Acting for the climate: Motive—demand dynamics in the formation of student agency

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Abstract

In this chapter, we aim to advance our understanding of how education can harness students' capabilities to collectively deal with and act on major challenges, such as the ecological crisis. We examine students' agency formation in an environmental action project in a rural high school in Southern Finland. In the project, the students interacted with young climate activists, local politicians, and other local stakeholders to envision and contribute to changes in ways of living and organizing activity in the school and beyond. In using the term "agency," we refer to the students' opportunity, will, and skill to act upon, influence, and transform activities and circumstances in their lives and communities. The chapter draws on the concepts of demands and motives, foregrounding the dialectic between individuals' opportunities and demands related to the practices they inhabit. Drawing on longitudinal student interviews, this study asks the following questions: What are the motive orientations that diverse youth attach to the environmental actions project, and how do these interact over time with the various emergent demands of the activity and opportunities for action in and outside of school? How does the students' agency develop over time through their engagement with the project?

Introduction

The ongoing climate crisis—and the wider sustainability crisis—demands profound transformations at every level of society, as humanity has crossed six of the nine planetary boundaries, for example, regarding biodiversity and climate change (Richardson et al., 2023). Education can play a role in societies' transition to more sustainable and just human activities. However, to address the climate crisis, fundamental changes in how education and its meaning are understood in society and research are needed. A recent report commissioned by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) emphatically states that it is not possible to continue education as we have understood it until now (Common Worlds Research Collective, 2020). Instead of leveraging "more" education, there is a need to interrupt "business as usual" in education, which

continues to reproduce and normalize the exploitative and unjust logic of economic and technological growth, contributing to the current crisis regarding humanity and the more than human (Rajala et al., 2023b; Wals, 2021). Education must harness the ability to imagine and enact new ways of organizing activities within societies (Plumwood, 2007).

This chapter addresses this challenge by focusing on the current young generation as historical actors, as they are encountering the climate crisis as a threat to their futures, as well as those of other people and species (Ahola et al., forthcoming; Stetsenko, 2023). Despite being acknowledged as frontrunners in initiatives such as the climate movement and often being assigned the responsibility for resolving the climate crisis as future adult citizens, young people often encounter a dismissive attitude and a lack of support for their activism on the part of adults (Mustalahti et al., 2023). Furthermore, although schools and formal education are often seen as central actors in raising a new generation capable of acting for sustainable futures, schools have been slow to address sustainability crises and the associated need for collective action and systemic changes in societies. Instead, school education has often been limited to advocating for personal environmental choices, which are important but not adequate in terms of addressing the magnitude of the required changes in societies (Cutter-Mackenzie & Rousell, 2019; Karsgaard & Davidson, 2023).

In this chapter, we aim to advance our understanding of how education can harness students' capabilities to collectively deal with and act on major challenges, such as the ecological crisis. In particular, we examine students' agency formation in an environmental action project in a rural high school in Southern Finland. In the project, the students interacted with young climate activists, local politicians, and other local stakeholders to envision and contribute to changes in ways of living and organizing activity in the school and beyond. In using the term 'agency', we refer to the students' opportunity, will, and ability to act upon, influence, and transform activities and circumstances in their lives and communities (Rajala et al., 2016). To this end and to center young people's perspectives on the topic, this chapter draws on the concepts of demands and motives, foregrounding the dialectic between individuals' opportunities and demands related to the practices they inhabit (Hedegaard, 2012). Drawing on longitudinal student interviews, the study asks the following questions: What are the motive orientations that diverse youth attach to the environmental actions project, and how do these interact, over time, with the various emergent demands of the activity and opportunities for actions in and outside of school? How does the students' agency develop over time through their engagement in the project?

Student agency formation

Building on a cultural-historical perspective, we conceptualize agency as an ongoing process that is contextually and historically situated (Lipponen & Kumpulainen, 2011; Rajala et al., 2016). Agency emerges at the nexus of people changing the world and being changed in the process, which are the two poles of a dynamic, recursive process of simultaneous self- and world co/realization (Stetsenko, 2023). The students are regarded as potential "historical actors" who can contribute to the cultural-historical change required for sustainability transformations (Gutierrez et al., 2019; Rajala et al., 2023a; Hilppö & Rajala, 2023; Hopwood & Sannino, 2023). Transformative forms of agency are enacted in contributions to collaborative transformative practices, implying a "sought-after future" and a commitment to realizing it (Stetsenko, 2017).

Previous cultural-historical research on the formation of students' transformative agency has highlighted the importance of the principle of double stimulation, whereby individually experienced motive conflicts and double binds are collectively resolved by relying on material and conceptual tools (Sannino, 2015). For example, Sannino et al. (2016) analyzed students' struggle with flooding and its consequences in a Brazilian school in a poor neighborhood. In this situation, the students struggled with the double bind of choosing between going to school at the risk of becoming sick versus staying home and missing the opportunity to learn. The authors discuss how a new management plan helped to create new forms of coordination between the various actors in the school and the community and created conditions for students' and teachers' agency to transform the situation for the better. The management plan included new practices, such as a student relay race at the flood site, meetings in the neighborhood health care center, and integrating the topic of flooding into school instruction. Hilppö and Rajala (2023) analyzed the formation of high school students' responsible agency to act for the environment. They showed how student-led, teacher-supported civic projects productively re-mediated the social and material organization of school activities, allowing the students to introduce, test, and develop their ideas regarding climate action projects. In particular, the study highlighted the role of technological communication tools and social media. Furthermore, the study also showed the crucial importance of a teacher's support of the students' emerging agency. The teacher took the students seriously and emphasized their ownership of their actions and control over the projects.

This chapter adds to the previous research on the topic by employing the cultural-historical concepts of demands and motives, foregrounding the dialectic between individuals' opportunities and demands related to the practices they inhabit (Hedegaard 2012; Edwards, 2017). These dynamics take into account both the individual youth's perspectives (their motives) and the perspective of the institutionally framed activity (demands) in which they participate and to which they contribute. The

term “motives” refers to the students’ orientation toward this specific activity setting, indicating which issues are meaningful and important for them. The students’ motive-shaped actions are in interplay with surrounding institutional practices, which are influenced by broader sociocultural contexts (Hedegaard 2012). Furthermore, their motives are shaped by demands created by the objectives of institutional practices. Similarly, these demands can be modified through participating in and contributing to an activity. Therefore, there is a dialectical interplay between motives and demands (Hedegaard, 2012; Kumpulainen, Kajamaa, & Rajala, 2019).

We use the motive–demand conceptualization as an analytical heuristic to shed light on the formation of students’ agency within a school environmental action project. We conjecture that the specific forms of motive–demand dynamics that are provided by the novel form of this school activity may expand the students’ agency as citizens who can act for sustainability transformations. From this perspective, the students play an active role in shaping the social situation that accounts for their agency formation as they construct and reconstruct their relationships with other students, teachers, and other people in the relevant activity contexts of their lives (see also Edwards et al., 2019; Vygotsky, 1998). Tensions between motives and demands can lead to the reconstruction of a young person’s motive orientation, and they are thus essential for their development and learning (Hedegaard, 2012; Kumpulainen, Kajamaa, & Rajala, 2019).

Setting and Data

Societal and institutional setting

The study was conducted in Parola upper secondary school, which is a rural school in Hattula municipality, in Southern Finland. Hattula municipality emphasizes sustainable development in its strategy, but the promotion and implementation of concrete climate action have been rather modest as compared to the actions of other municipalities of the same size. However, the municipality is working on significant solar and wind power projects, in line with its sustainable development guidelines. There is no separate focus on climate education in the schools in the area. However, responsibility for the environment and an orientation toward a sustainable future are highlighted in the municipality’s local additions to basic education. The local curriculum in the municipality specifies the themes of increased responsibility, sustainable lifestyles, and ecological education.

The school hosts about 180 students (aged 15–19 years). The students are selected based on their average final grades in comprehensive school. The required grade for selection as a student is around

7 out of 10, which is not considered competitive. Most of the students at the school live in the municipality during their studies. The most important forums in which young people can influence politics are school student councils, the town youth council, and various youth clubs, none of which are specifically focused on climate action. The tasks of the 15-member town youth council include increasing young people's political participation and organizing various youth events. The town youth council is also represented in most of the municipality's political decision-making bodies. The most important of these is the municipal council, in which the youth council has the right to engage in debate and make initiatives.

Project

This study focuses on a pilot project in the school that aimed to strengthen the capability of young people to engage in climate action. The project was motivated by both the need to respond to the growing climate anxiety among Finnish youth and the aspiration to create a new type of climate action that takes place on the terms of young people, alongside the traditional teaching of climate knowledge. The main goal of the project was to create a safe space for collaboration within the school community, in which students interested in climate change could come together, discuss climate feelings, and hopefully channel them into visible and viable climate actions. The project was intended to give young people the experience of belonging to a community, create positive climate attitudes, encourage students to act for the sake of the climate, and broaden their understanding of the tools and possibilities of participatory democracy.

The project focused on developing positive visions of the future and encouraging participants to critically examine the prevailing social conditions and practices. It was based on the belief that by envisioning a more just and sustainable world, we can be empowered to make it a reality. The project strived to foreground hope and optimism, as well as unconventional alternative thinking about the solutions to the climate crisis. The teacher, who is one of the coauthors of this chapter, considered it important to address the varying backgrounds, strengths, and interests of the students who participated in the project.

In the first phase of the project, ten to fifteen students from different year groups convened in the form of regular workshops and meetings to promote voluntary climate initiatives. A teacher acted as the project leader, and their role was to coordinate and schedule the group activities and provide guidance for the students during the various phases of the project. The workshops provided the students with opportunities to learn about climate change; develop their own ideas for climate

action; and collaborate with other people interested in solving climate issues, such as local experts and politicians and young climate activists. In 2021, three 6-hour workshops combining theory and practical climate action were organized. In these workshops, the students gathered to plan and advance ideas for tangible climate action, hear from influential actors and experts on climate challenges, and visit climate-related destinations of special interest. The work took place in the form of various group exercises and tasks. The goal of the first phase, which lasted an entire semester, was to generate at least two ideas formulated from a set of themes, such as vegetarian food, recycling, tree planting, consumption reduction, and food waste reduction.

During the project, it became natural for the students to focus on influencing climate-related issues in their own immediate environment. The project resulted in a climate day and new recycling solutions at the school. The students also made a proposal to the municipal council to increase the selection of vegetarian foods in local schools. A climate team was created that was composed of young people who participated in the project. This team was awarded the Youth Action of the Year Award in January 2023 by the municipality. The reasons for the award included the climate team's successful work in raising awareness of climate change and deepening people's climate thinking. The climate team has since become a permanent part of the school's activities, and new students are recruited to join it every semester.

Participants

All fifteen students who participated in the school project and their teacher were invited to take part in the study. The school project was an elective course for the students, and their participation in the course was voluntary. The research procedures used in the study adhered to the ethical standards of scientific research of the University of Eastern Finland and the Finnish National Board on Research Integrity. Participation in the research project was voluntary, and the participants, as well as the parents of the underaged students, were informed about the project and how the research data would be used. Informed consent was obtained from all research participants.

Data and analysis

The data were collected during the 2020–2022 academic years during the school project, which was described above. The empirical material consists of longitudinal interviews carried out with

individual students at three timepoints throughout the project. Twelve students out of 15 participated in the interviews (seven participated in all three interviews, two participated in two interviews, and three participated once). The interviews were analyzed using an inductive qualitative analysis approach based on the open coding of excerpts that formed thematically coherent, continuous units of analysis. Guided by the two research questions, coding focused on students' accounts of their motives and demands and their mutual dialectics.

Results

Our analysis indicates that the school project created unique opportunities and demands for the students to reflect on and expand their emerging motives to understand and act on the climate crisis. The project imposed a unique set of demands on the students, which differed from the kinds of demands that school activities normally imposed on them. Overall, the project required a long-term commitment to the pursuit of the open-ended and complex problem of envisioning local solutions to the climate crisis and taking collective action to change social practices in the school and the town. We identified three distinct motive–demand dynamics that expanded the students' agency and enabled them to link the learning achieved in the project to their personal interests, needs, and out-of-school activities. The dynamics were named as follows: a) expanding agency: from personal reflections to collective actions, b) rethinking personal and familial ways of living, and c) overcoming polarization and expanding perspectives on environmental action. Below, we will discuss each of these dynamics in turn.

Expanding agency: from personal reflections to collective climate actions

In the project, a collective space for imagination and action was created in which the students could pursue their personal motives related to the climate crisis and come together to talk, imagine, debate, and act. This collective space created new kinds of demands that expanded their agency as informed citizens who can take individual and collective action for the environment in their school and broader society. Associated with these dynamics, the demands that the project imposed on the students included sharing thoughts and expressing stances about the climate crisis in peer groups, envisioning new local solutions, questioning established practices, and acting collectively to make changes in their school and the municipality (e.g., organizing a climate day for the entire school and

learning how the municipality politics works and how to make an initiative within the municipal council). Such demands and opportunities were largely absent before the project, and consequently, the students' thinking and action about the topic had been mostly confined within the private space of their own thoughts and discussions with family or, more rarely, a small circle of their peers. For example, many of the students said they had learned about climate change mostly by watching documentaries, reading books, and searching for information on the internet on their own time and that regular school activities did not provide them opportunities or place demands on them in terms of learning about climate change. According to the interviews, the students typically did not have a shared space in which to meet peers and reflect on their growing interest in climate change. The following excerpts from the student interviews illustrate a common sentiment among the students in this regard:

Excerpt 1

Student: It was nice that so many students from different grade levels came together in a shared space... In a way, this made it [the motive to act for the environment] visible. It does not remain at the level of my private thoughts or in a small circle [of peers] but, rather, becomes more visible when a larger group talks about the same thing.

Excerpt 2

Student: In my opinion, it has been really nice to get to talk with people about these climate issues. It is perhaps not the first topic that we talk about at the lunch table. Like, it is not the first thing that you talk about with friends, so it has been interesting to get to talk with a like-minded group. So, although I myself gather information out there and navigate social media and see those things, [here], you get to concretely plan things and talk with others, and it has been really nice.

Excerpt 3

Researcher: Had you had this kind of opportunity to make an impact before?

Student: Well, not in my opinion. If there has been something like this, then someone just says that this is a bad situation and we should act, but then, there has not been any idea about how to act.

The project also created new demands and opportunities for the students to act collectively regarding the climate crisis. Even before the project, many of the students and their families had made changes in their personal lives to promote sustainability, for example, changes related to recycling, choosing sustainable methods of transportation, or switching to a vegetarian diet.

However, very few students reported experiences of engaging in public reflections on climate or taking collective climate action. A rare exception was that some students had previously participated in a student climate demonstration in a nearby city, which had been a significant and uplifting experience for them. However, these opportunities were rarely available in the rural town where the students lived. Some students were involved in the school's student council, the town's youth council, or even party politics, but in those settings, environmental issues were seldom on the agenda, as illustrated by the following excerpt.

Excerpt 4

Researcher: Okay, do you address these kinds of climate issues in the student council?

Student: Well, there, it is, again, that those are different people than in this course. For example, not everyone is interested in these [issues] at all. So, we really haven't [addressed climate issues]. We have focused more on things like students' wellbeing and organizing events and things like that.

Against this background, it can be concluded that the new kinds of demands that the project imposed on the students contributed to the social expansion of their agency in terms of reflecting on and acting for the environment. Even the relatively modest changes, such as installing new biowaste containers at the school cafeteria, that were the result of the students' actions appeared to be important for them, as explained by one of the students at the beginning of the project.

Excerpt 5

Researcher: Okay, what have you got so far from this course?

Student: Umm.. Well, in the first session, we watched the documentary. So, it was quite interesting. And then there is the fact that we really are able to make an impact on some things if we really try.

Researcher: Where did you get the experience that you have had an impact on things?

Student Well, not much has happened yet really, but for example, in the cafeteria, those new biowaste containers. So, not yet much else, but I hope that we will get to do some other good things too.

In the excerpt, the student also notes her emergent motive to act together with the other students to achieve something more than the new biowaste containers. Later in the project, the students organized a school climate day, which included contacting local politicians and organizing activities

for all the students in the school. The student-led climate day was later established as a recurrent yearly event in the school, strengthening climate action as part of the entire school's agenda. The project also made an impact on policies at the town level. The students filed an initiative with the town council to make vegetarian food available for everyone in the school cafeteria. Although this may appear to be a relatively modest achievement, it was nevertheless important for the students, and they did not believe that it was possible to advance environmental causes via town policies, due to generally conservative attitudes, as illustrated by the following excerpt.

Excerpt 6

Student: Well, the initiative about vegetarian food will encounter obstacles in municipal decision-making, so it will probably not be advanced very far.

Researcher: Why?

Student: Well, I guess that… Or my own experience perhaps is that, here, we have politicians that are so conservative that it is not the first thing on their priority list.

[..]

Researcher: Have you heard about how what's up with the initiative?

Student: Um, I have not

Researcher: Okay, would you have hoped that you would have got to know about it?

Student: Well, I guess that it has been, like, circling around there for quite a long time. I guess that we won't hear about it for a while. Of course, they will process it in some given time, or at least, I believe it is so.

[...] Researcher: Okay, do you think it was worth it?

Student: I think it was nevertheless very good that we concretely sent the message that we would like to have this, and we did this initiative to promote vegetarian food, so it is important, in my opinion, that the message gets through that there are people who want this.

Despite the students' reservations, the initiative was approved by the municipal council. As illustrated by the excerpt, the information about the official decision to approve the decision had not reached all the students by the time we conducted the final interviews. However, those students who had heard about it viewed it as a significant and somewhat surprising success.

In sum, although, against the backdrop of the enormity of the climate crisis, the cultural and social change that the students achieved was relatively modest, the experience of contributing to collective action motivated students to contribute to similar enterprises in the future, as illustrated by the following excerpt:

Excerpt 7

Student: A kind of domino effect can happen so that my own learning is enhanced. For example, in the future, I am interested in taking part in these kinds of projects. Or, in my view, this has been a good experience. So, maybe, when, in the future, there is something like this available, I will be interested in it.

Rethinking one's personal relationship to the climate crisis

The project also imposed new demands on the students and offered them new opportunities to reflect on what they had learned in the project and connect it to their past, present, and future as citizens. The demands that the project imposed on the students included learning and applying concrete and local knowledge about the impact of climate change in town and the ways that their local community could act for the sake of the environment. In this respect, the students contrasted the project with their regular curriculum in the school, as illustrated by the following excerpt.

Excerpt 8

Student: Well, generally, some courses, like biology and geography courses, have given us knowledge at that [abstract] level. But, then, this course has perhaps helped us understand how it [climate change] can be seen concretely in a specific lake or its water or in some forest. So, it has expanded my thinking.

In the excerpt, the student, like many of his peers, explains that in his regular lessons, he has acquired abstract disciplinary knowledge, which he had difficulties connecting to his concrete realities and experiences. Within the project, lecturers and other visitors, such as a young climate activist, touched on a more emotional but also practical aspect of learning about climate, one the students were eager for. They learned about the protection of local lakes and forests and the impacts on climate change of local production activities, such as farming.

More broadly, the student's words in the following excerpt show how the school project enabled students to reflect on and reimagine conditions for sustainable life in their town and relate them to their own lives as citizens. In the excerpt, the student reflects on what he learned from a visit to a local organic farm.

Excerpt 9

I enjoyed the visit to the farm because I am myself from a farm. Like, we don't have animals, but we have fields and forest. Like, in our family, there is a long tradition of farming. So, it was, like, we don't have an organic farm… So, I got kind of a different view of it. It was really a different kind of a farm… I kind of thought about it from the perspective of organic farming [and] whether it could also work on my mother and father's farm. And as Ellen [the farmer at the organic farm] told us about, it is a difficult way of farming. It has its own challenges, and she said that it could be partly organic and partly based on the use of pesticides and the like. It is not a real alternative right now, and it, perhaps, will not be taken up in our farm. However, I thought about it as a possibility in the future, like, precisely at our farm.

In the excerpt, the student reports that the visit to the organic farm led him to consider the desirability and viability of new ideas, such as organic farming. His reflections on the visit enabled him to view his life, those of his family members, and their source of livelihood from an expanded perspective, which opened up new possibilities for the future.

Overcoming polarization and expanding perspectives on environmental action

Although all the students shared the motivation to act based on the climate crisis, they also encountered differences in opinions and perspectives regarding how and why to act for the sake of the environment. There were differences of opinion between the students and between them and the teacher, as well as various visitors and other people they interacted with during the project. Thus, the project imposed demands on the students to interact with their peers, experts, activists, and local politicians from multiple political parties, as well as to relate their perspectives on the topic to other perspectives that significantly differed from their own. The students generally considered the diversity of the perspectives encountered to be positive, and many explained that the course had

helped them understand and accept a wider range of perspectives than they would have prior to the course. The following excerpts capture a common view among the students.

Excerpt 10

Researcher: What is your experience? What have you got from this course, or have you got anything?

Student: Well, at least, I have learned a lot of knowledge. And, then, like, differing views, same views, and overall, [I] have talked about these things with others. So that, in a way, you live in your own bubble about these things. Your friends could be simply positive or opposing. Here, you get to hear other views, learn new things, and change your views too.

Excerpt 11

Student: In my opinion, it is a good thing that we have approached the issue from different perspectives. So, for example, I had not been in favor of any activism. But, then, within this climate topic, there were some climate activists who lectured to us, and then, we approached it from a scientific perspective, like, from the perspectives of different people. And it has made me really think about the topic.

It is like this thing is not black and white, and in a way, to a large extent, this climate topic is such that people view it from their own perspectives and according to their own interests. For example, I come from a farmer family, so I understand that it can cause challenges to my parents when like, for example, when the tax rates for pesticides increase. I understand that it causes or, like, it is not only a positive thing for them. But, on the other hand, I also understand why they raise the taxes and forbid the use of some substances.

A central theme regarding which the students had diverging views during the project was climate activism. In addition to planning and implementing climate actions, the students watched a documentary about the Extinction Rebellion climate movement, met a young climate activist from the Fridays for Future youth climate movement who visited the project to tell the students about her experiences, and interacted with politicians from various political parties. The following excerpts illustrate that these encounters and their own actions, helped the students to refine and contextualize their motives for learning about and acting for the sake of the environment.

Excerpt 12

Student: In general, my orientation is a bit more positive toward the climate organizations than before. But about those organizations that are engaged in direct action, well, I like the parliamentary ways of influencing things more. Before, I could not accept Extinction Rebellion at all, but now, I can, to some extent, understand their actions.

[…]

Researcher: Was there something in this course that had an impact on your relationship [to climate activism] or to the idea that it has changed?

Student: Well, I met, like, different kinds of people, not only those in my liberal-National Coalition Party [a right-wing/center-right party] bubble. All the time, we have talked about climate issues and there have been different views so that…

Researcher: Can you give examples of the most significant encounters in this respect?

Student: Well, I don't remember everything, but at least last time, when they came to visit us from Lempäälä, so…

Researcher: You mean the Climate Warriors?

Student: Yes, those Climate Warriors.

Researcher: Yes, so how did you experience the Climate Warriors? What significance did their visit have for you?

Student: I think that it is very nice that it is the school's own group and not any organization. They act in the school, and the school has joined them in the Climate Warrior effort.

[…]

Student: It is, like, more neutral than actors like Extinction Rebellion.

In the excerpt, the student explains that the project has helped him to understand and even sympathise with forms of climate action that he previously opposed, which has helped him to engage in constructive interaction and build shared understandings with people and organizations whose ambitions and means of addressing the climate crisis differed from his own. This kind of shift in perspective, which other students reported as well, can be characterized as a relational expansion of the students' agency, which indicates a capability to act in relation to and collaboration with others (Edwards & D'Arcy, 2004; see also Rajala et al., 2013)

Discussion

This study highlights the importance of transformative forms of student agency as a mediator of young people's emancipation in the face of the climate crisis. The findings of this study advance a

nuanced understanding of the formation of transformative forms of student agency, as well as the conditions and resources that mediate and sustain them in educational settings. The findings add to prior cultural-historical research on the topic (e.g., Gutiérrez et al., 2019; Sannino et al., 2016; Hippö & Rajala, 2023) by highlighting the kinds of social situations that account for the formation of students' will, capacity and opportunity to act regarding the climate crisis (Vygotsky, 1998; Hedegaard, 2012). In this study, the conceptual framework for demands and motives offered a powerful theoretical lens via which to understand both individual youths' perspectives and motives and link their perspectives to the organizational practices and associated demands that create the conditions in which the students' agency can or cannot develop. In particular, the findings shed light on three distinct motive–demand dynamics that expanded the students' agency and enabled them to link the learning achieved in the project to their personal interests, needs, and out-of-school activities. These dynamics were named as follows: a) expanding agency: from personal reflections to collective actions, b) rethinking personal and familial ways of living, and c) overcoming polarization and expanding perspectives on environmental action.

Another key contribution of the chapter is that it further develops the theory of motives and demands, especially regarding how this theory can account for the formation of students' transformative agency in relation to the climate crisis. Earlier studies that have drawn from the theory have highlighted people's agency in making successful transitions across the varied contexts of their lives (Edwards, 2020), as well as how people agentively shape their own social development situations (Edwards et al., 2019). Both aspects of agency were important for the conduct of the students who participated in this study. Our analysis highlights the way in which they drew on and expanded their motives connected to the non-school contexts of their lives. Through their cooperation, the students also played a crucial role in allowing the enactment of a social development situation, which accounted for the development of their agency in the project. The teacher relied on the students as partners in contesting the existing social arrangements in the school, which imposed only narrow demands on the students in terms of learning about the climate crisis and acting upon it. It was the collaborative creation of the school project by the students, their teacher, and a range of partners in the community that enabled the students to acquire new alternative kinds of experiences that helped form their expanding actions, reflections, and relationships in the school and beyond. In short, the study further refines the theory of motives and demands by showing that it can illustrate the formation of transformative forms of agency that position students as historical actors who can contribute to collective transformative practices and thus address the climate crisis.

To conclude, it is essential for societies to create new forms of education that urgently engage students in reimagining alternatives to existing fossil-fuel-based practices and activity systems in their lives and societies and globally. In Finland, where this study was conducted, climate-change-related topics have been added to and play a significant role in the national curricula, but the practical implementation of sustainability education in everyday pedagogical practices of Finnish schools has been riddled with contradictions and ambiguities (Mykrä, 2021). Based on the findings presented in this chapter, we argue that it is not sufficient to root climate change and the wider sustainability topic in schools. In addition, there is a need for forms of education that create opportunities for and place demands on students to collectively pursue their motives as citizens who are concerned about the climate; reflect on and rethink the past, present, and future of their personal lives in relation to the wider socio-historical changes that are taking place in society, to which the students should be given opportunities to contribute; and engage in relational and collective climate action with peers and a diverse range of partners in and out of school.

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