enjoy collaborative activities and working at a distance, but when asked if they would like to do this in the future, they said they would, but 'only in person', so that they can hug and touch their friend and explain the activity when they are nearby.

The findings of our study are akin to the views of Strauss (2020), who argues that education during circumstances like COVID-19 should be based on the principle of *less is more*. This is indeed the case, because much more time is spent on examining and figuring out technical feasibility, resources, instructions, and agreements, or discovering where, what, and how to find things. The needs of children learning at home education vary, depending on family circumstances, but the number of parents who say they need less complicated and fewer teachers is much higher than those who say they want more (Strauss, 2020). The most stated requests are for teachers to streamline communication so that families are not overwhelmed, to simplify tasks so that parents can help, and to create timetables that are flexible enough to consider the different realities that families face when their children are at home during a pandemic.

Studies by L. Willen (2020), A. L. Jones and M. A. Kessler (2020) are also aligned to our study, which emphasises the need for social contact and the desire to learn 'face-to-face'. The researchers report that some teachers were unable to contact students and their parents because they did not respond to e-mails or phone calls. Pupils want personal interactions, eye contact, reinforcement in the form of hugs, smiles, verbal support and encouragement when they need it most, and teachers can only do this when they are around the child, and nearly impossible on a screen. Teachers also miss the pupils and their handshakes. The interpersonal relationships that teachers build with children, and vice versa, are often the key to educational success. The best teachers we all remember are the ones who inspired us when we needed it, gave us a boost, and made sure we got back up when we fell. For Winthrop (2020), distance learning poses a real risk for the use of primitive methods that ask learners to just sit and quietly watch videos, read online documents, or click through presentations. This is not only boring, but also encourages a passive form of learning. This format is especially unhelpful for students who do not have strong independent learning habits, are unable to concentrate, or have learning gaps.

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