

Navigating Maps: Geography Textbook Usage in Digital Times

1. Field of research and issues addressed

Formal education faces grand challenges along the process of digitization. Students' learning styles and needs require new teaching formats and different educational media. Geography is particularly impacted by digitization, as it belongs to the subjects with frequent use of a great variety of educational media (HEMMER & HEMMER 2010). Despite this variety, textbooks are still the most widely used educational media in Geography classrooms (HEMMER & HEMMER 2010). However, no representative empirical information on the specific patterns of textbook usage by both students and teachers is currently available (BAGOLY-SIMÓ 2014). Updating textbooks to more digital formats, however, requires solid empirical grounds on their usage.

This workshop series aims at initiating an international study on Geography textbook usage. In doing so, it focusses on the central artifact of Geography: maps. Within this CENTRAL proposal a series of two workshops aims to explore the following questions:

Q1: Which analogue and digital educational media do teachers and students use when working with maps?

Q2: How do teachers use Geography textbooks when working with maps?

Q3: What additional sources for maps do teachers use while planning and delivering their lessons?

Q4: How do students use their Geography textbooks?

Q5: What additional sources do they use?

Based on the experience of the individual consortium members and the work they already published in the field, mixed methods will serve to explore Geography textbook usage (see section 2.1).

2. Implementation

2.1 Handling of the issues

Geography textbooks and maps constitute a **common area of interest** across the consortium. International literature on educational media, textbooks, and maps served as theoretical foundation for the work carried out in the three national settings. In addition, all three groups work in a genuine post-socialist context and thus share common educational frameworks, structures, and processes. Despite these similarities, every group explored **unique facets and processes** using quite **different research methods**. This variety, however, serves as the starting point of collaborative work to be consolidated during the two CENTRAL workshops.

As a result, the **first CENTRAL workshop** (approx. May 2019, Berlin) aims at **consolidating the common grounds** for further work. Exploring the five research questions requires theoretical and methodological input. Three keynotes will update the participants regarding theories and methods of educational media research. Subsequent workshops along the main research questions will contextualize previous work along the methodological expertise of each research group. For example, in methodological terms, qualitative methods (widely used at ELTE) will support variable exploration in different national settings in preparation of surveys (already conducted at CU). Eye-tracking studies (vast experience at HU) will help better understand map usage by both teachers and students when working with textbook spreads. Time will be dedicated to develop junior researchers' transferable skills (see section 2.2). The main **outcome** of the first workshop is the timeline of empirical data collection required to proceed with seeking out third-party funding once the CENTRAL workshops are concluded.

The **second CENTRAL workshop** (approx. November 2019, Prague) will consist of three types of activities. First, empirical data collected, processed, and interpreted at the three universities, will be presented in workshops. Second, content and structure of the different papers (see section 2.3) will be sketched and refined. Junior researchers under the guidance of seniors play an important role in this process, as this is a great opportunity for skills acquisition (see section 2.2). Third, invited experts on funding schemes, grant proposal preparation and submission will work with the stakeholders to identify the most suitable funding scheme available at the end of 2019. In addition, responsibilities and timelines regarding grant writing will be agreed upon. In sum, the main **outcome** of the second CENTRAL workshop are clearly distributed roles concerning joint publications and grant application along with a realistic timeline.

2.2 Integration and promotion of junior researchers

As pointed out above, the two CENTRAL workshops are designed to offer junior researchers (JR) a multitude of possibilities to work on four sets of skills.

1. **Communication skills:** JR will be asked to reach out to invited scholars. This will give them an opportunity to build up confidence in reaching out to international experts, verbalizing requirements and needs, and respond to invitees' requests.
2. **Planning skills:** Senior researchers and their administrative assistance will work closely with JR during the planning phase of each workshop to familiarize them with common challenges, unprepared development, means to make amendments, and communicate changes.
3. **Moderation skills:** During the workshops, each JR will be in charge of a specific activity. They will plan, carry out, moderate, and document it accordingly.
4. **Academic writing skills:** Each workshop will dedicate time to discuss academic writing. The jointly developed papers are the best grounds to discuss challenges encountered and work on solutions under the guidance of senior researchers.

2.3 Timescale and/or provisional program

The consortium members agreed on the following timescale and provisional program:

- a. **Preparatory calls** (M1-2; April-May 2019): Péter Bagoly-Simó will set up regular Skype meetings with the senior researchers from ELTE and CU setting up a common agenda.
- b. **First CENTRAL Workshop** (M2, May 2019, Berlin)
- c. **Progress calls** (M2-9, May-November 2019): JR will carry out jointly the empirical work under the supervision of senior researchers. Three types of calls are planned. (1) JR will discuss the progress of their empirical work along the packages agreed during the First CENTRAL Workshop via Skype every second week. Senior researchers will monitor the process. (2) The three senior researchers will update each other on the progress on a monthly basis, and whenever urgent matters require such calls. (3) On the last Friday of each month, all consortium members will participate in a brief update call. This helps all stakeholders to have an overview of the progress within every work package and raise any questions in need to be discussed.
- d. **Second CENTRAL Workshop** (M9, November 2019, Prague)
- e. **Deliverables** (starting M9-submission): Péter Bagoly-Simó takes over the responsibility to coordinate the communication following the second CENTRAL workshop. This encompasses the processes of paper and grant application writing. He will be in touch with every paper lead authors as well as with the grant application writing team. In addition, he offers assistance during the final paper submission as well as the proposal writing and submission.

3. Sustainability/outlook

3.1 Anticipated added value

The researcher teams working at the three applying institutions share an interest in both Geography textbooks and maps. While heavily involved in development and implementation (ELTE and CU) or design and usage (CU and HU), their work concentrated on national educational systems. The workshop series will add value to previous work in five ways.

First, the **complementarity** of the three groups in terms of research methods, previous results, and theoretical background serves as solid grounds to plan work of international impact.

Second, **comparative and contrastive** work enables a deeper understanding of the textbook usage as opposed to studies limited to national frameworks.

Third, each researcher group brings in experience regarding **communication and dissemination** of results towards international and national communities. Strengthening joint communication towards international communities is a key goal that is strongly tied to junior researchers' training. In addition, results need to be directly communicated to practitioners (teachers) through the excellent national communication channels. Joining forces will lead to a greater impact.

Fourth, the **common post-socialist experience** will help stakeholders to better understand their national processes. They will also contribute greatly to understanding education during post-socialist transformation—a rather neglected field.

Fifth, the workshops will **empower junior researchers** nested in rather small national communities of researchers. Setting up a **regional network** will greatly support them in both research and teaching. Of particular importance is seeking out funding for emerging joint projects.

3.2 Joint publications

Each workshop will lead to joint publications of international impact. Junior researchers will play a key role in producing the papers under the guidance of senior researchers. The journal *Zeitschrift für Geographiedidaktik* | Journal of Geography Education agreed to publish a **journal special issue** exploring Geography textbook usage in general and maps in particular. Empirical work carried out between the workshops will lead to a common international **high-impact journal article**. Péter Bagoly-Simó is member of the Editorial Board of the leading Geography Education journal, *IRGEE*. He will support the network during the production, submission, and review process.

3.3 Joint third-party funds attracted or envisaged

Each researcher group already submitted research proposals with their national agencies. In addition, HU currently works on a submission with BMBF. Same applies to all other partners. The CENTRAL workshops are crucial to support the next step: applying jointly for European funding. The preliminary results produced during the workshops and published both in the special issue and the high-impact article could serve as the necessary proof of reliable and productive collaboration required by most third-party funders. The consortium aims to apply within the EC's funding schemes dedicated to digitizing European education.

4. Summary of the proposal for a non-specialist audience

Maps shape our daily life in myriad ways. They not only serve as means of orientation, but also influence the way we perceive space (e.g. dangerous, beautiful, contaminated, friendly spaces). Over the last decades, use of digital maps has become the standard. School Geography—to our knowledge—still introduces maps using analogue textbooks. There is no solid empirical evidence regarding teachers' educational media choice connected to maps. Similarly, little is known about the educational media students use to acquire map skills. The three universities involved in this proposal build on previous work carried out in three national settings covering different aspects of textbook usage in context of maps. Mixed methods, including surveys and eye-tracking studies will help answer the main research questions. The two CENTRAL workshops will help the stakeholders to get 'on the same page' (or in this case 'on the same map') while updating the theoretical and methodological knowledge. In doing so, junior researchers will play a key role in initiating empirical work and publish the preliminary results in joint papers. This preparatory work serves as a starting point for research grant submission with the EC.

References

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