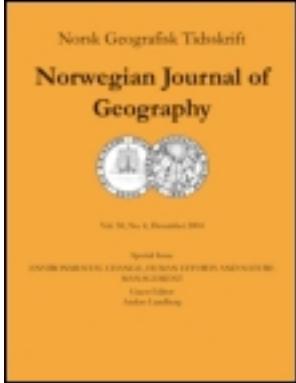


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Are teachers and students ready for the new middle school geography syllabus in Sweden? Traditions in geography teaching, current teacher practices, and student achievement

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Are teachers and students ready for the new middle school geography syllabus in Sweden? Traditions in geography teaching, current teacher practices, and student achievement

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The article examines the relationship between selective traditions in geographical education, what middle school teachers choose to emphasise in geographical education, and student achievement. The study, conducted in Sweden, is based on observations made by students in teacher training programmes, interviews with teachers, and analyses of a test administered to middle school students. It shows that selective traditions in geographical education are strong, resulting in a focus on country-related knowledge and map-reading skills. Both teachers and students seem unclear about what other subject-specific skills geography teaching provides. Furthermore, students have difficulty achieving a high level of geographic reasoning. The authors argue that a subject-specific language in geography is important in both teaching and assessment. They stress that students need more practice in geographic reasoning, since this is required by the new curriculum and in the national test in geography for Year 6 (i.e. pupils in the age range 12–13 years). The study adds to earlier research by highlighting Swedish middle school teaching, which is a neglected field within curriculum studies, and by using a combination of methods to analyse the impact of selective traditions.

Keywords: *geography teaching, middle school, selective traditions, subject didactics, subject skills*

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Introduction and aims

This study discusses the relationship between traditions in geographical education, what content teachers of middle school geographical education choose to emphasise, and student achievement. Our focus is on the triple message system of education – selection, transmission and realisation of knowledge – and how it is connected (Forsberg 2007). Hence, the study concentrates on the content and processes involved in teaching and learning geography.

In autumn 2011 a new curriculum was introduced in Swedish compulsory schools, including new course syllabi with clearer learning goals in terms of knowledge requirements, a new grading scale, and mandatory grading starting in Year 6 (age range 12–13 years) (Skolverket 2011). The Swedish Government also introduced national tests in social studies (geography, history, religion, and civics) for Years 6 and Year 9 (15–16 years) (as a means of supporting equal assessment and grading, and for analysing the extent to which learning objectives can be reached at school, municipal, and national levels (Utbildningsdepartementet 2011). The developments should be viewed in the light of the percentage of students in Swedish compulsory schools that do not fulfil the learning objectives and those whose knowledge remains below average in comparative international studies (Karlsson et al. 2006; Skolverket 2009).

According to an evaluation of the recent reforms in the education of teachers, the research base in teacher education should be strengthened (Utbildningsdepartementet 2009). One example of a research field that is in particular need of strengthening is *subject didactics* for future teachers of Years 4–6 (10–13 years) (Skolverket 2009). Subject didactics refer

to education research that focuses on the selection of content, the teaching process, and learning in a specific subject. This article discusses geography didactics and research on geographical education. One way to strengthen subject didactics is to include more research on how active teachers think and act. From a research perspective, middle school (Years 4–6) may be described as the forgotten years. In Sweden there is a lack of research that examines teaching and the evaluation of learning when students are in the age group 10–13 years (Years 4–6). Research on the subject of geography is no exception; it is virtually non-existent, especially when it comes to teachers' assessments of students' knowledge of geography in Year 6. In addition, research on educational assessments in general in Sweden has been carried out primarily by pedagogues (e.g. Lundahl 2011). Given that we are geographers with a strong interest in educational issues, our study focuses on analysing the content of geographical education and subject-specific skills. Specific geography skills are those that students develop through geographical education, such as the ability to read a map.

Previous studies, both national (SOU 2007:28; Skolverket 2009) and international (Alexandre 2009; Kolenc-Kolnik 2010), indicate that curriculum reform and policy documents do not lead to major changes in teaching; rather, teaching tends to be governed by earlier curricula or content in textbooks. Research indicates that the curricula for elementary school geography in Sweden in the period 1951–1994 did not differ significantly from each other and that the formulated objectives were almost identical (Wennberg 1990; Holmén & Anderberg 1993; Molin 2006).

Wennberg (1990) concluded that teachers were not thoroughly familiar with the national curriculum, and did not make use of it in their planning. A study conducted by Holmén & Anderberg (1993) revealed that the modest objectives that characterised primary school geography had repercussions throughout the school system, in terms of, for example, a low level of education in geography in the case of geography teachers, the poor status of geography as a taught subject, and lack of advancement in students' skills and attitudes. The same results were demonstrated in a study of choices made by Swedish upper secondary teachers with respect to the purpose, content, and method of geography teaching (Molin 2006).

Selective traditions are established choices for a specific subject; in other words, the predominant content and structure of education that are taken for granted (Englund 2007). As Williams points out, selectivity of content is the main issue: 'The way in which from a whole possible area of past and present, certain meanings and practices are chosen for emphasis, certain other meanings and practices are neglected and excluded' (Williams 1973, 3). The aim of our study is to discuss the ways that selective traditions in geographical education affect what teachers emphasise and what students achieve. First, we identify the content that is emphasised in middle school geographical education and how it can be evaluated. Our purpose is to explore the subject-specific skills that teachers believe they can impart to their students. Second, we discuss – based on results from a geography test – how the content of geography teaching can affect subject-specific knowledge and skill. Finally, we look at teacher practices and student achievement in relation to the selective traditions in geographical education as well as the knowledge requirements of the new syllabus.

Selective traditions and teaching

The concept of selective traditions has been used by Williams (1973) and further elaborated on by Englund (1986; 1998) with respect to citizenship education. The concept has also been used in Sweden to identify teaching traditions (Östman 1995) as well as how teacher's classroom practice relates to those traditions in the field of science (Lundqvist et al. 2012). Subject traditions emerge from history and reflect specific perceptions associated with various purposes, content, and methods. According to Östman (1995), such perceptions are seen as ideological rules for the selection of content. He argues that discourses within school subjects are both affected by and can include a number of different selective traditions. The discourses are characterised by various values and beliefs, such as ideologies, knowledge, visions, and perceptions of human nature that compete with each other. Cherryholmes (1988) maintains that competition between the discourses makes it possible to problematise both education theory and practical content. Several didactic typologies are often involved, as shown by Roberts (1988) for North America and by Östman (1995) for science education in Sweden. Wilson & Cervero (1997) apply the concept of selective traditions in their study of the historical development of adult education planning

theory in the United States of America. They argue that selective traditions promote a particular discourse and exclude certain views by championing one way of understanding the subject. Liu (2011) makes a similar point when discussing the relationship between Chinese and Western traditions of curricula and pedagogy.

Molin (2006) has specifically studied selective traditions in Swedish geographical education. Educational philosophies are an important basis for categorising various selective traditions, and therefore Molin used educational philosophies in her study of secondary school geography teachers and their perceptions of educational aims, content, and methods. The study shows that the choice of content made by modern geography teachers is characterised by an essentialist philosophy of education that lacks the perspective of values such as gender. This is problematic, given that the curriculum specifically highlights these issues as the responsibility of schools and teachers. If geography teaching lacks a moral dimension, the opportunity to discuss issues related to solidarity, social justice, gender, ethnicity, and sustainable social development is largely lost (Molin 2006). Molin's study shows that substance traditions have become selective over time, meaning that they include and exclude subject matter and form a dominant school curriculum discourse. A dominant discourse that is not exposed to competing alternatives may eventually be perceived as objective and therefore not open to question. The result is embodied in five didactic typologies in the subject of geography: based on traditional values, science, social sciences, interdisciplinary approaches and current events, or values (Molin 2006). The five typologies show that the various objectives, contents, and methods lead to different kinds of meaning-making in the teaching of geography.

Skills in geography and assessment practices

According to a Swedish Government Official Report (SOU 2007:28), there is a lack of research on determining the areas of knowledge that are relevant in different subjects. This is reflected in the curriculum texts that describe general skills, desirable processes, and attitudinal changes rather than subject-specific knowledge content. Therefore, it is emphasised that there is a need to develop descriptions of all of the subject-specific qualities and skills that students can cultivate by studying a subject. We argue that these subject-specific skills are important for both teaching and assessment.

Several studies show that assessment is an important factor in spurring students' efforts at school, and that good assessment involves improving the quality of teaching and learning (Eisner 1985; Black & William 1998; Lundahl 2011). In this respect, the encounter between teacher and student is central: there is a clear correlation between student achievement and a teacher's ability to develop and apply formative classroom assessment (Lundahl 2011). Research shows that feedback is crucial to learning and is thus a powerful tool for significantly improving student

achievement (Lundahl et al. 2010). However, the single most important factor in learning is the teacher's skills (Bright & Leat 2000; Östman 2003; Leat et al. 2005; Alexandre 2009; Lundahl et al. 2010). Further, Svingby (1998) believes that the professional repertoire of teachers in terms of assessment needs to be expanded, as it is much too limited.

Three out of four Swedish schools inspected in 2007 were criticised for their reporting of results and knowledge; the Schools Inspectorate report noted that monitoring and evaluation were largely lacking (Skolinspektionen 2010). The report showed that teaching was not focused on the national objectives of the curriculum and cited examples of assessment based on criteria such as ensuring that laboratory reports were neatly written and students' active participation in study and field trips, i.e. examples unrelated to the kind of knowledge described in the national grading criteria (Skolinspektionen 2010). Samuelsson (2010) examined the skills considered in social studies by analysing individual development plans with a written assessment in middle school history. The study revealed that teachers often left out summative and formative reviews of social studies. Further, they lacked an assessment repertoire with a subject-specific language in social studies assessment. Little or no information was provided about what students could do and what they needed to improve on.

An important insight is the didactic analysis of language and communication that is vital to learning and the importance of taking it into account when designing tests and performing assessments (Englund 2007). Studies that have examined the ways that teachers assess students' knowledge have shown that gender is of critical importance to assessments made by teachers (Danielsson 2009; Andersson 2010). A national evaluation found that girls offered more qualitative answers and wrote in a more detailed and explanatory manner than boys (Skolverket 2004). However, the sample design of the evaluation may have favoured girls. Korkeamäki (1992) and Severin (2002) have shown that there are no qualitative differences between the verbal response images of girls and boys. The national evaluation also showed that Swedish girls had higher grades than boys in all subjects except physical education (Skolverket 2004). In addition, the national evaluation found that statistics demonstrated clear gender differences between test results and final grades, and that research showed that boys were at a disadvantage when it came to grading (Skolverket 2004). However, international research shows that boys receive higher grades than girls in geography but it is unclear whether it has to do with, for example, the content of the questions or how they are framed (Eve et al. 1994; Henri et al. 1997).

Methods

Our study combined qualitative and quantitative methods in order to capture the perceptions of teachers about their geography teaching and to gain insight into their students' achievements and the subject skills that geography teaching imparts. The results are related to selective traditions in geography. The informants, comprising 3 teachers, 1 student

teacher, and 106 students, were notified of the ethical guidelines, purpose, and methods of the study and how the empirical material would be analysed and used (Vetenskapsrådet 2002). Furthermore, the participants were guaranteed anonymity. To identify the content that is emphasised in middle school geographical education, we used Uppsala University's Student Observations and Didactic Analysis (SODA) research database, as well as interviews. During the second and third semesters of one year in the university's teacher education programme, all students were assigned an observation task to enable them to observe systematically and critically analyse the didactic choices made by schoolteachers. The study involved observations of all geography lessons taught by middle school teachers in the years 2008–2010, which totalled 35. In addition, we conducted four semi-structured interviews: three with teachers in middle schools and one with a student enrolled in a teaching programme. We asked about the purpose and content of geography teaching, the methods used, how the content was examined and assessed, and the subject-specific skills that teachers believed they could impart. In the interview with the student teacher we asked about his previous geographical education and experiences of the presentation of geography teaching in teacher education.

In order to examine the ways that the content of geography teaching can affect students' subject-specific knowledge, we administered a geography test containing 10 questions and an accompanying questionnaire to total of 106 students in Year 6 (12–13 years) attending five schools situated in mid-Sweden. The test contained different types of questions, such as naming countries and capitals that had been highlighted on a map of Europe, multiple-choice questions dealing with substance concepts, such as 'delta', and open-ended questions that allowed students to demonstrate their ability to reason in discussions about geographical features. The survey included questions about the extent to which the content of the test corresponded to the tuition the students received and on the degree of difficulty of the test. Two questions were included to generate more in-depth information: one measured the students' knowledge of countries and capitals in Europe, and the other, more open-ended, question asked students to choose a road alignment and justify their choice. The students' responses were assessed and analysed from a gender perspective. However, the discussion concerning gender (in the section headed 'Student achievement in a written test') should be interpreted with caution because only 54 out of 106 students specified their gender. The open-ended question was also analysed at the level of reasoning. Finally, we returned to one of the schools and administered a test in which we asked 32 students in Year 6 to give their responses to a number of statements using an atlas with true and false entries. Such tests are also named 'multiple choice' tests (Rød et al. 2010, 142). As an example, one of the statements used in our test was: 'Ireland lies west of Great Britain.' Our aim was to test students' knowledge of geographical place names and the location and relative size of places, though the use of an atlas.

Selective traditions in middle school geography teaching

Our analysis of the observations made by the students in teaching programmes shows that geography teachers in middle schools often lack clear aim or do not even have an aim. One of the interviewed teachers stated that the purpose of geography is closely linked to public knowledge, for example knowing the name of the world's highest mountain, which confirms the dominant role played by names of places and countries in geography teaching. Learning names and interpreting maps are common teaching objectives. Moreover, the analysis of the SODA database observations revealed the traditional progression in geography from the local to the global, starting with the Swedish provinces, to Sweden as a whole, Scandinavia, Europe, and ultimately the world; only a few observations deviated from the pattern. The teachers' statements on geography as a taught subject were strongly linked to knowledge of countries and map-reading skills. Geography teaching is often done with reference to a particular country, which students have to find facts about, sometimes in the context of an imaginary journey. The trainee teachers' observations revealed that learning is often textbook-driven. In addition, they noted that students in middle school often seemed to copy their answers directly from their textbooks without having understood or thought very deeply about the question they were answering. One interviewee expressed concern that the content of the forthcoming national test would not match the content of the textbook that she used.

The interviews indicated that teachers believe that their methods need to change in order for students to meet the proficiency requirements of the new curriculum. For example, it was mentioned that students need more training in how to argue and reason. Teachers use many different types of examinations, and consider that oral examinations engage students more than other types and may be better than written examinations for revealing what has been learned. The dominant method of examination was formative assessment, and the interviewees highlighted that the students were an important part of the assessment process. Based on discussions with teachers concerning their assessment of the knowledge that their students had acquired, we found that subject-specific knowledge is very rarely emphasised compared to more general knowledge, such as the ability to extract facts from a text.

The teachers had trouble identifying the subject-specific skills that the teaching of geography can impart, and after some consideration they mentioned two skills: reading and understanding a map, and the ability to use scales. They also stressed the importance of having the relevant tools to interpret the world we live in. One teacher said that geography teaching could be linked to current events, as students receive the tools necessary to understand the causes of disasters such as tsunamis and earthquakes.

Student achievement in a written test

Students in Year 6 were asked to solve a problem that measured their knowledge of place names. The problem required them to match countries, mountain ranges, rivers, and cities with the right letter on a map of Europe. Approximately 45% of the 106 students scored 100% and the results were about the same for girls and boys. When we tested their ability to use an atlas to respond to a number of statements, they appeared to have difficulty. They were not accustomed to using an atlas and they took a relatively long time to find countries, mountain ranges, and other features. This result is also supported by the observations made by students enrolled in teaching programmes, several of whom concluded that middle school students did not have the basic skills to read an atlas.

The open-ended question about options for drawing a road was designed to measure the students' ability to employ geographical reasoning using subject-specific language. Their responses were analysed and the assessment took into account their ability to compare alternative road alignments from a geographical point of view, and to justify their decision and evaluate it from different perspectives. The students' reasoning reflected their understanding of the complex relationships between nature and cultural landscapes. The responses were assigned one of three grades, depending on the students' level of reasoning (Fig. 1). An example of simple reasoning involved a description of what the road passed through (e.g. a village) and its main impact. By contrast, an example of developed reasoning could include a comparison with another option and a more in-depth analysis of the effects of constructing a road at that site. Highly developed reasoning could be exemplified by a student specifying chain reactions and looking at the effects from different angles. The results revealed that few students were able to use highly developed geographical reasoning when faced with such an open-ended question, although boys performed the task on road alignment slightly better than girls.

Our conclusion is that students attending middle school in Sweden generally lack the skills required to perform geographical reasoning independently, even though the ability to perform geographical reasoning is among the knowledge requirements stipulated in the national curriculum. With respect to grade A at the end of Year 6, for example, the new curriculum states: 'In their reasoning, students should be able to describe complex relationships between nature and cultural landscapes, natural resources, and the distribution of the population. Students should also be able to use geographical concepts in a well-functioning manner' (Skolverket 2011, 165; our translation).

We also found that students seemed to lack models for constructing an argument and inserting it into a subject context. In this regard, one way to help students would be to make use of the support structure in the query formulation, for example by including subject-specific concepts or particular perspectives that the students should use in their discussions. The teachers in our study experienced that their students felt uncertain about whether they had written

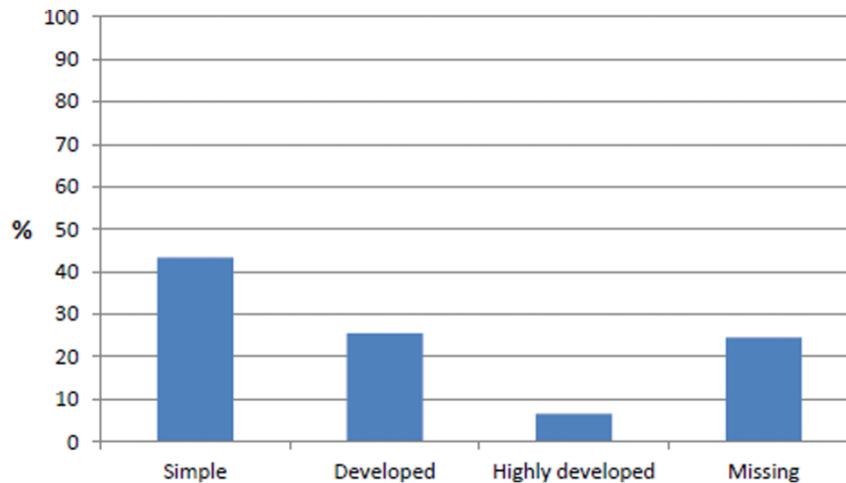


Fig. 1. Students' understanding of the relationships between nature and cultural landscapes according to their level of reasoning; percentage of students in each category (n = 106)

enough, which indicates that the support structure should provide essential guidance. When students evaluated the test as a whole, 48% thought the questions were fairly easy to understand. Their assessment of the test suggests that there was only a vague connection between how students viewed the difficulty of the questions and their results. The fact that only 6% of the students exhibited a high degree of reasoning in their responses indicates that they were not accustomed to such demanding tasks; rather, they had believed that simple reasoning was enough. The boys thought the test was slightly harder than the girls, yet their results were somewhat better.

Discussion and concluding remarks

Our study revealed how the selective traditions of geographical education influence the didactic choices made by teachers. The purpose of their teaching is often unclear, which may reduce their students' understanding of the subject-specific content of their teaching. Our results are in line with those of previous studies that have demonstrated that geography teaching has remained relatively unchanged regardless of curriculum reforms (Wennberg 1990; Holmén & Anderberg 1993; Molin 2006; Alexandre 2009; Kolenc-Kolnik 2010). Further, we found that the content of geography taught in middle schools seems to be traditional, following the selective tradition. Knowledge of individual countries and regions is given priority over knowledge of connections between different places in order, for example, to understand the consequences of injustice and to work on issues related to sustainable development using an interdisciplinary, holistic, and pluralistic approach. Geography teaching appears to be closely related to textbooks. The consequences of such a method are that the content is largely limited to knowledge of place names and country-specific knowledge at the expense of solving problems, examining the world, and identifying resources that need to be shared. The selective traditions also influence the views

of teachers concerning what skills can be developed through learning geography and how such skills can be assessed. The teachers in our study experienced difficulty when asked to give examples of subject-specific skills. Samuelsson (2010) shows that history teachers in Sweden lack a subject-specific language when assessing the skills of their students. They had little or no information about what students could achieve and what they needed to develop within the subject. If geography teachers had a clearer idea of what is particular to geography teaching, they probably could use more subject-specific language for assessment purposes. Currently, both teaching and assessment practices are guided by the selective traditions of the subject. Teachers are often unaware that they are affecting their students' ability to understand the subject, and that they are reinforcing a traditional view. Our study revealed that the didactic choices of teachers have consequences in terms of the knowledge that students acquire. Selective content, such as being able to locate countries and named places proved to be the kind of knowledge that students master best. However, the new syllabus requirements that students should be able to demonstrate knowledge of the relationship between geographic objects and locations posed major difficulties. In addition, students were unable to employ sophisticated geographic reasoning. One interesting result is that among those who thought that the test we had administered was easy, many had failed it, thus indicating that they believed that simple reasoning would be sufficient to answer questions. More research is needed to examine the differences between boys and girls with respect to their written work. Our study was not extensive enough to draw any firm conclusions, but the results indicate that boys have the same ability to employ advanced geographical reasoning as girls, a finding that contradicts the results of previous studies in Sweden (Skolverket 2004). More research on such gender differences is needed in order to explain and thus adjust teaching so that both girls and boys can perform better. In the light of the adoption of the curriculum reform in autumn 2011 and the Swedish Government's decision to

introduce national tests in geography as of spring 2013, it will be interesting to investigate whether, and if so how, the curriculum changes the didactic choices of teachers and thus their teaching and assessment practices. It was apparent from our study that geography teachers in Sweden believe that their methods need to be changed as the national tests are introduced. Our conclusion is that they are aware that their teaching is too traditional and needs to be modernised in response to the new curricula and national subject tests.

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