



# The Curriculum Renewal Facing Classroom Practices: Teachers' Planning and Implementation of Teaching on Interdisciplinary Topics

Summary of Report no. 6

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## Summary

This report presents a research-based evaluation of the reform known as the Curriculum Renewal (LK20/LK20S in Norwegian), and is based on research carried out in the sub-project *EVA2020: The Curriculum Renewal in the Face of Classroom Practices*. This sub-project is about how the curriculum is experienced and implemented in classroom situations by teachers and students, with a particular emphasis on learning and teaching in connection with three interdisciplinary themes: health and life skills, democracy and citizenship, and sustainable development. Our analytical gaze is aimed at *highlighting academic, pedagogical and structural opportunities and challenges that are expressed in teachers' planning and implementation of teaching in these three interdisciplinary themes*. The following research questions guide our empirical analyses:

- *What perspectives are expressed in teachers' reflections on the topics of interdisciplinarity, in-depth learning, planning of interdisciplinary work, student participation, assessment of interdisciplinary work and societal challenges?*
- *How do teachers facilitate students' learning processes in interdisciplinary teaching units?*
- *How and to what extent do teachers bridge students' lifeworlds and academic content?*
- *What characterises teachers' interactions with the students and in the activities carried out?*
- *How do teachers emphasise interdisciplinary elements and subjects?*

In order to provide knowledge about teaching and learning practices that arise in and around teaching on interdisciplinary topics, we have conducted and are currently conducting six comprehensive case studies in which we follow teachers and students at three lower secondary schools and three upper secondary schools in the planning and implementation of teaching units on interdisciplinary topics. In order to capture the meeting of curriculum renewal with classroom practices over time, three of the studies were carried out during the early phase of the project period (Autumn 2021 and Autumn 2022), while three of the studies are scheduled for the later phase (Autumn 2023 and Spring 2024). This report is based on data from the first three case studies, which covered one lower secondary school and two upper secondary schools. We recruited schools that are organizationally flexible in working with interdisciplinary themes, that is, schools that periodically dissolve the subject timetable to make room for interdisciplinary teaching units that accommodate different singular subjects. In order to answer our questions, we selected a multiple case design and made an expedient selection of three schools that provided us with rich data and which gave us the opportunity to study how teachers plan and carry out teaching in interdisciplinary topics in depth. The data consists of a total of 107 hours of transcribed video recordings of classroom interactions, situational images, observation notes, collected teaching materials and student products, as well as interviews with school principals, teachers and students.

The research carried out in this project is based on a sociocultural perspective on learning and teaching; therefore, such processes are understood as meaningmaking activities that take place in interaction between people and available resources in the classrooms we have observed. A sociocultural perspective also emphasises the importance of positioning students as active and responsible participants in teaching and learning. Furthermore, this perspective is the basis both for the themes we explore, our research design and for the data sources we use as a basis for

our exploration. In our analyses, we focused on what is referred to in the research literature as the ‘tensions’ that emerged in the classroom practices we observed. By tensions, we mean systemic contradictions, conflicts and dilemmas that arise in collective actions in the classroom. By identifying and discussing these tensions, we also make visible the different dimensions that actors in the field of practice must deal with when realising interdisciplinary teaching. This is valuable knowledge to push the field forward and to support teachers in their work to plan and implement this type of teaching.

The report opens with a theory section in which we begin to provide a framework for the main theme of the sub-project through a review of perspectives on interdisciplinarity in an international and national context and in which we thematise the relationship between interdisciplinarity and in-depth learning. We then explain the three interdisciplinary themes and place them in a national and international education and governance context and provide a description of the themes as they are described in LK20/LK20S.

The empirical section of the report consists of three parts. In the first part, we present detailed and practice-related descriptions of the three observed teaching units based on our data material. In order to contribute insight into how individual schools work with the planning and enactment of the interdisciplinary topics, we attempted to describe the observations of practice in a form that makes them interesting and accessible to actors in the field of practice and the field of education policy. As evident from these descriptions, we observed three rich teaching units. The interdisciplinary teaching units all include variations in activities and approaches related to the interdisciplinary themes. The practice-related descriptions of the three teaching units are followed by a two-part analysis: an analysis of teacher reflections and analyses of classroom practices.

### Analyses of teacher reflections

In the first part, we present the results from the analyses of the teachers’ reflections on the six themes of interdisciplinarity, planning of interdisciplinary teaching, societal challenges, in-depth learning, student participation, and assessment of interdisciplinary work. These analyses are based on group interviews with the teachers in the planning phase and after they had completed the teaching units. Our analysis of the teachers’ reflections reveal the following:

*Planning of interdisciplinary teaching:* In the interviews, the teachers emphasised joint planning time in the development of interdisciplinary teaching. The teachers’ reflections did not mention formulations about the interdisciplinary themes in the subject plans or the overarching section of the LK20/LK20S in connection with the planning itself, where the teachers emphasized, to a greater extent, the importance of competence goals or subject-specific topics.

*Interdisciplinary teaching on interdisciplinary topics:* The teachers emphasised that interdisciplinary teaching can help make interdisciplinary topics more interesting and relevant for students; in addition, interdisciplinary teaching provides good opportunities for teacher collaboration. The teachers believed that school leadership plays an important role in realising interdisciplinary teaching, for example, by setting aside time for teacher collaboration and obliging individual teachers to participate in this collaboration.



*Interdisciplinary theme and societal challenges:* The teachers related the work with interdisciplinary themes to societal challenges that the students must process in the projects. The focus was on developing a secure identity; it was about ensuring communal attitude and inclusion in a multicultural society, maintaining democracy and developing respect across differences. It also involved students becoming aware of the importance of sustainable food production and consumption. However, more than identifying contemporary challenges and crises, the challenges are often reformulated into positive statements about what the school's mission is. Individual teachers reflected on the fact that the teaching units, to a low extent, linked societal challenges to societal structures that must be changed politically and not just be considered an individual responsibility.

*In-depth learning and interdisciplinary themes:* The teachers expressed a need for collective work with the concept of in-depth learning in the professional community. In the absence of a more developed and common professional understanding of the term, teachers must build on everyday understandings of the term. Then the contrast between depth and breadth becomes central to understanding what in-depth learning can be. The teachers emphasised that working with concepts or themes in diverse activities over time is made possible in interdisciplinary teaching and is something that can contribute to in-depth learning; however, they were also unsure of how to develop interdisciplinary teaching units that enable this type of learning.

*Student participation:* The teachers at all three schools highlighted the importance of student participation. The teacher interviews reveal that there is both a broad and a narrow understanding of student participation. The former concerns students being able to influence the content of the teaching, that the assignments are sufficiently open and that students can bring in topics that interest them. A broad understanding of student participation suggests that students should also be able to influence the fundamental framework for teaching. The balancing act between teacher management and support on the one hand and the students' independence on the other seems demanding regardless of whether a narrow or broad understanding of student participation is taken as a basis.

*Assessment in interdisciplinary teaching:* Two of the schools made a conscious choice not to plan for formative and summative assessment, while one of the schools carried out both formative and summative assessments. Teaching units linked to the interdisciplinary themes were understood by several teachers as something that differs from a more performance-oriented school day and as an opportunity to emphasize process, creativity and cohesion. The teachers identified a number of dilemmas in not including grade-based assessment, such as, for example, the fact that individual students put in less effort and that they experience a greater variation in the academic quality of the students' final products.

### [Analyses of classroom practices](#)

In the second part of the analysis, we present the results regarding teachers' organisation and implementation of interdisciplinary teaching units. The analyses are based on observations, transcribed video recordings of teacher–student interactions, as well as teaching and learning products or artefacts produced by teachers and students. Our analyses of classroom data highlighted that the teachers' work with the learning environment, relationship building and community building became central to the interdisciplinary work at all three schools. This centrality forms the basis for the first part of the empirical classroom analyses. Furthermore, our analyses highlighted several tensions that were expressed in the three teaching units. These

tensions relate to i) the totality of the teaching units and degree of structuring, ii) the relationship between the students' everyday experiences and subject content, and iii) how subject content and scientific concepts emerge, and the teaching units' interdisciplinary approach.

*Building a learning environment through work with interdisciplinary themes:* Our analyses show that the teachers at all three schools used interdisciplinary teaching as an opportunity to strengthen the learning environment and build relationships and a sense of community at the school, class and group levels. The teachers provided emotional support to their students by facilitating the building of a positive *milieu* in the class. The teachers allowed students to share their feelings, provide friendly and supportive comments to their peers, and show sensitivity as they move around the classroom. The teachers visited individual students and groups to identify their need for help, and they included the students by allowing the students' everyday experiences to have a place in their teaching. Our analyses thus show that the teachers took care of many key aspects of class management and emotional support.

*Tensions linked to the totality and structuring of the teaching units:* One identified tension concerns the relationship between the various sub-activities in a teaching unit and the relationship between these teaching activities and the subject area in focus. The activities in the teaching units at two of the schools appeared to be loosely connected. Each activity appeared to be meaningful and engaging in itself; however, the relationship *between* the activities and the academic content sometimes appeared to be loose. A clearer emphasis on subject-oriented consolidation activities in both whole-class and group work situations could help to strengthen the connection between the activities and the connection between the activities, subject concepts and the overarching interdisciplinary theme in the teaching plans. The second identification relates to the degree of structuring in the sense of the support teachers provided before, during and after a teaching sequence, as well the extent to which students had freedom to choose topics, learning resources, activities, working methods and student products. The teaching unit on health and life skills at *School 1* had the highest degree of structuring. At the opposite end, we find the teaching unit on democracy and citizenship at *School 2*, where it was a stated aim on the part of the school and the teachers that the students should have full freedom to choose the theme, activities, working methods and student products. The teaching unit on sustainable development at *School 3* was somewhere between the other two units in terms of the degree of structuring. Our analyses show both opportunities and challenges related to open and closed teaching structures, as exemplified by Schools 1 and 2. For some students, an open structure can be experienced as freedom and lays the foundation for engaging, creative and exploratory learning. For others, it is experienced as challenging given its unclear frameworks and structures. On the other hand, a more closed structure risks giving less room for students' co-determination and less leeway for students to be positioned as authoritative and responsible participants in their own learning.

*Tension between the students' everyday experiences and subject knowledge:* Our analyses show that teachers, both through the preparation of the teaching units and classroom conversations, were able to create spaces where they supported students in reflecting on various dimensions of their lives outside school. This is an important goal of teaching that supports the students' development of competences relevant to interdisciplinary topics. Nevertheless, we found some interesting tensions that arose in the teaching units. We see examples of practices where the students' everyday experiences were activated explicitly by the teachers to a large extent, but to a lesser extent were integrated with subject-specific knowledge in the teaching. Students' everyday experiences and interests appeared in student products but were not realised as

resources in professional conversations around the interdisciplinary topics. Lastly, practices with a good amount of teacher support in the form of subject-based conversations, where the students worked on topics closely related to their own lives, everyday experiences and interests to a small extent, became effective resources in these conversations. Overall, our observations may indicate that the teachers are less aware of the importance of explicitly building on and integrating the students' everyday experiences with professional knowledge in classroom discussions and that the students' sharing and pursuit of their own experiences and interests are not always prioritized in the more academic work with the interdisciplinary themes.

*Tensions between societal challenges and the school subjects:* Our analyses display possible tensions that arise when the school subjects meet the interdisciplinary themes. Tensions are, on the one hand, about the uniqueness of school subjects and the connections of academic resources to a school context. On the other hand, they are concerned with how academic resources are used to shed light on and solve societal challenges. Our analyses point in the direction of societal challenges being introduced to varying degrees as interdisciplinary dilemmas that include ethical, political and scientific aspects. The students' descriptions and arguments were often not problematized using academic concepts, theories and perspectives, and less attention was paid to the central concepts of the subjects. The proposals for solutions to the challenges often pointed in the direction of an individualization of responsibility, which risks reducing the complexity of the societal challenge and the importance of finding political and structural solutions.

We identified a variation in the schools' interdisciplinary approaches. The teaching unit at one of the schools can be defined as multidisciplinary, while the teaching units at two of the schools can be defined as transdisciplinary. Our analyses show that the two transdisciplinary approaches contributed to that the included subjects' concepts, resources and perspectives to a less degree were made relevant during the teaching units. And contrary, the third school's multidisciplinary approach with a clear division of the subjects' concepts, resources and perspectives made the subjects more visible, but at the expense of an interdisciplinary approach to the societal challenges in focus.

### Discussion, implications and further research

In the discussion section of the report, we discuss the possibilities and challenges displayed in our analyses of teacher reflections and classroom practices seen in the context of central areas in the national curriculum. The report closes with a chapter where we summarise our main empirical findings, followed by a section where we address potential implications for teachers' planning and execution of interdisciplinary teaching units, schools' professional learning environments, school leaders and the education policy level. Finally, we identify some themes for further research in the sub-project EVA2020: Subject Renewal in the Face of Classroom Practices.