

# The Norwegian Curriculum and Integration of Knowledge in Textbooks in Social Studies: A Comparative Study

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## Abstract

The new Norwegian curriculum subject renewal is part of an international trend with a shift towards more knowledge-based curriculum, with greater emphasis on subjects and subject concepts, with the aim of realizing in-depth learning in schools. This paper, which is grounded on social realism and Ratas' CDC model, examines, and compares the design of the curriculum and the new textbooks in social studies. The comparative study reveals a gap between the curriculum and the textbooks, with quite different interpretations of the Norwegian curriculum reform. The paper explains why coherence design, which links subject concepts, content knowledge and competencies, is a precondition for in-depth learning and cumulative knowledge building in social studies.

**Keywords:** knowledge-based curricula, in-depth learning, textbooks, social studies, knowledge building, epistemic structure, coherence design

## 1. Introduction

The purpose of this paper is to examine the relationship between the new Norwegian curriculum and integration of knowledge in textbooks in social studies. Recently, Bratland & El Ghami (2022a, 2022b) investigated two studies of the new curriculum in social studies and selected textbooks in social studies. Both studies, of curriculum and textbooks, are founded on a social realist approach (Maton & Moore, 2010). These studies are related to an international context, with curricula that are characterized by the idea of 21st century learning (Ananiadou & Claro, 2009; Lourie, 2020; McPhail & Rata, 2016), also known as outcome-based or neoliberal curricula (Benavot & Meyer, 2013; Bratland, 2022; Priestley & Biesta, 2014). 21st century learning places great importance on skills and competences, often at the detriment of more traditional forms of knowledge (Louire, 2020). This dominant trend has been subject of an increasing criticism, not least from researchers who share a social realist position (Maton, 2014; McPhail & Rata, 2016; Rata, 2016; Winch, 2013, 2014; Young & Muller, 2013), where Young (2008) has argued for a program to "bring knowledge back in". The 21st century learning movement has recently been challenged by a new trend that can be broadly referred to as knowledge-based curricula (Hoadley, 2018; Lingard & McGregor, 2014; Rata et al., 2019; Spielman, 2018). The latest Norwegian curriculum reform is part of this trend (Kunnskapsdepartementet, 2016; Kunnskapsdepartementet, 2019a; Ludvigsen, 2015), with a weight on subjects and subject concepts, elements that are meant to promote in-depth learning in schools (Botten, 2020). The transition from 21st century learning to a more knowledge-based curriculum includes several unresolved problems (Bratland & El Ghami, 2022a; Rata, 2021; Spielman, 2018; Young, 2020), related to the curricula's design and effects. Although the trend with new knowledge-based curricula places stronger emphasis on subjects and subject concepts, they have a design that leads to unintended consequences, where students do not have access to specialized knowledge in the subjects (Bratland & El Ghami, 2022a). Spielman distinguishes between "knowledge-led" and "knowledge-engaged" curricula (Spielman, 2018). These knowledge-based curricula are marked by a distinct focus on content knowledge or subject concepts, respectively, but without linking these elements together. This problem seems to be related to the fact that the new knowledge-based curricula are not based on an epistemologically informed approach to knowledge in education. Ratas' (2019, 2021) Curriculum Design Coherence (CDC) model, which is based on social realism, is a theory that justifies why there is a need for curricula with a coherent design, if we want to give students access to epistemic knowledge in education. This paper is grounded on Rata's CDC model and argues that epistemically structured knowledge is a prerequisite for

in-depth learning and knowledge building in the social studies. On this basis, this paper will ask the following research questions: What kind of design characterizes the curriculum and textbooks in social studies? Is there a connection between the curriculum and the integration of knowledge in textbooks in social studies? What kind of opportunities does the curriculum and textbooks create for in-depth learning and knowledge building in school?

## 2. Theoretical Approach to Curriculum and Textbooks

In this paper will make use of a simplified version of Rata's CDC model (Rata 2019, 2021), focusing on three elements: subject concepts, content, and competencies. Ratas' model is founded on social realism (Maton & Moore, 2010), with weight on the concepts of «socio-epistemic» (Muller, 2009) and «powerful knowledge» (Young & Muller, 2013). Social realism assumes that knowledge in education is social and epistemic (Wheelahan, 2010), where a distinction is made between discipline-based knowledge and socio-cultural knowledge. Discipline-based knowledge is a relatively context-independent form of knowledge, based on generalized concepts, which are part of a complex pattern of meanings (Bernstein, 2000), which creates an epistemically structured knowledge (Rata et al., 2019). Socio-cultural knowledge is linked to experiences and simple meanings and is a context-dependent form of knowledge. Discipline-based knowledge is "powerful knowledge" (Young & Muller, 2013), understood as a specialized form of knowledge, with an epistemic structuring of concepts, which gives students in school opportunities to transcend their socio-cultural understanding. Ratas' CDC model (2019, 2021) agrees with this knowledge requirement, and argues that students' intellectual growth, also referred to as in-depth learning (McPhail, 2020), should take place within the frame of generalized subject concepts. Discipline-based knowledge is a general and objectified form of knowledge, but according to social realism, this knowledge has a preliminary character, which should be continuously revised and tested against facts and data (Maton & Moore, 2010). Rata's CDC model draws on this insight and suggests that knowledge in education should take the form of a proportional statement or knowledge requirement, which can be tested against content knowledge (Rata 2019, 2021).

A coherent curriculum design, which connects subject concepts and content, anchors the concepts to a specific and materialized content, where the concepts acquire deeper meanings. This link between subject concepts and content is referred to in the CDC-model as "Knowledge that" (Ryle, 1949). When subject concepts are linked to a specific content, with a coherent design, it creates an epistemic structure, where the subject concepts are explicit and visible, and can be tested against a content, this structure becomes a key to developing students' understanding of the topic. The CDC model distinguishes between "Knowledge that" and "Know how to" knowledge (Ryle, 1949; Winch, 2013; Winch, 2014), to connect these forms of knowledge. "Know how to" refers to competencies and skills, where students apply subject concepts to perform tasks. In this way, competencies and skills are connected to the epistemic structure. The elements in Rata's model represent different forms of knowledge, and there are several challenges associated with connecting the various elements together. The trend of knowledge-based curricula has revealed several of these problems, with the emergence of "knowledge-led" and "knowledge-engaged" approaches (Spielman, 2018), where the focus is either on subject concepts or on content knowledge, but without linking these elements together. These problem descriptions constitute a significant context for this paper, which examines the relationship between the Norwegian curriculum and new Norwegian textbooks in social studies.

## 3. Methods and Translation Device

Curriculum for social studies and textbooks are quite different types of texts, but this paper assumes that it is possible to overcome this disparity, by developing a translation device and a set of common design categories. (Bratland & El Ghami, 2022b). We will give a more detailed account below. To create a connection between theory and data, "an external language" (Bernstein, 2000) was developed. Development of the external language is an operation that includes the construction of a translation device and design categories, which can create a link between theory, concepts, and data (Maton & Chen, 2016). These devices, which make it possible to systematize and analyze data, were supported by a text-based content analysis. Text-based content analysis is a well-established method (Bratberg, 2021; Krippendorf, 2019), which provides good opportunities for qualitative and quantitative analyses. As mentioned, this method was combined with development of a table, a translation device, which provided possibility of coding data. Both mentioned studies are grounded on Rata's CDC model, which was used to prepare a translation device, which aims to create a connection between theory and data:

Table 1. Translation device

Epistemic structure	Description of coded content
Subjects' concepts	The texts* connect the topic to selected key concepts, and establish a relationship between these concepts
Content knowledge	The texts connect the topic, subject concepts, and selected content, by providing some explanations or interpretations
Competencies / skills	The texts connect the topic, subject concepts, and selected content, by providing tasks that require the use of competencies and skills

\* Refers to curriculum and new textbooks in social studies

Table 1 shows three elements, which should be connected to create an epistemic structure in curriculum and textbooks in social studies. Creating a coherent design is a challenging task, which requires professional competence. Social sciences are disciplines that is characterized by «horizontal knowledge structures» (Bernstein, 2000), where there are several different theories and concepts that may be relevant in the design of the curriculum or textbook in social studies. Nevertheless, specialized knowledge of the social studies is based on a coherence principle (Rata, 2021), where the selected subject concepts should be connected, so that the generalized concepts can give the textbooks or the curriculum an epistemic structure. It is also crucial that subject concepts are linked to a relevant content. Selection of relevant content is a task that requires good academic judgement, with selection of facts, events or situations that can best provide evidence and illustrate the concepts, depending on what we want the students to learn in the subject. Similarly, skills and competencies should be linked to the epistemic structure, with tasks that give students the opportunity to use subject concepts, where students can demonstrate their conceptual understanding. This contrasts with the trend of emphasizing activities, where students draw on their experiences, detached from the concepts of the subject. Likewise, the standard with a coherent design, grounded on Rata's CDC model, is not necessarily met in the Norwegian curriculum or textbooks in social studies.

This paper aims to make a comparative study of the curriculum in social studies (Kunnskapsdepartementet, 2019b) and textbooks in social studies (Heidenreich, et al., 2020; Bredal et al. 2020; Hellerud et. al., 2020). Such an analysis will be able to provide insight into the extent to which there is a connection between the curriculum and textbooks. The basis for the comparative analysis will be the results from our previous studies (Bratland & El Ghami, 2022a, 2022b). However, to make such a comparative study, it was necessary to develop a set of common design categories that make it possible to compare the curriculum and the textbooks. After an overall assessment, where different design categories were tested against data, it was decided to use the following design categories in the comparative analysis:

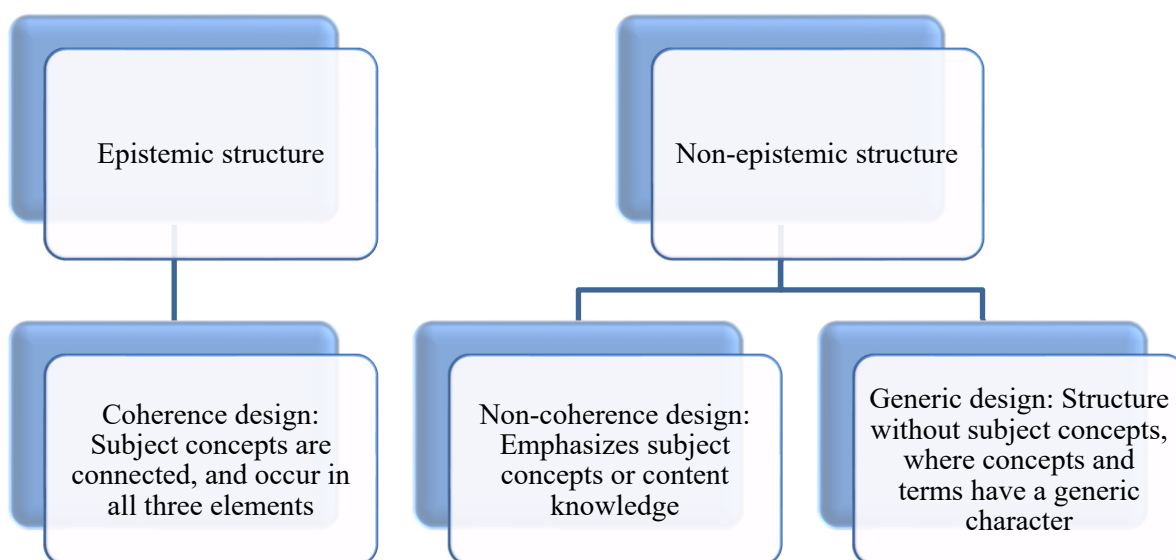


Figure 1. Design categories for comparative analysis of curriculum and textbooks in social studies

#### 4. Studies of the New Norwegian Curriculum and Textbooks in Social Studies

In this section we deal first with each of these studies separately, with a discussion of sources and data, procedure, and results (Bratland & El Ghami, 2022a, 2022b). This will provide a basis for a comparative study of curricula and textbooks in the social studies.

##### Study 1: The new curriculum in social studies

This study of the new curriculum in social studies focuses on the plan's goal formulations (Bratland & El Ghami, 2022a; Kunnskapsdepartementet, 2019a). These goal formulations provide a concentrated picture of the plan's content. To make an epistemic structure, the goal formulations should establish a link between subject concepts, content, and competencies (Rata, 2019, 2021). Goal formulations that encapsulate the three elements are categorized as a coherent design. To carry out a complete content analysis (Bratberg, 2021; Krippendorff, 2019), various design categories were developed, within the span between epistemic and non-epistemic structure (see Figure 1). The design categories are marked by different degrees of connections between the three elements, with goal formulations that gives quite different messages about what kind of knowledge students should learn in social studies in Norwegian schools. The results of our study of goal formulations in the new curriculum in social studies (Bratland & El Ghami, 2022a; Kunnskapsdepartementet, 2019b, SAF01-04). Figure 2 present here how the curriculum's goal formulations are distributed on the different design categories, at different levels and in total.

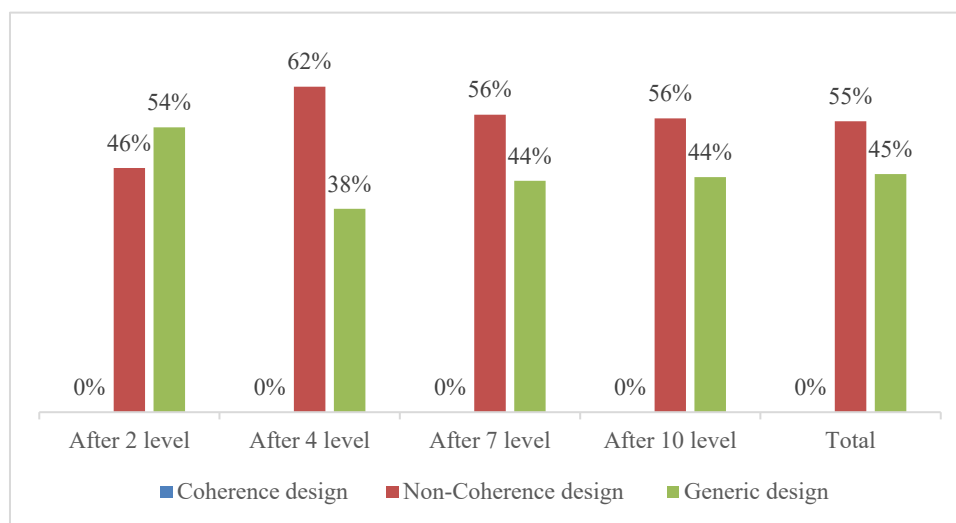


Figure 2. Distribution of coherence design, non-coherence design, and generic design in goal formulations in the social studies curriculum

Figure 2 shows how the goal formulations in the curriculum are divided into coherence design, non-coherence design, and generic design. The figure shows that goal formulations with non-coherence design dominate (55%). Goal formulations with a non-coherence design are marked either by subject concepts or subject content, but these are not linked together (Bratland & El Ghami, 2022a). These designs relate in different ways to knowledge and in-depth learning in the reform. Goal formulations with places strong weight on subject concepts emphasizes "big ideas", but do not link concepts to a content. For example, after level 7 the students should be able to "discuss what equality and gender equality mean for a democracy, and develop proposals for how to counteract prejudice, racism and discrimination" (Kunnskapsdepartementet 2019b, p. 9, authors translation). In this design, the subject concepts are not anchored in a content, which gives the concepts a free-floating character, without opportunities to give the concepts in-depth meanings, or to test the concepts against a given content. Goal formulations with a content design signify another variant of non-coherence design, with a one-sided emphasis on content knowledge, but without this content being linked to subject concepts. For example, after level 10 students should "account for the Norwegianization of the Sami and the national minorities and the injustice they have been exposed to and reflect on the consequences it has had at the individual and social level" (Kunnskapsdepartementet 2019b, p. 11, authors translation). In this design, knowledge in social studies is understood as content, with concepts that have a descriptive and contextual content, with goal formulations that indicate a content list of what the students are to learn. This design does not give students access to specialized knowledge in social studies and seems to open for a return to school characterized by memorization (Young, 2020). At the same time, there is a significant portion

of goal formulations with a generic design (45%). Goal formulations with this design can be, for example, «*conversation about friendship, belonging or relationships*» (Kunnskapsdepartementet, 2019b, p. 6, authors translation). This design lacks subject concepts and content knowledge, and signifies a continuation of 21st century learning, with a one-sided emphasis on competencies. We found no cases of goal formulations with a coherence design in the curriculum for social studies, which may be related to the divergent nature of the new Norwegian curriculum reform, and the lack of an explicit theory of knowledge in education.

#### Study 2: Textbooks in social studies

This study deals with three Norwegian textbooks from level 8 in social studies (Bratland & El Ghami, 2022b). These books are based on the new curriculum in social studies and cover topics that have a prominent place in the curriculum. The three selected books are *Relevans 8* (Heidenreich, et al., 2020), *Samfunnsfag 8* (Bredal et al., 2020) and *Arena 8* (Hellerud et. al., 2020). These textbooks are published by the most significant textbook publishers in Norway: Aschehaug, Cappelen Damm and Gyldendal. These books are also the most used in Norwegian schools, and the books can be considered a representative selection. The analysis of the textbooks is grounded on Rata's CDC model (2019, 2021), which has been transformed into a simplified version, referred to as translation device (see Table 1). The analysis focus on the chapters of the books, and the main text of the chapters. The chapters of the textbooks have a different character, compared with the goal formulations of the curricula. Textbooks chapters are complex texts, which weave together different types of knowledge in a unique way. This leads to designs that are different, with different connections between the three elements. The results of our study of the textbooks in social studies (Bratland & El Ghami, 2022b), were summarized in Figure 3, which illustrates how the textbook chapters are distributed on the various design categories referred to as “coherence design”, “non-coherence design” and “generic design”.

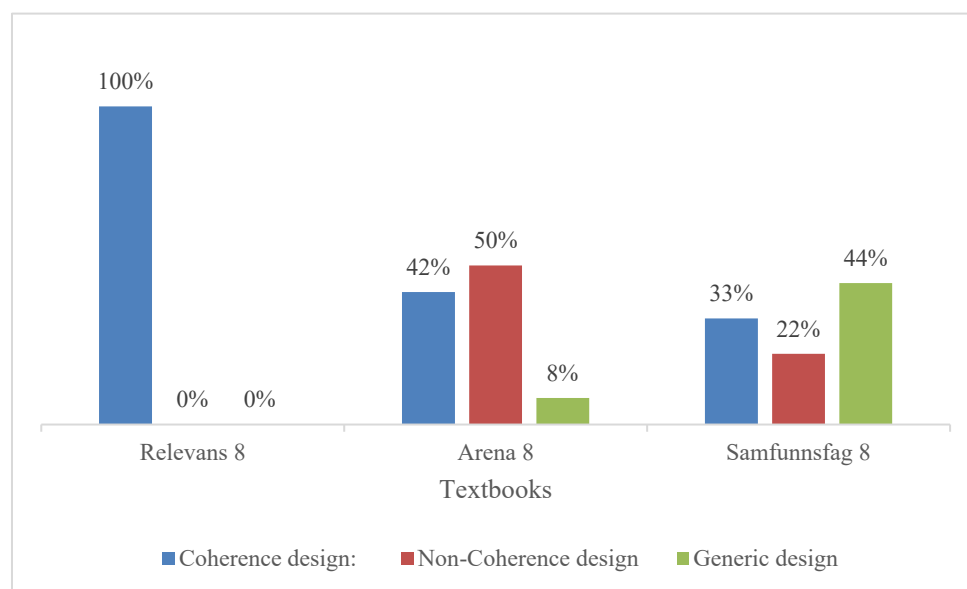


Figure 3. Distribution of coherence design, non-coherence design and generic design in chapters in three textbooks

Figure 3 shows that the three textbooks are quite different, with chapters with very different designs. One of the textbooks, *Relevans 8* (Heidenreich, et al., 2020), is consistently characterized by chapters with a coherent design (100%). The chapters in this book have an epistemic structure, where subject concepts, content and competencies are linked together. The other two textbooks are characterized by chapters with different designs, where a majority are chapters without an epistemic structure, here categorized as non-coherence design (50%, 22%) and generic design (8%, 44%). In *Arena 8* (Hellerud et. al., 2020), most chapters have non-coherence design (50%), while in *Samfunnsfag 8* (Bredal et al., 2020), most chapters have generic design (44%). Chapters with a non-coherence design are marked by subject concepts, but these are not linked together, which gives the concepts a free-floating character. For example, Chapter 3 in *Samfunnsfag 8* starts with the question "What is society?" (Bredal et al., 2020, p.71). To answer this question, the chapter presents concepts such as norms, rules, globalization, welfare state and citizenship. In this chapter, these concepts are not linked together, but appear separately, accompanied by several

anecdotal examples, which intends to give the concepts a deeper meaning. When the concepts are not linked, they can not be tested against a content, and in that sense, this design lacks a connection between subject concepts and content. Chapters with a generic design are marked by generic concepts and terms, characterized by simple meanings, such as source criticism, critical thinking, influence, or digital judgment. These terms are linked to a content, but the chapters are unrelated to subject concepts. This design places great importance on competencies, where students should produce knowledge based on their own experiences. In relation to the new Norwegian curriculum reform, chapters with generic design continue aspects taken from the 21st century learning. Chapters with coherence design and non-coherence design place more emphasis on the reform's stress on subjects and subject concepts, but with quite different results. It is only chapters with a coherence design, which create a coherent epistemic structure. For example, democracy is given a large place in the textbooks discussed, and in Relevans (Heidenreich, et al., 2020) this topic is related to concepts such as democracy, politics and parliamentarism. In the chapter, these concepts are linked together, and put in context with the constitution, the Norwegian electoral system, rights, and freedom of expression in Norway. The coherence between subject concepts and content gives students access to epistemically structured knowledge in social studies, which in turn is linked to competencies, where students can use subject concepts to solve the given student assignments. In this way, students are engaged with knowledge that comes from the disciplines, not from subjective experiences. When competencies are connected to epistemically structured knowledge, students gain access to the subject's generalized concepts, something that opens for in-depth learning and cumulative knowledge building in social studies.

### 5. Comparative Analysis of Curriculum and Textbooks

Figure 3. illustrates how coherence design, non-coherence design and generic design are divided into chapters in three selected textbooks in social studies. Compared to the curriculum (see Figure 2), this result is remarkable, especially when it comes to chapters with the category of coherence design. In the curriculum goal formulations, this design is absent (0%), but this design is strongly present in the textbooks. In one of the textbooks, Relevans (Heidenreich, et al., 2020), all the chapters have this design (100%). This design is also well represented in the other textbooks (42%, 33%). This means that this design is clearly best represented when we look at these textbooks together. This large gap between the curriculum and textbooks in the social studies at this point is a surprising discovery. This large difference between curriculum and textbooks is not only of a quantitative nature but constitutes a distinction between design with an epistemic structure and design without an epistemic structure. It is only in the textbooks that we find a relatively strong presence of coherence design, which indicates that the authors of these chapters have interpreted the Norwegian reform's highlighting of subjects and subject concepts in a different way, compared with the authors of the curriculum in social studies. The authors of chapters with coherence design treat subject concepts as the specialized knowledge of the disciplines, where the selected subject concepts are linked together, and create a coherent connection between subject concepts, content, and competencies, so that an epistemic structure arises. This structure equips students with a cognitive architecture, which opens opportunities for in-depth learning in social studies.

Two of the textbooks have most chapters with non-coherence design and generic design. Both design categories are well represented in the curriculum for social studies (Kunnskapsdepartementet, 2019b), and these chapters create continuity with explicit relationships to the curriculum. In Arena 8 (Hellerud et al., 2020), most chapters have a non-coherence design (50%), while generic design has a prominent place in Samfunnfag 8 (44%, Bredal et al., 2020). These design categories represent two different trends, the first being linked to the trend of knowledge-based curricula, while the second points in the direction of the 21st century learning movement. Chapters with non-coherence design introduce subject concepts. However, these concepts are not connected, something that gives these chapters a segmental and fragmentary character. Chapters with a generic design introduce generic concepts and emphasize skills and competencies, which are detached from the subject's epistemic structure. There is a significant difference between these last design categories, but both have consequences that place obstacles in the way of in-depth learning and cumulative knowledge building in the social studies.

### 6. Discussion

The new Norwegian curriculum is part of an international trend with knowledge-based curricula (Adolfsson, 2018; Bratland & El Ghami, 2022a; Hoadley, 2018; Lingard & McGregor, 2014; Rata, et al., 2019; Spielman, 2018), but this new trend includes several unresolved issues, with designs that do not provide access to the subjects' specialized knowledge. The Norwegian new curriculum reform (Kunnskapsdepartementet, 2016; Kunnskapsdepartementet, 2019a; Ludvigsen, 2015), which emphasizes subjects and subject concepts, places more importance on knowledge in education. Nevertheless, as shown in the analysis of the new curriculum for social studies (Kunnskapsdepartementet, 2019b), the reform leads to design categories that either emphasizes subject

concepts or content knowledge, but without connecting these elements (Bratland & El Ghami, 2022a). This leads to a curriculum without an epistemic structure, with goal formulations with non-coherence design, alongside a significant element of goal formulations with generic design. This lack of epistemic structure is reinforced by a significant proportion of goal formulations with generic design. Both forms of design have a prominent place in two of the textbooks, the latter being based on the ideas underlying the 21st century learning (Ananiadou & Claro, 2009; Lourie, 2020; McPhail & Rata, 2016), but the former representing an incomplete attempt to emphasize subjects and subject concepts. The last category of coherence design is absent in the curriculum but well present in the textbooks. The significant presence of chapters with coherence design is remarkable and represents a knowledge-based approach to the Norwegian reform's weight on subjects and subject concepts. As Rata (2019, 2021) has pointed out, coherence design provides access to epistemically structured knowledge in the social studies. In the textbooks, chapters with this design are obviously based on the Norwegian reform's stress on subject concepts, but in the chapters with this design, the concepts are treated in a way that breaks with the constructivist framework that underlies the new Norwegian reform (Bratland & El Ghami, 2022b). Instead, subject concepts in these chapters are understood as discipline-based knowledge, where the generalized concepts represent the subject's specialized knowledge. In contrast to 21st century learning, the subject's knowledge in this design is understood as epistemic knowledge, with theories and concepts, which have been developed within the disciplines' research fields. Discipline knowledge is separate from social and experience-based knowledge and signifies a break with our everyday commonsense understanding of the world (Moore, 2013; Rata et al., 2019). When disciplinary knowledge is expressed as generalized subject concepts, which are linked to content and competencies in textbooks, it has major implications for students' learning. Design with this approach gives access to "powerful knowledge" (Young & Muller, 2013), which takes students past their common sense understanding of the world, where access to generalized concepts opens new horizons, with opportunities to test knowledge claims against a specific content. In this way, this design provides «epistemic access» (Shay, 2014), which equips students with a cognitive architecture, where the acquisition of knowledge can have the character «concept development» (Rata, 2016). When students' learning can take place within the framework of subject concepts, and the acquisition of knowledge takes place at different levels of abstraction, concepts students already know can be inserted into new relationships, to other concepts and content knowledge, which means that students can have progress in their understanding. This is how this design opens for in-depth learning (McPhail, 2020) and cumulative knowledge building (Maton, 2016) in education.

On the other hand, the Norwegian reform subject renewal is an ambiguous reform (Kunnskapsdepartementet, 2016; Kunnskapsdepartementet, 2019a; Ludvigsen, 2015), with elements that point in different directions, which leads to a curriculum in social studies with goal formulations with non-coherence design and generic design. This problem is associated with the Norwegian curriculum reform being founded on theories that can be related to 21st century learning (Ananiadou & Claro, 2009; Lourie, 2020; McPhail & Rata, 2016), which places decisive importance on skills and competences, escorted by a constructivist narrative (Sawyer, 2006), where the students themselves should develop knowledge. In this approach, students learning is separated from the subject's epistemic structure, which leads to incomplete and deficient goal formulations, expressed in the curriculum in social studies, as non-coherence design and generic design. This trend, with a curriculum without coherence design, is continued in part in two of the textbooks in this study, where most of the chapters are similarly characterized by non-coherence design and generic design. When the concepts are not connected, or are replaced by generic terms, the students do not get access to specialized knowledge in the subject. There are specific problems related to each of these design categories, but both have in common that they create barriers for in-depth learning and cumulative knowledge building in social studies.

## 7. Conclusion

The transition from 21st century learning to more knowledge-based curricula is not a simple matter (Bratland & El Ghami, 2022a; Rata, 2021; Spielman, 2018; Young, 2020), but includes several unresolved problems, related to the curriculum's design and effects. The new Norwegian curriculum, which highlights subjects and subject concepts, fits into the same trend. The Norwegian curriculum for social studies has goal formulations which recognizes subjects and subject concepts. These goal formulations have a design that emphasizes subject concepts or content knowledge, but without creating a link between these elements. This absence of coherence between these elements has unintended consequences, where students do not have access to epistemic knowledge in the subject (Rata, 2019, 2021). A significant proportion of the goal formulations in this plan has a generic design, a design that can be associated with the 21st century type of curriculum. Overall, this curriculum provides a complex and contradictory message about the kind of knowledge students should learn in social studies. This problem, where students do not have access to specialized knowledge in the subject, seems to be related to the fact that the



Norwegian curriculum reform is not supported by a theory of knowledge in education. The new textbooks in social studies contain chapters which is based on the curriculum, with non-coherence and generic design. Nevertheless, there is a marked difference between the curriculum and the new textbooks in social studies, which contain a significant number of chapters with coherence design, which creates a connection between subject concepts, content, and competencies. The large gap between the curriculum and textbooks is remarkable and shows that the textbook authors have interpreted the Norwegian reform's emphasis on subjects and subject concepts in a different way, linked to the disciplines' form of knowledge, with chapters with coherence design, which gives students access to epistemically structured knowledge (Rata et al., 2019) in social studies. Specialized knowledge in social sciences is based on the principle of coherence design, and chapters with this design show how the emphasis on subject and subject concepts in the new Norwegian curriculum reform, can opens for in-depth learning and cumulative knowledge building in social studies.

#### Note

All references to the analyzed textbooks are given in the form of a title and references. All English translations are by the authors.

#### Disclosure of potential conflicts of interest

The authors declare that they have no competing interests

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