

**GeoCapabilities:
A Transatlantic Approach to Researching and Improving
Teacher Preparation and Leadership in Geography**

Major Activities and Findings (Phase 1): July 2012 - June 2013



Dr. Michael Solem, Principal Investigator
Association of American Geographers, Washington, DC, USA

Dr. David Lambert, Co-Principal Investigator
Institute of Education, London, UK

Dr. Sirpa Tani, Co-Principal Investigator
University of Helsinki, Finland

Overview

GeoCapabilities is a transatlantic collaborative project for researching the potential of improving curriculum making in geography through a “capabilities approach” to teacher professional development. The project is being led by the Association of American Geographers (AAG) in collaboration with Texas State University’s Grosvenor Center for Geographic Education, the Institute of Education in London, the University of Helsinki, the European Association of Geographers (EUROGEO), and the Geographical Association.

The capabilities approach provides a theoretical framework for understanding the broader aims of geography in education and how these aims may be shared internationally, irrespective of differences in the scope and sequencing of national curriculum standards. We posit a capabilities approach can empower teachers to become leaders of curriculum making by clarifying the ways geography imparts an essential perspective for life and citizenship in a highly interdependent world. We would further argue that establishing joint efforts between the U.S. and Europe to develop teachers as leaders will prove an indispensable strategy for achieving the potential of the capabilities approach in geography education.

This report presents major project activities and findings in its first year (June 2012 – June 2013). Chapter 1 summarizes the aims, methods, and limitations of the research. In Chapter 2, we provide a brief synopsis of the theoretical and methodological literature informing GeoCapabilities. Research findings are presented in three separate chapters as national case studies: England (Chapter 3), Finland (Chapter 4), and the United States (Chapter 5). In the final chapter, we present a synthesis showing how the results of the three national case studies potentially provide a shared conceptual basis for curriculum making across national boundaries. We offer recommendations for future research and curriculum making from a capabilities approach, noting the potential of expanding the research and development activities to include a broader array of nations in Europe and in developing regions. We conclude the chapter by outlining the components of a prototype web-based platform supporting a capabilities approach to teacher professional development at the transatlantic scale.

Chapter 1: Aims, Methods, and Limitations

A. Aims

GeoCapabilities is a research project currently led by the Association of American Geographers (AAG) with funding from the U.S. National Science Foundation's Geography and Spatial Science program. The project's aim is to research the potential of improving curriculum making in geography through transatlantic and trans-European collaborations in teacher professional development. This work is being pursued in partnership with the Grosvenor Center for Geographic Education at Texas State University, the Institute of Education in London, the University of Helsinki, the European Association of Geographers (EUROGEO), and the Geographical Association.

The theoretical framework for this project is the "capabilities approach" for education as inspired by the ideas of economist Amartya Sen and philosopher Martha Nussbaum (Nussbaum & Sen 1993). In the context of geography education, the capabilities approach asks teachers, as curriculum leaders, to reflect on the role of geography in affording people with intellectual, moral, and existential capabilities for lifelong learning, economic and social agency in citizenship, and the pursuit of personal well-being (Hinchcliffe 2007; Kuklys 2005). As such, the approach offers a "new space to evaluate what is of value in education" (Hart 2009: 391).

To date, the first phase of GeoCapabilities has developed a methodology to analyze and compare the content, organization, and positioning of geography in the national curriculum standards and frameworks of the U.S., England and Finland. The pilot analysis produced case studies showing how capability concepts are articulated in these nations' geography standards and frameworks. The case studies, which appear in Chapters 3-5, demonstrate how geography education potentially contributes to the development of three human capabilities:

1. Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason;
2. Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability;
3. Understanding one's potential as a creative and productive citizen in the context of the global economy and culture.

The results of phase 1 were used to craft a synthesis (Chapter 6) that presents a common transatlantic framework for understanding geography in the secondary school curriculum of the U.S., England, and Finland. This framework illustrates how the broader aims of geography education for capability development are shared across national borders, irrespective of differences in the scope and sequencing of national standards.

As a school subject and academic discipline, geography is concerned with social and environmental issues affecting people, places and environments worldwide. It is therefore ironic that there has been very little international dialogue among geography teachers on what the aims of geography education ought to be in a rapidly globalizing and increasingly interdependent world. Many assertions can be found in the U.S. and European national curriculum standards

regarding the importance of geographic literacy for what we might refer to as “global citizenship” or “global learning” (Falk 1993; Gaudelli & Heilman 2009). At present, however, American and European teachers have few opportunities during their initial training and careers to engage the perspectives of peers and experts in different countries concerning the nature and impacts of environmental change, political conflict, resource consumption, migration, urban growth, natural disasters, and other issues they are expected to understand well enough to teach effectively. Consequently, students tend to learn the subject from the perspective of their local and national contexts without acquiring international perspectives providing critical insights on issues.

GeoCapabilities makes the explicit claim that the capabilities approach will enable and facilitate international communication about geography in education. To date this has been notoriously difficult because there are distinctive traditions and cultures of geography in the school curriculum. For example, geography in the U.S. is often taught as a social science. In the UK, the humanities have a relatively stronger presence in geography, whereas in Finland there are more explicit connections between biology and geography. The capabilities approach, by bridging curriculum content and broader educational aims, is a framework that allows for national differences in a manner that encourages dialogue across national jurisdictions. Such curriculum-focused dialogue, articulated through capabilities as a language that captures broad educational goals common to different nations, is a means of nurturing an internationalized curriculum for teacher leadership in schools across the U.S. and Europe.

GeoCapabilities therefore has broad implications for educational practice and policy, coming as it does at a time when reforms are dramatically changing the character of geography in schools and, in turn, how teachers are prepared and trained. In the U.S., teacher preparation in many states gives only cursory attention to geography even though geography is present in state standards. This situation owes to the lack of geography courses offered on the campuses of many teacher education programs. Because of their inadequate preparation in geography, American teachers have long felt unprepared to teach the subject (Anderson & Leinhardt 2002; Chiodo 1993; Diem 1982; Reinfried 2006; Segall 2002; Segall & Helfenbein 2008).

European nations are also experiencing significant developments in their geography education systems (Lambert 2009a, 2009b, 2011a, 2011b). Leat and his colleagues point to the difficulty of national systems accommodating to what they describe as the “paradigm shift” required to introduce a competence-based curriculum, as it ...

“... explodes conventional understandings of school learning which rely predominantly on the acquisition of knowledge and the development of understanding and skills, often completely disaggregated and decontextualized from real-life experience.” (Leat et al 2012, 401)

While Leat and his colleagues seek to demonstrate that “national politics have a habit of overwhelming EU policies” (ibid: 409), GeoCapabilities seeks a different approach: not to castigate national policies for failure of ambition, but to understand and harness different perspectives. This will be done with a language and conceptual apparatus, provided by the capabilities approach, that encourages productive pan-European and transatlantic dialogue about

subject content in the context of broader educational aims, centered on developing teachers' leadership capacities through building their curriculum understanding and practical curriculum-making skills.

B. Methods

The research in the first year was concerned with exploring and clarifying the following questions:

1. In what ways is geography a “powerful knowledge” (as defined below on p. 9)? In what ways is the capabilities approach helpful to teachers in bridging notions of powerful knowledge content to broader educational aims?
2. In what ways can geography standards in different national settings be said to contribute to the development of human capabilities?

We proceeded to implement a two-stage methodology for analyzing national geography standards in the U.S., England, and Finland from a capabilities perspective. First, researchers in each country partner independently performed a content analysis of their respective national documents presenting the standards/curriculum framework for geography. The text of the documents was coded for explicit and implicit evidence of the three capabilities. The coding, where possible, was performed on sections pertaining to the “purpose” or “significance” of geography education (i.e., why geography is important) as well as on sections outlining the geographic content, skills, and performance expectations for students at different grade levels (i.e., what students should know and be able to do).

In May 2013, a workshop will be held in Bruges, Belgium involving the principal researchers, the project evaluation team from Texas State University's Grosvenor Center for Geographic Education, and 11 invited teachers and geography professors representing the U.S., England, Finland, Turkey, Greece, Germany, and the Netherlands. The goals of the workshop are threefold:

- 1) *To critique the methodology and findings of the pilot analysis for the U.S., Finland, and England (this report).* The workshop participants from these countries will perform a content analysis of their respective national geography standards using the same coding procedures conducted by the principal investigators. Workshop participants will discuss their reviews and explore with the principal researchers the interpretive and definitional issues they discovered regarding how capabilities are understood..
- 2) *To assess the potential for expanding our work to other European nations (Greece, Germany, the Netherlands and Turkey).* The workshop participants from these countries will begin an initial analysis of capabilities in their respective nations' geography standards. They will be asked to follow the same coding procedure as above.
- 3) *To generate ideas for cross-cultural curriculum making across the represented countries.* Time will be dedicated at the workshop for participants to compare findings and identify the extent the three capabilities are present (or not) within and across their

respective national geography standards. They will then (a) review the synthesis presented in Chapter 6 which provisionally illustrates how a capabilities approach might provide a unifying framework for envisioning the purpose and goals of geography education at the transatlantic and trans-European scales; and (b) identify a range of geographic topics and ideas for student activities that will inform the content of a future GeoCapabilities platform for teacher preparation and training.

C. Limitations

Our premise is that the conceptual perspectives on geography education that teachers develop through the capabilities approach will enrich their understanding of geography subject matter and empower them to lead curricular reforms locally. The long-term goal is to develop awareness and support the application of these capabilities concepts in cross-cultural curriculum making, led by teachers who participate in future training workshops sponsored by the project.

We also wish to make clear what the GeoCapabilities project is *not* about, both in terms of its aims and intended outcomes:

- *We are not defining a universal rationale and justification for geography education.* A capabilities approach provides a language that teachers can use to communicate pedagogical ideas and potentially engage in curriculum making with their peers internationally. It equips teachers with concepts and an international perspective for understanding geography in education and for articulating the aims of their professional goals as teachers. Rather than being a “top-down” approach, capabilities as applied in geography education empowers teachers as leaders of curriculum making and gives them a voice in defining the goals of geography in education. The capabilities approach provides teachers, via international dialogue and exchanges, with diverse cross-cultural examples of geography in a global context and a means of shaping curriculum at the local level on the basis of that shared knowledge.
- *We are not proposing international standards for geography education.* As the national case studies reported here show, nations take varying approaches to geography teaching and learning in local jurisdictions. Differences in the scope and sequencing of geography curricula is a function and reflection of national policies and cultures. This means, for example, that the relative geographic literacy and proficiency of a typical 15 year old in the U.S., where standards are set at the state level, will differ from a peer in England and Finland, where there is a national curriculum. Each nation has different expectations for what youth should know about geography and be able to do geographically. Nonetheless, as our analyses indicate, there are shared concepts and perspectives across the three nations with regard to how geography can better prepare that 15 year old with a “capabilities set” for living autonomously, thinking freely, contributing as a citizen to the betterment of local and global communities, and understanding the implications of personal choices for the quality of life and environments in other parts of the world.
- *We are not advocating a universal approach to teacher preparation in geography.* The national case studies for the U.S., England, and Finland also demonstrate how teacher

education systems are structured very differently. Teachers receive varying amounts of preparation in geography prior to entering the teaching workforce. While teachers will always need to understand the professional expectations set forth by local jurisdictions, we argue that the quality of their teaching can be enhanced further by engaging them in critical thinking about geography in the curriculum through applications of the capabilities approach. We believe that having teachers themselves learn geography through international collaborative approaches made possible by the capabilities approach will deepen their subject-matter knowledge and help them develop the capabilities of their students. This can be done in the wide variety of educational settings, and in complementary fashion with the wide variety of professional development methods in which teachers are prepared to teach geography.

The following three chapters report an initial analysis of the standards for England, Finland and the United States in terms of the three capabilities identified above. This is at a broad-brush level and is inevitably somewhat subjective and tentative. It is not so much a content analysis of the standards, but an interpretation of the aims of geography as expressed in the national curriculum.

The analyses were conducted after an initial seminar, led by co-PI Dr. David Lambert, with seven geography education specialists under the auspices of the Geography Education Research Collective (GEReCo) in England, held in July 2012. Following an introductory presentation of the capabilities approach and the aims of this initial research project a number of relevant observations were made resulting in several questions (which were subsequently discussed between the PIs on Skype and further considered at the PI meeting in Helsinki in December 2012).

- On what basis are the capabilities *selected* (from Martha Nussbaum's original list of 10 human capabilities)?
- The selection of capabilities could be seen as individualistic ('neoliberal'?). What about more social capabilities (such as 'affiliation')¹?
- Would different jurisdictions/nations have differing emphases in relation to particular capabilities – that is, does this project need to be careful to avoid inadvertently attempting to 'impose' an international standard for geography education – and if so why and what value would this serve?
- If not an international standard, is this project *instead* attempting to create a 'bridge' to express what is common and of value in teaching and learning geography in school internationally? If so, why and for what purpose?
- In what ways is the capabilities idea simply another ways to express competences and/or transversal 'skills' – does it mask *what is actually there* in geography?
- Isn't 'capabilities' a distraction? Should we be focusing on geography as 'powerful knowledge' (or the 'geographic advantage' [USA]; or 'thinking geographically' [UK]) in its own right?

¹ In subsequent attempts to develop this project in a broader collection of countries, a fourth capability has been added to take account of this observation. Thus the capabilities in future proposals may expand to become:

1. Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason;
2. Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability;
3. Understanding one's potential as a creative and productive citizen in the context of the global economy and culture.
4. Making healthy allegiances: being able to live with respect towards others and to be able to imagine the situation of others

These are important questions to address. At this stage, and for the purposes of the initial (Phase 1) analysis undertaken in relation to geography standards, we are reminded of the need to be:

- clearer about what the outcomes of this project may be. For instance, it may be that in addition to analysis of national curriculum documents and standards, we should agree what kind of contextualization is necessary in different jurisdictions.
- clear that this project focuses mainly on the intellectual/cognitive development of young people and geography's contribution to this. The focus on the students as knowers: not students as 'learners' per se, but on *what* children and young people may need to know in relation to their development as individuals with human capability.
- clear about what this project has to do with teacher development – and the role of teachers in interpreting the curriculum/standards (specifically, their orientation to knowledge and principled 'curriculum making')

We will return to these questions and observations as the project proceeds to later stages.

Chapter 2: Literature Review

This chapter presents a brief synopsis of the theoretical and methodological literature informing the GeoCapabilities project. We are planning to write an extended theoretical discussion of the capabilities approach for future publication in a scholarly journal. For purposes of this report, we wish to provide a concise rationale for a capabilities approach to geography education and why, we believe, it offers a potentially transformative framework for international dialogue aimed at understanding geography in the school curriculum. We relatedly offer a justification for a web-based platform as a method of applying a capabilities approach to geography teacher preparation at the international scale.

In their recent work *The Global Fourth Way: The Quest for Educational Excellence*, Andy Hargreaves and Dennis Shirley reflect on three decades of research on educational change in different countries. From their review they conclude that developing teachers as leaders is key to future educational innovation and effective schools:

“We need to establish platforms for teachers to initiate their own changes and make their own judgments on the frontline, to invest more in the change capacities of local districts and communities, and to pursue prudent rather than profligate approaches to testing.” (Hargreaves and Shirley, quoted in Rubin 2013).

Meta analyses of educational research by Marzano (2003) and Hattie (2009) also point to the key role of teachers regarding the effectiveness of schools.

A capabilities approach to geography education asks teachers to consider the role of geography in helping young people think about their life in relation to themselves in the world and what may become of their communities as well as people, places, and environments around the world (Wadley 2008). Geography does not tell us how to live; but thinking geographically and developing our innate geographical imaginations can provide the intellectual means for visioning ourselves on planet earth. This disciplinary knowledge base and perspective are components of what Michael Young (2008, 2011) refers to as “powerful knowledge,” which he defines as the knowledge children and young people are unlikely to acquire at home or in their workplace, and knowledge they will need if they are to become active citizens and workers in the complex modern world.

Teachers who work in settings with weak traditions in subject specialist education, or who individually do not see themselves as confident or knowledgeable specialist teachers, may have difficulty providing their students with access to powerful knowledge through their pedagogical practices. These teachers in particular, but in truth all teachers who aspire to leadership roles, must find a means to “connect” or bridge their subject-specialist knowledge content (such as that identified in national geography standards) with broader educational aims, articulated in such a way that captures the spirit and purposes of powerful knowledge as defined above. In effect, we are arguing that an absence of high quality geography in a school deprives in specific ways the potential of that school’s curriculum to develop human capability: students will have been deprived of certain epistemic access which will undermine their capabilities to think and act in a rapidly changing world.

Work on capabilities and education so far has been exploratory, and practical applications have covered a diverse range of educational issues, such as participating in class (Saito 2003), gender equality (Unterhalter 2005), learning about history (Conklin et al. 2010), being able to take part in discussions with other learners (Walker 2006), or being respected by teachers (Appadurai 2004). The link between education and other dimensions of social well-being, such as developing vocational skills and knowledge (Hollywood et al. 2012), numeracy (Freeman 2010), or general confidence (Tikly and Barrett 2011), has also been explored. Although the relevance of the capabilities approach for teacher education and training has been pointed out, and specifically in geography education (Lambert 2011), it has not yet been applied to the professional development and support of teachers and initial training education.

Several decades of research have verified the critical need for secondary teachers to have a deep knowledge of their subject areas (Deleplace & Niclot 2005; Yager 2005; Metzler & Woessmann 2012). Beyond content knowledge, teachers must have pedagogical knowledge, pedagogical content knowledge, a knowledge of learners, knowledge of curriculum, and knowledge of instructional design and technologies (Shulman 1987; Harris, Mishra & Koehler 2009). Even though research has extensively explored these areas of teacher knowledge, there remains a problem of inadequately trained teachers in disciplines like geography, often at the level of leadership in helping to define the aims and purposes that can be served by the subject (Lambert & Morgan 2010).

As we discuss in greater detail in Chapter 6, we aspire in a future (second) phase of GeoCapabilities to address the need for improved teacher training by applying our research findings to develop an innovative web-based platform for a capabilities approach to teacher preparation and leadership in curriculum making. Regarding our choice of a primarily online delivery format, we know from research that the most typical form of professional development, the short workshop, is the least effective at improving teaching at a large scale (Pianta 2011). This outcome is consistent across content areas and grade levels (Tyler 2011). Moreover, traditional face-to-face professional development has a geographically limited reach; only teachers who are able to access these opportunities locally can participate (Jimoyiannis 2010; Avalos 2011; Watkins & Donnelly 2011). For these reasons, alternative methods of professional development have become more appealing in recent years with the widespread use of online learning and Internet technology and video (Borko, Whitcomb, and Liston 2009; Boehm et al. 2012). Such modes of delivery are also helpful if the goal is to internationalize approaches to professional development. We do, however, recognize that traditional formats for professional development still have value for many teachers, and thus we will produce resources suitable for face-to-face workshop experiences at the local level.

In sum, the theoretical and methodological basis of GeoCapabilities argues that a capabilities perspective on geography goes beyond a focus on competencies by describing a subject that can contribute in specific ways (and no matter how it is configured in national standards) to young people's powerful knowledge, consisting of a deep descriptive 'world knowledge'; a theoretically-informed relational understanding of people and places in the world; and a propensity and disposition to think about alternative social, economic and environmental futures. Such learning will be achieved through teaching strategies that emphasize the application of

geographical understanding in realistic decision-making contexts. This requires teachers, through principled curriculum making activity, to give young people opportunities to acquire, develop and apply a range of key geographical ideas and principles, and ultimately to make judgments about particular issues.

In the following three chapters we turn to our initial analyses of national geography standards in England, Finland and the United States. Each chapter presents a brief history of curriculum change in geography, followed by an analysis of the geography standards from the perspective of three capabilities. Because of variations in how the standards explain geography in terms of educational objectives at different years/grade levels, the chapters do not follow a consistent format in reporting results. Chapter 6 presents a tentative synthesis of the findings reported in the national case studies. We recognize this is a work in progress in need of critical review.

Chapter 3: England Case Study

Introduction

In this chapter we subject the geography national curriculum standards for England, known as “programmes of study”, to a capabilities analysis. The national curriculum in England has, since its first inception in 1991, undergone three major revisions (in 1995, 2000 and 2008) and is currently undergoing a fourth. The analysis attempts to take account of this dynamic context. Although the geography national curriculum for England has been subject to extensive and critical review over the years (e.g., Graves et al 1990; Lambert 2004; Rawling 1996; 2001; Winter 2009; 2011; 2012) it is possible to summarise the overall “arc” of development, through the successive revisions, as follows:

- The stipulation, in 1991, of a detailed “content rich” programme of study for geography for key stages 1, 2, 3 and 4 (5-16 years). This consisted of 184 separate “statements of attainment” spanning those years. There were no explicit aims.
- Withdrawal (in 1994) of geography (and history) as a statutory subject in the national curriculum for key stage 4 (14-16 years) owing to acute curriculum overload.
- Abolition of the statements of attainment in 1995, and replacement with 8 “level descriptions” purporting to cover progression in learning through key stages 1, 2 and 3.
- Simplified programme of study, in 2000, with less specific content requirements, but with clearer aims.
- In 2008, key stage 3 organised around “key concepts” and “key processes” rather than prescribed content, within an aims-based ‘big picture’ of the whole curriculum.
- New proposals (2013) for the abolition of level descriptions and the introduction of a new curriculum (key stages 1-3) based on the “core of essential knowledge” of geography, driven by a statement of aims and purposes.

Throughout this extended period of uncertainty and change, school geography in England has retained its place as a statutory subject on the national curriculum from 5 to 14 years old, and an identity that aligns the subject broadly *within the humanities*, a point stressed in the Geographical Association’s 2009 ‘manifesto’ *A Different View*.

At 14 years old (at the end of key stage 3 and statutory geography) students are often encouraged to choose *either* geography *or* history to study to GCSE level (approximately one-third of students nationally study neither). The introduction in 2011 of the English Baccalaureate formalised this optional status, narrowly defining its requirement of a humanities subject as being either geography or history. School geography still retains a strong tradition of physical geography although in recent years it is the case that the scientific component of this has declined somewhat, the emphasis shifting towards people-environment interaction and impact studies rather than on physical processes per se.

Thus, in summary, geography is a statutory subject in the national curriculum from 5-14 years. The standards are set out in programmes of study written by the government’s curriculum agency (or, since its abolition in 2010, by government officials). From 14 years geography becomes optional, chosen by about 30% of students. The 14-16 curriculum standards are dictated by

public examinations (GCSE), the specifications for which are written by one of four awarding bodies in a competitive market situation. A non-governmental agency, Ofqual, is the market regulator which sets out the national criteria.

Details of the current (and proposed) national curriculum programmes of study are set out in Appendix A, together with the current national criteria for GCSE geography. Together these form the raw materials for the capabilities analysis of the national curriculum for England.

Capabilities analysis of geography education in England

This section provides some preliminary analysis of the standards for geography in England. For addressing our research questions, it is impractical and unproductive to assign capability outcomes to specific content requirements. It is more appropriate to focus our analysis on the level of aims (where these have been stated) and possibly outcomes (which at present in England are expressed as NC ‘Levels’ and GCSE ‘Grade Descriptions’). Each of the three selected ‘capabilities’ is taken in turn.

The analysis is based on a reading of the 2008 KS3 National Curriculum *general* aims and purposes. One of the main criticisms and difficulties of this curriculum (which remains in statute until 2014) is that there are no statutory *subject specific* aims (apart from those implied in the so-called “importance statement”) and very little prescribed, substantive content.

All subjects, including geography, were to serve three overarching general aims: to create successful learners, confident individuals and responsible citizens. These statements are revealing of a curriculum expressed in terms of generic skills and competency outcomes. Geography is seen, through the non-statutory guidance, to contribute in terms of broad skills development within a quite vaguely defined ‘context’ – e.g., reference to place, location, scale, the global and the real world.

Analysis: Focusing on the capability: ‘Promoting individual autonomy and freedom, and the ability to use one’s imagination and to be able to think and reason’

There is absolutely no doubt that at the *level of general aims*, or what the curriculum designers called the ‘big picture’, there is an explicit intention to address individual freedoms. The following gives examples under the three curriculum aims:

Successful Learners (who enjoy learning make progress and achieve)

‘are creative, resourceful and able to identify and solve problems’

‘have enquiring minds and think for themselves ...’

‘know about big ideas and events that shape our world’

Confident individuals (who are able to live safe, healthy and fulfilling lives)

‘have a sense of self-worth and personal identity’

‘have secure values and beliefs and have principles to distinguish right from wrong’

Become increasingly independent, are able to take the initiative and organise themselves

‘recognise their talents and have ambitions’

Responsible citizens (who make a positive contribution to society)

'respect others and act with integrity'

'understand their own and others' cultures and traditions... and have a strong sense of their own place in the world'

'challenge injustice, are committed to human rights ..'

'take account of the needs of present and future generations in the choices they make'

As we have seen, in the 2008 geography programme of study there are no 'aims and purposes' for geography. Instead there is a programme of study expressed under five headings:

- The importance statement
- Key concepts
- Key processes
- Range and Content
- Curriculum opportunities

In addition there are 8 "level descriptions" purporting to express progression in learning geography from age 5 to age 14.

Below, we have extracted a number of statements that appear to express geography in relation to the capability "enhancing individual freedoms".

The 'Importance Statement'

Geographical enquiry encourages questioning, investigation and critical thinking about issues affecting the world and people's lives, now and in the future ...

... Geography inspires pupils to become global citizens by exploring their own place in the world, their values and their responsibilities to other people, to the environment and to the sustainability of the planet.

Key concepts

7b. Appreciating how people's values and attitudes differ and may influence social, environmental, economic and political issues, and developing their own values and attitudes about such issues

Key processes

Under 'enquiry':

a. ask geographical questions, thinking critically, constructively and creatively'

f. plan geographical enquiries, suggesting appropriate sequences of investigation

g. solve problems and make decisions to develop analytical skills and creative thinking about geographical issues.

Range and content

Study of geography should include:

h. interactions between people and their environments, including causes and consequences of these interactions, and how to plan for and manage their future impact.

Curriculum Opportunities

The curriculum should provide opportunities for pupils to:

- a. build on and expand their personal experiences of geography*
- b. explore real and relevant contemporary contexts*
- f. participate in informed responsible action in relation to geographical issues that affect them and those around them*
- g. examine geographical issues in the news*
- h. investigate important issues of relevance to the UK and globally using a range of skills, including ICT*
- i. make links between geography and other subjects, including citizenship and ICT, and areas of the curriculum including sustainability and global dimension.*

National curriculum reform (2012-14)

The 2008 KS3 National Curriculum for geography, on which the above analysis is based, is set to change. The new curriculum (for first teaching 2014) is likely to be simplified with less emphasis on the general aims and generic skills development. The geography curriculum is likely to be strengthened, with subject specific purposes and aims, but also stripped down: it will stress ‘core of essential knowledge’ of geography. Furthermore, the current Level Descriptions, which together successfully express a sense of intellectual and personal growth in geographical knowledge understanding and skills (and therefore may be associated with ‘enhancing freedoms’), are also set to be abolished, replaced with assessment that relates directly to the knowledge content of the curriculum.

Taken together, do these proposed reforms mean it will be more difficult to analyse the geography curriculum according to the capability of ‘enhancing individual freedoms’ (and understanding autonomy and rights)? In many ways it will be for others (publishers, Associations – and indeed individual teachers) to interpret how a core of essential knowledge may be inserted into a more complete localised curriculum or specification. It is in this context that a capabilities approach may be of particular significance, in providing a ‘frame’ for curriculum thinking: in effect a bridge between the knowledge content of the curriculum and the wider educational aims and purposes this serves.

However, as in the previous section, at the level of aims and purposes for geography (Key Stages 1-3) it is possible to express geography in terms of the capability to ‘enhance individual freedoms’. The following extracts have been selected to show this:

“Teaching should equip pupils with a deep knowledge and understanding of the Earth’s key physical and human characteristics and processes, and an understanding of how human activity affects, and is affected by the physical environment”.

and

“... using frameworks which explain at different scales, how geographical features are shaped, interconnected and change over time.”

In each case we can claim an individual's autonomy and capacity to promote their individual freedom is enhanced through a deep knowledge of their relationship with the Earth and its physical and human systems.

Discussion

As we have acknowledged from the start, the claim made at the end of the previous section is to some extent a confection. We could use a statement of geographical aims, expressed primarily in terms of knowledge and understanding (but also encompassing skills development and specifically *communicating* geographical information) in any number of ways. The value of applying capabilities is that it provides a means of doing this that lifts us above the level of particular content and individual lessons. The challenge this project identifies is not to assess how a capability concept such as "autonomy" might be developed through the content of a geography lesson (in accordance with the learning expectations, or outputs, of the national curriculum framework) but to express the outcomes of an education that includes geography. Or, conversely, how the development of human capabilities may be impaired if geography were not a component of the school curriculum.

A national curriculum focussed solely on core knowledge may say comparatively little that is explicitly concerned with human capabilities development. But what our initial analysis may show is the importance of distinguishing aims from the content of the national standards. National content standards – in England referred to as the national curriculum – are not in themselves a fully formed curriculum. The latter is made locally by teachers and the question this project raises is whether 'curriculum making' in this sense is supported by the sense of educational purpose offered by a capabilities approach.

Thus, auditing standards for 'capabilities' may have some initial value. Even so, we should remain alert to the possibility that its longer term value may be limited, because such a methodology may fall into a similar trap as auditing curricula for competences or transversal skills: these are essentially reductive processes that may undervalue learning subject content as a justifiable end in itself. The judgement this research must therefore make is the degree to which developing and refining geocapabilities may result in a concept that helps teachers translate a standard into a defensible form of educational practice (which has a distinctive knowledge component as well as skills and competences). It may be a concept, or device, that is useful for teachers to *comprehend* the wider purposes of geography, and to plan their teaching accordingly.

An enduring and crucial question that follows in this discussion is whether geography as a *school subject*, with its loose and sometimes tenuous links with the wider *disciplinary practice*, is justifiable and comprehensible simply in its own terms (expressed in the national curriculum/standards) or whether it *needs* the educational scaffold supplied by the capabilities approach. If a capabilities approach helps lift the level of discourse about geography beyond what is expressed colourfully by the following quote then we may conclude this would be a good thing, especially if it helps support improved practices in geography classrooms:

"Other things are in the national curriculum that, when I was at school, I found inimical to education. Geography was the most extreme example. We were made to do geography. I was not

persuaded then and I am not persuaded now that geography should be part of anybody's education. If I want to know where somewhere is ... I go to my computer. These days, I have to type in the name of countries that did not exist in my day, but I can find out where they are.”
Lord Peston, House of Lords, July 2011 (Hansard 2011)

Capabilities at GCSE level

In this section, the two other capabilities are explored, using the GCSE as the main setting. The criteria and the grade descriptions are the main reference point and the capabilities under investigation are:

- Identifying and exercising one’s choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability
- and
- Understanding one’s potential as a creative and productive citizen in the context of the global economy and culture.

These capabilities are, arguably, more oriented to the content of geography. Unlike in the previous sections, concerned with autonomy and enhancing individual freedoms, we may be less reliant on general educational aims.

Analysis: Focusing on the capability: ‘Identifying and exercising one’s choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability’

At the level of aims the national criteria for geography are interesting. They explicitly speak of geography specifications having “to enable students”. For example, in relation to ‘choices about how to live’ geography specifications must enable learners to:

- *develop their knowledge and understanding of geographical concepts and appreciate the relevance of these concepts to our changing world;*
- *appreciate the differences and similarities between people’s views of the world and its environments, societies and cultures;*
- *understand the significance of values and attitudes to the development and resolution of issues;*
- *develop their responsibilities as global citizens and recognise how they can contribute to a future that is sustainable and inclusive;*

The outcomes statement (the grade description) provides clear indication that to enhance students’ capabilities in this regard is an explicit intention. Students need to show that:

*‘They recognise and understand complex relationships between people and the environment, identifying and evaluating current problems and issues, and **making perceptive and informed***

geographical decisions. *They understand how these can contribute to a future that is sustainable.* (our emphasis)

Furthermore, the national criteria state that specifications must address:

- *a range of places, at local, regional, national and international scales, selected from the UK, other parts of Europe and other continents, to include places at different levels of development;*
- *aspects of physical and human geography, and their associated processes, including relationships between people and environments;*
- *current issues of local, national and global importance, including climate change and sustainable development;*

The following skills statements enhance this yet more explicitly:

- *make informed geographical decisions;*
- *describe, analyse and interpret evidence, making decisions, drawing and justifying conclusions, and communicating findings in ways appropriate to the task audience;*
- *evaluate methods of collecting, presenting and analysing evidence, and the validity and limitations of evidence and conclusions.*

Of course, whilst this mix of knowledge and skills can combine to enhance the capability concerning choices of how to live, the case can also be made that they contribute to students' sense of autonomy and personal freedom by explicitly promoting participation in decision-making activity – based on close description, analysis, evaluation in geographic context and a range of practical skills and competences, including communication.

Analysis: Focusing on the capability: 'Understanding one's potential as a creative and productive citizen in the context of the global economy and culture'

Capabilities in this regard are *perhaps* a little less visible at the level of aims and outcomes in comparison with the others explored in this exercise. It may be worth examining specific contents of specifications and syllabuses, to examine how studies of production and consumption are dealt with in geography programmes: of food, water and energy security for example, of the distribution of manufacturing and service industries in relation to research and development activity and the role of technologies. In other words, there are arguably specific geographical knowledge domains to this capability.

However, still at the level of aims GCSE specifications in Geography must enable learners to:

- *actively engage in the process of geography to develop as effective and independent learners, and as critical and reflective thinkers enquiring minds;*

- *understand the significance of values and attitudes to the development and resolution of issues;*
- *develop their responsibilities as global citizens and recognise how they can contribute to a future that is sustainable and inclusive;*
- *develop and apply their learning to the real world through fieldwork and other out-of-classroom learning;*

All these can be directly relevant to the nurturing young people who can respond intelligently, with a knowledge base, to significant issues to do with development and sustainability. In terms of outcomes relating to specification contents, students need to understand and appreciate:

- *the use of new technologies, including GIS, to assist geographical investigation;*
- *geographical concepts and ideas including uneven development and alternative futures;*
- *the relevance of geographical studies to their lives and to the real world.*

Again, it is possible to articulate the educational outcomes of teaching geography in terms of enhancing students' capabilities – their potentials as productive and creative participants in rapidly changing economic, social and political environments.

Some concluding observations and comments

- This analysis has been conducted with care, but is nevertheless partial and incomplete. It is also perhaps inevitably subjective at this stage. It will be interesting to see whether we can achieve a more systematic and objective way of subjecting curriculum/standards documents, which come in many forms and genres. Whilst it may be impossible to devise a simple transferable method of analysis, it will be very important to achieve some inter-rater reliability through extending this approach with others (e.g., at the Bruges Eurogeo workshop May 2013). We need to avoid, in making claims about geo-capabilities, accusations that we are simply 'reading them into' the standards.
- The significance of curriculum aims, as opposed to contents, is clear from the first phase analysis above. Perhaps the bigger test will be to follow this through to subject contents – possibly the USA standards, being far more detailed than what pertains in England or Finland, has already ventured to this point. But in England, as national standards and criteria become more content focussed, capabilities may apply, but be less explicit. The capabilities approach may be even more significant in such contexts as a means to enable local curriculum making.
- Do 'geo-capabilities' have to be shown explicitly in curriculum documents or are they a meta concept? Thus, in the England context, it seems likely that with the current round of reform

there is be far less visible orientation to capabilities. This does not however mean that this suddenly ceases to be valid or important as an expression of curriculum goals and purposes.

- ‘Levels’ of curriculum is perhaps something we should pay attention to. We are operating this analysis at a top level. But when it comes to capabilities and teacher development we are inevitably operating at a more local level.
- Should we look at IGU International Charter and its original intentions – and learn from what this achieved and failed to achieve?
- How are we using ‘capability’ and is this project beginning to use it consistently – do we have a strong shared sense of what it is?
- How does our notion of ‘geo-capability’ relate to the hypothesis of geography as a ‘powerful knowledge’ (Young 2008) and how does the concept help articulate geography in a ‘Futures 3’ curriculum (Young and Muller 2010). See page 38 in this report for an initial outline of this framework.

Chapter 4: Finland Case Study

Introduction

Framework curricula for the Finnish primary, secondary and upper secondary schools are renewed approximately every tenth year. The present version of the curriculum for basic education (grades 1–9; seven to fifteen year-old students) was published in 2004 (see Appendix B). The renewal process for the new curriculum was started in June 2012 when the Decree on national objectives and distribution of teaching hours in basic education was issued by the Finnish government. In autumn 2012 a draft version of the general part of the curriculum document was published online. For example, it describes basic values, conception of learning and main objectives of education. These sections were made available for public comment during a short period of time in November-December 2012 on the website of the Finnish National Board of Education. The summary of the comments was published in January 2013. Subject-specific groups started their work in the beginning of 2013 and first versions on these texts will be made available for public comment during spring 2014. The renewed core curriculum will be completed by the end of 2014.

The analysis presented below is based on the core curriculum of 2004 where, in addition to the aims and contents of all the school subjects, mission and underlying values of education, conception of learning and cross-curricular themes are defined (see Appendix B). For the purposes of the analysis of GeoCapabilities, we found it useful also to investigate these general parts of the curriculum. In the first part of the document, learning is defined as an individual and communal process of building knowledge and skills, and students are seen as active agents who construct knowledge in different learning contexts. Situationality of the learning is highlighted, and the importance of different learning environments is acknowledged. The underlying values of education which have been defined in the document are ‘human rights, equality, democracy, natural diversity, preservation of environmental viability, and the endorsement of multiculturalism’. Education is designed to promote ‘responsibility, a sense of community, and respect for the rights and freedoms of the individual’ (p. 12). These aims can be connected to the ideas of GeoCapabilities, and that will be done in the following sections of this chapter.

Teaching in Finnish primary and secondary schools is organized under separate subjects, but there are also some cross-curricular themes which are meant to be taken into account in all the subjects. They are designed to stress the importance of integration between the subjects and thus to promote collaboration between different fields of study as well as between the teachers. In the present version of the framework curriculum, seven cross-curricular themes are defined: 1) Growth as a person, 2) Cultural identity and internationalism, 3) Media skills and communication, 4) Participatory citizenship and entrepreneurship, 5) Responsibility for the environment, well-being, and a sustainable future, 6) Safety and traffic, and 7) Technology and the individual (pp. 36–41). Some of these themes have links to the ideas of the three GeoCapabilities and they will be analysed together with the aims and contents of geography education.

In the present national framework from the year 2004, during the first four school years, geography is taught as part of the subject *Environmental and Natural Studies*, which integrates

contents of biology, geography, physics, chemistry, and health education. From the 5th to the 6th grade geography is taught together with biology, and from the 7th to the 9th grade as an individual subject. Geography is mandatory for all the students during the nine years of basic education. It has been decided that in the next core curriculum, the name of the integrated subject will be changed into *Environmental Studies* and it will be taught from the 1st until the 6th grade. Geography will stay as a separate subject from the 7th to the 9th grade. The aims and contents of each school subject are defined quite briefly in the national core curriculum. There are altogether only eleven pages describing the aims, contents, good performance at the end of the fourth and the sixth grades, as well as the final assessment criteria for the 9th grade for the subjects 'Environmental and Natural Studies', 'Biology and Geography' (5th and 6th grades), and Geography.

Analysis: Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability

'Understanding citizenship and sustainable development' is a capability which can be easily read from different parts of the Finnish core curriculum. Two of the seven cross-curricular themes have clear connection to 'citizenship' and 'sustainability'. First of them, *Participatory citizenship and entrepreneurship*, has the aim to help the students 'perceive society from the viewpoints of different players, to develop the capabilities needed for civic involvement, and to create a foundation for entrepreneurial methods' (p. 38). In the same context, it is also noted that the school should support the students' development as 'independent, initiative-taking, goal-conscious, cooperative, engaged citizens', and help them form 'a realistic picture of their own possibilities for influence'.

Another cross-curricular theme which can be linked with the capability dealing with citizenship and sustainable development is called *Responsibility for the environment, well-being, and a sustainable future*. The aim of this theme is to augment the students' 'abilities and motivation to act for the environment and human well-being' and thus 'raise environmentally conscious citizens who are committed to a sustainable way of life'. The role of the school in teaching future-oriented thinking and the construction of the future upon ecologically, economically, socially, and culturally sustainable premises is also highlighted. Objectives of this theme are defined as follows (p. 39): 'The pupils will come to understand the prerequisites for human well-being, the necessity of environmental protection, and the relationship between the two. They will learn 'to observe changes taking place in the environment and human well-being, to clarify these changes' causes and consequences, and to act for the good of the living environment and the enhancement of well-being. They will also learn 'to evaluate the impacts of their consumption and daily practices, and will adopt the courses of action required for sustainable development; 'to learn to promote well-being in their own communities and to understand the threats to, and potential for, well-being at a global level'. Students will also 'come to understand that, through their choices, individuals construct both their own futures and our common future; the pupils will learn to act constructively for a sustainable future.'

Environmental and Natural Studies is defined as a subject with the perspective of sustainable development. The relationship of individuals with their environments is highlighted, and the problem-based learning together with students' prior knowledge, their personal experiences as

well as their skills, are emphasized. Students' actions as members of the society are mentioned in the description of the subject but, when the aims and contents of the subjects are examined, the focus is strongly put on the natural sciences and their ways to study the (natural) environment. Geographical contents include studies of student's daily environments, basics of cartographic and planetary issues and regional geography starting from regions of Finland, followed by Nordic countries and other nearby regions and then the global level. In the description of the good performance at the end of the fourth grade, however, there is also emphasis on the importance of an interest in and a responsibility for both the natural and built environments. In this context the ability to evaluate 'beauty, diversity, and pleasantness of an environment' is noticed. The main emphasis in *Environmental and Natural Studies* has been put on the environmental knowledge and scientific methods of observing, measuring, and analysis of the environmental phenomena. The core curriculum does not give any explicit models with which teaching could be organized so that active citizenship or responsible action for a sustainable future could be fostered in youth.

Biology and Geography are taught as one subject in the 5th and the 6th grades. Despite the idea of integration, there are separate goals described for both of the disciplines and the links between them are very weakly constructed. In the aims of geography the importance of both natural and cultural environments is highlighted so that their appreciation would be enhanced. Responsibility, the protection of nature, and the preservation of living environments are also emphasized in the goals of the subject, where it is also mentioned that instruction 'must also support the pupil's growth as an active citizen committed to a sustainable lifestyle' (p. 176).

In the more detailed goals of the subject, there are some links to citizenship and sustainability education. It is stated that the pupils will 'come to understand that people depend on the rest of nature in their food production'; they will 'develop their environmental literacy, act in an environmentally friendly way, care for their local environment, and protect nature; 'ponder questions bearing on growth, development, human diversity, and social interaction'; 'take responsibility for their own actions and take other people into consideration'; and they will 'understand the dependence of human activity on the possibilities that the environment offers on earth' (pp. 176–177). Even when there are quite many aims which could be connected with the aspects of sustainability and citizenship as listed above, it must be noted that there are not any contents which could be easily connected with these issues. The mentioned contents emphasize the knowledge which should be learned in the subject.

While the natural and built environments were highlighted and social environments were not mentioned in the description of the *Environmental and Natural Studies*, in the description of *Geography* for secondary schools these three aspects are noted. Interaction between people and the environment, from the local to the global level, should be examined and students' impact on nature and human activity should be evaluated. Geography is seen as a connecting link between natural and social sciences. It is mentioned how the geography instruction should support students' growth as active citizens who are committed to a sustainable way of life' (p. 182).

The same which have been said earlier on the mismatch between the basic description and the more detailed aims of the subjects 'Environmental and Natural Studies' and 'Biology and Geography', can be seen also in the context of the Geography subject. Most of the described

aims concentrate on defining the needed knowledge, and only few of the mentions deal with any value-based issues. These exceptions are the following ones: ‘The pupils will know how every citizen in Finland can have an impact on the planning and development of his or her own living environment’; ‘The pupils will understand and evaluate critically news information on such issues as global environmental and development questions, and learn to act in accordance with sustainable development themselves’ (p. 182).

The contents of the subject are divided into four themes, which are ‘Earth – the human being’s home planet’; ‘Europe’; ‘Finland in the world’; and ‘The common environment’ (p. 183). Issues which can be linked to sustainability and citizenship, include questions of planning (in the context of Finland), consumption as well as environmental and developmental questions from the local to global level. In the description of final assessment criteria themes of the subject are evaluated from the viewpoints of geographical skills, regional geography (analyzing the world, Europe, and Finland), and the common environments. Knowledge on how every citizen can influence the planning and development of his/her own environment as well as students’ ability to ‘describe their own opportunities for contributing to the improvement of the environment’s status’ are mentioned among other issues.

Analysis: Understanding one’s potential as a creative and productive citizen in the context of the global economy and culture.

‘Understanding economy and culture’ refer to capabilities which are not clearly identified in the Finnish geography curriculum, but they are more strongly defined in the general parts of the curriculum document. The underlying values of education include mentions of Finnish culture and its diversification, multiculturalism, importance of sense of community, students’ own cultural identities and promotion of tolerance and intercultural understanding (p. 12). As part of the ‘mission of basic education’ the need to support students’ linguistic and cultural identities and the task to transfer cultural traditions to next generations are mentioned. At the same time revitalization of ways to think and act and the need to develop students’ abilities for critical evaluation are highlighted (p. 12).

One of the seven cross-curricular themes of the core curriculum is named as *Cultural Identity and Internationalism*, which have many links with issues dealing with economy and culture. Its goal is defined to help students ‘to understand the essence of the Finnish and European cultural identities, discover his or her own cultural identity, and develop capabilities for cross-cultural interaction and internationalism’ (p. 37). With the help of this theme students are meant to ‘come to know and appreciate their respective cultural inheritances’; ‘to see the Finnish cultural identity as an element of indigenous, Nordic, and European cultures’; ‘to understand the roots and diversity of their own cultures and to see their own generation as a continuer and developer of previous generations’ way of life’. They are also aimed to be given an introduction ‘to other cultures and philosophies of life, and acquire capabilities for functioning in a multicultural community, and in international cooperation’; and to ‘come to understand the component factors of cultural identity and their meaning for the individual and community’. Core contents of the theme *Cultural Identity and Internationalism* include ‘one’s own culture, the culture of one’s home region, and the nature of being Finnish, Nordic and European’; ‘other cultures and multiculturalism’; human rights and prerequisites for trust, mutual respect, and successful

cooperation among human groups'; 'internationalism in different spheres of life, and skills for functioning in international interaction'; and 'the importance of the culture of manners' (p. 37). The other cross-curricular theme which has some connection to the ideas of the capability concerning with being creative and productive in the 'knowledge economy' is called *Participatory citizenship and entrepreneurship*. Its contents have been described earlier in the context of the capability dealing with sustainability and citizenship. From the perspective of economic and cultural aspects, some of its contents can be mentioned here: aspects of entrepreneurialism (p. 38), understanding of the business world and organizations; information about division on labour between the school community, the public sector, the business world, and organizations.

In *Environmental and Natural Studies* there are no clear connections to economic or cultural aspects. In the subject *Biology and Geography* geography education deals with regional geography. Education is meant to expand students' conception of the world 'from Finland to the whole of Europe and the rest of the world'. A foundation for intercultural tolerance and internationalism (p. 176) is meant to be constructed in geography teaching.

Among the aims of geography education (from the 7th to 9th grades) it is mentioned that 'the geography instruction is provided so that the pupils' cultural knowledge increases and their ability to understand the diversity of human life and living environments around the world improves'. Among the objectives the following is mentioned (p. 182): 'learn to recognize the features of different cultures and to take a positive stance towards foreign countries, their peoples, and representatives of various cultures'. It is also said that 'they will learn to perceive their own regional identity'.

Contents of the subject have some connection with economy and culture: When two or more continents are studied, their natural conditions, human activity and cultural features are compared. In the context of geography of Finland, population of the country and its minority cultures are studied, and the cultural features of their own and other cultures are explored. Among the described assessment criteria in the end of the 9th grade it is mentioned how students should be able to depict and analyze 'the location and regional features of settlement and business activity in Finland' (p. 184)

Analysis: Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason

The capability which refers to understanding autonomy and rights is the most vaguely connected to geography in the Finnish core curriculum. One of the seven cross-curricular themes, *Growth as a Person* (p. 36) has the goal 'to support the pupil's comprehensive growth and the development of his or her life management skills'. Its aim is 'to create a growth environment that supports individuality and healthy self-esteem on the one hand, and, on the other, development of a sense of community based on equality and tolerance'. In the objectives of the theme some ethical issues are highlighted: students are described to 'learn to evaluate the ethics of their actions and to recognize right and wrong'. Core contents of this theme include for example the following aspects: justice and equality; ethical observation and interpretation of ethical phenomena; study skills and long-term, purposeful self-development; and consideration for other

people; rights, obligations and responsibilities within a group, various ways of cooperation' (p. 36).

In *Environmental and Natural Studies* teaching is defined to be based on an investigative, problem-centered approach where students' own prior knowledge, skills and experiences should be starting points for studying. For geography education the most emphasis is put on the content knowledge and the skills (for example observation skills, working with maps and diagrams, etc.) which emphasize knowledge. For the grades 5 and 6, among the objectives it is mentioned (p. 177) that students should learn how to 'take responsibility for their own actions and take other people into consideration'. There are no clear connection to autonomy and rights in the geography curriculum for the grades 7, 8 and 9 either. Some ideas which could be connected to this theme can be mentioned. Among the objectives (p. 182) the following is mentioned: 'The pupil will understand and evaluate critically news information on such issues as global environmental and development questions, and learn to act in accordance with sustainable development themselves'.

Discussion

Based on the analysis of geography curriculum, there seems to be a gap between the described aims and the defined contents of the subject. The curriculum leaves the major responsibility to local authorities and teachers to decide how to apply this framework into teaching practices. In the Finnish case, textbooks have a remarkable role in guiding teaching, and at least the young teachers who do not have much experience on teaching, rely heavily on the textbooks and teacher's materials which are available. It is thus difficult to know exactly what is going on in the classrooms if the aims and contents of teaching are examined only on the basis of national core curriculum. From Sirpa Tani's earlier professional experience, however, she would describe geography teaching in Finnish primary and secondary schools as being strongly attached to regional geography and learning about different natural and built environments. The strong connection to biology has kept the physical geography quite important in the contents, and maybe the scientific background of geography teachers (having almost always biology as their second teaching subject) has made it somewhat difficult to implement any more critical social and cultural aspects of geography in curricula, textbooks, or practices of teaching. Even when the curricula could make out-of-school education possible, it is seldom done in geography. Cross-curricular themes which are planned to be implemented in all the school subjects are often taught during some theme weeks or special occasions, and when their ideas are not emphasized in the aims and contents of separate school subjects, they are easily forgotten.

There will be some major changes in the next core curriculum. It has noted how the cross-curricular themes have seldom been taken as integral parts in school subjects and, therefore, the plan is to include these integrating and value-based ideas more strongly into each subject. It has also been acknowledged by the Finnish National Board of Education how content knowledge has been in a central position in the present curriculum and thus in future more emphasis will be put on defining skills and competences.

Chapter 5: United States Case Study

A. Structure and Organizational Framework of the U.S. National Geography Standards

National geography standards for the United States were first published in 1994 in the volume *Geography for Life: National Geography Standards* (Geography Education Standards Project 1994). *Geography for Life* presents 18 content standards, organized into six broader essential elements, that specified what students should know and be able to do as a “geographically informed person” at the fourth, eighth, and twelfth grades. All U.S. states and territories have created their own geography standards using *Geography for Life* as a template (although there is considerable variation from state to state in the extent to which the national standards have been adopted and adapted).

As would be expected, the standards exhibit a progressively more complex level of knowledge and skills from elementary to secondary grade bands. Beyond knowledge-oriented outcomes, the standards further define a geographically informed person as an individual capable of applying a process of geographic inquiry, consisting of five skills: *asking geographic questions, acquiring geographic information, organizing geographic information, analyzing geographic information, and answering geographic questions*. Through geography education, students acquire both a *spatial* perspective and an *ecological* perspective of their world. Collectively, geographic knowledge, skills, and perspectives are the fundamental components of geographic literacy and proficiency.

Geography for Life also set forth a rationale for geography in education. It advocated four arguments for an expanded presence of geography in the school curriculum, paraphrased as follows:

1. Existential reasons: Geography can help us understand our place in the world.
2. Practical reasons: Geography provides knowledge and skills important for careers and the nation’s economic competitiveness.
3. Intellectual reasons: Geography improves the capacity of individuals to make sound decisions using facts and concepts about people, places, and environments.
4. Ethical reasons: Geography teaches stewardship of natural and cultural environments for the benefit of present and future generations.

As states begin to revise their standards the coming years, they will have a new set of U.S. geography standards to consider. Released in the fall of 2012, the second edition of *Geography for Life* largely retains the structure, organizational framework and guiding aims of the 1994 standards (Heffron and Downs 2012). There are, however, some important differences.

First, the new standards incorporate a deeper foundation of educational research in spatial thinking, a mode of cognition that focuses on environments and phenomena at geographic scales (e.g., communities, ecosystems, nations). As an integral component of scientific inquiry and problem solving, the new standards present spatial thinking as being essential for performance in areas as diverse as environmental conservation, transportation, national security, and natural hazards.

A second change in the standards is the emphasis on classroom uses of geospatial technologies including digital maps, geographic information systems (GIS), remote sensing, virtual globes, geovisualizations, and other technologies for displaying and analyzing spatial data (modeling). Since the publication of the first edition of the standards, these technologies have revolutionized the ways that people practice geography and geographic information science (Gewin, 2004).

Third, *Geography for Life, 2nd edition* draws on research in the learning sciences regarding how children and young adults process, reason with, and learn geographic information. Learning progressions within standards and across grade levels emphasize principles of alignment and scaffolding. Moreover, scope and sequencing of geographic content is based on research and practical teaching experiences in the fields of psychology, cognitive theory and geography education. This research foundation, however, is rather thin, and more empirical evidence on learning progressions is needed to further refine the standards in the future (Bednarz, Heffron and Huynh 2013).

A fourth change in the standards can be detected in the ways they address theoretical and methodological developments in the discipline, as well as changes in national and global affairs. Geographic content and the questions that geographers ask have continued to develop since the standards were first released in 1994. For example, in the early 1990s geographers were well aware of and participated in the discussions of global change, globalization, natural disasters, and ethnic conflicts. At the beginning of the 21st century those topics are widely pursued in the discipline and represent a large part of what the public considers to be within the realm of geography. Additionally, the new standards introduce more contemporary concepts and topics such as social justice, terrorism, and displaced persons, while noting the contextual importance of viewing the world from the perspectives of age, gender, race and ethnicity, and other standpoints.

Finally, the new standards provide a discussion of how geographic knowledge, skills and perspectives work together for “doing geography” in a variety of home, work, and leisure settings. In the past decade there has been significant growth in applications of geography in geographic information technologies across business, government, and nonprofit sectors of the global economy (Solem, Foote, and Monk 2013). This trend coincides with new federal investments to establish common core standards in math and science, including social science disciplines. At the time of this report, twenty state education agencies are collaborating with fifteen professional organizations in the social studies to develop a common set of standards which will include geography. The ultimate goal is to produce a set of fewer, higher, clearer standards that prepare all students for college, careers, and citizenship.

Figure 1 depicts the current 18 national geography standards and six essential elements, with hyperlinks to a National Geographic website that provides illustrations and examples of performance statements for each standard at different grade levels.

Standard	Description	Essential Element
1	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information	The World in Spatial Terms
2	How to use mental maps to organize information about people, places, and environments in a spatial context	The World in Spatial Terms
3	How to analyze the spatial organization of people, places, and environments on Earth's surface	The World in Spatial Terms
4	The physical and human characteristics of places	Places and Regions
5	That people create regions to interpret Earth's complexity	Places and Regions
6	How culture and experience influence people's perceptions of places and regions	Places and Regions
7	The physical processes that shape the patterns of Earth's surface	Physical Systems
8	The characteristics and spatial distribution of ecosystems and biomes on Earth's surface	Physical Systems
9	The characteristics, distribution, and migration of human populations on Earth's surface	Human Systems
10	The characteristics, distribution, and complexity of Earth's cultural mosaics	Human Systems
11	The patterns and networks of economic interdependence on Earth's surface	Human Systems
12	The processes, patterns, and functions of human settlement	Human Systems
13	How the forces of cooperation and conflict among people influence the division and control of Earth's surface	Human Systems
14	How human actions modify the physical environment	Environment and Society
15	How physical systems affect human systems	Environment and Society
16	The changes that occur in the meaning, use, distribution, and importance of resources	Environment and Society
17	How to apply geography to interpret the past	The Uses of Geography
18	How to apply geography to interpret the present and plan for the future	The Uses of Geography

Figure 1: The U.S. National Geography Standards (Heffron and Downs 2013).

B. Results of capabilities analysis of U.S. national geography standards

The preamble for *Geography for Life, 2nd edition* (pp. 7-16) sets forth a broad rationale for the inclusion of geography and the need for rigorous academic standards in the American school curriculum. The purpose of this analysis is to identify language that explicitly or implicitly relates to or otherwise supports three capabilities.

Analysis: Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason.

- Page 7, paragraph 2: “Geographic literacy will also be necessary for ... preserving **quality of life ... and ensuring national security.**” In the context of the American political system, government exists to protect the inalienable rights” of “life, liberty, and the pursuit of happiness” (Declaration of Independence).
- Page 7, paragraph 2: “As **individuals** and as members of society, humans face decisions on **where to live**, what to build where, **how and where to travel**, how to conserve energy, how to wisely manage scarce resources, and how to cooperate or compete with others.”
- Page 7, paragraph 3: “Making all of these decisions, **personal** and collective, requires a geographically informed person ...” This implies geography contributes to the ability to make and act upon personal decisions freely.
- Page 7, paragraph 7: “With a strong grasp of geography, people are better equipped to **solve personal issues ...**”
- Page 7, paragraph 8: “By **understanding their own places in the world**, people can **overcome parochialism and ethnocentrism.**”
- Page 10, paragraph 2: Text notes that since the 1994 standards geographers have increasingly examined topics such as **terrorism, genocide, displaced persons, and social justice**. Such issues deal explicitly with issues of autonomy, freedom, and rights.
- Page 13, paragraph 1: “Geographic education enables students ... **to engage in ethical action with regard to self ...**”

Analysis: Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability;

- Page 7, paragraph 2: “Geographic literacy will also be necessary for ... **sustaining the environment.**”
- Page 7, paragraph 2: “As individuals and as **members of society**, humans face decisions on where to live, **what to build where**, how and where to travel, **how to conserve energy, how to wisely manage scarce resources**, and **how to cooperate or compete with others.**”
- Page 7, paragraph 3: “Making all of these decisions, personal and **collective**, requires a geographically informed person ...” This implies geography contributes to the ability to make decisions by taking into consideration the implications for one's community, state, and people and places in other world regions (different scales of citizenship).
- Page 7, paragraph 3: Text gives this example, “To understand the rapid growth of megacities in South Asia, an understanding is required of the connections among **subsistence farming, population growth rates, rural-to-urban migration, infrastructure, comparative economic advantage, and factors of production.**”

- Page 7, paragraph 5: The geographically informed person is prepared to meet the challenges of *understanding what is happening in the world, why it is happening in a particular locale, how those things might change in the future, and how to make geographically informed and reasoned decisions.*
- Page 7, paragraph 7: “With a strong grasp of geography, people are better equipped to *solve ... collective issues at the global level.*”
- Page 7, paragraph 7: “Geography focuses *attention on fascinating people and places ...* knowing them enables people to *make better-informed and wiser decisions.*”
- Page 8: “Geography ... provides an *ethical grounding for understanding the future of the planet ...* a basis for people to *cooperate in the best interests of the planet and the future.*
- Page 9, paragraph 1: “The goal of schools was to ‘ensure that all students ... may be prepared for *responsible citizenship.*’”
- Page 10, paragraph 2: Text explains the standards were revised/updated to recognize that “greater attention is being paid to the idea of a *green world* and to *mandates for sustainability and environmental stewardship.*”
- Page 13, paragraph 1: “Geographic education enables students ... to *engage in ethical action* with regard to self, *other people, other species, and Earth’s diverse cultures and natural environments.*”
- Page 13, paragraph 3: Becoming an **informed citizen** requires going beyond only knowing the disciplinary content of geography. Students must also be able to use geographic reasoning and do geography.

Analysis: Understanding one’s potential as a creative and productive citizen in the context of the global economy and culture.

- Page 7, paragraph 1: The text notes in the 21st century the "*global economy* will be even more *competitive and interconnected*"
- Page 7, paragraph 2: The text asserts "geographic literacy" is important because it "*enhances economic competitiveness*" and helps an individual understand "*how to manage scarce resources*" and "*compete or cooperate with others*"
- Page 7, paragraph 7: The text states that "with a strong grasp of geography" people are better able to "*solve personal and community issues*"
- Page 8: The text argues that geography education provides "*a basis for people to cooperate in the best interests of the planet and the future*"
- Page 9: The text refers to the Goals 2000 legislation of the early 1990s which spawned the original standards. That legislation specified the goal for schools to be one of ensuring youth "*learn to use their minds well ... and are prepared for productive employment in the nation's modern economy*". GFL2 refers to this goal as "still relevant".
- Page 13: In a section on *Doing Geography*, the text argues that a geographically informed person is able to apply "geographic perspectives, knowledge, and skills" to make "well-reasoned decisions" for personal and community problem-solving and to "engage in ethical action ... with regard to *Earth's diverse cultures.*"

- Page 13: The combination of geographic perspectives, knowledge, and skills creates a "lens" through which a person sees how "***cultures are deeply connected to physical and human features that define places and regions***"

A separate analysis of the three capabilities was performed on the full set of 18 standards in *Geography for Life, 2nd edition*. These findings capture relevant areas of subject matter and examples of geographic skills and perspectives that could potentially serve as examples of learning objectives for capabilities-based curriculum making (see recommendations in Chapter 6). Because the intent of the capabilities analysis is to identify shared examples at the level of aims and goals for geography in American, English and Finnish education, we will restrict our analysis to the relevant statements of curricular purposes and roles in *Geography for Life*. Detailed findings for individual U.S. geography standards and similar grade-level learning outcomes appear in Appendix C.

Chapter 6: Synthesis Findings and Recommendations

A. Synthesis

In this chapter we propose a provisional synthesis of the analyses reported in Chapters 3-5 to illustrate how capabilities can help to identify shared educational aims for geography in schools, despite the considerable international differences in geography standards and requirements. Table 1 summarizes key characteristics of the structure and organization of school geography curricula as presently depicted in the U.S., England, and Finland, along with the geography requirements set by education policies governing schools at the national level (in the cases of England and Finland) and at the state and local levels (in the case of the U.S.). One can quickly construe from this information that not only is there profound differences in geography curriculum and requirements within the U.S. alone, but such differences become even more pronounced when comparisons are made among the three countries profiled in this report.

In this context, we quickly discovered that it would be impractical, for purposes of achieving the goals of our project, to perform a comparative analysis of national standards at the level of grade-level content alone. Given the ultimate goal of GeoCapabilities is to construct a conceptual framework supporting an international dialogue, and eventual collaborative program for teacher preparation in geography, we needed to consider how our respective standards view the role of geography in education from the standpoint of overarching aims and goals. Capabilities potentially provide a unifying language which make such discoveries possible for researchers and, it is hoped, teachers. We posit that once shared aims for geography education are identified, and their implications for teacher preparation are discussed internationally, subsequent efforts to engage geography educators in curriculum making at the local level *and* through international collaboration can proceed with a clearer sense of purpose.

Table 2 outlines examples of how three capabilities potentially provide a common ground for thinking internationally about the outcomes of education in geography. In relation to each capability, we reviewed the findings of our case studies for evidence of overlapping goals and aims for educating young people in geography. Examples of shared goals are presented in the second column. In turn, this information opens up avenues for potential collaborations in curriculum making, while engaging teachers in ideas about education and their professional aspirations and responsibilities as geography teachers. These examples are shown in the third column.

The next step in our analysis is to subject this work to more extensive critical review, a process which will begin with the workshop scheduled in Bruges in May 2013.

Table 1: Comparison of national geography standards and requirements in the U.S., England, and Finland.

	United States	England	Finland
Structure and organization of national standards/curriculum for geography	<p>Geography for Life (2012): 18 standards organized into 6 essential elements. National standards are voluntary guidelines. States write their own standards, and local jurisdictions often are free to decide whether or not to require geography.</p> <p>At either the middle school (grades 6-8) or high school level (grades 9-12), geography may be present as a strand within social studies standards or as a separate set of standards (sometimes paired with history), often linked to a course.</p>	<p>The geography standards, expressed as the national curriculum programme of study (POS), has not been stable. Thus, the POS for primary (5-11 years) is the one written in 2000 (this being the third iteration since 1991); the key stage 3 POS (11-14 years) was reformed in 2008; <i>all</i> are being radically reformed for first teaching in 2014.</p> <p>Geography is optional after 14 years: approximately 30% of students choose to study for GCSE, a national externally assessed examination. Schools can choose from a list of seven different geography 'specifications' offered under free market conditions by four commercial Awarding Bodies.</p>	<p>National Curriculum (2004)</p> <p>The aims and contents of each school subject are defined quite briefly in the national core curriculum. There are altogether only eleven pages describing the aims, contents, good performance at the end of the fourth and the sixth grades, as well as the final assessment criteria for the 9th grade for the subjects 'Environmental and Natural Studies', 'Biology and Geography' (5th and 6th grades), and Geography (7th-9th grades).</p>
School geography requirements.	<p>Elementary grades (K-5): Geography mostly integrated with social studies disciplines.</p> <p>Middle School (grades 6-8): 18 states either require or make optional a geography or geography/history course. 11 states have no geography requirement, while individual districts in 22 states may require geography.</p> <p>High School (grades 9-12): 27 states either require or make optional a geography or geography/history course. 7 states have no geography requirement, while individual districts in 17 states may require geography.</p>	<p>All state primary schools must teach geography by law. All state secondary schools must teach geography to 14 years. There is no requirement in law to <i>offer</i> geography after 14 (but only c 100 schools - from 4500 - do not offer the possibility to study geography to GCSE). There is no legislation to say that geography should be taught as a discrete subject: most primary schools (and some secondary schools) integrate geography – eg with science or history – or in themes such as environment. There is no legislation to lay down how much time should be devoted to geography – so long as the POS is covered.</p>	<p>Grades 1-4: Geography taught as a natural science in first four grades in Environmental and Natural Studies.</p> <p>Grades 5-6: Required geography and Biology course.</p> <p>Grades 7-9: Required stand-alone geography course.</p>

Sources: Grosvenor Center for Geographic Education (2012); Heffron and Downs (2012); Finnish National Board of Education (2004); UK Department for Education (2013).

Table 2. Examples of shared capabilities in geography education and their implications for collaborative approaches to teacher preparation and leadership in curriculum making.

Capabilities	Synthesis Findings (U.S., Finland, England)	Implications for Curriculum Making (Examples)
<i>Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason.</i>	A shared view in the standards is that geography education equips individuals with the ability to think and reason using diverse forms of locational data and knowledge of human and natural systems in different (and sometimes unique) place contexts. This contributes to the empowerment of individuals to think critically and creatively, whether independently or in collective decision-making and problem-solving contexts, about change and alternative futures.	Teachers in the U.S., Finland, and England participate in online projects and discussions to offer diverse examples of how their fellow citizens face decisions on where to live, what to build where, how and where to travel, how to conserve energy, how to wisely manage scarce resources, and how to cooperate or compete with others. On the basis of these exchanges, teachers work together to develop curriculum materials that engage students in geographic questions of this nature, and demonstrate the significance of context and perspective.
<i>Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability.</i>	Reform of geography in all three countries is driven by greater attention to the idea of sustainability and mandates for environmental stewardship. Knowledge of human-environment relations is essential for understanding environmental and development issues at local, regional, national and international scales, and how individual and collective decisions about the future can be enhanced on the basis of this knowledge.	Teachers in the U.S., Finland, and England participate in online exchanges of data on energy consumption based on household energy logs. They interpret similarities and differences in localized decision-making using comparable data for developing regions, considering the relevance of urban vs. rural land use and energy choices, etc. This experience prepares them to create similar classroom activities for their students, and also to engage other teachers in thinking about environmental questions from a comparative perspective.
<i>Understanding one's potential as a creative and productive citizen in the context of the global economy and culture.</i>	Citizens require geographic knowledge and perspectives on economic processes and conditions in different regions to compete and cooperate effectively in a global market while being mindful of the impact of choices, the diversity of cultural approaches to business and economic decision-making, questions of how to act ethically, and the value of considering the greater good.	Teachers in the U.S., Finland, and England collect sales data on products manufactured under a variety of trade relationships between their nations and developing regions, considering and debating the costs and benefits to producers and consumers. They then co-develop a list of questions and have their students engage in online discussions about the relative merits of trading systems and how this knowledge might affect their future choices as consumers and business owners.

B. Implications for Teacher Preparation

We next discuss the implications of the synthesis findings for teacher preparation in geography, from local curriculum making practices to collaborations and dialogue at the international scale. We proceed with a brief description of the teacher preparation systems in each country, noting

how these systems as presently configured, along with rather stark differences in the amount of geography preparation teachers have relative to their peers in different nations, may potentially facilitate or limit a capabilities approach. As our work in GeoCapabilities evolves and matures, we will need to return to these issues and pursue them in much further detail.

United States: Introducing a capabilities approach for teacher preparation will be conditioned by the present configurations of teacher education systems in different countries. In the United States, where standards are written and implemented at the state level, a capabilities approach has potential to engage current teachers in thinking about curriculum matters and shared ideas across states as well as internationally. One mechanism for doing so is through the Geographic Alliances, a network of state-based organizations that were established in the late 1980s and early 1990s with grants from the National Geographic Society's Education Foundation to promote collaboration between university geographers and in-service teachers. Primarily based at universities, the Geographic Alliances are funded through endowments, legislative appropriations, and State departments of education. Alliance activities generally include planning and conducting summer institutes for teachers, producing and reviewing materials, developing statewide assessments, participating in writing panels for state and district educational standards, and developing web sites, newsletters and other mechanisms to assist teachers in selecting and implementing geography materials. More than 30,000 teachers regularly participate each year in continual professional development through their state Geographic Alliance.

A more challenging, yet potentially even more far-reaching opportunity exists in the pre-service teacher education system. Here, a capabilities approach may provide a mechanism for dismantling historically persistent structural problems that have undermined teacher preparation at the pre-service level. Because of the small number of academic geography departments that offer formal teacher preparation programs, many teachers who are responsible for teaching geography in schools begin their careers with little or no formal preparation in geography, geospatial technology, and methods of spatial analysis. Few teachers major in geography, and many claim to have only completed one college course in geography or perhaps a workshop in which they received training in a type of GIS software (Gersmehl 2008).

As we discuss in the next section of this report, a capabilities approach could begin to rectify this situation through the form of a web-based platform offering broader access to teacher preparation and greater opportunities for teachers to acquire an international perspective on geography subject matter related to national standards. If pre-service teachers develop adequate competency in the content of the discipline, then they are more likely to become proactive with geography's inclusion in the curriculum at all grade levels. The key, it appears, is to reach aspiring teachers at a formative time when they deepen and extend subject matter knowledge, refine their instructional repertoire, and strengthen dispositions and skills to study and improve their teaching (Feiman-Nemser, 2001; Cattani, 2002). If teacher preparation in the content of geography were expanded systematically through statewide or national teacher preparation guidelines, then classes of students would be met by geographically informed teachers from the very first day in the classroom. The most certain means to gain support for the discipline among new teachers is for them to know they are competent in the content they are responsible for teaching.

England: The introduction of Chapter 3 presented a broad sequence of change with regard to geography in the national curriculum in England: roughly, that from its detailed, content-rich inception in 1991 (but with no explicit statutory aims) the subject has experienced successive weakening of its content specification up to and including the 2008 ‘aims-led’ reform of KS3. In Young and Muller’s (2010) terms, this could be described as a move from a ‘Futures 1’ to a ‘Futures 2’ scenario.

Current (2013) ‘knowledge-led’ proposals are not designed to return us to 1991 (although they run this risk). They are designed to identify the ‘core of essential knowledge’ for geography – returning to subject specialist teachers the opportunity, or responsibility, for localised curriculum making. This is an opportunity for the creation of geography in a Futures 3 formation.

F1: subject delivery – of knowledge for its own sake; traditional subjects as ‘given’ bodies of knowledge; this represents under-socialised knowledge

F2: skills and ‘learning to learn’ – knowledge is constructed; subject divisions are artificial and arbitrary; experiential learning; this represents over-socialised knowledge; it undermines the notion of the world as an object of study/thought

F3: subjects are not given (as in F1), but not arbitrary either (as in F2); students are introduced to ‘... the epistemic rules of specialist communities’ to provide ways to understand the world objectively, and take pupils *beyond their everyday experience*. (Young 2008; Young and Muller 2010)

In England the majority of secondary school teachers of geography have a degree in geography (even so, it is worth stressing that it is in KS3 that most non-specialist teachers are concentrated – and that in some schools the majority of lessons at this level are taught by non specialists). This is a sound platform for high quality teaching. However, there are several priorities that emerge if we envisage teachers as effective local ‘curriculum makers’. In their training teachers need:

- To make conceptual distinctions between (for example)
 - National curriculum and localised curriculum
 - Curriculum design and curriculum making
 - School subject and academic discipline
 - School subject and everyday experience
 - Curriculum and pedagogy
 - Knowledge and skills
- Have access to the language, concepts or frameworks that enable connections to be made between (for example)
 - All the above
 - The content of geography and its aims and purposes
 - The aims and purposes of geography and wider educational goals

The hypothesis of this project is that ‘GeoCapabilities’, with its emphasis on the contribution geography makes to the cognitive and intellectual growth of individuals and the part this plays in their development as capable human beings, provides a framework for thinking productively about these matters. The analysis in this chapter shows that it is possible to identify three ‘capabilities’ in geography standards, particularly at the level of curriculum aims.

Finland: The Finnish curriculum which has been analyzed in this report was published in 2004. The renewed core curriculum will be completed by the end of 2014. Its preparation is carried out in working groups, some having their focus on the general parts of the curriculum, and some on different school subjects. Each working group consists of educational officials, researchers and teachers. The preparation is planned as an interactive process, during which the draft versions of the curriculum documents can be commented on the website of the Finnish National Board of Education.

In the analysis of the present curriculum it became obvious how difficult it was to draw lines between geography curriculum and other parts of the document. This was the result of the seven cross-curricular themes having many aspects which could be linked with a capability approach in geography. It has been acknowledged, however, that these cross-curricular themes have not often really been included in school subjects. Because of this, it has been decided that in the future curriculum same types of integrative themes will not be presented any more but value-oriented themes are planned to be included in each subject's own curricula. If this will be done in a successful way, the other problem which was identified in our analysis could be also solved; the aims of geography and its contents would then be more strongly linked together.

Finnish core curriculum, which is planned in the national level, gives the framework for local curricula which are made in the municipalities and in schools. This means that teachers have quite much power to decide what and how to teach. Capabilities approach could be delivered to them through teacher education and for example through the teachers' organizations.

Geography is taught from the 1st to the 6th grade by primary school teachers who have their major in education, with only a few studying units in geography education. For them the biggest challenge of geography teaching is their limited knowledge of the academic geography and thus their abilities to enhance students' geographical thinking remains often modest. Applying the capability approach to their geography education courses could help them to find links between the contents of the subject and more value-oriented aims.

Geography is taught as an individual subject from the 7th to the 9th grade. Most of these teachers have their master's degree either in geography or biology, and the other of these two subjects includes as a minor subject in their degree. It is possible to introduce the capability approach to them during their pedagogical studies.

C. Recommendations

The next stage will be to use the framework of GeoCapabilities in practical training situations. The synthesis of the U.S., Finland, and England case studies provides the conceptual framework and ideas for the design and content of a prototype web-based professional development platform (GeoCapabilities platform). We are now seeking additional funding support to develop this platform, which we envision as a key means by which we will continue our research on the potential of the capabilities approach.

Joint implementation of the capabilities approach in American and European geography classrooms will require an understanding of effective practices in international collaboration. Members of the GeoCapabilities partnership have previously and productively worked together on several broad-based research and educational initiatives for improving the quality of geography teaching and learning in schools, including methods of building international collaborations using Internet technologies. One highly relevant project for GeoCapabilities is the AAG's Center for Global Geography Education (www.aag.org/cgge), which since 2003 has been led by two members of the U.S. team, Drs. Michael Solem and Phil Klein, to support collaborative online learning projects in high school and university geography classrooms. CGGE offers a set of online geography case studies presenting international perspectives that teach students how to apply methods of geographic inquiry in their investigations of social and environmental issues. CGGE case studies are supplemented by collaborative projects that use Internet technologies to connect geography classes regionally and internationally.

Over the past several years CGGE has also sponsored international workshops providing schoolteachers and university faculty with professional training in international collaborative approaches to teaching, learning, and instructional materials development. Evaluations of the CGGE modules within existing undergraduate curricula in several countries provide strong evidence of improvement in students' comprehension of geographic concepts, their familiarity and understanding of issues in multiple regions, and their capacity for intercultural learning and collaboration using the Internet (Klein and Solem 2008; Ray, Muniz, Klein and Solem 2012). As GeoCapabilities moves forward, CGGE will be presented as a model in our planned workshops to help teachers understand what they can do in and beyond their classrooms to develop their students' international perspectives and abilities to work and learn collaboratively.

The GeoCapabilities platform we envision for future development will be designed to facilitate the development of several components of teacher leadership relevant to curriculum making in geography, including: a) modeling methods of teaching, b) serving in an advising and mentoring capacity to other teachers, c) jointly developing curriculum with local and international colleagues, d) structuring problem identification and resolution from an international perspective, and e) developing instructional materials through local and international collaborations (Harvey 1988; Frost et al. 2000; Katzenmeyer & Moller 2001; Frost and Harris 2003; Yost, Vogel, & Liang 2009; Gutierrez & Bryan 2010). It will support capabilities-based dialogue aimed at discussions and ideas about geography's role in the education of young people. The resources supporting this online preparation and training will also be designed to support and reflect the local realities and professional expectations for current teachers in their respective nations, thus maximizing their practical value for participating teachers. This means every project partner will adapt the resources when and where local/national situations require it, but we also wish for our teachers to consider together the broader purposes of their teaching, through what we call 'curriculum making' activity, and the extent to which their goals as geography teachers are – or ought to be – shared and understood beyond the expectations of their own national standards and frameworks.

In order to operationalize the capabilities approach in geography education, we propose the following resources for the prototype platform.

- **Content Videos:** The videos will illustrate major aspects of capabilities in the context of a real-world case study. A particular video could focus on, for example, a farmer who uses geographic practices to implement sustainable agricultural techniques. The content video would also feature geographers commenting on how and why the farmer uses the practices and how they illustrate the potential of geography education contributing to the capability of “Identifying and exercising one’s choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability.”
- **Practical Curriculum Making:** The project will develop comprehensive guides to curriculum making that align directly with the video case studies. These guides will be designed for use by teachers in their schools and classrooms, and will be presented in a way that can serve as a springboard for teachers who want to develop and localize their own curriculum resources focusing on geographic practices that operationalize the capabilities.
- **In-Class Video/Multimedia:** We will develop videos and other multimedia featuring a teacher and secondary school students engaged in international learning collaborations using the lessons and activities developed in the project as well as existing CGGE resources. The videos will also include commentary by experts on the content and pedagogy used in the lessons, as well as reflections from the featured teacher on issues such as adaptations that need to be made in order to implement the lessons in his/her classroom.

The professional development materials developed for the platform are intended for use in pre-service and in-service training settings in the U.S. and Europe. With this in mind, on-line and face-to-face delivery components will be developed. These include:

- **Training Demonstration Videos** that capture an actual teacher-leader demonstrating the use of the content videos, the classroom videos, and the lesson plans in real pre- and in-service workshops in the partner countries. This video will focus on content, instructional strategies, and assessment related to the capabilities approach and collaborative online learning using CGGE resources. The demonstrations will be designed for use as models for implementation in other settings.
- **A Facilitator Guide** to assist teacher-leaders in using these professional development materials in a variety of pre-service and in-service training environments. The guide will include comprehensive suggestions for both on-line and face-to-face professional development activities.
- **A Web Site** containing ideas for implementing and extending content and pedagogical strategies highlighted in GeoCapabilities, as well as all video and print material produced by the project. It will include links to student-oriented activities created by teachers participating in this project. In addition, the web site will link to forums and/or blogs that will support leaders and teachers using the project materials, answer questions related to project materials, and permit teacher leaders to form virtual learning communities.

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