

# Exploring comparative curricular research in geography education

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## Abstract

Geography curricula is one of the least researched fields in geography education. This paper offers a brief description of the curricular architecture, aims, content, philosophies, epistemologies, and main factors influencing school geographies in Germany and Romania to prepare the development of analytical tools for future comparative studies. The conclusions of this study show that despite the uniqueness of every national or regional setting, there is a considerable number of similarities in how geography is conceived as a school subject, which can be the starting point to facilitate comparison.

**Keywords:** Geography curricula; geography education; curricular theory; comparative analysis

## Resum. *Explorant la recerca curricular comparativa en educació geogràfica*

El currículum de geografia és un dels camps menys investigats en l'ensenyament d'aquesta matèria. El present article ofereix una descripció breu de l'arquitectura curricular, els objectius, els continguts, les filosofies, les epistemologies i els factors principals que influeixen en la geografia escolar a Alemanya i a Romania, amb l'objectiu de preparar un marc analític que serveixi per realitzar estudis comparatius futurs sobre el currículum de geografia a diferents països del món. Les conclusions d'aquest estudi mostren que, tot i que cada currículum és únic, hi ha un gran nombre de similituds en la manera com es concep la geografia escolar, les quals poden servir de punt de partida i facilitar la comparació.

**Paraules clau:** currículum de geografia; educació geogràfica; teoria curricular; anàlisi comparativa

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**Resumen.** *Explorando la investigación curricular comparativa en educación geográfica*

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El currículo de geografía es uno de los campos menos investigados en la enseñanza de dicha materia. El presente artículo hace una breve descripción de la arquitectura curricular, los objetivos, los contenidos, las filosofías, las epistemologías y los principales factores que influyen en la geografía escolar en Alemania y Rumanía, con el objetivo de preparar un marco analítico que sirva para realizar estudios comparativos futuros sobre el currículo de geografía en diferentes países del mundo. Las conclusiones de este estudio muestran que, aunque cada currículo es único, hay un gran número de similitudes en la manera de concebir la geografía escolar, las cuales pueden servir de punto de partida y facilitar la comparación.

**Palabras clave:** currículo de geografía; educación geográfica; teoría curricular; análisis comparativo

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**Résumé.** *Exploration de la recherche comparative du curriculum dans l'enseignement de la géographie*

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Le programme de géographie est l'un des sujets les moins étudiés dans l'enseignement de la géographie. Cet article fait une brève description de l'architecture du curriculum, des objectifs, des contenus, des philosophies, des épistémologies et des facteurs principaux qui influencent la géographie scolaire en Allemagne et en Roumanie, dans le but de préparer un cadre d'analyse pour servir à de futures études comparatives du curriculum en géographie dans différents pays du monde. Les résultats de cette étude montrent que bien que chaque programme soit unique, il y a un grand nombre de similitudes dans la façon dont la géographie scolaire est conçue, qui peuvent servir de point de départ et faciliter des comparaisons.

**Mots-clés:** programme de géographie; l'enseignement de la géographie; théorie du curriculum; études comparatives

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### Summary

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## 1. Introduction

School geographies around the world exhibit an impressive diversity. While the International Charter on Geographical Education (IGU CGE, 2016) and the Lucerne Declaration on Geography Education for Sustainable Development (Haubrich et al., 2007) delimit some common features, local and regional epistemologies, educational philosophies, and practices shape the way students study geography. Thereby, curricula and textbooks play a central role. Despite their importance, geography curricula are among the least researched fields of geography education (cf. Bagoly-Simó, Hemmer and Reinke, 2017; Brooks, 2017; Zadrozny et al., 2016). While some national studies explore particulari-

ties of individual countries (cf. Casinader, 2016; Maude, 2014; Tani, 2014; Lambert and Hopkin, 2014; Yaser and Seremet, 2009; Tabulawa, 2002), and the first comparative studies already started emerging (Butt and Lambert, 2014), longitudinal studies carried out with comparative analytical tools are further to be strengthened (cf. Research chatterer). Therefore, the aim of this paper is to offer a brief description of the curricular architecture, aims, content, philosophies, epistemologies, and main factors influencing school geographies in selected countries around the world to prepare the development of analytical tools for comparative studies to follow.

The main theoretical framework of this study is twofold, namely the curricular theory by Marsden (1997) and the three futures theory of Young and Muller (2010). While the former places emphasis on the curricular architecture, the latter views the overall aims and objectives of geography education.

Based on historical data and analysis in Britain, Marsden (1997) delimited three components of a geography curriculum. First, the subject component encompasses the conceptual understanding of the very subject, which is deeply rooted in geographic epistemologies. Second, the educational component entails current discourse in educational sciences, such as constructivism and standard- and competence-based education. In other words, this component targets the very process of teaching and learning. Third, the social education component entails what Marsden calls the “contemporary good cause or issue” (i.e. environmental education, education for sustainable development, intercultural pedagogies). This last component not only contributes to a loss of subject-specificity, but also leads to stark politicization of the curriculum and of the overall justification of instruction.

Looking beyond curricular architecture and anatomy and coming from the background of social realism and the sociology of education, Lambert et al. (2014) delimited three types of futures for curricula. Along these lines, a Future 1 Curriculum treats knowledge as largely given and established by tradition. This type of curriculum understands knowledge as property of the powerful and is, thus, selective in giving access to higher education and social and economic power. Pedagogies associated with a Future 1 Curriculum are, on the one hand, based on direct and one-way transmission and, on the other hand, expect compliance from students. Towards the end of the 19th century, broad social movements led to broad access to education, changing the nature of the knowledge of the powerful. Feminist and post-colonial claims also supported this transition. The product of these upheavals is the Future 2 Curriculum that stands for an over-socialized knowledge that is constructed in response to specific interest and needs. In essence, Future 2 Curricula view knowledge as a means to an end. Strong stakeholders expressing their interest and needs are future employers and industry lobby representatives. Most of the contemporary educational systems driven by the ethos of constructivism and relying on standardization and competences promote Future 2 Curricula. Arguing that this type of curriculum makes knowledge weak and arbitrary, Lambert et al. (2014) stress the need for knowledge that is always open to

change based on research and debates of specialist communities. This kind of knowledge that constitutes the grounds of a Future 3 Curriculum is not arbitrary, it is bounded by the epistemic rules of the very specialist communities from which it originates. In consequence, teachers working with a Future 3 Curriculum can actually aim at taking their students beyond their experiment in the most reliable ways we have and based on the best knowledge that is available to us.

Against the background of these theoretical considerations, we will proceed to discuss the curricular architecture, aims, content, philosophies, epistemologies, and main factors influencing school geographies in selected countries around the world.

## 2. Germany

The German federal educational system enables all 16 states to design and implement their own curricula. Over the course of the last decades, a number of factors of both a political and scientific nature reshaped school geography and geography teacher training.

In the aftermath of WW2, the two German states followed different educational philosophies that were reflected in the overall organization of teaching and learning. The socialist German Democratic Republic established a centralized educational system with a curriculum of national validity. In contrast, the states of the Federal Republic of Germany were free to design, implement, and adapt their educational systems. This included also the freedom to produce and approve textbooks for different school types and grades. In the following, we will offer a brief description of the most important factors that shaped the development of school geography in both German states until the reunification and of reunified Germany after 1990.

### 2.1. German Democratic Republic

School geography in the German Democratic Republic (GDR) – similar to all other satellite countries of the USSR – followed the Soviet model. Geographic education started in primary school and remained compulsory across lower and upper secondary education. The time resources generally encompassed two weekly hours. The national publishing house produced and distributed all textbooks and educational media, which were used across the country and constituted the guideline for teaching and learning.

The main educational approach of school geography followed a mixture of general geography and regional geography. At primary level, students were first acquainted with their home region and the geography of their home country, the German Democratic Republic. Hence, geography followed the traditional approach of starting at large scale and gradually progressing towards small scale. Secondary education introduced basics of physical and human geography. While school physical geography covered most physical-

geographical sub-disciplines (geomorphology, soil science, meteorology, climatology, hydrology, biogeography etc.) and also geology, human geography set an emphasis on economic aspects of command economies, population and settlements. Political and social geography were replaced by ideological discourse. Following this thematic introduction based on general geography, students were introduced to the geography of the continents. Concepts of general geography served to analyse the specifics of space at continental, sub-continental, national, and sometimes even sub-national (regional) scale. Selected countries served as examples to understand the physical and human geography of continents and regions. Thereby, geomorphology, climate, hydrology, soils, flora, fauna, population, settlements, economy, infrastructure and transportation, and tourism served as an analytical grid. Numeric data, such as the production of power plants in MW and the exact location of industry, length of railroad segments etc. went along with strong topographic lexical knowledge. The geography of the USSR and of the Federal Republic of Germany enjoyed special attention as reflected in the generous curricular time resources dedicated to them.

Overall, GDR's geography curriculum combined elements of a linear curriculum with those of a circular curriculum. General geography constituted the thematic pillars of a linear curriculum. However, the pillars were discontinuous, as some grades, such as grade 5, followed a thematic approach as opposed to other grades (e.g. grades 7 and 8) dedicated to regional geography. Regional geography worked with the basics introduced within general geography, while general geography in upper secondary education included examples of regional geography when expanding on the knowledge intruded during general geography in lower secondary grades. In essence, both general and regional geography display a mixture of linear and circular curriculum elements with specific points of junction and reciprocal reinforcement.

The curricular documents contained educational objectives, time resources, and content (topics and central concepts). While no specific skills or capabilities/abilities were explicitly mentioned, the curricula contained instrumental objectives that covered map skills and spatial orientation. Working with numeric data (including graphs and diagrams) was considered to be skills acquired within other subjects and applied in service of geographic education. The content of teaching and learning was clearly delimited and accompanied by key concepts and terms.

The national publishing house produced one textbook for each subject and grade. Geography textbooks contained enriched colour diagrams, graphs, and figures (mainly black, greys, and blues) and colour pictures. Lessons were of a different length and included varying numbers of task and exercises, most of which were limited to reproducing the lesson's content. Some of the tasks targeted ideological aspects that were well implemented in textbooks. In the case of geography, even physical geography compared imperialist and socialist countries. One example of ideological indoctrination is meteorology. While learning about meteorological instruments and

forecast networks, students learned that GDR's infrastructure, instrument precision, and forecast models are much more progressive and benevolent as opposed to those used in the imperialist countries for purposes of propaganda (cf. Bagoly-Simó, 2008a).

## 2.2. Federal Republic of Germany

Education in the Federal Republic of Germany (FRG) was – and remained even after the reunification – a state matter. Each state decided about the typology of schools, designed the curricula, approved educational media, and organized teacher training.

Overall, the first four years of school constituted primary education, while the following nine years constituted secondary education. Starting with the fifth grade, students were distributed – based on their achievements and upon recommendation of their primary teachers – into different types of school. Those with lowest academic success were assigned to *Hauptschule*, while students with potential for stronger vocational training attended *Realschule*. The best achievers were allowed to attend *Gymnasium* and conclude their school training after a total of thirteen years with a final examination called *Abitur*. In addition, students with special needs could attend schools with special education profiles (*Sonderschule*).

Based on the typology of schools it instituted, each state designed its own curricula for each school type in part. In consequence, there were separate geography curricula for primary, lower secondary (*Hauptschule*, *Realschule*, *Gymnasium*, *Sonderschule*), and upper secondary schools (*Gymnasium*). Despite this wide variety, school geographies in the FRG followed the traditional approach of *Länderkunde*. A major change happened during the 1969 German Congress of Geography in Kiel, where overall reforms of geography both as a discipline and as a school subject were demanded. In the aftermath of 1969, a more thematic approach entered the schools to be gradually replaced by a thematic-regional or regional-thematic approach. In contrast to *Länderkunde* and the thematic approach, school geography started introducing thematic aspects by the example of selected regions or discussing selected regions based on specific topics connected to them. For instance, fast urban growth became connected to Latin America, population growth to India and China, environmental pollution to the USSR, AIDS and hunger to Africa. Implementing the thematic-regional versus the regional-thematic approach enabled a more problem-based learning and freed school geography from unnecessary encyclopedic knowledge. Still, as time resources were limited, the originally intended transfer to other regions or topics (e.g. after having learned the basics of environmental pollution by the example of the USSR, other regions and their industrial activities had to be explored) often had to be dropped. In consequence, topics stuck to regions and led to stigmatization. The cultural regions approach (*Kulturerdteile*) introduced by Kolb (1962) – similar to Huntington's (1996) theories – redrew the world map and enforced the attribution of specific characteristics

to regions. In general, content covering human geography was increasingly expanded at the expense of physical and regional geography.

Along with the above-described influences coming from the very discipline of geography, educational sciences and educational policy also had a strong influence on school geographies. Following the Sputnik Shock, a range of reforms affected the educational philosophy, including a stronger focus on educational aims and objectives, and a growing emphasis on skill acquisition.

Overall, the curricular architecture experienced a number of changes. While educational objectives and content were always part of curricula, aspects of assessment also entered the documents. In addition, classroom activities, choice of educational media, and distribution of time resources across the grade increasingly became a decision at the discretion of the teacher.

Following the heterogeneity of school types in the federal states, textbook publishing houses developed competing products. Thereby, content was often freely recycled between school types and even grades (cf. Behnke and Bagoly-Simó, 2017). The states established a textbook approval mechanism of a diverse nature and accuracy. Along with textbooks, teachers' magazines published lesson plans and additional materials to support teachers during the very process of lesson planning.

### *2.3. Germany after the reunification*

In the aftermath of 1990, school geography in reunified Germany displayed a mixed path-dependency. While the federal states of the former FRG suffered little adaptation, the central educational system of the GDR underwent a transition to federal structures. While the central curriculum was given up, certain elements were conserved as part of the newly developed state curricula. However, the grounds for these new curricula were already existing curricula of selected states of the former FRG. These "partnerships" between "old" and "new" federal states led to a complete replacement of the old instead of institutionalizing hybrid structures fostering a gradual transition.

Faced with the heterogeneity of school geographies, the first initiative to develop a nation-wide guideline for curricular work emerged within the "Curriculum 2000" project. The main aim of the project was not the reduction of diversity or even an institutionalization of federal guidelines, but rather an open discussion about frameworks, approaches, and content of school geographies primarily aiming at an easier regional mobility of both students and teachers. As a result, considering the immediate environment and Germany in lower grades along the lines of an overall progression from the near towards the remote was institutionalized.

In the aftermath of the 1992 Earth Summit in Rio de Janeiro, early initiatives of Environmental Education in school geography were greatly reinforced and an overall discourse on the importance of Education for Sustainable Development (ESD) was initiated. Along with Development Education and Global Learning, ESD became a central element of geography education. The

main argument was the affinity of the subject with both the very concept of sustainable development (human-environment systems; concurrent consideration of ecologic, economic, and social aspects) and a number of ESD topics depicting global challenges (e.g. climate change, hunger, poverty, demographic development, etc.) (cf. Bagoly-Simó, 2013). In addition, inter- and later on transcultural education gained increasing importance for lesson planning in school geographies.

The latest influence of major proportions was the introduction of standardization. As a result of the rather dissatisfactory PISA results, the German Federal Government funded the development of educational standards for the intermediate school certificate. However, only core subjects, such as German Language and Literature, Mathematics, and Science were funded. In consequence, the community of geographers developed its own educational standards in 2006 (DGfG, <sup>8</sup>2014), which encompass six areas of competence: Subject-specific Knowledge, Spatial Orientation, Acquisition of Knowledge/Methodology, Communication, Evaluation, and Action. Each area of competence contains a certain number of standards; however, no clear concept of progression connects the standards. While the standards are not mandatory, a growing number of federal states started implementing them (cf. Schöps, 2017). In essence, the implementation of the Educational Standards in Geography for the Intermediate School Certificate (DGfG, <sup>8</sup>2014) greatly reduced the diversity of school geographies. In doing so, they enabled an easier transfer of textbook materials and increased the mobility of teachers and students.

The overall approach of school geographies in Germany remained the thematic-regional or the regional-thematic approach. For example, Bavaria and Berlin followed a more regional-thematic approach in which the curriculum remained linear and where individual sub-disciplines, such as physical geography, human geography, human ecology, regional geography, topography, geographic methods, and geographic perspectives constituted the central pillars. Curricular plateaus (cf. Richter, 1997) connected these pillars and were meant to secure a general scaffold for progression. These plateaus were phenomena (grades 5-6), structures (grades 7-8), functionality of space (grade 9), processes (grade 10), systems (grades 10-11), and models (grades 11-12/13).

The prevailing model of lesson planning is problem-based. Teachers are required to identify one essential problem students will work on over the course of 45 or 90 minutes. While the approach is welcome and applies much of geographical knowledge, teachers often reduce geography to everyday issues (and ignore subject-specific problems of the very discipline of geography) and require students to solve global issues, such as climate change, limited access to water, or demographic growth within 45 or 90 minutes. In consequence, many students leave geography classrooms highly frustrated and feeling guilty and responsible for issues out of their reach.

Following the introduction of skill- and standard-based education, geography curricula were progressively opened towards non-subject-specif-



ic competence areas, such as communication, evaluation, and methodology. Overall, subject-specific knowledge, specifically in terms of powerful disciplinary knowledge, experienced a slow but steady erosion. Curricula (over-)emphasize progression and skills levels, but are becoming less and less prescriptive regarding the content of geography education. For example, the Berlin-Brandenburg curriculum contains specific progression models (Bagoly-Simó and Uhlenwinkel, 2017), but leaves the choice of regions and detailed thematic content at the discretion of school curricula and individual teachers. This development might challenge younger teachers trained along the lines of a neoliberal Future 2 education (cf. Young and Muller, 2010) with limited subject-specific knowledge.

Finally, the most recent challenges faced by school geographies across the federal states are dramatic cutbacks in time resources (according to the latest suggestions, geography could be taught in half an hour per week in the capital region) and the introduction of integrative subjects, such as social science (composed of history, geography, and political science) and science (biology, chemistry, physics).

### 3. Romania

The centralized Romanian education system regulates geography education by means of a national curriculum with validity for all primary and secondary schools. In contrast to former socialist GDR, Romania and all former satellite countries of the USSR followed a path-dependent development where hybrid structures emerged from the old (socialist) and the newly implemented (capitalist and democratic) structures. In consequence, the development of school geography in Romania depicts the post-socialist condition and the lengthy path of transformation towards democratic societies and market economies (cf. Bagoly-Simó, 2008b).

School geography in Romania during state socialism covered ten of the twelve grades. Primary education (grades 1-4) set an emphasis on the regional geography of the students' home administrative unit (*judet*). Subsequently, fourth graders studied basics of the geography of Romania. Overall, primary geography was descriptive and ideologically laden. Lower secondary education started with general physical geography (fifth grade) and covered minimal aspects of population and settlement geography along with the geography of the non-European continents in grade 6. In continuation, grade 7 was dedicated to Europe, while eighth graders focused yet again on the geography of Romania. Upper secondary education covered general physical geography and geology (grade 9), general human and economic geography (grade 10), environmental geography (grade 11), and the geography of Romania (grade 12). Thus, the curricular architecture of Romanian school geography displayed a mixture of linear and spiral curricula in which the main emphasis was on physical geography and the geography of Romania. Along with socialist ideology, geography also served the purpose of nation-building by constantly

reinforcing the continuity of Romanian people in the space delimited by the Carpathian Mountains, the Danube, and the Black Sea. The main element of the curricular architecture was content. Along with time resources, the curriculum prescribed central concepts and regional examples, but also topographic terminology to be acquired. Overall, geography was taught in two hours per week.

Following the 1989 revolution and system transformation geography experienced a number of changes, most of which were induced by modifications of the educational policy. Overall, the curricular architecture suffered a number of changes, as skills and competences, methods, educational media, and assessment were added. Even today, content plays an essential and central role. In contrast to Germany, there are no general standards or common areas of competence, but loosely formatted skills that should be connected to content. However, it is at the discretion of every geography teacher to design skill and competence development based on the prescribed content.

Regarding content, there is a surprising continuity on all educational levels. Primary geography was reduced to one year, namely fourth-grade geography of Romania. Secondary geography conserves the introduction through general geography; however, physical geography lost its hegemony as elements of human geography were gradually added to the fifth-grade curriculum. Sixth-grade geography has an emphasis on Europe and replaced the analysis of each country in part by the general description of European regions. Selected countries serve as examples of regional structures and processes. Seventh-grade geography of non-European continents follows the same pattern. In contrast to the pre-1989 curricula, post-socialist lower secondary geography dedicates considerable less attention to Russia and the CIS as was the case with the USSR. Finally, eighth-grade geography of Romania stubbornly remains within the framework of a traditional descriptive geography serving the purposes of nation building.

The content of upper secondary geography experienced significant changes in the aftermath of the 1989 system reform. Similar to the fifth-grade general physical geography, its ninth-grade counterpart was complemented by a growing amount of human geography at the expense of sub-disciplines of physical geography. General human geography (grade 10) remained constant, while the content of grades 11 and 12 underwent significant change. The former environmental geography taught in grade 11 was replaced by a geography of contemporary world's fundamental challenges. In essence, the curriculum adopted some aspects of ESD, but mainly targeted a transition from a systemic vision that excluded society towards a more inclusive analysis of human-environment interaction. Similarly, twelfth-grade geography of Romania progressively addressed aspects of the European Union transitioning towards a geography of Romania in the European Union.

Along with the change in content went the progressive erosion of time resources. Primary geography was halved, most of lower secondary geography – with the exception of ideologically laden eighth-grade geography of Roma-

nia – was reduced to one hour per week. A similar process applies to upper secondary geography.

The textbook market also experienced major changes. During state socialism, the state-owned publishing house (*Editura Didactică și Pedagogică*) produced one textbook for each subject and grade. Black and white editions of the text predominated; however, cartographic material was rich. During the late 1990s, several alternative publishing houses entered the market and the number of textbooks (mostly in colour with a larger number of pictures) for each grade grew exponentially. Following a phase in which approval procedures were lacking, the market became more stable with only a few publishers still sticking to the textbook market.

#### 4. Conclusions

School geographies around the globe display a myriad of phenotypes. Despite the uniqueness of every national or regional setting, the subject shares a number of similarities. First, school geography seems to follow an implementation path of a Future 2 Curriculum (Lambert et al., 2014). The risks associated to this development are strongly tied to the loss of subject-specificity and, thus, the very core of geography. Putting geography back into geography education or strengthening the remaining geography (Marsden, 1997) seems to be one of the most urgent tasks of the coming years. Failing to do so within a neoliberal Future 2 Curriculum could lead to a complete dissolution of school geography and its inclusion in social science or science. Second, eroded time resources challenge the very aims of school geography, thereby contesting established progression models and teaching practices. Disruptive school geographies, as in the case of Berlin, where the subject is being taught for a semester, while the next semester is dedicated to history only to pick up geography again in the first or second semester of the following academic year, seriously endanger geographic literacy and remove the few elements of powerful knowledge left in the subject. Third, increased emphasis on the social education component at the expense of the subject component (Marsden, 1997) might contribute to Environmental Education, ESD, or any other good cause de jour, but it concurrently weakens geographic education and literacy. Fourth, school geographies seem to gradually distance themselves from regional approaches. In light of the prevailing discourse in geography, this development appears reasonable and timely. However, considering the educational aims of school geography this perspective might require revision. Fifth, strategies in favour of conserving the status quo of school geography are not only heterogeneous, but also seem to have increased in frequency and intensity over the course of the last decades. Exploring the role of stakeholders, the dynamics of processes, and the degree of success seems to be essential for the status of school geography and, implicitly, of geography education as a whole. The author of this paper understands these conclusions as a starting point of collaborative work and further international comparative research.

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