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### **published in**

International Journal of Disaster Risk Reduction  
2023

### **DOI (link to publisher)**

[10.1016/j.ijdr.2023.103608](https://doi.org/10.1016/j.ijdr.2023.103608)

### **document version**

Publisher's PDF, also known as Version of record

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### **citation for published version (APA)**

Janssen, C., Kover, I., Kyratsis, Y., Kop, M., Boersma, K., & Cremers, A. L. (2023). The corona pandemic and participatory governance: Responding to the vulnerabilities of secondary school students in Europe. *International Journal of Disaster Risk Reduction*, 88, 1-18. [103608]. <https://doi.org/10.1016/j.ijdr.2023.103608>

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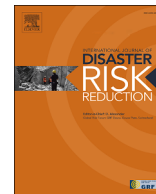
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## International Journal of Disaster Risk Reduction

journal homepage: [www.elsevier.com/locate/ijdrr](http://www.elsevier.com/locate/ijdrr)

# The corona pandemic and participatory governance: Responding to the vulnerabilities of secondary school students in Europe

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## ARTICLE INFO

## Keywords:

COVID-19  
Crisis response  
Participatory governance  
Vulnerability  
Secondary schools

## ABSTRACT

Adolescents in secondary schools have limited susceptibility to the SARS-COV-2 virus, but paradoxically are considered to be carrying the highest psychosocial burden during this pandemic. The aim of our European multi-country qualitative research was to investigate the COVID-19 crisis response in secondary schools and the role of national, regional, and local stakeholders in contributing to a participatory governance approach. We carried out 11 months of qualitative fieldwork, which included 90 respondents from the Netherlands, Ireland, and Finland for in-depth interviews and/or group discussions. Participant observation was conducted in four secondary schools to explore the interplay of day-to-day formal and informal practices of crisis governance. Our findings contribute to a better understanding of what efforts were made to facilitate participatory governance and where a bottom-up approach would have served useful in successfully implementing the COVID-19 mitigation strategies. Moreover, we show how these mitigation strategies have led to unintended consequences, such as students' difficulties with isolation and associated mental health problems, and the struggles of socialization when returning to a physical school environment. Our findings highlight the importance of the school environment in the socio-emotional developments of adolescents. We introduce the TAPIC-R model to analyze good governance, advancing the existing TAPIC model with an emphasis on the role of resilience in shaping participatory governance. We argue this is urgently needed during crises to strengthen engagement of the community, including vulnerable groups and achieve positive outcomes within and across policy structures and action domains.

## 1. Introduction

Since March 2020, the outbreak of the COVID-19 pandemic and associated mitigation measures have been seriously disrupting human lives around the globe. Although adolescents and children were shown to be the least vulnerable to the coronavirus from a medical perspective [1], they have long been identified as carrying the highest psychosocial burden during this pandemic [2]. Different mitigation strategies to halt the spread of the coronavirus in secondary schools, such as mask mandates, school closures, and distance learning [3] put tremendous pressure on students to adapt quickly and be mentally resilient [4]. There is a growing body of evidence suggesting that adolescents experienced the greatest decline in mental health in the first few waves of the pandemic as compared to any other age group [5,6].

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Adolescents are considered to be exceptionally exposed to external or global crises, since adolescence, historically termed as the “period of storm and stress” [7], is considered to be one of the most vulnerable eras in the life course [8]. Adolescence signifies a critical transition period into adulthood, wherein parents are replaced by peers as the primary sources of interaction, influence, and identity formation [9]. Consequently, disruptions in adolescents' home and school environments might lead to lifelong negative consequences undermining a healthy development [10–12]. To further complicate the pandemic's effects on adolescent well-being, their parents, caretakers, and other individuals in the home environment might also be experiencing crisis-related psychological, social, or economic difficulties. This creates an indirect link between crisis situations and adolescent well-being [13]. In general, a supportive family environment can increase adolescents' protective factors and coping skills, whereas dysfunction in family may increase negative reactions given to stressful events, such as internalizing symptoms [14].

There is a common and deep concern about the effects of the pandemic on adolescents' mental health and socio-emotional development. The majority of mental health disorders emerge during adolescence [15] and figures prior to the pandemic already showed that 11.6% of adolescents live with anxiety disorders and 12.9% with depression globally [5]. Now, scholars warn that the COVID-19 pandemic will not only exacerbate these numbers, but additionally trigger a wide range of post-traumatic stress disorder symptoms [16]. Therefore, there is an urgent call for the coordinated mobilization of knowledge production, communication, and action targeted at this vulnerable population [17,18].

So far, the literature is unclear about the effects of measures taken to mitigate the effects of this crisis. The COVID-19 outbreak can be considered both an acute and a slow-burning crisis as it is a disruptive, dynamic, and non-linear problem [19] without clear-cut solutions. In addition, the measures taken will have uncertain effects in the long run, in particular for vulnerable groups, such as adolescents. What is needed is a form of ‘good governance’ that is based on the recognition of the slow burning nature of the crisis and that takes into account the needs of the most vulnerable. Societal stakeholders, including those in secondary education, may contribute to “good governance practices” [20] of the pandemic, including quality decision-making and coordination among stakeholders of all levels to meet the needs of the public [21].

A dominant analytical tool for good governance entitled the TAPIC heuristic model, developed by the WHO, includes the following dimensions: transparency, accountability, participation, integrity, and capacity [22–24]. The first dimension, transparency is defined as making publicly clear the decision-making process and the grounds on which legitimacy is claimed. It also asks to make clear which decision-makers were involved and therefore plays a key role in effective and inclusive crisis collaboration [23]. Secondly, accountability is defined as ensuring that anybody who acts must account for their actions and decisions. This serves as a means to fair governance practices as it provides other actors who are entitled to have those actions and decisions explained with the opportunity to reward or punish them [22–24]. Thirdly, the model highlights the importance of participation, defined as ensuring that people who are affected by a decision can express their views about it in a way that ensures they are at least heard [22]. Following transparency is the dimension of integrity, defined as ensuring that the processes of representation, decision-making, and enforcement are clearly specified and members of governance institutions have clear roles and responsibilities and adhere to widely shared ethical principles [23]. Lastly, the dimension of capacity is defined as employing the necessary expertise to assist policy-makers in avoiding, diagnosing, and remedying policy failures and unintended consequences [22–24].

The different dimensions of the TAPIC heuristic model are not ‘ingredients of good governance’ per se, but rather highlight governance issues that need to be addressed. There may be tradeoffs and conflicts between the different domains while none of the proposed domains assumes priority. Moreover, such practices of good governance are ambiguous, and not value-free or universal as multiple realities interfere with formal objectives and workings of governance [25]. In this sense, the formal dimension of COVID-19 crisis governance refers to guidelines, plans, and rules that are predesigned, including the institutions, the roles and responsibilities of different actors, and the collaborations between them [26]. Informal COVID-19 crisis governance refers to the complex web of stakeholders and networks at all societal levels that are active outside of formalized governance arrangements. Various scholars argue the need to recognize bottom-up, “emergent,” and informal societal responses to crises and how these are related to formal responses by authorities [27–29]. We therefore propose ‘resilience’ as a sixth dimension to the TAPIC model, creating our proposed TAPIC-R model, which better incorporates both formal and informal participation of societal actors.

Using a participatory governance approach, we seek to deepen citizens' participation in governmental processes. Herein, citizens and other non-state actors take ownership to influence and share control in processes of public decision-making that affect their lives [30]. Investigating the varying interests and actions of involved stakeholders will lead to a comprehensive understanding of the COVID-19 crisis response strategies within secondary education in which alternative views can be offered, dominant views can be resisted, and new solutions can surface. Additionally, participatory governance builds on the need for empowered participation of and further enhances collaboration between multi-level networks in crisis response and recovery processes [30].

The aim of our European multi-country qualitative research was to investigate the COVID-19 crisis response in secondary schools and the role of national, regional, and local stakeholders in contributing to a participatory governance approach. We used a whole-of-society approach, including all three societal levels of the crisis response: local; regional; and national [31]. Local stakeholders are the secondary schools including students, their family members, teachers, and school principals. Regional stakeholders constitute public health services, municipalities, and secondary school associations. National stakeholders include representatives of the government, the National Institute for Public Health, and student and teacher unions.

With this whole-of-society approach, we contribute to the understanding of how governance of the COVID-19 pandemic could be facilitated by a more participatory, bottom-up approach to enhance implementation of mitigation strategies. Moreover, we show how some of these mitigation strategies have led to unintended consequences, such as students' difficulties with isolation and associated mental health problems, and the struggles of socialization when returning to a physical school environment. In order to analyze participatory forms of good governance, we use our TAPIC-R model, building upon the existing TAPIC model but additionally emphasize

ing the role of resilience in shaping participatory governance. We argue this is urgently needed during crises to strengthen engagement of the community including vulnerable groups and achieve positive outcomes within and across policy structures and action domains. Ultimately, we aim to answer the following two research questions:

- (1) What were the challenges of participatory governance for multi-level stakeholders in developing and implementing the COVID-19 mitigation strategies in secondary schools?
- (2) What were the unintended consequences of the COVID-19 mitigation strategies for secondary school students?

Additionally, with our use of in-depth interviews and creative methods, including videos and art, we empowered adolescents to voice their concerns during a period in which many felt silenced. In a joint effort with stakeholders from diverging societal levels, we sought to explore the COVID-19 crisis response in secondary schools in order to share best practices and lessons learned for future crisis governance and to highlight adverse effects of certain mitigation measures on adolescents' mental health and socio-emotional development.

## 2. Methods

This research is part of the EU-funded research entitled Health Emergency Response in Interconnected Systems (HERoS). The HERoS project aims to improve the effectiveness and efficiency of the COVID-19 crisis response. Our sub-study addresses COVID-19 crisis governance within secondary education in the capital cities of the Netherlands, Ireland, and Finland.

Between June 2021 and April 2022, we carried out 11 months of qualitative fieldwork (Table 1) and included 90 respondents for in-depth interviews and/or group discussions (Table 2). Respondents were selected through snowball sampling techniques where existing study subjects recruited subjects from among their acquaintances. In Amsterdam, we collaborated with three secondary schools to select teachers and students. Authorities and organizations were detected, selected, and approached online. In Dublin, the Health Protection Surveillance Centre (HPSC) provided contact information from their networks, and organized the approach and introduction to the school, enabling identification of respondents (staff, students, and parents) at schools. In Helsinki, HERoS consortium members assisted us in finding suitable authorities, organizations, and schools.

**Table 1**  
Methodological approach of the study

Country	Method	Time and place
The Netherlands	Participant observation	For 3 months on a weekly basis in the schools
	In-depth interviews	1 interview with each respondent of 1–2 h at their respective schools, workplace, or online
	Arts-based engagement ethnography	For 1 month on a weekly basis with students in their respective schools
	Visual ethnography	For 1 month on a weekly basis in the schools
Finland	In-depth interviews	1 interview with each respondent of 1–2 h held online
	Focus group discussions	3 meetings of 2 h held online
Ireland	Participant observation	2 days visit to the school
	In-depth interviews	1 interview with each respondent of 1–2 h held online
	Focus group discussions	1 meeting of 2 h in the school

**Table 2**  
Overview of respondents (roles and organizations are mixed up to ensure anonymity)

Country	Stakeholder level	Roles	Organizations
The Netherlands	National	Director, project leader, paediatrician, head of the board of directors, board member, heads of executive board, expert youth education	Ministry of Education, Culture and Science (OCW), National Institute for Public Health and the Environment (RIVM), Association of Schools in secondary education (VO-raad), General Union of Educational Personnel (AOB), National Action Committee Students (LAKS), Dutch youth institute (NJI)
	Regional	2 directors, advisor, head of executive board, crisis team project leader, education crisis team member, strategic advisor secondary education, head youth healthcare	Municipality Amsterdam, Public health services Amsterdam (GGD), Foundation Public Secondary Education Progresso (SOVOP), General Association of School Leaders (AVS), Association of school boards in Amsterdam secondary education (OSVO), Foundation Guidance Service for Waldorf Schools (BVS)
	Local	11 teachers, 27 students (aged 12–17), 2 school principals, care coordinator	School A, School B, School C
Finland	National	Director, 2 upper secondary school policy leaders, 2 advisors in Upper Secondary School Policy, Expert in Education Policy, Union members	Finnish Institute for Health and Welfare (THL), National Agency for Education
	Regional	Secondary education specialist, expert in education policy, 3 board members	Helsinki City Administration, Finnish Union for Teachers, Finnish Union for Students
Ireland	Local	Teacher, 10 students, school principal	School D
	National	Infection control staff, Health policy officer, Public Health staff	Health Service Executive (HSE)
	Local	2 students, parent, 2 school nurses, school principal	School E

The majority of the research was conducted in the Netherlands, in which we held 52 semi-structured interviews and visited three secondary schools for participatory action research (PAR). Within PAR, the focus is on co-creation of the research together with respondents [32], involving them in the meaning-making process through their own concepts and discourses (Ybema et al., [51]). This was accomplished through arts-based engagement ethnography, as we invited 20 students to participate in a one-month art project and seven students for a project around vlogging. The art project resulted in student-created artworks about their individual experiences during the COVID-19 pandemic. These alternative methods provided a detailed account of the complexities of students' experiences with the pandemic including data regarding emotions and non-verbal behavior. Moreover, we engaged 10 key respondents (six students, four teachers, and one school principal) into a visual ethnographic project. We jointly video-recorded in-depth interviews, observations, and integrated students' artwork and vlogs into an ethnographic film. Visual ethnography allows us to show the daily life in schools, including interactions amongst students or between students and staff. We used the engaged characteristics of PAR to help respondents share their stories of the pandemic and enabled them to advocate for themselves.

In Finland, we organized three focus group discussions and two in-depth interviews with experts on national and regional level. One online focus group discussion was held with 10 upper secondary class students and their psychology teacher. In total, we included 21 Finnish respondents. In Ireland, we interviewed five health experts from the national and regional offices of the Health Service Executive. We visited an Irish boarding school for participant observation and for a focus group session with parents, students, school nurses, and the principal. In total, we included nine respondents.

Interview topics included coordination, collaboration, and decision-making in the pandemic crisis response, communication around the mitigation strategies, and experienced vulnerability of adolescents during the pandemic. During focus groups, we allowed for open discussions among respondents, exploring the above-described topics from different perspectives and triggering interaction when these perceptions were conflicting. Participant observation during our visits in secondary schools allowed us to develop an understanding of the social context in which our respondents found themselves on a daily basis, revealing the nuances and complexities of their lives.

Data has been subjected to thematic content analysis [33], which was iterative and followed a process of coding and categorizing using Qualitative Data Analysis and Research Software (ATLAS.ti; 9th edition). This has been meticulously analyzed for important recurring themes, patterns, and meaning. In our analysis, we followed two categories based on our research questions to establish lessons learned and best practices of the COVID-19 crisis governance in secondary schools: participatory governance and unintended consequences of the COVID-19 crisis response. Each category consisted of multiple reoccurring themes in order to establish a holistic framework. We have tested our emerging interpretations by looking for disconfirming cases and variations in the data.

Ethical clearance for the overall study was obtained from the HERoS Ethics Committee, the VU University Ethical Committee (reference number RERC/21-06-1), the Royal College of Physicians of Ireland Research Ethics Committee (RCPI RECSAF 158v2), and approved by the Helsinki City Administration in Finland (HEL 2021-008753 T 13 02 01). We used pseudonyms and unidentifiable descriptions of respondents throughout this article to ensure anonymity and confidentiality. Written informed consent was obtained from each respondent before recruitment, interviews, discussion and/or participant observation. Respondents between the age of twelve and sixteen additionally provided informed consent from their parents. The research methods were adapted to the specific interests, competences, and needs of adolescents. This meant that there was time and space for adolescents to explore and test their ideas during the process. The researchers had the capacities from either education or experience to work with this age group. In the Netherlands, ethical permission was additionally granted for the use of visual methods and for the collection of visual data, which involved a special consent form.

### 3. Findings

We divided our findings in the following three themes: (1) the COVID-19 crisis response in secondary education in the Netherlands, Finland, and Ireland, (2) participatory governance during the COVID-19 crisis response in secondary education, and (3) unintended consequences of COVID-19 mitigation measures for students. The first theme serves as a contextual framework of the COVID-19 timeline in all investigated countries. Theme two serves to answer the first research question on challenges of participatory governance for multi-level stakeholders in secondary schools. Lastly, the third theme serves to answer the second research question on unintended consequences of the COVID-19 mitigation strategies. Merging the perspectives of our respondents of all three analytical societal layers, we present here the collaborative efforts including conflicts of interest and associated tensions in order to provide a nuanced view of the complex and intersecting life worlds. We present our results using the words of our respondents through quoted texts from interviews. Moreover, we present several of the student artworks derived from our arts-based engagement ethnography, including the descriptions written by the students themselves, in order to illuminate their individual experiences during varying phases of the pandemic. Differences between the countries occurred only sporadically and will be made clear explicitly where relevant.

#### 3.1. COVID-19 crisis response in secondary education in the Netherlands, Finland, and Ireland

In this section, we give an overview of the different measures implemented to halt the spread of the coronavirus in secondary schools in the Netherlands, Finland, and Ireland. Prior to the COVID-19 outbreak, all investigated countries had an established response team for nation-wide health emergencies. These are called the National Public Health Emergency Team (NPHE) in Ireland and the Outbreak Management Team (OMT) in the Netherlands and Finland. These are the primary advisors to the governments, who were the chief decision makers in the pandemic. The NPHE in Ireland as well as the OMTs in Netherlands and Finland had a predominantly medical/clinical approach and consisted mainly of health experts, an approach that has been debated during the COVID-19 pandemic. Other important stakeholders are the Ministries of Education and the different national and regional supporting bodies

(e.g. teacher and student unions) and the secondary schools themselves. Below, we outline the country specific measures taken in secondary schools to mitigate the pandemic.

### 3.1.1. COVID-19 crisis response timeline in the Netherlands

On March 15th, 2020, all schools in the Netherlands were closed. Only vulnerable students or students whose parents had an essential profession were allowed to go to school. After two months, schools were responsible for organizing hybrid education together with applying strict infection control measures to halt the spread of the virus, such as keeping 1.5 m distance. This led to huge differences in strategies and levels of education across the Netherlands. On July 1st, all schools were fully reopened. Students had to keep distance from school staff but not from each other anymore. In fall 2020, COVID-19 infections started to rise in secondary schools with some schools introducing a mask mandate.

On November 3rd, the Outbreak Management Team advised to stop physical education in secondary schools, but this advice was not followed by the government until December 15th, when all Dutch schools were closed again. Exceptions were made again for specific students, including final year students who were allowed to come to school on a regular basis. Three months later, March 2021, every student needed to be able to go to school at least once a week as decided by the Dutch government. But it wasn't until the 31st of May that students could go back to school again, which meant the second lockdown was the longest period of school closure in the Netherlands. Fig. 1 shows a visualization of the COVID-19 timeline in the Netherlands.

### 3.1.2. COVID-19 crisis response timeline in Finland

On March 16th, 2020, the Finnish government decided that all schools must close and start distance education. Exceptions were made for students who had received a decision on special support. Two months later on May 14th, schools re-opened, except for the Uusimaa region including Helsinki, where schools remained closed for the rest of the academic year. The new school year started in August 2020, with nationwide measures being implemented, such as keeping a 2-m distance. On October 10th, the government recommended that secondary schools switch to distance learning again, yet this was not legally binding and schools had the autonomy to decide on their own. During the fall of 2020 and winter of 2021, the government issued several recommendations around distance learning and mask mandates. However, only the Uusimaa region issued a second lockdown, including full school closures between December 2020 and May 2021. Fig. 2 shows a visualization of the COVID-19 timeline in Finland.

### 3.1.3. COVID-19 crisis response timeline in Ireland

On March 13th, 2020, the Irish government closed all schools for an initial period of two weeks. This period was prolonged multiple times, until May 18th, when schools were allowed to reopen for teachers to facilitate remote learning. On July 27th, a roadmap was published entitled 'Reopening Our Schools. The Roadmap for the Full Return to School.' This roadmap included the measure that teachers and students must wear face masks, when a physical distance of 2 m could not be maintained. At the end of August 2020, schools officially reopened. On January 6th, 2021, schools were closed again with the exception of special schools, special classes, and specialized settings. Final year students received in-school teaching provision for three days each week; all other students were supported to learn remotely. Schools had the autonomy to decide what worked best within these parameters. During the months of March and April 2021, schools gradually reopened for students, with final year students being allowed back first. Fig. 3 shows a visualization of the COVID-19 timeline in Ireland.

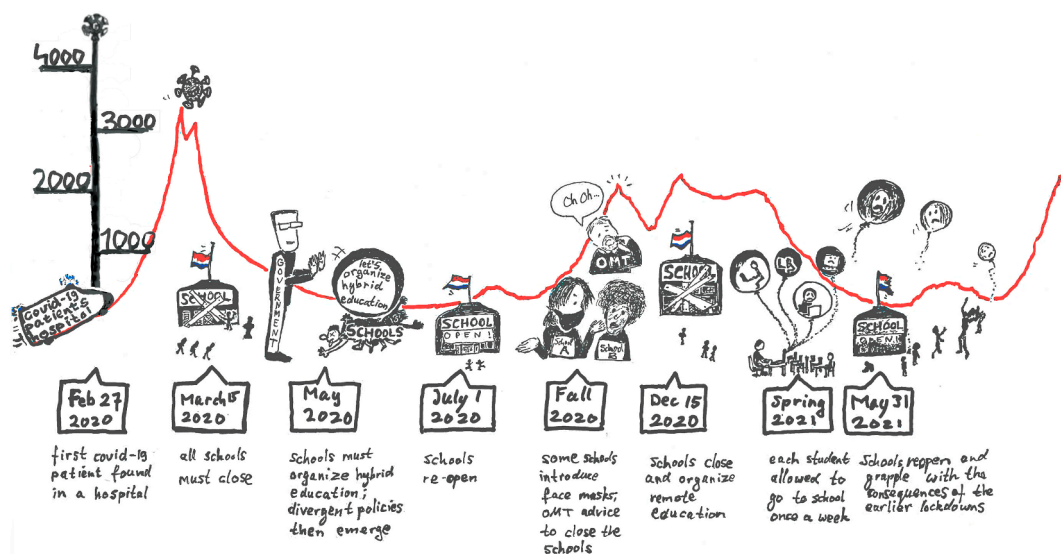


Fig. 1. The COVID-19 timeline in the Netherlands.

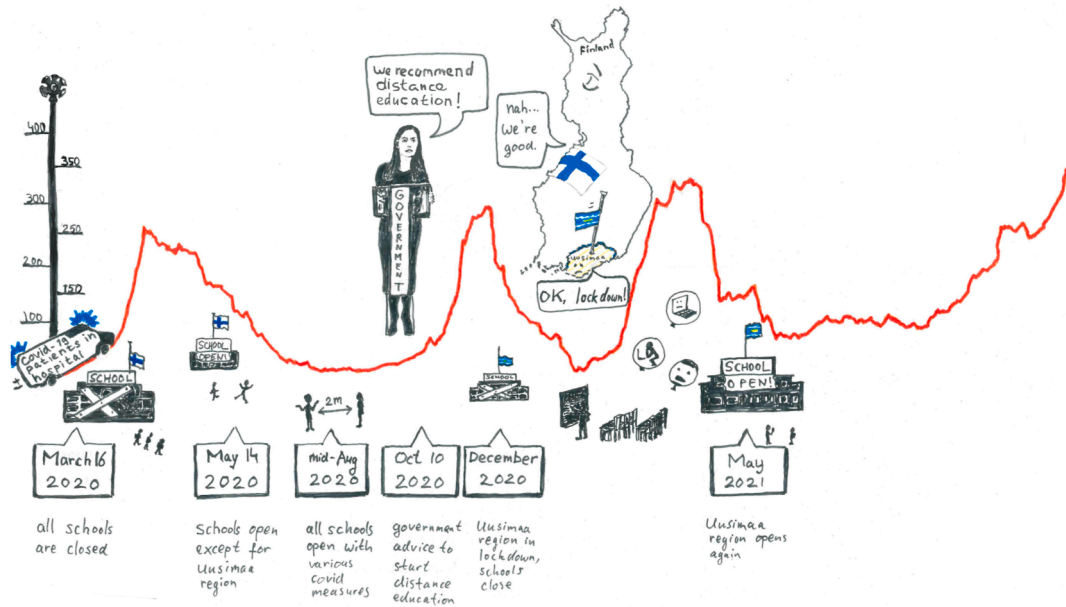


Fig. 2. The COVID-19 timeline in Finland.

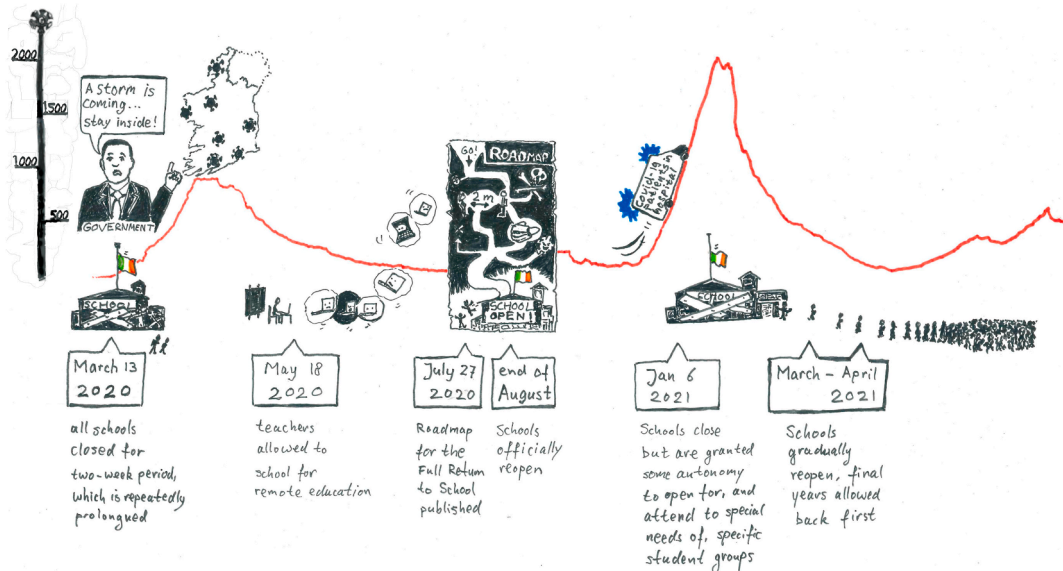


Fig. 3. The COVID-19 timeline in Ireland.

### 3.2. Participatory governance during the COVID-19 crisis response in secondary education

Below, we present how secondary education stakeholders engaged in participatory governance whilst developing effective mitigation strategies. We will first discuss processes on a national and regional level, describing the strengthening and emerging collaborations between stakeholders, the conflicting interests regarding school closures, and concerns regarding measures exacerbating inequalities amongst students. Then, we move to the challenges faced by local stakeholders in implementing rapidly-changing strategies, adapting to new educational standards, and the importance of the physical school environment for adolescents.

#### 3.2.1. COVID-19 crisis response on a regional and national level

On a regional and national level, the initial crisis response in all three countries was characterized by collectivity and collaboration. The familiar rhetoric of the virus as a common enemy fueled a determination amongst secondary education stakeholders to work together in infection control, meanwhile providing the best possible education. The traditionally slow and sometimes troublesome educational policy response was now replaced by shorter communication lines, causing stakeholders to be better able to find each other. Moreover, people were more involved with collective interest rather than individual priorities, allowing for quicker decision-making

processes and more informal contact between stakeholders. In Ireland, Public health staff explained the importance of close communication:

“All the teams who were working on the ground to implement [the mitigation strategies], I would meet regularly with them to see what the implementation needs and the findings on the ground were. I think the advantage is that we have a direct communication path. I know exactly what’s happening on the ground and what some of the issues or problems are.”

- Specialist in Public Health Medicine

Similarly, a member of the Dutch General Union of Educational Personnel explained that the sense of urgency created extended possibilities considering collaboration between supporting organizations, government bodies, and schools. Most secondary stakeholders on national and regional level described the strengthening and emergence of formal and informal collaborations in the beginning of the pandemic. For example, the Association of School Boards in Amsterdam Secondary Education set up an informal crisis team who would meet weekly to discuss the implementation of the mitigation strategies. During these meetings, members could additionally share emotions or express frustration, which was highly valued by the involved educational professionals. In Finland, the director of the Finnish Institute for Health and Welfare (THL) explained that they set up weekly, interactive meetings with regional supporting organizations in which everyone could share their status quo and get feedback from others. He explained that it was a very low-threshold meeting that was not so much about efficiency but more about discussing contemporary topics and issues.

The most conflicted decision-making process evolved around the reopening of schools in all three countries. In Finland in May 2020, restaurants and most businesses were still open, while schools were already closed. Not being able to fight economic interests, one Finnish member of the COVID-19 Coordination Group released an open letter to criticize the government's priorities. This created a general dissatisfaction about school closures among parents already upset about the prolonged remote learning, which eventually led to the reopening of primary schools first and secondary schools later. Hesitancy around school re-openings was partly due to students often being portrayed as ‘super spreaders’ in media outlets worldwide, concerns about students possibly not adhering to the rules, and more general beliefs that schools were too overcrowded to secure effective infection control. Additionally, connections between schools and public health organizations were very distant, especially in the beginning of the pandemic:

“We had to work together a lot with the head of youth health care from the municipality of Amsterdam, which is actually a bit of a shame. Because back in the days, every school had a school doctor, and that is what you would want now as well, a school nurse and doctor who are a direct point of contact. Now, we constantly had to create new, short communication lines with youth doctors in order to understand when to put classes in quarantine or send students home.”

- Member of the Amsterdam Association of School Boards Secondary Education, the Netherlands

In Ireland, teacher unions considered strikes to combat the opening of schools, with some teachers describing they felt too vulnerable to the virus when standing in front of a classroom full of students who were not always complying with the face mask and distancing rules. Where Ireland did not have a student union, the Finnish and Dutch student unions played a prominent role in crisis governance and were often heard in parliament. Yet despite being given a platform, both student and teacher unions felt it was hard to be listened to because of the conflicting interests and the lobbying done to push one's own arguments. This served as a great difficulty in developing effective mitigation strategies that would not inflict strong resistance from either union.

In the Netherlands, the General Union of Educational Personnel pinpointed that mitigation strategies were mostly directed at the vulnerability of students, omitting the safety of teachers. This feeling of not being prioritized was further amplified by the fact that the Dutch Association of Schools in secondary education had very short ties with the government and the National Action Committee for Students and less so with teacher unions. Moreover, a member of the Amsterdam Association of School Boards shared her concerns about teachers not being prioritized in the vaccination program after distance and masks rules were lifted and replaced by frequent rapid testing. She explained that this further enhanced the feeling that teachers had to continue doing their jobs without feeling they were adequately protected.

In addition to the conflicting interests and different lobbies, there were also political concerns around the effect of the school closures on infection control amongst adults. The Dutch prime minister indicated that closure of schools also meant parents were often forced to work from home rather than go to their office, which contributed to infection control. For this, the prime minister and his government were extensively criticized with youth experts arguing that children can never be used as a remedy for infection control. Additionally, a member of the Dutch OMT explained that there was no time for evaluation during and between the first waves of the pandemic as new crisis response strategies were constantly being developed. He explained that this meant such statements occurred spontaneously and consequently, had to be internally discussed on the spot and handled if a change in approach was required. In Ireland and Finland, this specific topic was not discussed by our respondents.

Another difficulty in developing infection control measures involved concerns around exacerbated existing problems and inequalities between and within schools. Several educational experts warned that inequalities were exacerbated by growing staff shortages and limited access due to the quality of school buildings that complicated infection control, including ventilation options. They pointed out a widening gap between students from different socio-economic backgrounds. A pediatrician and member of the Dutch Outbreak Management Team explained that there is a lot of talk about learning loss amongst students. He, however, told us that the average learning level of students did not change much as a result of the pandemic, but that the gap between the highest and lowest level between students became much bigger. In Finland similar worries were expressed:



“I think in every sector from every part of the country, that’s the main message we get. Those who are doing well, the distance learning is no problem and they have skills to learn autonomously. But those who are falling behind are now really falling behind. And this is one of the biggest problems we have to tackle in the coming years.”

– Advisor in the National Agency for Education, Finland

While generally experts call for heightened attention to pupils who were already struggling prior to the pandemic, a Dutch educational expert also raised concerns about pupils who used to excel socially and academically in school and have been suffering from loneliness and depression since the lockdowns. Lastly, Finnish experts also raised great concerns about emerging pupils with special education needs, who might have been overlooked during the pandemic and whose situation may have worsened during remote education. In Ireland, concerns around inequality between schools in providing tools for online education was raised by school management but not by any national or regional stakeholders.

### 3.2.2. COVID-19 crisis response on a local level

Regarding crisis governance on a local level, the one-directional, authoritative announcements of Dutch, Finnish, and Irish governments to abruptly close schools and later introduce hybrid education caused sudden and rapid changes in secondary schools. School staff generally felt they lacked the required knowledge and equipment to respond adequately to these top-down measures and carry the associated responsibility for infection control. Delays in guidance to schools on how to adapt to these new situations further complicated this. In Fig. 4, a student describes how it felt to constantly adapt to these delayed guidelines. Moreover, contradicting and confusing advice from the various supporting organizations - such as the regional municipalities, the city administrations, and the regional COVID-19 management teams - resulted in further insecurities and valuable time lost while trying to make the right decisions. In the Netherlands, each region had its own public health service that did not always issue the same advice. This meant schools had to navigate diverging guidelines in implementing the mitigation strategies when students from different regions got ill or tested positive. The combination of not yet established communication lines with relevant supporting organizations and the need for a rapid response placed a heavy burden on teachers and school management in the beginning of the pandemic, who had to make decisions outside of their general expertise.

Moreover, school principals were challenged to work with constantly changing guidelines to control the spread of the virus as well as to protect their students and staff. Students expressed they found it hard to adhere to all the new guidelines upon returning to school. In the Netherlands, Dutch students explained they saw the wearing of face masks in schools as controversial, because the ever changing measures seemed contradictory or did not make sense to them. For example, they had to wear face masks when in the hall-



*Hollow borders*  
Lieve, 16 years old

Two contours of my head that intersect. In the lower part, I used light colors and shapes with a psychedelic feel to them because it was kind of wild in your head and you have no idea what was happening exactly. In the upper part, I used dark colors, to mimic the feeling of the dark lock-down that has a more intense psychedelic effect. The contours consist of 'high' lines that are gold plated, they indicate rules we had to follow. In the overlapping part of my heads, there is empty space because we had no idea what to think or how to behave. The title refers to the boundaries that we cannot see, but to which we had to adhere.

Fig. 4. Hollow borders Student, 16 years old.

Two contours of my head that intersect. In the lower part, I used light colors and shapes with a psychedelic feel to them because it was kind of wild in your head and you had no idea what was happening exactly. In the upper part, I used dark colors, to mimic the feeling of the dark lock-down that has a more intense psychedelic effect. The contours consist of 'high' lines that are gold plated, they indicate rules we had to follow. In the overlapping part of my heads, there is empty space because we had no idea what to think or how to behave. The title refers to the boundaries that we cannot see, but to which we had to adhere.

ways, but not in the classroom, whilst infection could occur when within 1.5 m distance from someone for more than 15 min according to the government. Irish students explained that masks were used extensively in schools, but they experienced it as quite difficult because wearing them in class meant they were unable to hear each other in classes. They additionally expressed that they felt they had to be very flexible and adaptable in order to keep up with the changing guidelines. Dutch students explained they did not have any influence on measures and instead chose to just not adhere to the rules (with an exception of those in the student board). Fig. 5 shows concerns raised by a student who critiqued the guidelines. We did not discuss adherence to the mask mandate with Finnish students nor did we hear their experiences about their influence in changing guidelines.

Similarly to students, teachers also described this period as highly demanding, because they constantly had to adapt to new measures. A Dutch school principal explained what it did to teachers:

“Right before the summer holidays, you could see everyone was walking on eggshells. Everyone was completely exhausted. Apparently, it takes a mental toll on people when you constantly have to change. Constantly have to do just that little bit extra and keep an eye on everyone. There is no time to shut off. You cannot keep up with that.”

- School principal, the Netherlands

Online teaching became the new standard of education and proved difficult and demanding for teachers in various ways. First of all, many had little prior knowledge of remote learning technologies, and consequently had a hard time to keep students engaged and motivated. Second, teachers were confronted with increasing inequalities between students exposed by the varying needs for laptops or internet connection. In the Netherlands, the municipality of Amsterdam helped schools in providing laptops for students in need, and later contributed to facilitating stable internet connections. However, a teacher noticed that she then ran into the problem of overcrowdedness at students' homes, challenging students in their efforts to concentrate on school. Teachers from all three countries expressed they saw students struggling with the consequences of the pandemic, such as learning loss, internet addiction, and depression.

Despite teachers' already heavy workload, Finnish and Dutch students explained that their teachers took small initiatives to provide extra support. Some Finnish students expressed that these initiatives were 'life-saving.' One Dutch school had the advantage to follow the 'Kunskapsskolan' method, building on personalized education with weekly one-on-one attention for each individual student. Consequently, this school did not have the sudden COVID19-related challenge of losing students out of sight, something that did happen in other schools. The school served as an example for other schools locally and provided trainings about their personalized methods during the pandemic.



*Is this freedom?*  
Maryam, 16 years old

Two contours of my head that intersect. My painting is a critique of the government, not only in the Netherlands, but of the rest of the world as well. Is this freedom? Is this for the 'health' of the people?

Fig. 5. Is this freedom? Student, 16 years old.

Two contours of my head that intersect. My painting is a critique of the government, not only in the Netherlands, but of the rest of the world as well. Is this freedom? Is this for the 'health' of the people?

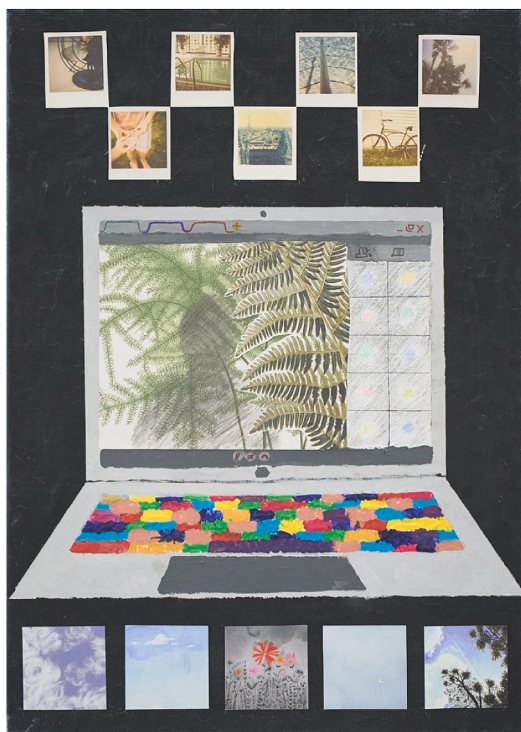
In all three investigated countries, the second lockdown strengthened the general strong belief amongst students, teachers, and educational experts that the physical school environment is essential to adolescents. The artwork in Fig. 6 shows how strongly students started depending on the online world. The Ministry of Education, Culture and Science in the Netherlands explained that they encouraged schools to identify the most vulnerable students who could continue attending school part-time during lockdowns. By January 2021, the ministry and schools had to conclude that actually all students fell within this group. This realization was partly influenced by strong signals from UNICEF and the Dutch Children's Ombudsmen about students urgently in need to come back to school in order to protect their social, emotional, and mental health. School principals indicated that because of the re-opening of schools they faced complicated dilemmas providing a school environment meanwhile balancing both teachers' health and students' well-being. When students were eventually allowed to return to school, various teachers and students indicated that students were expected to resume work as before the lockdown and special programs were put in place to make up for learning loss. Since many students struggled with adapting to the physical and social school environment and the fear of a new lockdown, our respondents in secondary schools expressed the need for more guidance for students. In the next section, we will extensively elaborate on the effects of lockdowns and the shift back to physical education on adolescents' social and mental health.

### 3.3. Unintended consequences of COVID-19 mitigation measures for students

In this section, we discuss the unintended consequences of the COVID-19 mitigation strategies for students. We explain students' efforts to navigate this crisis at such a young age, their feelings of resilience and responsibility, difficulties with isolation and associated mental health problems, and the struggles of socialization when returning to the physical school environment.

A member of the Association of school boards in Amsterdam secondary education expressed that in her opinion, there was too much talk about students being vulnerable. Whereas she agreed that we had to be wary of thinking that students are extremely flexible and can adapt to anything, we should emphasize their strengths to be resilient and help them in exercising this resilience by providing them with the right means. Students explained that over the course of the first weeks of the pandemic, they indeed found creative new ways to spend their time. They started keeping diaries to independently structure their lives, encouraged themselves to go outside, or replaced their time normally spent on football with finding new hobbies. Dutch teachers similarly described how their students developed new interests and were impressed with how quick most students adapted to changes. A Dutch teacher even explained to us how some students blossomed during lockdowns:

"Some students are a bit quieter, more in the background of the classroom. And those students really blossomed. They were suddenly writing whole stories. And if you spoke to them one-on-one through Teams, they suddenly said so much more than



*A look inside the life of a student*  
Lisa, 15 years old

I have visualized my life at the time of corona by looking at the life of a student, looking at the world around them through a computer screen and a window, as if you were disappearing. For this painting, I used paint and clipped photos from magazines, the photos depict different glimpses into different lives. The computer is grey because it was boring and tiring but the keyboard is coloured because the computer and the internet offered a way out in many different forms, from friends to movies/series.

Fig. 6. A look inside the life of a student Student, 15 years old.

I have visualized my life at the time of corona by looking at the life of a student, looking at the world around them through a computer screen and a window, as if you were disappearing. For this painting, I used paint and clipped photos from magazines, the photos depict different glimpses into different lives. The computer is grey because it was boring and tiring but the keyboard is coloured because the computer and the internet offered a way out in many different forms, from friends to movies/series.

normally. Some students loved having to structure their own work. They were so good at it, they got much higher grades than before corona.”

– Teacher, the Netherlands

Moreover, many students indicated that they felt responsible to contribute to halting the spread of the virus. This feeling was strongest in Finland, where students explained that even in the mitigation relaxation periods, they still often chose to not meet up with their friends to remain responsible and protect their families. Moreover, due to the ‘irresponsible youth’ rhetoric in the media worldwide, Finnish students reported that when they finally met friends, they felt guilt and fear for their loved ones. Similarly, most Dutch students strictly adhered to COVID-19 rules, but expressed how attitudes changed after the first lockdown when they returned back to school. They very well understood why vulnerable or older teachers were scared to get infected in schools as they acknowledged most students did not wear masks or kept distance anymore. Students sometimes expressed feeling conflicted about the mitigation strategies, as shown in the artwork in Fig. 7.

During the lockdowns, students had to follow classes from home, which was, according to many students challenging. They explained a feeling of being on holidays, soon realizing it was easy to do little during online education. As a result, many students felt demotivated, aggravated by a lack of outside activities and multiple sources of (online) distraction, such as Netflix and TikTok. Some students expressed they got addicted to online platforms, staring at screens throughout the day and staying up late disturbing their circadian rhythm. However, some students expressed they got tired of online communication as part of remote learning and banned all social media, augmenting their social isolation. Meanwhile, many students were concerned about the quality of online education. Graduating students were particularly stressed about their disrupted preparatory education for their end-of-school examinations, and the challenges they could encounter in their future education and career.

The lockdowns additionally limited students’ physical contact with friends. Few students explained friendships with one or two friends intensified and flourished. However, most students described becoming very antisocial, not leaving their rooms, and not following online education properly anymore, which is made visible by a student through the artwork in Fig. 8. One girl explained that she felt irritated by the littlest things and therefore she avoided seeing her friends and became alienated. The changing nature or loss of friendships was a great topic among students of all countries, as a Finnish student explained:

“I think cliques are more common now since we face the threat of going into lockdown anytime. They get closer with each other but more distant with outsiders. [...] This decreased my motivation to get into friend groups.”

– Student, 17 years old, Finland

Students and teachers explained that the lockdowns were taking its toll on the mental health of many students, of whom many for example suffered from loneliness, depression, or internet addiction. A Dutch student, for example, explained that by not being able to



*The consequences of politics*  
Conchita, 14 years old

I try to symbolize my confusion because my politics are not always in line with the rules.

Fig. 7. The consequences of politics Student, 14 years old.

I try to symbolize my confusion because my politics are not always in line with the rules.



Fig. 8. Loneliness Student, 16 years old.

During quarantine, you were not allowed to have contact with people. So, I could not meet with friends or family. This made me feel lonely.

*Loneliness*  
Sofia, 16 years old

During quarantine, you were not allowed to have contact with people. So, I could not meet with friends or family. This made me feel lonely.

talk to people or go outside as much as she would normally do, she started to suppress her feelings and bottle them up inside her mind:

“I had a period where I really did not want to pretend to be happy. I'd just sit at the dinner table with an angry face, waiting for another day to come. [...] It lasted for a few months. I was just so angry. It felt like I had almost no emotion anymore because there was nothing that I could have felt about things. And when you have no emotion, it feels as if you are a little bit dead.”

– Student, 14 years old, the Netherlands

Many school principals and teachers from all countries explained that these stories were not exceptional, some students were so isolated and lost out of sight, and care coordinators were busier than ever trying to support students. By this time, students with serious mental health problems were placed on long waiting lists for external psychological services, which were in all three countries already problematic prior to the pandemic. Finnish students expressed disappointment and frustration with these waiting times, but said they believed the school had done everything they could and praised online education for giving them some structure:

“Online school really saved my mental health from completely falling apart during fall of 2020.”

– Student, 16 years old, Finland

In addition, teachers and students reported how the lockdowns disturbed various social processes for students in all three countries. The cancellation of end-of-the-year events meant students were unable to find closure, disrupting the process of changing years or schools (from primary to secondary education, or for graduate students leaving school). Multiple Dutch teachers stressed the importance of symbolic school events (e.g., introduction, prom, or graduation) in transitioning into adulthood, and their concerns regarding the disruptions in these transitions. Various teachers discussed that the effects of these disruptions were particularly visible when students came back to school after the second lockdown. Students had been amongst their parents for so long, isolated from peers their age or a school environment, that they had lost a sense of who they were, what was allowed, and what was not.

“When we returned from lockdown, you could see that students were so preoccupied with what their position was in the classroom. Who am I? What do I want? Which way should I go? And that's very crazy, because usually you have that norming and storming at the beginning of their first year of high school. It is a process of how students learn to feel safe in a group. And now we found that process happening all over again. [...] There were also so many little fights just because students could not communicate with each other anymore. They were just uncontrollable.”

– Teacher, the Netherlands

Dutch students indicated having trouble with communicating with each other and reported that there were more misunderstandings and fights. Associated feelings of insecurity were further amplified by not knowing whether they could come to school or had to stay in isolation at home, since there was always the risk of getting infected with the virus. Students described that sometimes whole

classes or years had to stay home in quarantine. They explained that students themselves were responsible to keep up with school work since there was no more hybrid education. On top of that, online schooling impacted students' ability to focus, their self-esteem, and perceived capabilities:

"I am less optimistic about my skills and abilities to study now. Especially when we had to get back it was hard to even go to school due to fear of realizing how talentless I am."

– Student, 16 years old, Finland

#### 4. Discussion

Our European research focused on the COVID-19 crisis response in secondary schools and the associated participatory governance approach, including challenges encountered. By including perspectives at the local, regional, and national level, we present an enhanced understanding of how formal and informal infection control measures were shaped by the contingencies of daily life and consequently how they were experienced. The aim was to collect best practices and share lessons learned to inform future crisis strategies in secondary schools and to raise awareness about certain mitigation measures with adverse effects on adolescents' mental health and socio-emotional development (Table 3).

We have analyzed our findings using our proposed TAPIC-R heuristic model of governance, based on the WHO's TAPIC model including *transparency*, *accountability*, *participation*, *integrity*, and *capacity* as crucial dimensions of governance that may pave the way to "good governance" [22–24]. We modified the model to do justice to the (needed) participatory governance approach and added the valuable dimension of *resilience* in order to recognize bottom-up, "emergent," and often informal societal responses to the crisis and how they are related to the formal responses by authorities [27–29]. We define resilience as recognizing civic communities' abilities to develop capacities to prepare for disruptions, to recover from societal shocks and stresses, and to adapt and grow from the disruptive experience.

The TAPIC-R model works by first asking in which dimensions of governance an issue lies. We found that efforts of good governance in the beginning stages of the pandemic centralized around the dimension *participation*. Our findings from all three countries highlight that, while formal decision-making based on fit-for-purpose scientific knowledge is important, a combination with emergent and participatory approaches is urgently needed for effective collaboration and coordination among all involved stakeholders. Local stakeholders, however, did not feel they could appropriately handle the crisis on their own and explained they were in desperate need of centralized decision making. They asked for clear, "top-down," centralized decision making, at least in relation to general rules. The newness, confusion, and lack of answers that characterized the beginning of the pandemic resulted in insecurity, fear, and feelings of misplaced responsibility. However, when it comes to the nuances of the general guidelines, local stakeholders pointed at the value of collaborative decision-making enabled by newly formed and closer communication channels between policy makers and those 'on the ground.' The COVID-19 crisis has revealed that effective participatory governance needs to engage the social sectors and to create a sense of ownership. It requires the participation of various entities across both temporal phases and scales of different crisis events [34].

We found that efforts for participatory governance were, paradoxically, put largely towards collaboratively organizing a top-down response of the implemented mitigation strategies. In this regard, (self)organization and authority are still largely defined by local stakeholders' interconnectedness and interdependencies with existing policies and objectives in the formal response to COVID-19. Instead, we argue that more efforts should have been put towards including local stakeholders' individual concerns in an earlier stage of the pandemic. Consequently, crisis response can effectively adapt to local circumstances, meanwhile enhancing a more complete sense of participation of all stakeholders involved.

The second dimension of the TAPIC-R model we encountered in our findings is *transparency*. Transparency serves as a gateway to effective crisis communication and therefore plays a key role in developing support for the implemented measures [23]. Yet, we have shown that the COVID-19 crisis governance was characterized by the juggling of priorities and taking into account the conflicting vulnerabilities of, amongst others, students and staff. On top of that, these struggles were paired with a complexity and unpredictability of the virus itself, meaning policy makers had to develop policies and guidelines to cope with the pandemic by deriving the known from the unknown [35,36].

Whilst there is recognition for the difficulty of this task for policy makers, local stakeholders in our study reported doubts with the chosen mitigation strategies due to contradictory information and often changing reasoning. Effective crisis communication and expectation management should be not just an attempt to restore formal authorities' legitimacy in a top-down fashion but an outcome of collaboration between various stakeholders to gain trust in measures taken [37]. This lack of trust may have also been facilitated with a lack of transparency in the reasoning behind implemented mitigation strategies. A lack of clarity and consistency challenged clear crisis communication, which sometimes led to the feeling of an absence of transparency. Furthermore, this raised feelings of distrust and fueled the belief in misinformation. Over time, these feelings resulted in heated debates on topics such as the purely medical approach of the OMTs [38] and the therewith experienced priority of physical over mental health.

Alongside feelings of a lack of transparency in the COVID-19 crisis governance, we additionally encountered that the *integrity* of decision-making processes was questioned by the actors we interviewed. We found that government bodies were so preoccupied with responding the rapid changes, that they felt they had little to no time to evaluate their crisis response strategies. At the time of writing this article, independent national research teams started coming out with first reports on the crisis response and implemented mitigation strategies. For example, In October 2022, the Dutch Safety Board published a report that analyzed the country's COVID-19 response strategy between September 2020 and July 2021, in which they too concluded that the government insufficiently evaluated the chosen mitigation strategies, including the closure of secondary schools [39]. The effectiveness of school closures in infection con-

**Table 3**  
Lessons learned and best practices/policy recommendations.

Topic	Lessons learned	Best practices/Policy recommendations
Participation Collaboration	There was a need from local and regional stakeholders for general measures and big decisions to be made top-down. Some school directors reported they are not infection control experts but felt an increased responsibility around decision-making processes, which resulted in great stress.	General measures and big decisions need to be top-down and more collaboration between different experts is needed. Moreover, schools should be adequately supported in implementing the measures. However listening to those impacted by decisions is key, due to unintended consequences.
Transparency Face masks	The reasons for wearing face mask were inconsistent in some schools (e.g. wearing only when moving around but not while sitting). Face masks in schools often negatively affected students' social development (e.g. facial emotional learning).	The reasons for the use of face masks in schools need to be well-argued and only implemented when justified.
Importance of clear communication	Some local stakeholders in our study reported doubts with the chosen mitigation strategies due to contradictory information and often changing reasoning. Unclear communication about strategies did not only result in stress and anxiety in the field, but also in the long-term loss of faith and trust in supporting bodies.	Governments should evaluate the communication strategies during the pandemic in order to establish which standards of clear communication should be adhered to in future crisis situations. Moreover, they should formalize newly formed crisis connections.
Integrity Delayed evaluation	The effects of the implemented mitigation strategies during the different waves of the pandemic were not always (timely) evaluated.	Future crisis governance should prioritize timely evaluation of policies as well as transparent decision-making processes that are based on the findings of these evaluations.
Accountability School closures	School closures had long-lasting and unpredictably negative consequences on adolescents' social and cognitive development. Almost all respondents reported strong resistance against the school closures as infection-prevention measure. Getting out of routine for students caused disruptions in socialization processes and asks individualized efforts of teachers in order to deal with this disruption. Teacher unions sometimes advocated for the closure of schools because they felt teachers were exposed to disproportionately high risk since students often do not adequately adhere to measures.	School closures should be the last resort in infectious control strategies and due consideration should be given to infection control and negative consequences for students. However, when opening the schools, vulnerable teachers need to be adequately protected and schools should receive support from infection-prevention experts in how to create responsible and safe teaching environments.
Capacity Unequal representations in decision-making processes	Both students and teachers reported feeling underrepresented in certain decisions around the mitigation strategies. The needs of teachers and students sometimes opposed each other. Therefore decision-making often dependent on who had the strongest lobby at the time.	Governments should invest in communication with students' and teachers' organizations and a more participatory, bottom-up approach needs to be adhered to address the diverging needs of local stakeholders.
Increased sense of responsibility of students	Some students reported that they avoided meeting friends to protect their families even 1, 5 years into the pandemic. Due to the 'irresponsible youth' rhetoric, some students reported that when they finally met friends they felt guilt and fear for their loved ones.	Vulnerable populations should be protected from discourses of blame and governments should tailor their communication to vulnerable groups in crisis response.
Unintended consequences		

(continued on next page)

Table 3 (continued)

Topic	Lessons learned	Best practices/Policy recommendations
Learning loss, mental health consequences and disrupted processes of identity-forming for students	Many adolescents reported a wide range of anxiety and depressive symptoms. Their artworks showed these devastating effects. Specific concern was raised for students who were already struggling prior to the pandemic but also for students who excelled in the traditional school environment and therefore experienced the pandemic as more difficult. Disruption to students' learning and social development caused multiple struggles as well as complications communicating and forming social relationships.	Learning loss amongst secondary school students has received widespread attention. Whilst important, equal attention should be paid to the socio-emotional effects on students. Governments should be encouraged and guided in helping schools deal with the increased demand for mental health services. Creative methods can serve as a way of bringing the message around socio-emotional effects across to stakeholders, as these effects are hard to capture in numbers.
New forms of education	Many students reported difficulties with the increase in independent learning, which resulted in problems such as loss of motivation, concentration, structure, and time perception. Many teachers reported the feeling that they weren't able to cope with the increased demand of individual education needs.	More financial support should be provided for educational institutions to be able to cope with the increased demands of individual education needs.
Increased inequality	Multiple stakeholders reported great concerns about the increased inequality between schools and amongst pupils.	Initiatives to decrease inequality amongst students should be aimed at providing all students with the appropriate means to follow either online or physical education. Moreover, initiatives should be tailored to the specific needs of individual students.
Resilience Participatory governance	The nuances of implementing guidelines should have better incorporated the viewpoints of local stakeholders.	More specific guidelines that depend on the individual attributes of the field should include more bottom-up participation. Additionally, more efforts should be put towards including local stakeholders' concerns in an early stage of the pandemic. This way, measures can be developed based on the specific context of different schools and what is deemed feasible.

tol is less proven than that of businesses and the service sector [40]. A similar report published by the Ministry for Foreign Affairs of Finland concluded that there were considerable knowledge gaps on the results of cooperation utilized during the pandemic which could only be bridged at a later time [41]. Future crisis governance should therefore prioritize timely evaluation of policies as well as open decision-making processes that are based on the findings of these evaluation in order to operate on trust and therewith create support for the implemented policies. Additionally, we, together with various stakeholders of the secondary school sector, now call for a realization that prolonged school closures do more harm than good, hoping to prevent the full closure of schools in the future.

Another discussion evolved around feelings of a lack of *accountability* for policy makers. Accountability aims to prevent feelings of betrayal amongst local stakeholders who feel promises of collaborative efforts to implement mitigation strategies have been broken. More transparency and accountability would have thus served as a gateway to support for the mitigation strategies as acting with openness lays the foundation of trust. Our research shows that these discussion around the handling of the government and accountability became more divisive over time due to uncertainties about the pandemic, the possibility whether we can control or diminish the virus, and the effectiveness and unintended consequences of the measures taken.

*Capacity* building efforts of good governance is another often-mentioned topic in our study. Collectively making sense of the COVID-19 crisis enables relational understanding and thus enlarges the coordinating capacity of actors with different institutional backgrounds. This requires all stakeholders being engaged in dialogue, in which they navigate their differences in norms, meanings, and interests to achieve a shared goal [42,43]. Putting efforts of capacity building towards collaboration with local communities allows for the influence of characteristics of the individual, relational, and structural contexts in organizations, and may lead to growth not only in individuals' knowledge but also in individuals' relational capacity for learning and applying knowledge. Overall, the call for *participation, transparency, integrity, accountability, and capacity*, becomes even greater when looking at the unintended consequences of the COVID-19 crisis governance.

In terms of unintended consequences, we encountered many issues derived from remote education, such as students struggling with loneliness, anxiety, or depression as a result of prolonged times of insecurity and isolation. Moreover, we found that the disruption to students' social development caused communication issues as well as complications forming social relations. This is especially worrying as it interfered with adolescents' processes of moving away from their parents and forming more individual identities [9]. The disruptions to identity-forming processes caused by the pandemic during adolescence may cause uncertainty and lead to adolescents' diminishing expectations about their lives, future, and themselves [44]. We also saw students struggling to keep up with online education, such as loss of motivation, concentration, and time-perception. Feeling like one is underperforming compared to peers is one of the biggest determining factors in developmental psychology for challenges throughout adulthood, with long-lasting impacts on mental and physical health [45]. [10] explain that suitable intervention strategies to combat these disruptions to adolescents' development need to be identified and implemented if we want to be able to prevent long-lasting impacts of the pandemic. We have seen that individualized education such as in the *Kunskapskolan* method proved of great value during the pandemic. Educational



systems in general would therefore benefit from a shift to more personalized education forms since this would render schools more resilient for future crisis situations.

Lastly, we saw that the COVID-19 crisis has laid bare as well as increased existing inequalities amongst students and between schools. Sevelius et al. [50] already warned that marginalized groups may be proven to be more difficult to reach by local governments and parents who do not master the local language would not always be aware of the COVID-19 regulations and were additionally unable to provide home schooling. We found that the needs of students diverged greatly and that also students who excelled in the traditional school environment experienced great difficulties. Therefore, individualized initiatives to account for the different ways students were affected during the pandemic are needed in order to prevent a further increase of inequality.

Adopting a participatory governance approach in the COVID-19 era implies the recognition of societal resilience that highlights capacities to a positive trajectory of functioning and adaptation after the crisis [46,47]. This is why we propose *resilience* as a sixth dimension, resulting in the TAPIC-R heuristic model. We found strong resilience and flexibility among students in their first reactions to the pandemic. The initial significant changes in their lives were greeted with excitement and creative solutions. Zaeske et al. [48] found that adolescents experienced a sense of empowerment when coming up with innovative and creative solutions to stay connected during the pandemic, helping them in dealing with the isolation. However, we also saw that, while in the Netherlands and Finland student unions exist, the pandemic has proven that their voices often remain unheard. Experts in education have emphasized the need for stronger student representation in governments and centered this task as a core element of improvement in both effective interventions for students recovering from the current pandemic, but also for future infection control strategies.

Our study contributes to a full understanding of how to best adapt to the vulnerabilities of adolescents in crisis situations by using a whole-of-society approach that allowed us to investigate the experiences of adolescents during the COVID-19 pandemic from a complex point of view. We have found that whilst adolescents' creative resilience to adapt to social change showed they are able to guide themselves through remote education, the effects on the mental and social health of students during the prolonged phases of the lockdowns show that there is no better place for them to be than in school. Our participatory action research, including collaborative and reflexive processes between researchers and respondents, has led to art and an ethnographic film (see trailer: <https://vimeo.com/761153939/28fff0574a>). This creates a platform on which students, and respondents in general, can represent their ideas and experiences [49]. Consequently, this may strengthen their position and voice in processes of public decision-making that affect their lives. With the art presented throughout the paper and the ethnographic film we want to contribute to the empowerment of adolescents in voicing their concerns in times of crises.

#### 4.1. Limitations and strengths

Limitations of our study include the varying sample qualities and sizes of the participating countries. The majority of our data came from the Dutch part of the project, and the research also used more longitudinal and in-depth methodology there (e.g. art-based ethnography). In Ireland we were only given access to a boarding school, which special attributes make generalizability and comparability difficult. In Finland we were not able to visit schools for participant observation, and instead, we held the focus group session with the students online. However, we do not attempt to make a generalized comparison between the three investigated countries but we rather approach is as one large data set from which we can learn diverging experiences of national, regional, and local experts in three European countries. Specific examples per country were mentioned if they occurred and important differences were highlighted when needed.

Moreover, although the three countries included in this study show some variation in political landscape, they all have Northern/Western European democracies. This means we were unable to include a Southern European perspective nor did our research range outside of Western Europe in general. Future research should therefore focus on how we can compare participatory governance between diverging democracies or non-democratic governments. It would also be of interest to compare how the political landscape may influence the effect of the mitigation strategies on adolescents.

This research showed the unintended consequences of the COVID-19 mitigation strategies on adolescents' well-being. We saw mental health problems throughout our student respondent group regardless of their social-economic background or the means they had to tackle their issues. However, responses to mental health issues and opportunities to resolve them can vary between students from different socio-economic backgrounds, and we did hear socio-economically charged experiences that are inexplicitly interwoven in students' stories of the pandemic. Therefore, we propose future research which investigates these differences and their effects, taking into account the inequalities amongst students in what help is available to them.

## 5. Conclusion

Our European multi-country qualitative research investigated the COVID-19 crisis response in secondary schools and the role of national, regional, and local stakeholders in contributing to a participatory governance approach. Our findings contribute to a better understanding of what efforts were made to facilitate participatory governance as well as where a more bottom-up approach would have served useful in successfully implementing the mitigation strategies needed to combat the spread of the virus. Moreover, we show how these mitigation strategies have led to unintended consequences such as feelings of isolation and associated mental health problems, and the struggles of socialization when returning to the physical school environment. Our findings highlight the importance of schools in the socio-emotional developments of adolescents. We introduce the TAPIC-R model to analyze good governance, building upon the TAPIC model but additionally emphasizing the role of resilience in shaping participatory governance. We argue this is urgently needed during crises to strengthen engagement of the community, including vulnerable groups and achieve positive outcomes within and across policy structures and action domains.

## Funding

HERoS has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003606.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

The data that has been used is confidential.

## Acknowledgements

We would like to thank all our respondents for sharing their stories with us and therewith contributing to this study. We would like to thank David Passenier for drawing the timelines presented in chapter 3.1. We would like to thank Laura Olkkonen for her contribution in checking the Finnish timeline.

## References

- [1] F. Götzinger, B. Santiago-García, A. Noguera-Julían, M. Lanaspá, L. Lancella, F.I.C. Carducci, A. Riordan, COVID-19 in children and adolescents in Europe: a multinational, multicentre cohort study, *Lancet Child Adolesc. Health* 4 (9) (2020) 653–661, [https://doi.org/10.1016/S2352-4642\(20\)30177-2](https://doi.org/10.1016/S2352-4642(20)30177-2).
- [2] J.M. Fegert, B. Vitiello, P.L. Plener, V. Clemens, Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality, *Child Adolesc. Psychiatr. Ment. Health* 14 (1) (2020) 1–11, <https://doi.org/10.1186/s13034-020-00329-3>.
- [3] S. Lindblad, G.B. Wärvik, I. Berndtsson, E.B. Jodal, A. Lindqvist, G. Messina Dahlberg, M. Wyszynska Johansson, School lockdown? Comparative analyses of responses to the COVID-19 pandemic in European countries, *Eur. Educ. Res. J.* 20 (5) (2021) 564–583, <https://doi.org/10.1177/1474904121104123>.
- [4] U. Panchal, G. Salazar de Pablo, M. Franco, C. Moreno, M. Parellada, C. Arango, P. Fusar Poli, The impact of COVID-19 lockdown on child and adolescent mental health: systematic review, *Eur. Child Adolesc. Psychiatr.* (2021) 1–27, <https://doi.org/10.1007/s00787-021-01856-w>.
- [5] N. Racine, B.A. McArthur, J.E. Cooke, R. Eirich, J. Zhu, S. Madigan, Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis, *JAMA Pediatr.* 175 (11) (2021) 1142–1150, <https://doi.org/10.1001/jamapediatrics.2021.2482>.
- [6] D. Fancourt, A. Steptoe, F. Bu, Trajectories of anxiety and depressive symptoms during enforced isolation due to COVID-19 in England: a longitudinal observational study, *Lancet Psychiatr.* 8 (2) (2021) 141–149, [https://doi.org/10.1016/S2215-0366\(20\)30482-x](https://doi.org/10.1016/S2215-0366(20)30482-x).
- [7] G.S. Hall, *Adolescence: its Psychology and its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education, second vol.*, D. Appleton, 1904.
- [8] N. Magson, J. Freeman, R. Rapee, C. Richardson, E. Oar, J. Fardouly, Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic, *J. Youth Adolesc.* 50 (1) (2020) 44–57, <https://doi.org/10.1007/s10964-020-01332-9>.
- [9] J. van Hoorn, E. van Dijk, R. Meuwese, C. Rieffe, E.A. Crone, Peer influence on prosocial behavior in adolescence, *J. Adolesc. Res.* 26 (1) (2016) 90–100, <https://doi.org/10.1111/jora.12173>.
- [10] T.D. Benton, R.C. Boyd, W.F. Njoroge, Addressing the global crisis of child and adolescent mental health, *JAMA Pediatr.* 175 (11) (2021) 1108–1110, <https://doi.org/10.1001/jamapediatrics.2021.2479>.
- [11] T. Lancet, Generation coronavirus? *Lancet* 395 (2020) [https://doi.org/10.1016/S0140-6736\(20\)31445-8](https://doi.org/10.1016/S0140-6736(20)31445-8), article 10242.
- [12] M. Qi, S. Zhou, Z. Guo, L. Zhang, H. Min, X. Li, J. Chen, The effect of social support on mental health in Chinese adolescents during the outbreak of COVID-19, *J. Adolesc. Health* 67 (4) (2020) 514–518, <https://doi.org/10.1016/j.jadohealth.2020.07.001>.
- [13] P. Banati, N. Jones, S. Youssef, Intersecting vulnerabilities: the impacts of COVID-19 on the psycho-emotional lives of young people in low- and middle-income countries, *Eur. J. Dev. Res.* 32 (5) (2020) 1613–1638, <https://doi.org/10.1057/s41287-020-00325-5>.
- [14] G. Bonanno, S. Galea, A. Bucchiarelli, D. Vlahov, What predicts psychological resilience after disaster? The role of demographics, resources, and life stress, *J. Consult. Clin. Psychol.* 75 (5) (2007) 671–682, <https://doi.org/10.1037/0022-006x.75.5.671>.
- [15] R. Kessler, G. Amminger, S. Aguilar-Gaxiola, J. Alonso, S. Lee, T. Astin, Age of onset of mental disorders: a review of recent literature, *Curr. Opin. Psychiatr.* 20 (4) (2007) 359–364, <https://doi.org/10.1097/ycp.0b013e32816ebc8c>.
- [16] D.M. de Miranda, B. da Silva Athanasio, A.C.S. Oliveira, A.C. Simoes-e-Silva, How is COVID-19 pandemic impacting mental health of children and adolescents? *Int. J. Disaster Risk Reduct.* 51 (2020) <https://doi.org/10.1016/j.ijdr.2020.101845>, article 101845.
- [17] E. Golberstein, H. Wen, B.F. Miller, Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents, *JAMA Pediatr.* 174 (9) (2020) 819–820, <https://doi.org/10.1001/jamapediatrics.2020.1456>.
- [18] D. Novins, J. Stoddard, R. Althoff, A. Charach, S. Cortese, K. Cullen, et al., Editors' note and special communication: research priorities in child and adolescent mental health emerging from the COVID-19 pandemic, *J. Am. Acad. Child Adolesc. Psychiatry* 60 (5) (2021) 544–554, <https://doi.org/10.1016/j.jaac.2021.03.005>.
- [19] H.A. Rothan, S.N. Byrareddy, The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak, *J. Autoimmun.* 109 (2020) <https://doi.org/10.1016/j.jaut.2020.102433>, article 102433.
- [20] V.P. Nanda, The “good governance” concept revisited, *Ann. Am. Acad. Polit. Soc. Sci.* 603 (1) (2006) 269–283, <https://doi.org/10.1177/0002716205282847>.
- [21] R.V. Aguilera, A. Cuervo-Cazurra, Codes of good governance worldwide: what is the trigger? *Organ. Stud.* 25 (3) (2004) 415–443, <https://doi.org/10.1177/0170840604040669>.
- [22] S.L. Greer, N. Vasev, H. Jarman, M. Wismar, J. Figueras, It's the Governance, Stupid! TAPIC: a Governance Framework to Strengthen Decision-Making and Implementation, European Observatory on Health Systems and Policies, Copenhagen, 2020.
- [23] S.L. Greer, M. Wismar, M. Kosinska, World Health Organization., Towards intersectoral governance: lessons learned from health system governance, *Public Health Panorama* 1 (2) (2015) 128–132.
- [24] S.L. Greer, M. Wismar, G. Pastorino, *Civil Society and Health: Contributions and Potential*, Forty-Eight Vol, World Health Organization, Geneva, 2017.
- [25] T.G. Weiss, Governance, good governance and global governance: conceptual and actual challenges, *Third World Q.* 21 (5) (2000) 795–814, <https://doi.org/10.1080/713701075>.
- [26] C.M. Weible, D. Nohrstedt, P. Cairney, D.P. Carter, D.A. Crow, A.P. Dumová, D. Stone, COVID-19 and the policy sciences: initial reactions and perspectives, *Pol. Sci.* 53 (2020) 225–241.
- [27] D.M. Abramson, L.M. Grattan, B. Mayer, C.E. Colten, F.A. Arosemena, A. Bedimo-Rung, M. Lichtveld, The resilience activation framework: a conceptual model of how access to social resources promotes adaptation and rapid recovery in post-disaster settings, *J. Behav. Health Serv. Res.* 42 (1) (2014) 42–57, <https://doi.org/10.1007/s11414-014-9410-2>.

- [28] C.S. Holling, Resilience and stability of ecological systems, *Annu. Rev. Ecol. Systemat.* 4 (1) (1973) 123, <https://doi.org/10.1146/annurev.es.04.110173.000245>.
- [29] P. Martin-Breen, J.M. Anderies, *Resilience: A Literature Review*. Bellagio Initiative, Institute of Development Studies, Brighton, 2011.
- [30] F. Fischer, Participatory governance as deliberative empowerment: the cultural politics of discursive space, *Am. Rev. Publ. Adm.* 36 (1) (2006) 19–40, <https://doi.org/10.1177/0275074005282582>.
- [31] T. Christensen, P. Lægread, The whole-of-government approach to public sector reform, *Publ. Adm. Rev.* 67 (6) (2007) 1059–1066, <https://doi.org/10.1111/j.15406210.2007.00797.x>.
- [32] T. Janamian, L. Crossland, C.L. Jackson, Embracing value co-creation in primary care services research: a framework for success, *Med. J. Aust.* 204 (7 Suppl) (2016) 5–11, <https://doi.org/10.5694/mja16.00112>.
- [33] B.G. Glaser, A.L. Strauss, *The Discovery of Grounded Theory: Strategies For Qualitative Research*, Routledge, 2017.
- [34] K.A. Daniell, A. Kay, Multi-level governance: an introduction, in: K.A. Daniell, A. Kay (Eds.), *Multi-level Governance: Conceptual Challenges and Case Studies from Australia*, Australian National University Press, Canberra, 2017, pp. 3–32.
- [35] C. Sohrabi, Z. Alsafi, N. O'Neill, M. Khan, A. Kerwan, A. Al-Jabir, R. Agha, World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19), *Int. Surg. J.* 76 (2020) 71–76, <https://doi.org/10.1016/j.ijisu.2020.02.034>.
- [36] R. Verity, L.C. Okell, I. Dorigatti, P. Winskill, C. Whittaker, N. Imai, A. Dighe, Estimates of the severity of coronavirus disease 2019: a model-based analysis, *Lancet Infect. Dis.* 20 (6) (2020) 669–677, [https://doi.org/10.1016/S1473-3099\(20\)30243-7](https://doi.org/10.1016/S1473-3099(20)30243-7).
- [37] F.K. Boersma, D. Allen, T. Comes, I. Stanciugelu, T. Terpstra, Communicating disaster risk, in: K. Poljanšek, M. Marin Ferrer, T. De Groeve, I. Clark (Eds.), *Science for Disaster Risk Management 2017: Knowing Better and Losing Less*, Publications Office of the European Union, Luxembourg, 2017 (Chapter 4).
- [38] M. Holdert, R. van Hest, J. de Vriez, Wetenschappers Bekritiseren Gebrek Aan Openheid Corona-Adviezen, 2020. <https://nos.nl/nieuwsuur/artikel/2331727-wetenschappers-bekritiseren-gebrek-aan-openheid-corona-adviezen>. (Accessed 13 August 2022). accessed.
- [39] Dutch Safety Board, Approach to Covid-19 Crisis, Part 2: September 2020 to July 2021, 2022. <https://www.onderzoeksraad.nl/en/aanpak-coronacrisis-deel2>. (Accessed 28 November 2022). accessed.
- [40] S. Walsh, A. Chowdhury, V. Braithwaite, S. Russell, J. Birch, J. Ward, O.T. Mytton, Do school closures and school reopenings affect community transmission of COVID-19? A systematic review of observational studies, *BMJ Open* 11 (8) (2021) e053371, <https://doi.org/10.1136/bmjopen-2021-053371>.
- [41] Ministry for foreign affairs of Finland, Response of Finnish Development Policy and Cooperation to the COVID-19 Pandemic, 2022. <https://um.fi/development-cooperation-evaluation-reports-comprehensive-evaluations>. (Accessed 28 November 2022). accessed.
- [42] J. Wolbers, F.K. Boersma, The common operational picture as collective sensemaking, *J. Contingencies Crisis Manag.* 21 (4) (2013) 186–199, <https://doi.org/10.1111/1468-5973.12027>.
- [43] J. Wolbers, K. Boersma, Key challenges in crisis management, in: R.P. Gephart, C.C. Miller, K.S. Helgesson (Eds.), *The Routledge Companion to Risk, Crisis and Emergency Management*, Taylor and Francis, New York, 2018, pp. 17–34.
- [44] A. McKinlay, T. May, J. Dawes, D. Fancourt, A. Burton, 'You're just there, alone in your room with your thoughts': a qualitative study about the psychosocial impact of the COVID-19 pandemic among young people living in the UK, *BMJ Open* 12 (2) (2022) e053676, <https://doi.org/10.1136/bmjopen2021-053676>.
- [45] R. Viner, E. Ozer, S. Denny, M. Marmot, M. Resnick, A. Fatusi, C. Currie, Adolescence and the social determinants of health, *Lancet* 379 (9826) (2012) 1641–1652, [https://doi.org/10.1016/S0140-6736\(12\)60149-4](https://doi.org/10.1016/S0140-6736(12)60149-4).
- [46] D. Aldrich, *Building Resilience: Social Capital in Post-Disaster Recovery*, University of Chicago Press, Chicago, 2002.
- [47] L.K. Comfort, A. Boin, C.C. Demchak, *Designing Resilience: Preparing For Extreme Events*, University of Pittsburgh Press, Pittsburgh, 2010.
- [48] L.M. Zaeske, T.P. Harris, A. Williams, G. Scheibel, H. Long, B.A. Kerr, Creative adolescent experiences of education and mental health during COVID-19: a qualitative study, *Psychol. Sch.* 60 (2) (2022) 460–478, <https://doi.org/10.1002/pits.22734>.
- [49] A.L. Cremers, R. Gerrets, M.P. Grobusch, *Visual ethnography: bridging anthropology and public health*, *Pract. Anthropol.* 38 (4) (2016) 7–11.
- [50] J.M. Sevelius, L. Gutierrez-Mock, S. Zamudio-Haas, B. McCree, A. Ngo, A. Jackson, K. Gamarel, Research with marginalized communities: challenges to continuity during the COVID-19 pandemic, *AIDS Behav.* 24 (2012) 2009–2012, <https://doi.org/10.1007/s10461-020-02920-3>.
- [51] S. Ybema, D. Yanow, H. Wels, F. Kamsteeg, Studying everyday organizational life, in: S. Ybema, D. Yanow, H. Wels, F. Kamsteeg (Eds.), *Organizational Ethnography: Studying the Complexities of Everyday Life*, Sage Publications, London, 2009, pp. 1–20, <https://doi.org/10.4135/9781446278925>.