Chapter #23

CULTURAL HERITAGE AS BUILT ENVIRONMENT EDUCATION RESOURCE: Pupils and teachers evaluating learning within Lost Traces project

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ABSTRACT

Monuments as facets of our material culture can be focal points of built environment education. Cultural heritage can enhance teaching of curricular subjects and can provide *par excellence* cross-curricular opportunities. Yet, studies evaluating educational experiences involving cultural heritage sites are scant. Therefore, this chapter presents results of an evaluation of learning experience with pupils and teachers participating in a 'Lost Traces' project. Questionnaires and group interview with card sorting task revealed educational methods the pupils selected as helpful for developing a myriad of competencies – from perceiving and feeling, analysing and communicating monuments related themes, to artistically intervening on sites and developing designs for the future use. LT projects promote diverse competences and highly enrich learning experiences. Pupils appreciated the ability to independently assemble teams spanning across generations, bring in their own ideas, work directly with experts, engage with interesting topics on-site. Yet, future project should allow for joined-up planning and careful programming of project phases and educational tools jointly with pupils; include more intensely social negotiation of what heritage is with different stakeholders to facilitate the process of monuments interpretation, thus, further broaden pupil's understanding of heritage.

Keywords: built environment education, monuments, cultural heritage learning, educational competencies, heritage interpretation.

1. INTRODUCTION

Built environment education (BEE), also named architecture education, utilises settlements, buildings and landmarks – as a subject, a context for learning and a curricular resource (Heinrich & Million, 2016). BEE incorporates educational activities related to cultural, arts, democratic, and environmental education using built environment (BE) facets. BEE aims to support pupils` development of critical thinking in connection to spatial issues and high-quality BE, foster environmental stewardship, inform about participatory and democratic decision making processes, and ultimately help pupils understand *"the interrelationships of humans with their environments in the past and present and in different parts of the world*" (Graves, 1990: 2). Monuments as facets of our material culture can be focal points of BEE. Cultural heritage can enhance teaching of curricular subjects, can provide *par excellence* cross-curricular opportunities; transforming abstract concepts from textbooks *"into tangible realities and intriguing stories about their everyday world*" (Hunter, 1993: 2), while assisting pupils to appreciate local history and culture, and comprehend the importance of historic preservation. Educational projects involving

monuments as a BEE curricular resource can be found internationally. Important contributions are coming from the English Heritage (Bradley, Coombes, Bradley, & Tranos, 2011) in the UK, '*Baukultur Aktiv*' (active building culture) program from Switzerland (Fachwerk, n.d) '*Denkmal aktiv - Kulturerbe macht Schule*' (active monument - cultural heritage makes school) program from Germany (DSD - Deutsche Stiftung Denkmalschutz, 2018), and Teaching with historic places (2016) from the USA. However, what we are lacking are evaluations of learning experiences involving monuments and cultural heritage sites. Therefore, this chapters presents results of an evaluation of learning experience with pupils and teachers participating in a project called '*Lost Traces*'(LT).

2. LITERATURE REVIEW

Today, architects and urban planners, as the authors themselves, carrying out educational projects with cultural heritage in focus find information and support for their work in policy documents, educational guides, and academic studies.

Policy documents such as Davos Declaration (2018) and Faro Convention (Council of Europe, 2005) accentuate the importance of active engagement and citizen participation in decision making processes about space, as well as the knowledge about the origin and the effects of space and its facets. BE, and cultural heritage sites as a part of BE, should be made a central educational topic, addressed at all levels of education (Art. 13, Council of Europe, 2005: 5-6; Davos Declaration, 2018: 12), as this so far was rarely the case.

An ever-growing number of educational guides for teaching/learning with monuments demonstrate how policies can be translated into educational practice. These guides provide a plethora of tasks and assignments for incorporating topics related to BE, cultural heritage and monuments (preservation) into curricular subjects (Fachwerk, n.d.; Schmidt-Breitung & Michels, 2018; DSD, 2018). The role of architects as creators and facilitators of BEE programs with monuments in focus can be most prominently observed in this group.

Academic studies reveal that monuments have been used to teach about local cultural heritage in history and geography (Apostolopoulou, Carvoeiras, & Klonari, 2014), cultural geography (Waters & Russel, 2012), heritage and history (Moreeng, 2014), social justice and sustainable learning (Moreeng & Twala, 2014), social studies (Hunter, 1993), sustainable development (Deutsche Stiftung Denkmalschutz, 2018) and art and architectural history (Shanken, 2004). The empirical evidence from this group of studies highlight the importance of including monument in curriculum, as 58% of teenagers from a study by Bradley et al. (2011) perceived at least one historic building in the local area, as distinctive, and personally significant. Yet, Moreeng (2014) calls for reconceptualization of the heritage teaching in schools to allow critical approach able to enhance pupils' deeper understanding of heritage. Pupils should have an opportunity to (re-) negotiate "the representation of a collective memory through the creation of their own monument" (Uhrmacher & Tinkler, 2007: 11). Hence, the accent should be on social construction of heritage (Dolff-Bonekämper, 2008). Architects and urban planner have recently started to contribute to the academic debate. Brković Dodig (2017) discussed BEE in museums and provided examples of teaching with historical buildings. Plein (2009) explored Denkmalpädagogik (monument pedagogy) projects in German schools. Heinrich and Million (2016) researched the engagement of young people in neighbourhood development projects including the (re-)use of cultural heritage. A recent study by Ozdemir (2018) evaluated how primary school pupils value cultural landscape and suggested that verbal information when paired with visual data increased pupils' levels of perception and awareness; and that practical experiences when paired with personal ones improve pupils understanding and connection to the cultural heritage, thus laying out the foundations for preservation of cultural goods. Studies exploring children's perception of cultural heritage are scant. We are evidently lacking children's and teacher's evaluation of the quality and content of educational experiences involving monuments and cultural heritage. This chapter ventures into narrowing this identified gap.

3. OBJECTIVES AND METHODOLOGY

This research aimed:

(1) to survey the general satisfaction of the pupils with the LT projects - what they liked and disliked, and what could have been better?;

(2) to investigate more deeply how children learned in LT projects, what from the offered learning tools and methods they have used and what from the envisioned competences they have developed.

<image>

Figure 1. Lost Traces projects. Photo by bauwärts-Stadt, Raum, Bildung.



Figure 2. Lost Traces project-Baukultur (Building culture) building camp in Venice. Photo by bauwärts-Stadt, Raum, Bildung.

'Lost Traces...search for traces of cultural heritage' was a part of the 2018 European Year of Cultural Heritage (Lost Traces, 2018a). It was developed by the Landesarbeitsgemeinschaft (LAG) Architektur und Schule Bayern e.V. (regional working group Architecture and School in Bavaria). LT comprised of 23 individual projects, mainly carried out in secondary and high schools (age 10-18) in Bavaria (Figure 1 and 2). Teachers worked in teams with professionals from monument conservation, archaeology, urban development, architecture, and creative industries. The individual projects took place during 2017/18 and 2018/19 academic year, lasting from a few days to a whole school year.

LT projects began with the site exploration: photo and video documentation were made; books were researched, and locals interviewed so that the places could be personally and collectively experienced. Drawings, photography, collages, maps, and 3D models assisted pupils to deepen their thinking about the place, as well as to showcase individual and group sentiments. Afterwards, pupils researched the archives and analysed historical and recent maps. The last phase tasked pupils to envision the future development of the heritage site expressed and presented through creative spatial interventions, artistic scenography, street art, light installations, guided tours, exhibitions, concerts or communal meals (Brković Dodig, Klepp & Million, 2019).

As the infographic shows (Figure 3), the focus was on iterative learning cycles, where one stage in the form of an essay, a photograph or a presentation could inform and initiate the next, thus potentially forming an educational continuum. Looking at the LT projects through the prism of education and pedagogy, the learning process followed Kolb's (1984) experimental learning cycle – each competence group was taught through one learning phase. In the learning process factual knowledge about location, building and history was complemented with personal impressions of a monument (including personal views of co-learners) to give others a tangible sense of individual learning experience. Teaching with monuments and cultural heritage meant viewing space as pedagogy. The result of the learning process was a personally enlivened and personally significant physically tangible object / model / performance / or exhibition, i.e. a result that negotiated the future of the place.

We have surveyed 8 LT projects. Firstly, we have administered 157 questionnaires to pupils in the participating schools, with a return quota of 86%. Via multiple-choice questions students were asked what they liked, disliked, what persons, materials they liked to have had, what they took personally from the project and how they define monuments. Since questionnaires do not allow further clarification of questions to respondents and collection of additional data (Bryman, 2012), we carried out group interviews with keyword card sorting activity (Figure 4).

We have carried out group interviews with children (3 groups of 5 to 6 children) and teachers (1 group of 6 teachers). According to Lewis (1992, 413) "group interviews with children help to reveal consensus views, may generate richer responses by allowing participants to challenge one another views, may be used to verify research ideas or data gained through other methods and may enhance reliability of children's responses". Card sorting as an elicitation technique is easy to administer for the researcher, easy to comprehend for the participants and speeds up the interviewing process (Fincher & Tenenberg, 2005). When combined with interview, it "allows the reasons behind participants' categorizations to be explored and understood, making sense of the data collected" (Saunders, 2015, 112).



Figure 3. Learning in Lost Traces projects based on Kolb's experiential learning cycles – visualisation of a theoretical model. Authors' belonging.

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Figure 4. Group interview with card sorting task. Photo by Sarah Klepp.

Firstly, participants respectively in their own groups were asked to select the competences learned and classify them into the four possible groups. Secondly, they selected educational tools and methods which used to carry out specific tasks in LT project. Thirdly, they linked the methods to the competences learned by gluing cards one next to the other. Simultaneously, they described a work assignment in which the pupils have learned the selected competences using certain methods.

The basis for card-sorting task was the pedagogical guideline of Lost Traces (2018b, 26-27) where 4 areas of competence were named, which children could possibly develop, when participating in LT projects, as well as the 4 corresponding groups of educational methods. The competencies and the educational methods were translated into keywords and phrases (Table 1) written on cards for the sorting task. All interviews were audio recorded and photographed. Respondents names are anonymised.

The questionnaires were analysed with a quantitative approach. The group interviews with card sorting were analysed quantitatively and qualitatively; as well as triangulated to identify different nuances of educational experiences within the LT projects (cf. Kelle, 2008, 232). For the quantitative analysis, the authors first counted the number of methods, competencies and links of competencies and methods selected by the respondents. For analysing the transcripts of audio recorded interviews, qualitative content analysis by Mayring (2000) was applied. The content was coded using QDA software in a feedback-loop search of main categories that appeared repeatedly in the interviews. In this way authors were able to identify the most important competencies pupils developed, the educational methods most frequently employed, as well as to establish the connection between the two – which educational tools helped children to develop particular competences. Additionally, through the same process authors selected statements and stories from the pupils and teachers to illuminate the quantitative data.

4. RESULTS

In the section below the results from the questionnaire will be followed by the results arising from the interviews.

4.1. Questionnaire results

Important aspects named by the pupils in LT project will be commented on in order of their significance discovered through the questionnaire.

1. In LT pupils praised teamwork the most. They appreciated working with classmates, learning with younger and older children, choosing their team, having sense of a community, meeting new people, experiencing opinions of the others and ultimately making friends.

Table .	1.
The list of competences and methods of	ffered through Lost Traces project.

1. PERCEIVE, DISCOVER, FEEL	2. ANALYSE, INTERPERT, CALSSIFY
Empathise, feel, trace, exploreDescribe and documentInquire and research	 Develop your own questions for the location Discuss and judge the place critically Analysing and interpreting the meaning of the place Recognising the potential of the location
Possible Tools/Methods	Possible Tools/Methods
 Site inspection and documentation Sensing and visualizing atmospheres Collecting and collaging Photo documentation and image sequences Draw: Details, floor plans, views, site plans, mental maps Model making Research in archives, Research on the net Interviews in newspapers, with experts, users Performatives, theatre, spontaneous productions, 	 Using archives and collections Comparisons (e.g. building typologies) Analysis of planning material (e.g. city maps) Talks and interviews with experts, contemporary witnesses, users References to current topics (e.g. Europe as a cultural space or migration)
"Architecture Theatre", - Promenades (explore places by walking)	
 "Architecture Theatre", Promenades (explore places by walking) 3. INFORM, PRESENT, COMMUNICATE 	4. INTERACT, DEVELOP, DESIGN
 "Architecture Theatre", Promenades (explore places by walking) 3. INFORM, PRESENT, COMMUNICATE Developing analyses and interpretations according to public interest Recognise essential aspects, and make concise statement Develop communication strategies Intercultural dialogue 	 4. INTERACT, DEVELOP, DESIGN Develop ideas and visions Create concepts Intervene, build and stage on site
 "Architecture Theatre", Promenades (explore places by walking) 3. INFORM, PRESENT, COMMUNICATE Developing analyses and interpretations according to public interest Recognise essential aspects, and make concise statement Develop communication strategies Intercultural dialogue Possible Tools/Methods	 4. INTERACT, DEVELOP, DESIGN Develop ideas and visions Create concepts Intervene, build and stage on site Possible Tools/Methods

2. They appreciated the room for self-initiative, the opportunity to work independently, being allowed to bring their own ideas and interests, as well as being creative and developing practical working skills.

3. Interesting learning topics and projects were highly lauded. LT projects gave pupils an opportunity to try something new - visit new places, meet new cultures and get introduced to new working methods.

4. Pupils valued discovering specific characteristic of a place, researching it and using for them novice educational tools e.g. - archives and photography.

5. Pupils liked the opportunity to artistically and creatively act upon what they learned. They liked making models, designing and changing the spaces; the result of their work being visible and usually tangible also.

6. Lastly, they praised acquiring new knowledge and skills, learning from different experts – architects, planners, conservators and historians in a positive learning atmosphere.

Their criticism regarded

1. time-management and organisation. Pupils did not have enough time for some of the activities and work stages, e.g. while the introductions to the projects were characterised as long, the time for actual making and constructing the project outputs was criticised as being too short.

2. Teamwork was perceived ambivalently – group collaborations, as stated above, were perceived as positive, but it was challenging for pupils to argue for their ideas and reach consensus.

3. Lastly, pupils complained about working conditions (being too hot or cold, having not enough furniture), the choice of topics that sometimes they could not impact and not having enough working materials.

4.2. Group interview results

In the following, we present the significant links between educational tools and competences children developed that stood out particularly strong in both quantitative and qualitative analysis (Figure 5).

4.2.1. Competence group 1. "Perceive, discover, feel"

Pupils - In order to develop competencies 'empathise, feel, trace and explore' pupils selected educational methods which allowed them a personal approach and a dialogue with the examined place, where 'site inspections and documentations' strongly stood out. The initial site explorations stimulated pupil's perception and discovery of the personal significance of the place through emotional access. In the words of one pupil "...you simply notice for yourself - how does this place affect me? And yes, it has also something to do with how to get other people excited about it".

Competences 'describing and documenting' were also strongly connected to 'site inspection and documentation' methods. This was followed by 'photo documentation', 'drawing' or 'model making' to document the research and the inventory on site.

To develop the competences 'inquiring and researching', pupils most often selected 'research on the net' and 'research in archives and collections' methods which helped them to collect information about the monument and discover possibilities for the new uses which correspond to the location. 'Interviews with contemporaries, experts, users' stood out as particularly important working method to learn quickly something new about the site.

Teachers - Similarly to the pupils, the teachers interviewed considered the use of on-site research methods: 'site inspections and documentations', 'photographic and film documentation', 'drawings', 'interviews with contemporary witnesses, experts, users' and

'research in archives' as significant in that order for developing competencies 'inquiring and researching'. As one teacher stated, in order to open up the site for pupils and to develop an understanding of the spatial situation: "... a very central competence was simply inquiring and researching with very different methods. Namely, drawing, observing, photographing, but also filming". While the teachers emphasise revealing of historical layers of a site and the discovery of information unknown to others as strong motivational factor for learning, children appreciated more the personal engagement with the monument.

Figure 5. Visualisation of the strengths of the links between educational tools and competencies.



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4.2.2. Competence group 2. Analyse, interpret, classify

Pupils - With regard to 'analysing and interpreting the meanings of a place', the pupils named 'establishing references to current topics' as a particularly relevant method: "...because it is important to analyse whether a building is significant, whether it can be used again today", elaborated one pupil. Secondly, they chosen practical methods such as 'drawings' and 'reconstructing rooms, buildings and places' through 'model making' as particularly useful for analysing, interpreting and developing future visions for a place. Lastly, pupils thematised 'discussing and judging the place critically' through 'teamwork' because "...if you do group work, you have to convince each other. This means that you have to deal with the topic, discuss it critically and also analyse it".

Teachers - The teachers differently prioritised the methods relevant to competences in group 2 compared to the pupils. Regarding 'analysing and interpreting the meanings of a place' the teachers named 'collecting and collaging' and 'conversations and interviews with contemporaries, experts, users' as essential methods applied by the pupils. Teachers agreed that previous methods enabled different generations to talk about the meaning of a place based on personal (family) stories, they are essential prerequisites for the pupils to learn to recognise historical relevance of a place and develop appreciation for it – this coincided with pupils opinions: "... what is also important to me in this analysis ... to recognize: What is the historical context? And what relevance such a building can have, so that one learns to appreciate it. So this appreciation, I believe, comes simply by acquiring a certain amount of knowledge about the interrelations".

Lastly in this group, teachers thematised the importance of the 'analysing and interpreting the meanings of a place' attained by the pupils to be further developed and accompanied by 'developing your own questions for the location'. Teachers also observed that methods in group 2: 'analysis of planning material', 'model building', and 'drawing' are useful for 'developing ideas and visions' competence in Group 4.

4.2.3. Competence group 3. Informing, presenting, communicating

Pupils - In the Group 3 'Informing, presenting and communicating', as crucial for the 'developing analyses and interpretations according to public interest' pupils mentioned methods such as 'exhibition', 'guided tours' and 'digital media'. They were helpful for arousing public interest, drawing attention to and encouraging visitors to engage with a forgotten place; as well as for getting feedback and the opinions of the visitors. One pupil commented "we had an exhibition... you go around during it and people ask you questions, give you feedback and suggestions. In return you just try to make the exhibition even better".

"If you want to communicate something to a broad mass, to the public", or develop suitable 'communication strategies' pupils stressed 'teamwork', 'guided tours', and 'presentations' as equally important methods, that should complement each other. Pupils stressed the importance of joint discussion in evaluating how successfully devised communication strategy worked.

Teachers - For the pupils to acquire competence of 'developing analyses and interpretations according to public interest', the teachers accentuated the importance of 'exhibitions' and 'guided tours'. According to them, the "vision of going public" - pupils being able to present the acquired knowledge or the newly gained results publicly and having their work publicly appreciated and acclaimed, was an essential motivational learning factor for the children. A teacher explained: "This open day, this event, where the community came, where the pupils did tower tours showed a large exhibition, where all the research results and the citizen survey were documented... the pupils noticed: 'What we have done is not only well received by parents and teachers''.

4.2.4. Competence group 4. Interacting, developing, designing

Pupils - Within the group 'Interacting, Developing and Designing', the pupils stressed the importance of bringing in their own ideas about a space, discussing their expectation of their own project, and evaluating its applicability to other contexts; thus, singled out 'developing ideas and visions' as the most important competence developed here. They used 'intervening, changing and redesigning a space' methods as a way of signalling that the space was important to them and through remodelling tried to arouse appreciation of the public also. *"The city church is very important for us"* state one pupil and *"other people should also join"*.

For 'creating concepts' pupils used 'model making' tool to speculate how a space should be built and which elements should it contain. For 'intervening, building and staging on site' and 'adding rooms and buildings' the pupils strongly accented the importance of manual works through 'model building'. "We built a cube model which was quite important for us later at the presentation" explained one pupil.

For 'developing ideas and visions' and 'adding rooms and buildings' 'cooperation' played an important role, e.g. working together in a group or with external helpers: "...what is also important here is working together. To build something together...even if everyone has an idea of their own...you have to bring them together and make something good out of all of them".

Teachers - For 'creating concepts' the teachers emphasized the relevance of manual activity and hand work. Teachers observed that 'model making' and practical work was very motivational for the pupils. This is emphasised in both the quantitative and qualitative evaluations but is not explicitly selected as a strong link. For 'intervening, building and staging on site' teachers once again underlined the importance of hand work and named it as the most important competence learned within the LT project framework: "... it was above all 'intervening, building and staging on site', i.e. the craftsmanship. And to understand this process: What does size mean? What does weight mean? What does tool mean? And how well you can use them to create a new room and prepare a party, prepare the set up. That is essential".

5. DISCUSSION

As the results demonstrate using a myriad of working method and educational tools children developed various competencies related to researching, sensing, analysing, interpreting, communicating, interacting and (re) designing cultural heritage sites. Positive condition of LT project that enabled children to do so, as well as criticism that should be considered when in future similar educational project are organised are discussed below.

5.1. Qualities of the learning process in the LT project

5.1.1. A personal change of perspective

One of the main objectives of LT project was to change the students' perspective on what a monument and a cultural heritage is. Although, the questionnaires suggested that still most of the pupils see the monuments standardly and traditionally as places of remembrance and works of art; the qualitative interviews make it clear that the children managed not just to explore the history of a place, but to gain personal insight, establish a personal and emotional relationship with the cultural heritage sites, transforming them through artistic interventions into their own.

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5.1.2. Don't just talk, do it yourself practically

The interviews made it clear that pupils appreciated having the results of the learning process in LT visible and tangible too. Being able to initiate, design and produce project outputs, on their own initiative independently, and also collaboratively in teams, was highlighted by both the pupils and the teachers. Practical/manual work and crafting activities were particularly strong motivational learning factor. As one teacher stated: "If they're allowed to do anything [with their own hands], they were really committed afterwards. They loved that they could do [make and build] something, and that they don't have just to draw it on a paper".

5.1.3. Go public!

Group interviews with pupils and teachers, made it clear how important it was for pupils to present their results and projects to the public, get public feedback and ultimately appreciation for their work. Effective public presentations increased children's and young people's self-confidence in their own abilities. This is undoubtedly important for children's experiences of self-efficacy.

5.2. Challenges within LT project

The following aspects were named as challenges by the students and teachers.

5.2.1. Time management

Pupils criticism regarded time management within their projects. For example, introductions were too long and implementation working phases too short. Pupils did not have enough time to familiarise themselves with the new methods and to complete each phase of the work. Pupils believed that time management for implementing certain concepts was not always realistic and *"many things"* were not as feasible as they had imagined at the beginning. It could be that the problems did not arouse due to the poor time management in LT project. Being introduced to new learning ways and tools pupils needed a bit more time to get accustomed to then, acquire mastery over them and skilfully use them. Pupils also suggested ways for tackling these challenges. To illustrate, some groups regularly discussed and documented specific work phases in order to keep an overview; and made a concrete plan for implement certain work steps. Already within the project they used some of the through project exercised skills, e.g. 'describing and documenting' to make past and future steps comprehensible for all team members: "... that you know a little bit where you are now...that you can review what you have done and that you can keep all the steps in your head".

5.2.2. Reduce abundance of tools to ease comprehension

Pupils raised their concern about how they applied some of the tolls and methods. They for example, evaluated teamwork ambivalently – while it was highly praised for enabling communication, exchange of ideas, quick completions and production of high-quality results, pupils complained about not knowing how to discuss and debate their personal ideas, evaluate suggestion and reach consensus. Instead of trying to offer as much working tools as possible (knowing how novice but beneficial these educational projects are in standard schools this tendency of project organisers to offer extremely rich learning experience supported by an abundance of learning tools could be understood) future projects should present all the available tools, and then should careful pick a few discussing their pros and cons with the pupils. Before application pupils should be introduced and trained to use new tools. For each learning step learners should have time to familiarise themselves with the methods and to choose the appropriate one. They also should be provided with enough time to reflect and plan the next step.

5.2.3. More pupils involvement at each project stage

The pupils expressed the wish to be involved in important project decisions and to be able to participate more in different learning phases. For example, some pupils criticised the fact that some phases of the project's implementation did not involve a dialogue on controversial issues such as changes of the concept idea:

"That was then also a point of friction in between, because in the end the object was completely different than we actually wanted it to be and [the project leaders] also rebuilt our model and did not respond to us as much as we initially imagined, which was a bit difficult". Hence pupils should have more time and space to vote on all relevant changes and issues.

6. CONCLUSIONS

Cultural heritage projects enhance learning processes, an appreciation of local history and culture, and the future understanding of monuments. In this research the learning outcomes of pupils in LT projects was evaluated in order to develop recommendations for further development of curriculums and teaching with monuments in schools.

LT projects promote diverse competences and highly enrich learning experiences. The evaluation showed the immediate growth in children and teachers. It revealed what methods and teaching settings worked better than others, as well as where and why pupils faced challenges. The next possible step could be evaluation of BEE project through the prism of transnational framework of competencies (see Koehn & Rosenau, 2016, 5-16) appropriate for the primary and secondary school context in partnership with experts from pedagogy and educational sciences. Nevertheless, beyond learning about cultural heritage pupils stated being in favour of everything that is "not school or a class". School as a learning setting is a contested one; pacified by its very components - set up, teaching methods, tools, external educators, locations etc. In LT projects pupils appreciated the ability to independently assemble teams spanning across generations, bring in their own ideas, work directly with experts, engage with interesting topics on-site. The quality of teaching in schools benefited from working in multi-professional teams and bringing in external experts to engage into multi-disciplinary and cross-generational teaching. Teaching methods and non-standardised learning tools appropriated from architecture and urban planning can enhance existing teaching/ learning practice and curriculum in schools (for exemplary project for illustrative purpose see Apostolopoulou et al., 2014; Brković & Chiles, 2016). However, when used in abundance, within short time frames and with little previous planning with children they can also put a lot of pressure on both teachers and pupils. Similar future project should allow for joined-up planning and careful programming not for, but jointly with pupils.

The goal of the LT project was to offer pupils another, more personal perspective of monuments and cultural heritage. In a narrow sense this aim was reached - especially in relation to cultural heritage sites reuse. Today's conflicts of interest and interpretational disputes in which monument values do not exist only by law or traditions, but are also socially assigned and constructed was rarely acknowledged by the pupils. Hence, to broaden the pupil's perspective monuments are to be studied and taught as social negotiation processes between different stakeholders (Dolff-Bonekämper, 2008), so that the processes of monuments interpretation is supported (Uhrmacher & Tinkler, 2007) and that the views of cultural heritage values of underrepresented or national, regional, global or transcultural groups become appreciated.

Lastly, it needs to be acknowledged that children learned about heritage in many settings - also outside of schools and LT projects: e.g. in their family, with friends, using different medias like the internet. Hence there is a need for exploring heritage learning in these other settings also, to draw a richer understanding of cultural heritage educational landscape.

REFERENCES

- Apostolopoulou, A., Carvoeiras, L.M. & Klonari, E. (2014). Cultural heritage and education. Integrating tour maps in a bilateral project. *European Journal of Geography*, 5(4), 67-77.
- Bradley, D., Coombes, M., Bradley, J. & Tranos, E. (2011). Assessing the importance and value of historic buildings to young people. London: English Heritage.
- Brković, M. & Chiles, P. (2016). 'Spector-The sustainability inspector': Participatory teaching, learning and evaluation game for architects, architecture students and pupils. *Facta* Universitatis, Series: Architecture and Civil Engineering, 14(1), 1-20.
- Brković Dodig, M. (2018). Built environment education for children Museums in focus. Proceedings of the Institution of Civil Engineers - Urban Design and Planning 171(1), 13-24.
- Brković Dodig, M., Klepp S. & Million, A. (2019). Built environment education for young people: Architects and urban planners using cultural heritage as a learning resource. In Carmo, M. (Ed) *Education and New Developments 2019* (Vol. 1, 247-251). Lisbon, InScience Press.
- Bryman, A. (2012) Social Research Methods (4th ed.) Oxford: Oxford University Press.
- Davos Declaration (2018). Bern: Federal Office of Culture, Cultural Heritage and Historic Monuments Section.
- Deutsche Stiftung Denkmalschutz (2018). Lernen am Denkmal [Learning with monuments]. Retrieved May 8, 2019, from: https://denkmal-aktiv.de/materialien/arbeitsblaetter/
- Dolff-Bonekämper, G. (2008). National regional global. Old and new models of social constructions of heritage. *Acta Historiae Artium*, 49(1), 119-1245.
- Fachwerk (n.d.) Baukultur aktiv. Baudenkmäler im Unterricht praxisorientiert erleben [Active built environment culture: Experience architectural monuments in a practice-oriented way in the classroom]. Retrieved from: https://www.fachwerk.erz.be.ch/schule/
- Council of Europe (2005). Faro Convention on the Value of Cultural Heritage for Society. Retrieved May 8, 2019, from: https://www.coe.int/en/web/culture-and-heritage/faro-convention
- Fincher, S. & Tenenberg, J. (2005). Making sense of card sorting data. Expert Systems, 22(3), 89-93.
- Graves, G. (1990). Teaching about the Built Environment. *ERIC Digest*. Retrieved from https://www.ericdigests.org/pre-9217/built.htm
- Heinrich, A. J. & Million, A. (2016). Young People as City Builders. Youth Participation in German Municipalities. dis-The Planning Review, 52(1), 56–71.
- Hunter, K. (1993). Teaching with Historic Places. *ERIC Digest*. Retrieved from: https://www.ericdigests.org/1994/places.htm
- Kelle, U. (2008). Die Integration qualitativer und quantitativer Methoden in der empirischen Sozialforschung. Theoretische Grundlagen und methodologische Konzepte [The integration of qualitative and quantitative methods in empirical social research: Theoretical foundations and methodological concepts]. (2nd ed.). Wiesbaden: Springer VS.
- Koehn, P. H. & Rosenau, J. N. (2016) Transnational Competence Empowering professional curricula for horizon-rising challenges. London/New York: Routledge.
- Kolb D.A. (1984). *Experiential learning: Experience as a source of learning and development*. New Jersey: Prentice Hall.
- Lewis, A. (1992). Group child interviews as a research tool. *British Educational Research Journal*, *18* (4), 413-421.
- LOST Traces (2018a). Lost Traces. Retrieved from: http://lost-traces.eu/
- LOST Traces (2018b). Landesarbeitsgemeinschaft (LAG) Architekur und Schule Bayern e.V. [Architecture and School Association Bavaria]. Retrieved from: http://lost-traces.eu/idee/

- Mayring, P. (2000). Qualitative Inhaltsanalyse [28 Absätze] [Qualitative content analysis: 28 paragraphs]. *Qualitative Social Research, 1* (2), Art. 20, Retrieved May 10, 2019, from: http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204.
- Moreeng, B. B. (2014). Reconceptualising the teaching of heritage in schools. SAJHE 28(3A), 767-786.
- Moreeng, B.B & Twala, C. (2014). Monuments as Spaces for Enhancing Social Justice and Sustainable Learning in History Teaching: A Case of the Voortrekker Monument. *Mediterranean Journal of Social Sciences*, 5(7), 491-497.
- Ozdemir, A. (2018). Cultural heritage readability: Children's perception of cultural landscape, Laodikeia Ancient City, Denizli. *Journal of Forestry Faculty*, 18(1), 32-45.
- Plein, I. (2009) Denkmalpflege Pädagogik in Baden-Württemberg [Monument pedagogy in Baden-Württemberg]. *Denkmalpflege in Baden-Württemberg* 38 (4), 208-216.
- Saunders, M.N.K. (2015). Using mixed methods combining card sorts and in-depth interviews. In F Lyon, G Möllering & MNK Saunders (Eds.), *Handbook of Research Methods on Trust* (2nd ed., 134-144.), Edward Elgar Publishing Ltd.
- Schmidt-Breitung, D. & Michels, I. (2018). Lernen am Denkmal Gute Gründe für den Lernort und Tipps für den Unterricht [Learning at the monument - good reasons for the learning location and tips for teaching]. Bonn: Deutsche Stiftung Denkmalschutz.
- Shanken, A. M. (2012). Research on Memorials and Monuments. Anales Del Instituto De Investigaciones Estéticas, 26(84), 163-172.
- Uhrmacher, B. & Tinkler, B. (2007). Engaging learners and the community through the study of monuments. *International Journal of Leadership in Education*, 11(3), 225-238.
- Waters, S. & Russel, W. B. III. (2012) Monuments All Over the World: Using Historical Monuments to Teach Cultural Geography. *Social Studies Research and Practice*, 7(2), 33-46.

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