Spatial Citizenship

Progress Report   Public Part

Project information

Project acronym:		SPACIT
Project title:		Spatial Citizenship
Project number:		517908-LLP-1-2011-1-AT-COMENIUS-CMP
Sub-programme or KA:		Comenius
Project website:		http://www.spatialcitizenship.org/
Reporting period:	From	01/12/2011
	To	31/05/2013
Report version:		0.1
Date of preparation:		20/06/2013
Beneficiary organisation:		Paris-Lodron University Salzburg
Project coordinator:		Josef Strobl
Project coordinator organisation:		Paris-Lodron University Salzburg
Project coordinator telephone number:		+43 (0) 0662 8044 7503
Project coordinator email address:		josef.strobl@sbg.ac.at

Executive Summary

Geo-media (i.e. spatially enabled mobile devices, online mapping tools, volunteered geographic information) have become easily accessible in everyday life. We therefore need to be aware of both the opportunities as well as impacts and challenges of using geo-media in society. This emerging geoinformation society warrants the development of new capabilities if people are to successfully participate as responsible "spatial citizens".

A spatial citizen should be able to interpret and critically reflect on spatial information, communicate with the assistance of maps and other spatial representations, and express location-specific opinions using geo-media. These capabilities need to be addressed at secondary school level. SPACIT provides the relevant teacher training activities.

The SPACIT project

- analyses dimensions of the geo-information society,

- develops both a competence model and curriculum for in service teacher training to enable students to successfully participate in the geo-information society

- conducts and disseminates teacher training courses based on this work.

This Interim report shows that the project has gone according to the project proposal in most aspects of the original proposal. The project team successfully completed work suggested in the fields of analysing dimensions of the Geoinformation Society (WP 1) and developed and broadly published the SPACIT Competence Model (WP 2) ; The basic concept of the curriculum has been developed, and work is under way to generate the materials to achieve the aims of the curriculum (WP 3). A date for piloting, testing and evaluating these course materials (WP 4) has been fixed and put on relevant European databases to attract teachers from the target group.

Results of WP 1 & 2 have been widely disseminated at European conferences as well as beyond Europe with the help of all partners including third country partners, and first learning materials have been tested in teacher training at various teacher training institutions.

The coordinator and the partners are decidedly positive about the finalization of the proposed work in time and at the quality levels envisaged.

Table of Contents

1. Project Objectives

SPACIT aims at providing teachers with the relevant education to support active Spatial Citizenship in the classroom through providing the following measures:

- an up-to-date online reader on the geoinformation society, the technological basics, its social implications and economical effects for individuals,

- a competence model and curriculum for an increased participation in the geoinformation society through Spatial Citizenship,

- materials for teachers to actively learn / teach Spatial Citizenship skills and competences to pupils through 4 units of training:

  a) Basic spatial concepts s to understand the correlation between absolute conceptions of space as used in geoinformation and social concepts of space as used in the social/political sphere
  b) Spatial thinking to understand and make use of relational concepts of space
  c) GI-enabled Spatial Citizenship – spatial communication – to be able to communicate and critically reflect on spatial representations (i.e. maps)
  d) GI-enabled Spatial Citizenship – participation – to be able to actively participate in collective decision making processes.

2. Project Approach

Spatial Citizenship is about 'learning how to navigate this world in respect to a) the physical world, b) the meanings attached to physical objects and environment c) the power relations involved in the production of meaning'.[1]

The Spatial Citizenship approach stems from the fact that the use of technologies and geoinformation is argued from the perspective of our everyday lives and the differences of individual/collective appropriation of space that are the basis for participation in collective decision-making. It is therefore relevant for democratic processes from local, urban and regional planning to nature conservation to organization and preparation for individual spare time and even voluntary activities. Participatory and community-based approaches and the posting of information and data collected in the field are already commonly in use. Developing this sort of engagement in secondary education allows teachers and students to become aware of the power of spatial thinking, geoinformation and the use of the (geo)-web as a communicative and participatory tool for citizens to engage with. (see Fig. 1)

Figure 1 Spatial Citizenship approach [2]

"The construction of Europe is not just a form of collaboration between States. It is a rapprochement of peoples who wish to go forward together, adapting their activity to the changing conditions in the world while preserving those values which are their common heritage". [3]

SPACIT has been developed in order to respond to the needs of the rapidly changing world and ever more diverse societies. The project is positioned within Comenius Priority 2: the development of approaches to teaching and learning.[4]

A spatial perspective connected with the use of ICT technologies and geoinformation in secondary education is an essential lifelong learning skill for Europe2020 citizens. In accordance to this SPACIT provides a system of in-service and initial teacher education that uses the potential of information technology critically to enhance citizenship education in and beyond the classroom. The products enable teacher trainers to integrate public, private and European offers in geoinformation with education for active citizenship.

- SPACIT addresses the lack of a systematic education development such a systematic approach allows both teachers, students, policy makers and curriculum developers to make a critical and reflexive use of spatial data/information.

- SPACIT introduces a competence model and curriculum for secondary education. It goes beyond the technical competences and highlights the competences associated with representation, communication and participation of young people in society.

- SPACIT promotes (geo)communication skills to be targeted in the secondary education curriculum

- SPACIT provides an interdisciplinary approach connecting social sciences, civics education, geoinformatics, didactics and teacher training and deals with mainstream technology, relevant and essential for teacher education

- The impact of the project will be sustained through a wide variety of seminars for teacher trainers during and beyond the life time of the project, explaining and offering the support of the free online learning environments (ready-to-use materials and online manual)

[1] Gryl, I., Jekel, T., Donert, K. (2010). GI and Spatial Citizenship. In T. Jekel, K. Donert, A. Koller (Eds.), *Learning with GeoInformation*. Berlin: Wichman Verlag

[2] Gryl, I. & Jekel, T. (2012), Re-centring Geoinformation in Secondary Education: Toward a Spatial Citizenship Approach. Cartographica, 47 (1), 2-12.

[3] European Communities, 1976, p.22

[4] Policy aspects for School Education and 2011 priorities concerning Comenius Centralised Actions http://eacea.ec.europa.eu/llp/events/2012/documents/kick-off-meeting_16-17_02/comenius_policy%20aspects_helland.pdf.

3.   Project Outcomes & Results

In the first half of the project, Spatial Citizenship has met all its key objectives and produced the results that were anticipated.

1. Society, space and the geoinformation age in school education – Scientific book and conference

The Geoinformatics Forum, an annual conference held in Salzburg, Austria is linking into recent research areas of GIScience and Society. GIScientists and developers have recently been raving about a spatially enabled world driven by ubiquitous platforms allowing for both professional and widespread lay person use of geoinformation. This spatially enabled world fostered - among others – research concerning aspects of geographical information science such as changes of society driven through application of these systems, specifically in the fields of visualization and Volunteered Geographic Information, empirical research in lay geoinformation use, and research into educational needs and teaching approaches prompted by the `geospatial world`.

Publications on the state of the art and explorations to the dimensions of the Geoinformation Society were contributed to GI_Forum 2012 and 2013. Project partners and external experts contributed to the conference proceedings of the GI-Forum 2012 with the focus on "Linking Geovisualization, Society and Learning" and GI-Forum 2013 with the focus on "Creating the GISociety". The chapter "Spatial Citizenship" in the conference contributions of GI_Forum 2013 identified different ways technology impacts on teaching and learning needs of citizens and was summarized in the section editorial by Quade & Felgenhauer (2013) as follows:

"In the wake of the increasing popularity of digital geo-media geography and geographical matters experienced a resurgence of interest. Technological advancements in the field of geospatial technology as well as digital technologies more generally have led to technological systems of ever-greater complexity yet high user-friendliness. At first sight, this appears to be a development that is to be welcomed as it enables an intuitive and conflict-free routine use of such technologies. The absence of disruptions and disturbances, however, is not conducive to achieving reflective and reflexive learning (Japp 1992; Halfmann 2011).

As the papers by Gryl et al (2013) and colleagues, Uhlenwinkel (2013), Vogler & Hennig (2013) and Abend have shown, an education that enables students to develop their discursive consciousness, including the ability to reflect on both the internal operations of a technology and the resultant external consequences of its application, is crucial for their developing higher-level thinking skills and becoming emancipated citizens. Some theoretical reflections that tie these considerations to the concepts of Critical Thinking and Spatial Citizenship education were offered by Carlos & Gryl (2013). In addition, Ferber & Jekel (2013) presented an approach of mapping and visualising the attribution of meaning to city spaces which may usefully complement further reflections on the possibilities of integrating lay knowledge into geo-media education.

The importance of research being attentive to individual and social (online and offline) practices and the role of (distributed) agency has been highlighted by Abend, Harvey & Miscione (2013) as well as to a certain extent by Steinmann and colleagues (2013).

Digital geo-media are, however, not only 'serious' tools with a political dimension to their use (and potential abuse), but also technologies that feature distinct playful, emotional and affective elements which may be productively integrated into educational contexts (cf. Abend (2013) and Odobasić and colleagues (2013)).

It can be concluded that most of the papers presented at GI_Forum 2013 Spatial Citizenship sessions are concerned with questions around the cognitive and communicative modes that are employed to approach, handle and reflect upon geoinformation. A central topic and common thread were the different levels of thinking and awareness concerning the constitution of geoinformation and digital geo-media: aspects of (routine) skills, (technical) knowledge, and critical discourse. In addition, many of the papers reflected on both the importance of playful engagement as well as an ambitious political discourse for successful geo-media education."

Results from WP 2 have been published in special sections devoted to spatial citizenship edited by the project team under the lead of University of Jena. A special effort was taken to provide the public with freely available online versions.

- GI_Forum 2012 contributions (8 papers, 70 pages) central for "Education for Spatial Citizenship" can be found in the the conference proceedings available as paperback version (http://www.vde-verlag.de/buecher/537521/gi-forum-2012-geovizualisation-society-and-learning.html) and as free online download (http://gispoint.de/gisopen.html).
- GI-Fourm 2013 conference contributions (11 papers, 105 pages) on Spatial Citizenship comprising contributions of project partners and external experts on the state of the art are available as paperback version and as free online download (links to the online resource and hardcopy forthcoming).

2. SPACIT Competence Model and Curriculum

The development of the Spatial Citizenship Competence Model (SPACIT CoMo) is based on the concept and theoretical structure of Spatial Citizenship and integrates different existing competence approaches and catalogues from related domains on the EU and international level. The SPACIT CoMo serves as the basis for the production of a curriculum for teacher education (Schulze, Gryl & Kanwischer 2013a, 2013b).

The structure of SPACIT competence can be best represented as a conglomerate of the single competences dimension. The categories of 'GM Technology and Methodology Domain', 'Reflection on the use of GM', and 'Communication with GM' are equivalent with the structure of the SPACIT concept provided in Gryl & Jekel (2012). It has to be mentioned that within this dimensions the focus is not any longer on „spatial representations" (as originally stated in ibid.), but has changed to use of „geo-media" (GM). Thus, they establish the centre of SPACIT CoMo in the sense of core competences. Basically, these dimensions are related to the more practical application of knowledge and skills as well as attitudes in the field of generic competences, above all instrumental competence (e.g. communication skills, information management skills, problem-solving and decision making) and interpersonal competences (e.g. social interaction, collaboration and teamwork skills). Here, the emphasis is on the reflective/ reflexive use of geo-(web2.0-) media for the purpose of self-active as well as collaborative communication for sharing discursive environments.

The dimensions of 'Spatial Domain' and 'Citizenship Education Domain' can be understood as horizontal layers underpinning the core dimensions overall. They are connected to theoretical aspects in respective knowledge areas and, thus, are related to subject-specific knowledge, skills and abilities. Finally, the „implementation level" of SPACIT is not incorporated within the other dimensions, but functions as an interconnected dimension necessary to link them to the aspect of SPACIT education. According to Quade & Felgenhauer (2012), the relevance to implement this competence dimension within the SPACIT CoMo is justified in the creation of reflective and reflexive learning situations combining various aspects of digital competence and geo-media use (i.e., critical engagement with geo-information and geo-spatial representations)

To arrive at an elaborated sub-structure of the dimensions of the SPACIT CoMo additional input from related domains and competence catalogues have been processed, based on the determination of the main categories of SPACIT competence (Fig. 2).
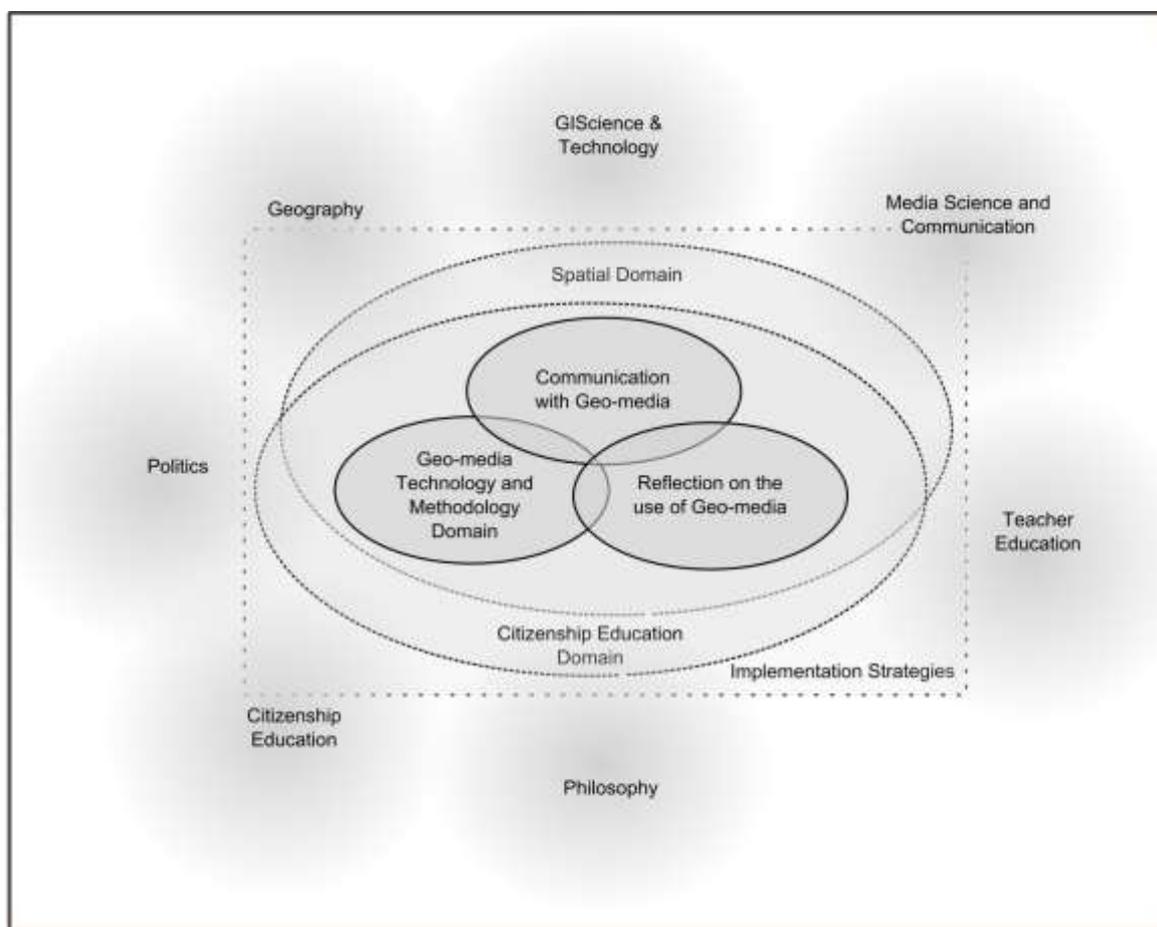

Figure 2 SPACIT Competence Model and related domains (Schulze, Gryl & Kanwischer 2013a)

The SPACIT Competence Model is the basis for a curriculum structure and provides appropriate measures which can be used to reach the competences suggested for Spatial Citizenship education. The SPACIT Curriculum also provides planned workloads according to the European Credit Transfer System for each part of the curriculum, for easier inclusion in various national initial teacher training and in-service training activities.

The SPACIT Curriculum is based on the principle idea of a face to face Comenius course. The structure is composed of four levels reaching from a basic/introductory level to the application level (Fig. 3).
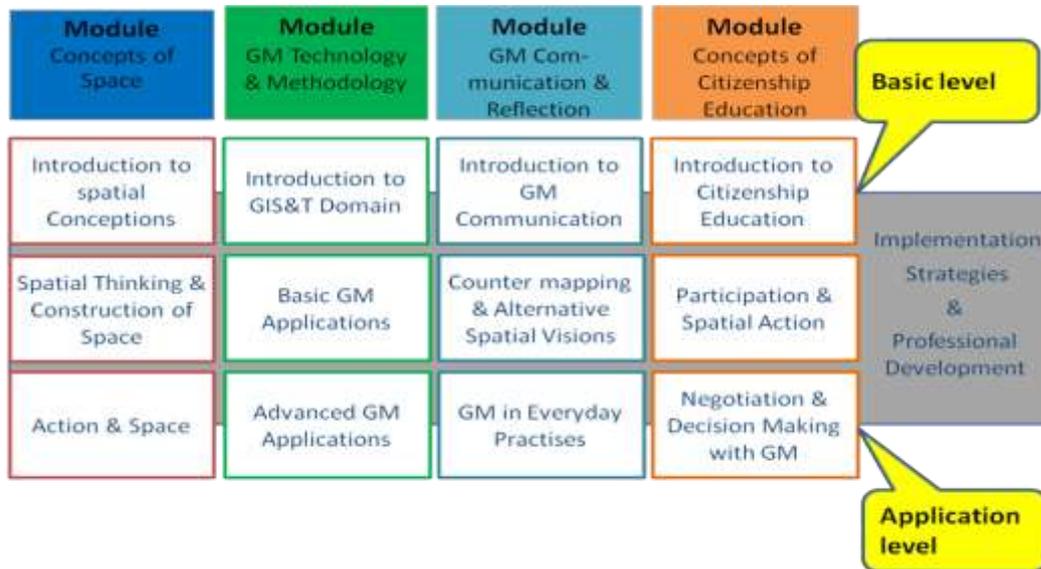

Figure 3 SPACIT Curriculum (Schulze, Gryl & Kanwischer 2013b)

The course is divided in four modules. The Module "Concepts of Space" contributes to the knowledge and understanding of absolute conceptions of space as used in geoinformation and social concepts of space as used in the social/political sphere, and the correlation between them. The Module "Geo-media Technology and Methodologies" contributes to the understanding of geo-media consumption, analysis, production and social networking. The Module "Geo-media Communication and Reflection" sheds light on the application of spatial representations within geo-media in everyday life and the translation between social and absolute space. The Module "Concepts of Citizenship Education" is based on the selected themes such as spatial action and participation, the effectively usage of spatial representations and geo-media in collective decision making processes. The SPACIT curriculum will be finished in June 2013.

3. Infrastructure and Dissemination

The project working infrastructure (Moodle-based) is in place and has been well used from the beginning of the project to share and discuss project outcomes. 19 active participants from the partner organizations are contributing to the discussion. A project website (http://www.spatialcitizenship.org/) with information on the project aims and deliverables is been implemented. Social media channels are used to communicate news and outcomes.

Facebook https://www.facebook.com/spatialcitizenship

Twitter (https://twitter.com/intent/user?screen_name=SpatialCitizens)

Dissemination has been very wide though meetings, events, presentations, seminars and publications at local, national and international levels. A range of dissemination events and activities are reported by partners to have been undertaken in different countries. These

included large conferences, workshops, seminars and smaller meetings. Also included are elevant contacts to policy makers and curriculum developers on a national level.

The dissemination strategy is to collect and organise the dissemination activities into three categories: media based, face to face and Internet based. (Cesie 2012)

In the First year - period December 2011 to November 2012 **Media-based activities** reached more than 120 people in the first year of the project life (December 2011 – November 2012). The target group was composed of students, researchers and professionals in the field of geography, GIS&T and learning with geoinformation with an academic, industrial or educational background. The activities included conference proceedings, one entry in a dictionary for geography education and paper publications.
During the second year of the project life, media-based activities substantially increased their impact, reaching more than 10650 people (students in teacher training, teachers, teacher trainers, researchers and professionals in the field of geography/geography education). This result was accomplished through paper publications, conference proceedings, a call for papers, and by making teaching material available online.

Face-to-face activities, period December 2011 to November 2012, included internal communication to staff members and events (conferences, info-days, fairs/forums/seminars, etc), reached more than 1852 people during the first year of the project life. School teachers, students, internal staff, volunteers, project managers from other NGOs and training centres from the UK, Denmark, Lithuania, Germany, Finland, France, Slovenia, Belgium, Austria, Ireland, Bulgaria, Spain etc., geographers, policy-makers, researchers and professionals in the field of geography, GIS&T and learning with geoinformation were reached. In the second year (period December 2012 to May 2013) of face-to-face activities, we increased the target number, with more than 2532 people reached, among which we identified Austrian in-service teachers, students in teacher training, European NGOs and partners from other projects, politicians, professionals from the geospatial industry, academics, teacher training institutions, PhD students and Master students, students of geography, and internal staff and volunteers of the partner organisations.

Internet-based activities (December 2011 to November 2012) resulted in reaching a target group of more than 46405 people in the first year of the project life. Our target group included own staff, students, teachers, researchers, non-governmental organisations, schools, stakeholders such as public institutions and policy-makers, youth, the interested public including parents, the general public using social networking sites. The target group reached through internet-based activity in the second year has shrunk over the period December 2012-May 2013 to 14121 people according to quantitative data available. However, qualitative data are not available for a number of activities carried out, eg. project description or links on partner institutions' websites. Appreciation of the project's Facebook page has considerably increased in the second period covered by this report and a larger target group has been reached through Twitter activity and on spatialcitizenship.org, with almost doubling views of the Prezi presentation of the project available on spatialcitizenship.org. The E.N.T.E.R. Network has identified SPACIT as good practice. The recognition has earned the consortium an invitation to take part in some of the upcoming YOURopa project activities.

4. Management

From a management perspective, the project is going according to plan in terms of workload, finances and results. Project management was helped by the suggestions and input of an external evaluator at the second meeting (Jul 2012) as well an interim evaluation (Dec. 2012). The project is managed through a hosted Moodle site (www.eurogeography.eu/community). Here a range of Web 2.0 tools are used to keep partners informed and share information and resources. The partnership changed though an amendment in 2013, as a work group central to the project changed affiliation from University of Koblenz Landau to Goethe-University, Frankfurt Germany. The validation of the amendment ensured that the project could go ahead with the original team.

5. Evaluation

The Evaluation of the project results is an ongoing process. To ensure the quality of the teacher training materials an evaluation report examines the evaluation of learning and teaching and teacher training materials. It explores the development of participative evaluation and the use of Empowerment evaluation. The project consortium decided at the last project meeting on the actual evaluation criteria of the course material which comprises the relevance, effectiveness, efficiency, impact and sustainability of the teacher training and materials. Also an external evaluator is taking part in the project activities and carried out a interim evaluation of the project so far to ensure the project is going according the work plan.

References

Abend, P. (2013), The uses of geomedia: an object-centered and situated approach. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Carlos, V. & Gryl, I. (2013), Where do critical thinking and Spatial Citizenship meet? Proposing a framework of intersections. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Cesie (2012), Dissemination and publication strategy Paper. (Confidential)

Ferber, N. & Jekel, T. (2013), Visualizing the re-production of space with multi-layer maps. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Gryl, I., Schulze, U. & Kanwischer, D. (2013), Spatial Citizenship: the concept of competence. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Gryl, I. & Jekel, T. (2012), Re-centring Geoinformation in Secondary Education: Toward a Spatial Citizenship Approach. Cartographica, 47 (1), 2-12.

Halfmann, J. (2011), Technikrecht aus der Sicht der Soziologie. In: M. Schulte & R. Schröder (Eds.), Handbuch des Technikrechts (pp. 93–107). Heidelberg: Springer.

Harvey, F. & Miscione, G. (2013), Irreductionally real information infrastructures: practices beyond universals. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Japp, K. (1992), Mehr Sicherheit durch Technik? In: G. Bechmann & W. Rammert (Eds.), Technik und Gesellschaft. Jahrbuch 6: Großtechnische Systeme und Risiko (pp. 175–191). Frankfurt am Main: Campus.

Quade, D. & Felgenhauser, T. (2012): Some aspects of social theory for the SPACIT competence model. SPACIT project, WP1, unpublished working paper.

Quade, D. & Felgenhauer, T. (2013): Section Editorial: Geoinformation and Society: Practicing and Comprehending Geomedia. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

OdobaŠić, D., Medak, D. & Miler, M. (2013), Gamification of geographic data collection. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Schulze, U., Gryl, I. & Kanwischer, D. (2013a): Public Report. Competence model for Spatial Citizenship education.

Schulze, U., Gryl, I. & Kanwischer, D. (2013b): Input presentation. WP2 Competence model and SPACIT curriculum. Istanbul, Turkey. April 18-20, 2013.

Steinmann, R., Häusler, E., Klettner, S., Schmidt, M. & Lin, Y. (2013), Gender dimensions in UGC and VGI: a desk-based study. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Uhlenwinkel, A. (2013), Spatial thinking or thinking geographically? On the importance of avoiding maps without meaning. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

Vogler, R. & Hennig, S. (2013), Providing geomedia skills beyond (post)secondary education. In: GI_Forum 2013 Conference Proceedings. Berlin: Wichmann.

4. Partnerships

The SPACIT Consortium is composed by 10 partner institutions from 7 EU states and 2 third partner countries:

The consortium is built on:
  a) The **common interest and priority** for the further exploration of the links between GI and citizenship education, the innovation of teacher education, development of innovative online course and support materials for trainers and teachers, for addressing the concept of Spatial Citizenship and for supporting learners to acquire competences that will enable them to more actively participate in society.
  b) b) Complementarity

The consortium consists of 12 partners that are highly recognized in various fields of teacher training. University of Salzburg (P1) and Goethe University (P5) have been actively exploring the links between GI and citizenship education and setting up the concept of spatial citizenship. Fatih University (P3) and University of Jena (P4) are very prominent in the field of spatial thinking support and in training teachers. These partners have a broad outlook with both citizenship and learning with GI components as well as broad experience in EC projects, and they have contributed broadly and internationally to the proliferation of GI in education.

In particular the partners engage to contribute with their special expertise:

University of Salzburg (P1) is part of a consortium that has developed the digital-earth concept in teacher education. Goethe University (P5) examines ways of implementing new media and GIS in education. Their concern is to develop and verify a theory-based competence model of reflective map reading, taking into account the political facets of representations of space as social constructions. They are also active in research training, in the examination of teachers' concepts of geo-media, and the development of teacher training for a more complex understanding of teaching and teacher training. They work closely with the experimental school KARS Landau (P8).

University of Jena (P4) is typified by a close and long term cooperation between social geography and geography education research groups. Research into society space interaction and constructivist approaches to geography education will be consistently linked together and strengthened through this project. The institute is able to contribute its expertise for basic needs of spatial "Spatial Citizenship" in WP 1 with regard to both social theory and geography education.

CESIE (P6) has been collaborating with local schools through national, regional and European projects in order to promote capacity building and innovation in teacher education. CESIE has experience in the development of innovative curricula for different targets and e-learning courses for specific purposes such as special needs, creative thinking and intercultural learning.

EUROGEO (P2) and CESIE (P6) are pan-European networks, with great expertise in project development and management. They are both concerned with citizenship education, democratic responsibility and active participation. Through their extensive networks they have a prominent role in the evaluation process and the dissemination of results to target groups.

P1-P6 all have or provide links to teacher training / in-service training / professional development that allows for testing and evaluating materials in practice and disseminating to short-term target groups. The scientific competences in these institutions also allow for the fine-tuning of the new and innovative concept of spatial citizenship, which still needs some further academic foundations.

The consortium also consists of four schools and training partners, who will predominantly be involved in the piloting and evaluation of the materials, but they will also contribute to other areas of the project. KARS Landau (P8) and National College Iaşi, Romania (P9) and European Youth Parliament UK (P10) are from the beginning involved in the project and contributed their expertise to the development of the course.

Bundesgymnasium und Realgymnasium Wien (P7) will contribute to piloting the course materials and attending the pilot teacher training course.

List of Partners

[P1] Paris Lodron University Salzburg, Austria
http://www.uni-salzburg.at
[P2] EUROGEO, Belgium
http://www.eurogeography.eu
[P3] Fatih University,Turkey
http://www.economic-geography.org
[P4] Friedrich-Schiller-Universitat Jena, Germany
http://www.uni-jena.de
[P5] Goethe University Frankfurt, Germany
www.uni-frankfurt.de/
[P6] Centro Studi ed Iniziative Europeo – CESIE, Italy
http://cesie.org
[P7] Bundesgymnasium und Bundesrealgymnasium Wien, Austria
http://www.grg21.ac.at/
[P8] KARS Laundau, Germany
http://www.kars-landau.de
[P9] Colegiul National, Iasi, Romania
http://national.is.edu.ro
[P10] European Youth Parliament United Kingdom (EYPUK), United Kingdom
http://eypuk.co.uk

+ third country partners
[P11] Center for Spatial Information Science, The University of Tokyo, Japan
http://www.csis.u-tokyo.ac.jp
[P12] National Council for Geographic Education, USA
http://www.ncge.org

5. Plans for the Future

The project consortium is confident to fulfill the workplan as proposed in the application and grant agreement.

Sustainability of the project will be ensured through the following actions:

I. A wide variety of seminars for teacher trainers during the life time of the project and beyond, explaining and offering the support of the free online learning environments; It is expected that teacher trainers will fall back on these ready to use-materials and online manual during their course work;

II. The hosting of the materials is secured for 5 years after the completion of the project by the European professional association (P2).

III. The competence model will influence the 'Citizenship Education' community including those working with geo-technologies to produce learning environments directed at the social appropriation of space and at individual/collective needs rather than technical/scientific content.

IV. Part, or all, of the curriculum is included in formal teacher training courses in the relevant subjects at several universities.

V. Basic concepts have been and will be communicated to policy makers and curriculum developers to include SPACIT in national / regional curricula;

VI. The geomedia centered approach will be widened to a more spatially centered approach for wider attractiveness across disciplines and school subjects.

VII. The basic approach is currently extended to users with special needs, e.g., the older generation.

Further sustainability actions will be generated during the project-life.

6. Contribution to EU policies

The digital agenda of the EU has several statements concerning the development of key competences in the spatial domain, namely a specific concentration on empowerment and emancipation, as well as hint for **Digital skills, literacy and e-inclusion.**
The digital era should be about empowerment and emancipation; background or skills should not be a barrier to accessing this potential.

As more daily tasks are carried out online, from applying for a job to paying taxes or booking tickets, using the Internet has become an integral part of daily life for many Europeans. Over half of Europeans (250 million) go online every day but 150 million Europeans – some 30% - have never used the internet. This group is largely made up of people aged 65 to 74 years old, people on low incomes, the unemployed and the less educated. (http://ec.europa.eu/digital-agenda/).
In addition, Europe is suffering from a growing professional ICT skills shortage and could lack the competent practitioners to fill as many as 700,000 IT jobs by 2015.
These failings are excluding many citizens from the digital society and economy and are holding back the positive impact that ICT can have on productivity growth.

Spatial Citizenship is centered on the need of establishing an active, constructive and participative European identity.

Up to now, citizenship education has mainly focused on our democratic society and the European legacy fostered through historical, social and cultural components of Europe. The rise of geo-technologies and the growing availability of information and data to the citizen necessitate a reconsideration of the role of secondary education for Europe2020. Few links to everyday, non-scientific, non-technical orientated uses of geoinformation and citizen participation have so far been provided.
Spatial (location-based) thinking connected with the use of ICT technologies and geoinformation in secondary education is an essential lifelong learning skill for Europe2020 citizens. Its development has so far largely been argued through the use of computer software and along the lines of specific disciplines in school curricula. These boundaries limit its application in the classroom, largely due to pressures from curriculum content and access to technology.

The SPACIT Project is positioned within Comenius Priority 2: 'the development of approaches to teaching and learning. SPACIT has been developed in order to respond to the needs of the rapidly changing world of work and ever more diverse societies.' It responds to the issue whereby schools need to develop a full range of key competences in young people. Spatial competences are key competences not previously addressed.
SPACIT provides a system of in service and initial teacher education that uses the potential of information technology critically to enhance citizenship education in and beyond the classroom. SPACIT offers a face-to-face and online mode of delivery. The products enable teacher trainers to integrate public, private and European offers in geoinformation with education for active citizenship. SPACIT offers a stepping-stone to further professional development, training and accreditation for European teachers.