



Lifelong Learning Programme – Comenius Action Teacher education

GeoCapabilities 3: powerful knowledge for all

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O3: Report on a set of pedagogical principles and strategies – summary only, open access

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Abstract: This case study report summarizes GeoCapabilities 3 project findings in the area of Intellectual output 3: Set of pedagogical principles and strategies. It focusses mainly on the principles and strategies used in the process of planning, teaching and evaluation of lessons on migration developing the social justice dimension in students. All this with an emphasis on the variable national and school context.

The report draws from a set of case studies from all partners supplemented by a comprehensive synthesis of findings. Teachers and other visitors to the GeoCapabilities3 website can read this report in conjunction with the reflective 'StoryMaps' the associate teachers wrote, accessed on the case studies page of the website.

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Summary

Context

In total, six academic institutions participate in the GeoCapabilities 3 project. Each of the project partners collaborate with associate schools (lower and upper secondary level) to address the goals of the project, specifically to develop a series of learning opportunities with innovative teaching ideas to trial the suitability of the GeoCapabilities approach with their school students. All 13 participating associate schools long-term face various challenging circumstances. These circumstances involve: location of the region (periphery), economy (higher levels of population poverty; structural changes – e.g., decline of industrial (textile, mining) areas etc.), and society and demography (changing demographics; migrant population; socio-economic deprivation etc.). Obviously, in most of the cases schools face a combination of these challenges.

Planning

Based on the case studies carried out, it can be concluded that there are tools which help teachers to start thinking innovatively about their own teaching. These were especially the creating of vignettes; deliberating the curriculum artefacts; discussion with academic geographers and geography educators; sharing ideas with other teachers (nationally and internationally); and the process of getting familiar with the key concepts of Geocapability approach (PDK, capability, Maude's typology, curriculum making etc.). However, it should be stated that teachers perceived the need to be provided with enough time to engage these tools in their lesson planning.

When planning lessons innovatively, it seems critical to consider the individual settings of each school and teacher (particularly when being in the challenging circumstances). Specifically, the teachers' open-mindedness to new teaching and learning approaches, and their will to think critically of currently used pedagogical principles and strategies are perceived as essential preconditions for successful implementation of new 'tools'.

Most of the teachers perceived the **vignettes** (and the process of their creation) as a crucial tool that introduced them the GeoCapabilities approach and helped them to better understand its nature. As a result, this tool boosts teachers' innovative thinking. Additionally to using vignettes for getting familiar with the approach, teachers emphasised that vignettes played multiple roles in the process of lesson planning. Firstly, vignette is a tool supporting teachers to think innovatively, i.e. to explore critical and current approach to teaching (migration) and to clarify their thinking, particularly to sum up what do (and what do not) they know about migration (and its wider consequences) in a clear and structured way. Moreover, it helped them to better understand the topic-related educational issues. Secondly, the innovative thinking about the topic in the process of vignette creation forced teachers to reflect on the lesson structure, respectively to restructure the lesson. Then, vignettes help teachers to identify opportunities to scaffold learning, particularly to identify possible bottlenecks in the process of teaching and learning, pre-empt students' questions and gather resources (i.e., the curriculum artefacts) needed for students' better understanding of the issues taught.

Moving from vignettes writing to lesson planning and then to teaching, teachers used the **curriculum artefact** as a helpful tool. As the key artefact, the sources used in the vignettes were often used. The deliberation of the special meaning (the additional educational value) of the curriculum artefacts (and therefore turning the educational materials into artefacts) is a key step to the setting of specific aims of the lesson/educational activity. The artefacts played a significant role in the most of the lesson taught by associate teachers. They were used as a evidence and data for the discussion and dialogue with students, helping them to understand issues from the vignette.

The complex use of vignettes and artefacts to teach migration and to develop social justice dimension in students reflect all five of **Maude's (2016) PDK typology**. Being aware of the PDK types, teachers reflect on their knowledge and thinking about geographies of migration. This tool, therefore, helps teachers to think about PDK (and to select the relevant PDK to be taught) and, subsequently, ways of its development in lessons. Teachers enable students to access a range of different knowledge. E.g., teachers planned to equip students with ways of

data analysis, different perspectives of the issues, interconnectedness of the problems, geographical concepts, regional and global knowledge, vocabulary. Moreover, they learn to follow and participate in the debates, examine and reflect on the decisions made by other people, consider ethics of policing and managing migration movements, identify choices in their lives etc.

It is essential to say that the process of vignette creation is often not simple nor smooth for the teacher previously unaccustomed to such way of thinking. Therefore, almost all associate teachers emphasize the importance of **meetings, discussions, sharing possibilities and collaborative work** with colleagues (academic geographers, geography educators, geography teachers). Specifically, they mentioned that meetings with academic experts on migration helped them to better understand (and subsequently to responsibly select and better teach) key concepts of migration. And generally to use new language (concepts) in dialogues. Discussions with geography educators help them to start thinking critically of their teaching, and collaborative work (in national or international group of teachers) on vignettes in a supportive atmosphere help them to become familiar with the process of vignette writing (and related way of thinking) and start creating their own vignettes. Moreover, they appreciate the possibility to share their experience, discuss lesson plans, joint evaluation of lesson and discuss identified teaching and learning bottlenecks with other teachers and geography educators.

The last but not least finding is that collaboration serves as a booster for innovative thinking and a systematic and long-term cooperation provides teachers with a welcome support to continue thinking and teaching innovatively even after the initial failures. Therefore, it could be said that the collaboration element is a very important tool that enable teachers own geographical thinking and innovative teaching.

Teaching

In their lessons, teachers reflected on the lesson plans constructed in the phase of planning considering the variability of national and school context. They used a mix of pedagogical principles, some of them migration-specific but mostly universal and applicable to all (not only) geographical PDK, which has a human dimension.

Teachers often grounded lesson in the students' prior knowledge and experience. In case of identified misconceptions related to the basic geographical (migration) concepts, they addressed them in due course. E.g., employed concept mapping approach to developing conceptual understanding and insight into the complexity of the migration processes.

The majority of lessons taught were student-centred, stressing the need for higher levels of students' engagement. This was done using individual and/or group teaching and learning activities, particularly dialogic teaching addressing the teacher- and student-generated questions, e.g., a rotating debate technique. Use of these techniques led to the development of students' understanding and attitudes and discussion skills. The higher engagement of students was identified as the critical pedagogical principle for the successful teaching (and learning) of migration and developing the social justice dimension, especially the more empathetic stance of students.

Moreover, teachers tried to bridge relevant theories and real life in their lessons. Specifically by focussing on the concrete life stories of real migrants. Teachers from countries, regions or schools with higher migrant background used students' personal and family experience with migration. The rest of the teachers used the mediated life stories of migrants – employing storytelling, role-playing, or drama-use to enable students to perceive specific situations from the point of view of the direct actor. Although this approach seems efficient in empathy development (i.e., the social justice dimension), some teachers perceived constraints related to the potential of these techniques (working with mediated experience) for communicating the key geographical concepts. Nonetheless, the investigation into real migrants' life stories seems efficient in the combination with decision making exercises leading students to feel like a migrant in a given situation.

Considering the need to address the misconception and build a more empathetic stance, teachers aimed their lesson to students' use of and access to reliable sources and data and think critically about the introduced information. In some lessons, the reliable data were used

to challenge students' negative views, and perspectives of migrants and migration previously gathered from elsewhere (incl. media and family).

Most of the principles and techniques used were perceived as innovative or innovatively used in the given context. The planning process led teachers to think critically, plan the lessons innovatively and forced them not to stick to the book. As such, the lessons taught (and planned) support the professional development of participating teachers (see below).

Evaluation

Teachers involved in the GeoCapabilities 3 project used a rich repertoire of evaluation tools to control the efficiency of teaching and learning, including specific tools for pre-lesson evaluation, control mechanisms during teaching and post-lesson evaluation tools. These were especially tools to assess students learning, e.g., pre- and post-lesson protocol, concept mapping, students free writing, semi-structured questioning, semi-structured peer interviews etc. Most of the evaluation was formative to support further development of students' PDK. However, teachers are aware that the evaluation was mainly short-term and that the longitudinal evaluation should be employed to identify how deeply students developed PDK.

Moreover, innovative (for participating teachers) ways of evaluation were employed by teachers, specifically student evaluation (the self-evaluation and the evaluation of the teaching) and peer evaluation (evaluative discussions with other teachers or geography educators).

Most of the teachers perceived their lessons as effective, mainly because they positively affected students' PDK (identified by the pre- and post-lesson protocol) and effectively engaged students in complex and relevant discussions. Although the lesson outcomes were met, some bottlenecks in the process of teaching were observed – e.g., lesson time-management (lack of time devoted to debriefing, sharing and interpreting students' findings). In some cases, the planned activities should be shortened to avoid students losing focus. In other cases, teachers had to provide students with more scaffolding than planned to apply thinking as intended. According to the teachers' self-evaluation of the lesson, the lesson plans were adapted for future use.

When looking into the students' evaluations, it can be stated that, generally, they responded very positively. Firstly, they appreciated that teachers engaged them in the lesson by discussions, inquiry, attractive questions/problems to be addressed etc. This was supported by using rich and engaging real-world data and visualization, helping students understand the fundamental concepts better. This was crucial as, in some cases, students found the concepts explained in the textbooks too general and hard to follow.

Almost all participating classes appreciated that the lesson focused on the practical consequences of migration processes for their everyday life (e.g. the interconnection of local and global processes) and, especially, were impressed by the personal stories of migrants. Such lessons help them to think of their own migration background and to find out new information (most of the emotional nature) about their families. This led to support in the formation of their own personal geography.

Although most of the lessons were effective and students appreciated them, an extensive list of factors limits students' access to/development of PDK. These are, primarily, factors related to students, teachers, school and curriculum system and out of school environment.

Firstly, students are limited with their motivation and overall engagement in the learning, specifically in learning geography. The question of motivation is often related to the attractiveness of the topic/problems to be solved and the meaningfulness perceived by the students.

Teacher-related limits result from the lack of teachers' time to develop lessons in a powerful way and from their professional expertise. This includes their disciplinary knowledge, ability to recontextualize the academic geographical knowledge and teachers' perception of their students' abilities – teachers should be aware that PDK development is not only for the higher ability students. Subsequently, some limits result from the specific circumstances of each school and possibly lead to the restriction from the school management (e.g. to avoid sensitive topics in the lesson).

The system and curriculum-related limits include the time and space dedicated to geography lessons and the strictness of curricula. As the strict curriculum leaves little (or no) freedom and responsibility on schools and teachers, there is no space for the development of teachers own curriculum, nor the development of curriculum making expertise by individual teachers. Moreover, there is a perceived lack of time in teaching programmes to study individual issues deeply as exams pressure influences the lesson content. Last but not least curriculum limit is related to the textbook content, as some textbooks content (and develop) only one type of knowledge (e.g., Type 2 according to Maude's typology).

The out of school environment includes families, social media, the internet etc., that influence students' attitudes, specifically their social representation and possible prejudice, and can restrict students' open thinking in this regard.

Finally, we should consider the way the project enhanced teachers' expertise. All of them developed their migration-related curriculum, including new lesson plans and conceptual and practical tools. They developed their lesson plans by specifying the lesson content (specifically the PDK) better, implementing innovative ways of teaching and evaluation and improving time management (e.g., providing more time to reflect on the lesson). Moreover, the project boosts teachers' professional development in subject-specific knowledge, skills and pedagogy. Teachers mostly updated and deepened their knowledge in the field and started to think critically of their actual teaching and considered to teach innovatively – they received support to think reflectively of what they do and why. One of the most considerable added value of the project was the possibility to share the experience regionally, nationally and internationally. In many cases, this experience opened their eyes (and minds), gave them support for innovative ways of teaching and positively influenced their self-confidence. In some cases, this was perceived as a springboard to teacher's further engagement in the collaborative geography teacher community.