

Final report

Project name

Promotion of Education for Sustainable Development through Professional Support to the Implementation of the Cross-curricular Area: Sustainable Cities and Neighborhoods

Aim of the project

The aim of this project was to enhance the implementation of principles of sustainable spatial development in the educational system through providing support for students and educators in the process of introducing the cross-curricular areas of sustainable development into the educational system, by focusing on the topic of Sustainable Cities and Neighborhoods, and based on professional expertise (Expeditio is an organization in which most members are architects and urban designers).

Introduction and lessons learned

After a year of implementation of this project we are very satisfied with how it has been realized. Given that cross-curricular education has been introduced into Montenegrin educational system, we wanted to use our professional knowledge in order to contribute to practical realization of that concept.

This cross-curricular program of education makes Montenegro unique both in the region and a wider area. We wanted to give our contribution to strengthening that positive initiative through practical work with teachers in order to acquaint them with the concept of sustainable cities and neighborhoods.

Results of the realization of this project will be very useful to our organization in the long run. Although the project lasted only a year and was a quite new area of activity for us, we have achieved the following:

- We have opened a completely new field of activity, i.e. initiated a formal work with the educational sector in Montenegro (through obtaining official accreditation from the Bureau for Education Services of Montenegro for the program we proposed, entitled "Evaluation of space – Sustainable cities and neighborhoods")
- The topic of sustainable cities and neighborhoods has been presented to teachers in Montenegrin primary schools, so that they can further spread it
- An excellent platform has been created for the improvement of materials for teachers trainings, which is sufficiently open, so that in the follow-up of the process it can be improved with lessons derived from practical experience

- The topic of sustainable cities has been made an integral part of our activity and, which will probably lead to transforming one of Expeditio's sectors into SUSTAINABLE CITIES sector
- Other donors have been made interested in this topic and possibilities created for the continuation of activities in that field

However, besides these positive results, there have been some negative aspects, which, due to our inexperience in working with educational system, we were unable to recognize at the beginning, such as: a clearly defined program of work (connected to a calendar year, school holidays, etc.) that we had to fit within, which caused a delay in some of the activities, as well as our insufficient knowledge of educational system in terms of curricula creation, in which we received great assistance from the person at the Bureau for Education Services of Montenegro.

Report on planned and implemented results

Planned	Implemented
ER1 Provided professional expertise through CREATION AND IMPLEMENTATION OF AN ACCREDITED TRAINING PROGRAM for school educators and managers to be used in implementation of the cross-curricular area "Sustainable Cities and Neighborhoods."	We have obtained accreditation for the training program, enabling us, during the school year 2015/16, to provide trainings to teachers on how to implement the program "Evaluation of space – Sustainable cities and neighborhoods". We intend to seek funding for the follow-up of these activities because we want for as many teachers as possible to receive this training and acquire knowledge of sustainable cities.
ER2 Produced a high quality TOOLKIT: "Sustainable Cities and Neighborhoods" (toolkit-guidebook, workbooks etc.) as a tool for the teaching process	A manual has been created which serves as an excellent starting point for teachers' trainings. During this project we have realized that in the next year this initial material (considering it does not have many users yet) should be further improved through concrete work with teachers. In that way the document will be 'open' for all comments and suggestions, so that it can be constantly improved and disseminated to users.
ER3 Quality implementation of cross-curricular area "Sustainable Cities and Neighborhoods" with focus on PRACTICAL WORK WITH STUDENTS AND EDUCATORS.	Concerning this aim especially successful was the training for teachers, during which we have managed to inspire a certain number of teachers to take, what we hope to be, a permanent interest in the topic of sustainable cities and integrate it in the subjects they teach. Teachers responded very well to the training and we believe that it forms an excellent basis to continue with that concept, while constantly improving it. We believe that a part referring to work with children could have been better, and we will work on improving that segment during the follow-up of these activities. Our final aim is to make the topic of sustainable cities understandable to both teachers and students, through teaching them how to understand the space within which they live and work.
ER4 PROMOTION: Wider public is informed about the results of the students and educators after one school term of implementation, in order to promote principles of sustainable development.	The promotion of activities and achieved result was done through several channels of communication. A new website www.gradovi.expeditio.org has been created, intended primarily for teachers, with a clear guidance (step by step principle) on how to apply in their practical work the methodology of teaching about the values of space. The principles of sustainable cities were additionally promoted through regular posts at Expeditio's Facebook page (4795 like) and Twitter account.

Report on planned and realized activities

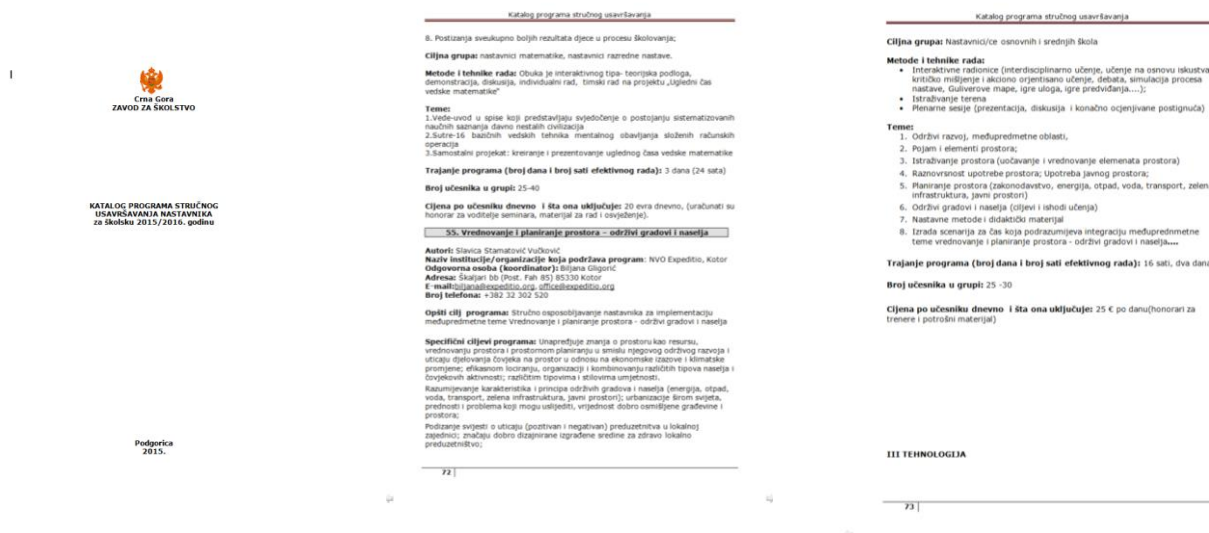
3.0 COORDINATION

The following staff members were engaged in the implementation of the project: Head of the project, Project coordinator and Finance manager. In general, coordination of all activities was done well, except for the part related to work with students, where we have not managed to fully implement what was planned, because we were unable to adjust the planned activities with the schools' program of work.

3.1 CREATION AND IMPLEMENTATION OF AN ACCREDITED TRAINING PROGRAM

As planned, a training program was created, submitted for accreditation and **officially approved for the school year 2015/16**. Already during this project we have conducted a pilot training for teachers in order to check and test the program. In this way, we are more confident to begin providing teachers trainings in the future.

An excerpt from the Catalogue of accredited training programs



The created teachers training program covers the following topics:

General aim of the program: Professional development of teachers so that they can implement cross-curricular topic "Evaluation and planning of space – Sustainable cities and neighborhoods".

Specific aims of the program: improving knowledge of space as resource, evaluation of space and spatial planning, sustainable development of space and effects of human activity on space bearing in

mind economic challenges and climatic changes; of efficient positioning, organization and combining of different types of settlements and human activities; of different types and styles in arts

Understanding the characteristics and principles of sustainable cities and neighborhoods (energy, waste, water, transport, green infrastructure, public spaces); urbanization around the world, positive aspects and problems that might follow, values of well-designed buildings and spaces;

Raising awareness of the influence (both positive and negative) of entrepreneurship in the local community; of the importance of well-designed and well-built environment for local entrepreneurship;

Target group: Primary and high schools teachers

Methods and techniques of work:

- Interactive workshops (interdisciplinary learning, learning from experience, critical thinking and learning oriented towards action, debates, simulation of a teaching process, Gulliver's maps, role games, prediction games,....);
- Field research
- Plenary sessions (presentations, discussions and final evaluation of results)

Topics:

1. Sustainable development, cross-curricular areas
2. Definition and elements of space
3. Researching space (perceiving and evaluating the elements of space)
4. Various uses of space; use of public spaces
5. Spatial planning (legislation, energy, waste, water, transport, green infrastructure, public spaces)
6. Sustainable cities and neighborhoods (aims and outcomes of learning)
7. Teaching methods and didactic material
8. Creating a scenario for a lesson that implies the integration of cross-curricular area "Evaluation and planning of space – Sustainable cities and neighborhoods"...



3.2 TOOLKIT: "SUSTAINABLE CITIES AND NEIGHBORHOODS"

Developing a manual /toolkit/

Cover page of the Manual

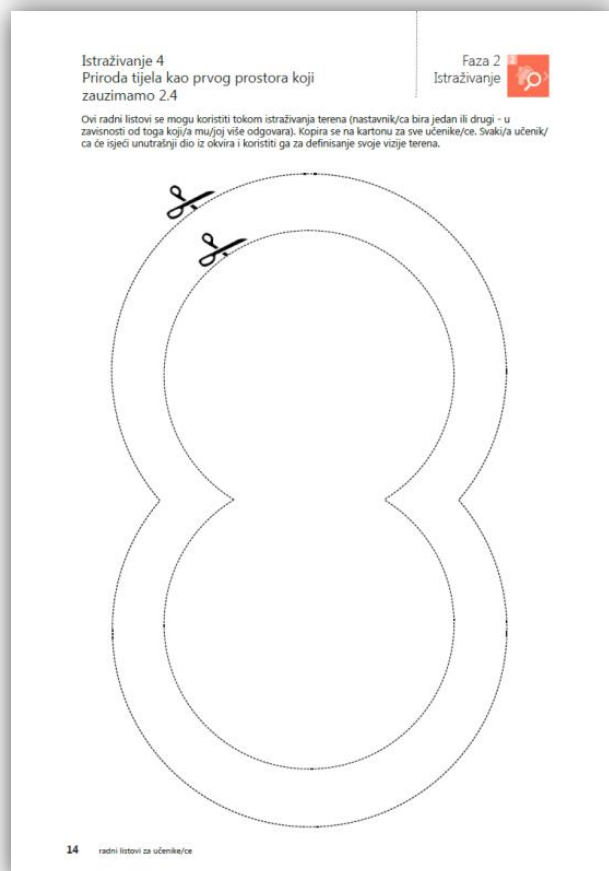
A complete Manual can be found at the link:

<http://www.gradovi.expeditio.org/index.php/prirucnik-za-nastavnike-ce>

The Manual has **162 pages**.

The Manual is intended as working material for teachers participating in trainings (but not only for them). In addition to a theoretical part which deals with topics of sustainable cities and sustainable development in general, the Manual comprises worksheets for teachers and students in order to facilitate practical work.

This Manual can be regarded as an initial version, to be further enhanced during the trainings and work with teacher. In that way, it will be kept "open" and constantly improved.



An example of a worksheet for students

The manual is available to be downloaded for free from the website www.gradovi.expeditio.org and it will be distributed, for free, to participants in the next teachers trainings.

3.3 PRACTICAL WORK WITH STUDENTS AND EDUCATORS

Teaches training for cross-curricular teaching of the topic “Evaluation of space – Sustainable cities and neighborhoods”

Training on values of space was held in Tivat on 17-18 April 2015. It was attended by 22 primary school teachers. The training lasted for 2 days and it was led by the following lecturers: Biljana Gligorić and Tatjana Rajić from Expeditio and Nevena Čubrilo from the Bureau for Education Services of Montenegro.

EXPEDITIO
Centar za održivi prostorni razvoj
Pula 14165, 55230 Metković, Croatia
t: 022 302 320, f: 022 302 321
office@expeditio.org, www.expeditio.org


Obuka:
Vrednovanje i planiranje prostora –
održivi gradovi i naselja

Lokacija: Tivat, Hotel Palma, Šetalište Kapetanova Vrzina
Datum: 17-18. April 2015
Vrijeme: 10:00 h – 17:00 h
Obuku vode: Biljana Gligorić, Expeditio; Nevena Čubrilo, Zavod za školstvo; Tatjana Rajić, Expeditio

Učesnici


	Ime i prezime	Grad	email
1.	Dužanka Kovačević	Herceg Novi	vuko.kov@t-com.me
2.	Branka Rilović	Herceg Novi	branka.rilovic@os-m.vukovic.edu.me
3.	Mila Mračević	Herceg Novi	
4.	Stanka Prnjat	Herceg Novi	
5.	Marina Perović	Herceg Novi	marina.hn@t-com.me
6.	Lilija Vlatković	Herceg Novi	vlatkovic@t-com.me
7.	Jarmila Radović	Herceg Novi	orjenskibataljon@t-com.me
8.	Ana Vujović	Zelenika, Herceg Novi	anauciteljica@gmail.com
9.	Siniša Brajović	Zelenika, Herceg Novi	sinisabrajovic83@gmail.com
10.	Adrijana Krcunović	Risan, Kotor	a.k@t-com.me
11.	Sanja Šofranac	Risan, Kotor	sanja.sofranac@os-vdobjnjakovic.edu.me

Obuka se sprovodi u okviru projekta: **Obrazovanje za održive gradove**
finansiranog od strane Rockefeller Brothers Fund-a



12.	Bojana Garović	Risan, Kotor	bojanagarovic1986@yahoo.com
13.	Petra Četković	Prčanj, Kotor	petracetkovic@gmail.com
14.	Branislav Perišić	Radanovići, Kotor	ictkoordinator@os-ndjurkovic.edu.me
15.	Ivana Kovačević	Tivat	ivanatv@t-com.me
16.	Zorica Stančić Janežić	Tivat	
17.	Lilijana Samardžić	Tivat	1008vuk@t-com.me
18.	Ljubinka Petković	Tivat	bubi8253@hotmail.com
19.	Vera Bogosavac	Radovići, Tivat	vera66@t-com.me
20.	Suada Bešković	Radovići, Tivat	beskovic@t-com.me
21.	Ranko Vuković	Podgorica	rankovukovic65@gmail.com
22.	Vidoje Šćepanović	Podgorica	vidoje@t-com.me
	Vinka Vujić	Tivat	
	Mirjana Knežević	Prčanj, Kotor	

Obuka se sprovodi u okviru projekta: **Obrazovanje za održive gradove**
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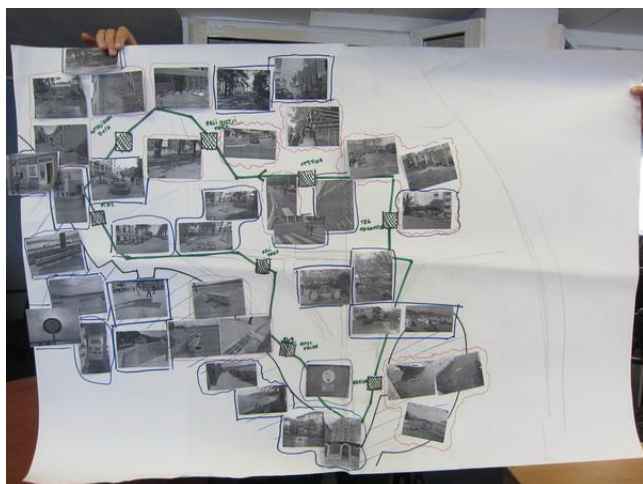
A list of participants in the training

Through interactive work the teachers had a chance to:

- Learn basic things about sustainable development and sustainable cities;
- Participate in creative workshops encouraging them to actively think about the values of space;
- Participate in a field visit to selected sites, which was used as a simulation of exercise they could do with their students;
- Do the mapping based on information collected during the field research;
- Draw conclusions about the values and problems of space;
- Propose in what ways they can, within their primary subjects, teach about the topics of sustainable cities and space in general;

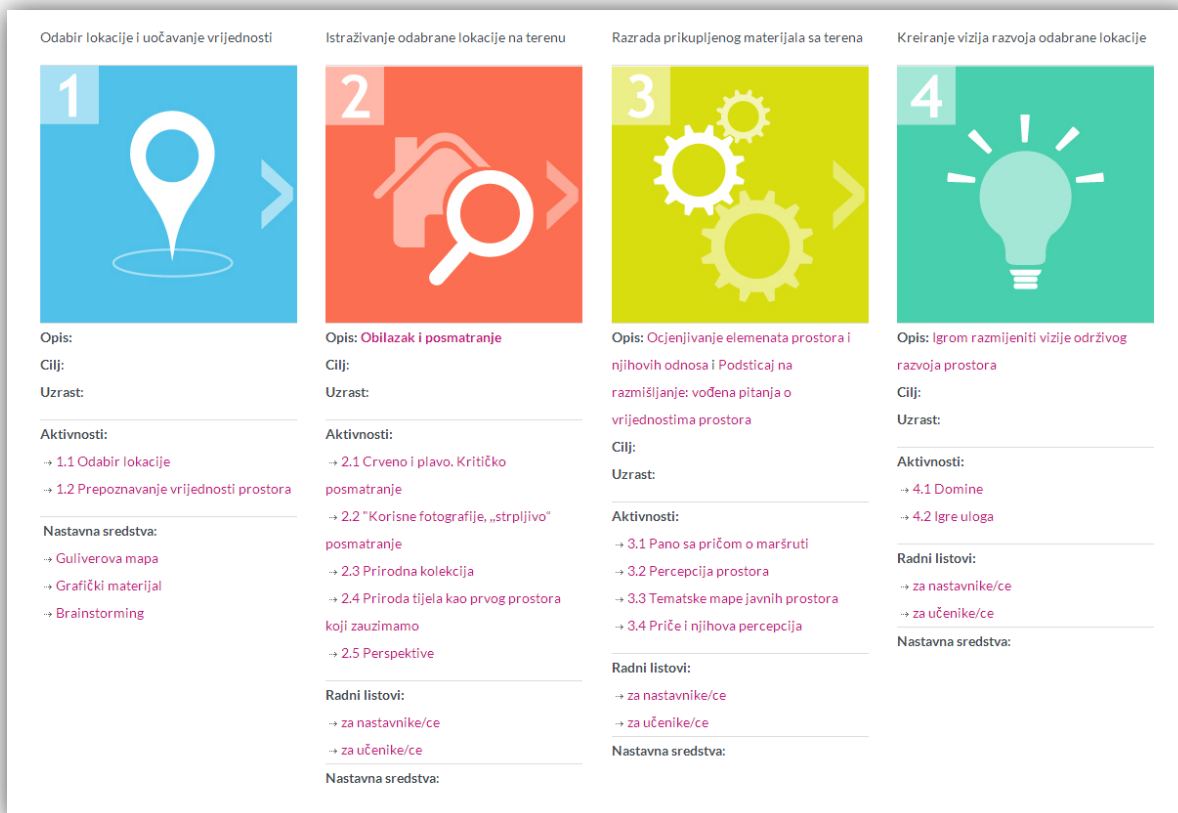
Photographs from the training





Website with interactive material for teachers

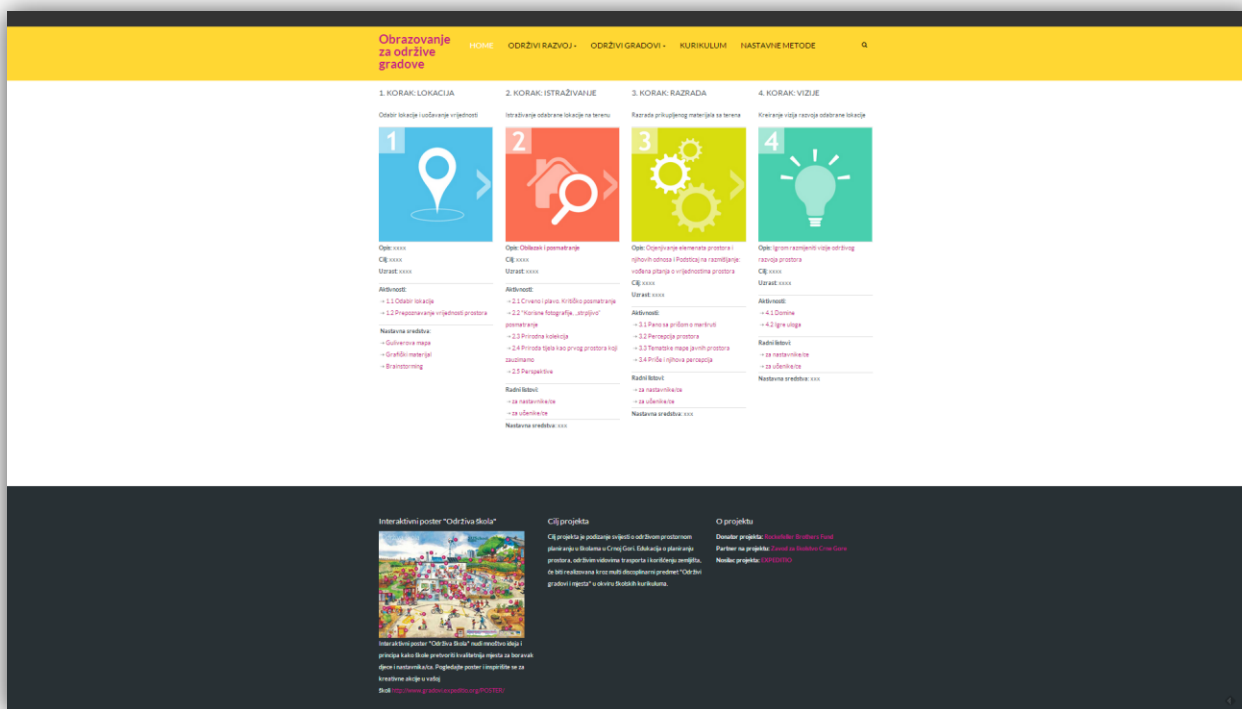
www.gradovi.expeditio.org



An interactive website has been created and set up at the above address. It is intended for teachers participating in the training on evaluation of space. The website provides a clear description of all the steps, arranged in order in which it is important to conduct them. Therefore, in an efficient way, it leads teachers through the whole process.

The advantage of websites is that they can be easily changed and improved. This is believed to be an initial phase of the portal and that, in the future, new contents, created during the next trainings, will be added to it. The content of the website is almost identical to that of the Manual, with an advantage that it is easier to follow the structure of the website. Although the manual format has its advantages, too. Each of the 4 phases contains the following basic information:

- Basic description of steps
- Aims and age (some of the areas remain open because we want to check them during further consultations with teachers)
- Activities that teachers implement with students
- Worksheets for teachers and students
- Teaching resources



The website content is completely open for new improvements. We plan to further develop:

- better connection with social networks
- information from teachers trainings and teachers' experiences
- examples of good practices related to sustainable cities, in order to help teachers better prepare for lessons
- models of inter-curricular education with examples for different subjects

Online interactive and educational poster SUSTAINABLE SCHOOL

An online interactive poster "Sustainable School" has been produced and set up on the address: <http://www.gradovi.expeditio.org/POSTER/>. The poster represents an interactive guide of terms, easy for children to understand, of what makes a school sustainable.

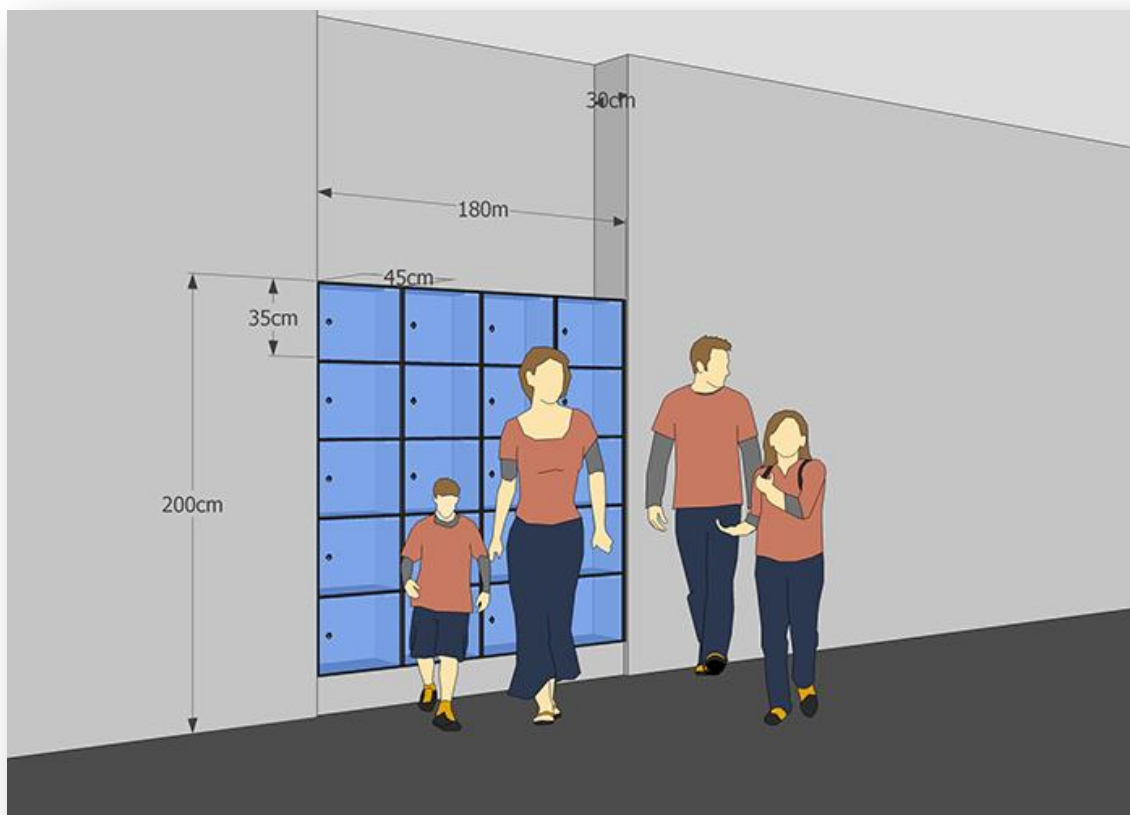


The poster contains **72 terms** explaining principles of sustainable schools and provides a simple and complete picture of what makes a school sustainable. We believe this type of presentation is very efficient way of learning because the images are simple and texts short and easy to understand.

Inspired by this poster we are now preparing a poster which in similar way presents the topic of Sustainable cities.

Equipment for the pilot school

We decided to offer to purchase equipment for the school identified as necessary by the school administration and Students' Parliament. During the first analyses, school lockers were recognized by both teachers and students as most necessary (as they are one of the conditions for a school to be a more pleasant space for students, contribute to increasing hygiene and provide a better connection between the school space and students).



However, although we wanted to grant students' wishes, it turned out to be very expensive and impossible to do because of the number of lockers that were needed. Furthermore, although a local firm (Shipyard in Bijela) offered to make lockers for free, as their donation, it proved out that such lockers would not be able to satisfy the required level of quality and safety for the intended use. Because of that, we decided, in agreement with the school, to purchase equipment needed for physical education classes, which is also one of the priorities identified by the students.

Producing a comic



THE GLOBAL GOALS
For Sustainable Development

While the project was implemented a process of adoption of new sustainable development goals (SDG) was finished. We have found this new goals presented in a comic form, intended for school children and thought it very important to translated the comic into Montenegrin language in order to spread the ideas these goals convey.

"Comics are effective teaching tools because they require readers to not only passively receive information, but also interact with the text and images to construct meaning, and that is the key to the magic. Words and pictures work together! Our "Heroes for Change" comic introduces the Global Goals and invites children to become superheroes themselves, by taking action to end poverty, inequality and climate change." [LINK](#)



Producing a poster of sustainability IDEAS for the pilot school

While cooperating with the pilot school we concluded it would be useful to combine the list of ideas for sustainable school created jointly by the teachers and students with a poster for sustainable schools, which represents an excellent framework for any school that wants to become more sustainable. This process resulted in creating a poster specifically for the pilot school Orjenski Bataljon in Bijela. The poster represents a sum of ideas that the school can realize in the future in order to become more sustainable. We believe this approach can be also useful for other schools as it would provide schools with their own "picture – vision of sustainability" serving as a reminder what they could do in order to become better places for students to learn and spend time in.

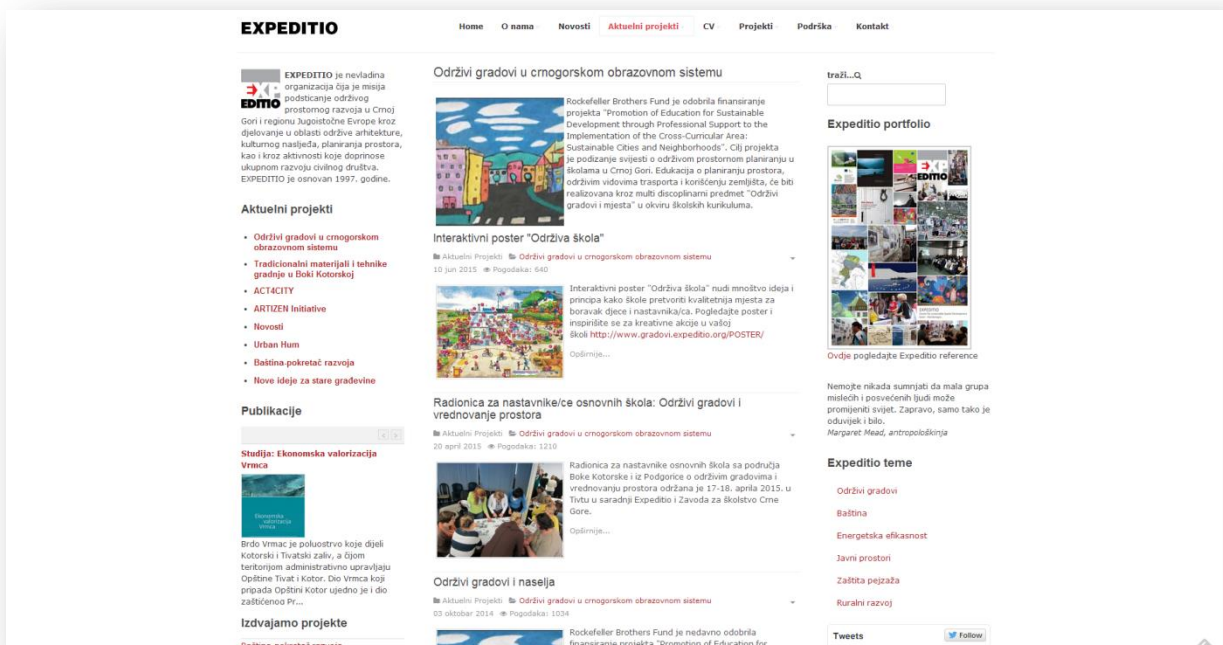
Održiva škola "Orjenski bataljon" Bijela



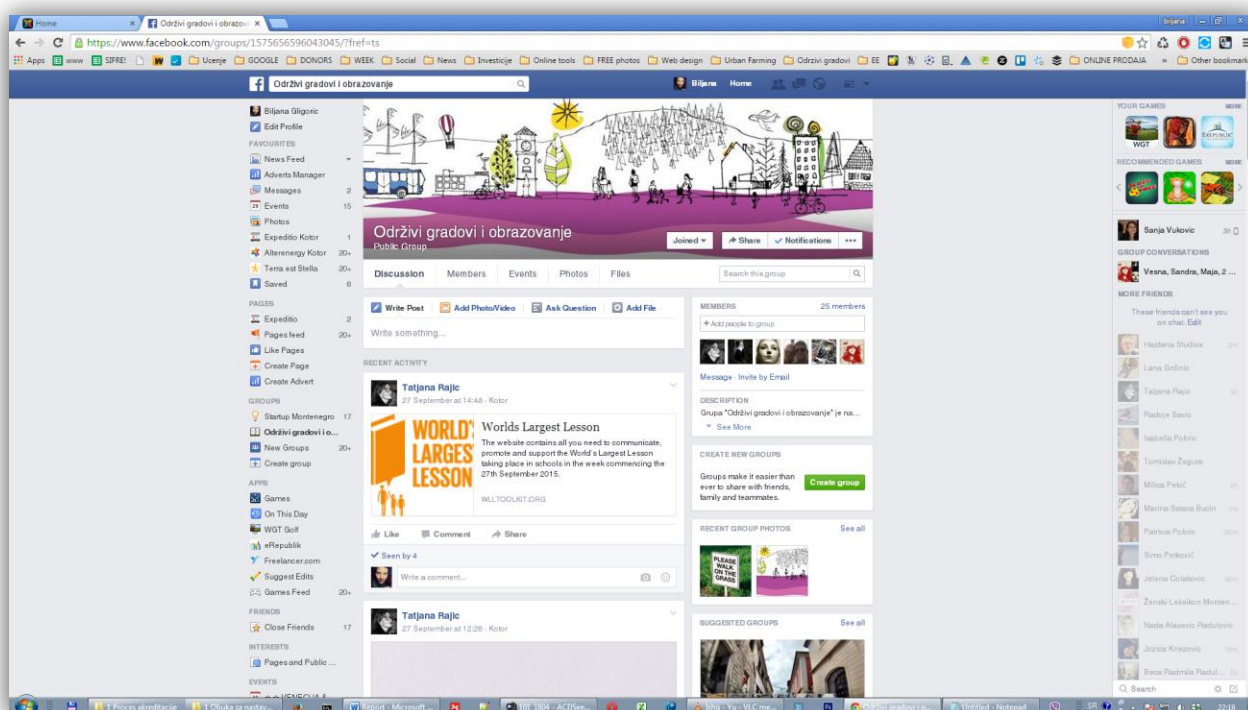
3.4 PROMOTION

The following promotional activities were conducted during the project:

- Promotion on the **website of EXPEDITIO** www.expeditio.org. The posts related to this project have had 2884 visits in total.



- Promotion on **Expedio Facebook Page** (4795 likes). During the course of the project there have been ~ 500 posts, 70% of which are about sustainable cities (#sustainablecities), which makes about **350 posts** on sustainable cities. If we take into account that there are around 500 impressions per post, there have been around 175000 impressions during the project;
- A Facebook group entitled “Sustainable cities and education” has been formed, composed of **26 members** - participants in teachers training



Follow-up of the project activities

- Considering that the teachers training program has been accredited, more teachers trainings are expected to be held during the current school year
- A more active cooperation has been begun with the Primary School "Orjenski bataljon" from Bijela, initiated by the school
- We are currently preparing a poster on Sustainable cities inspired by the example of Sustainable schools poster
- We have applied to two donors (DBU and the Commission for allocation of revenues from games of chance) to obtain funding for teachers trainings and work with students and we expect positive results. Considering an excellent cooperation with the Bureau for Education Services of Montenegro we expect that we will continue jointly applying for funding for similar activities.
- We will continue promoting sustainable cities through our work and activities at social networks
- We will apply for accreditation of teachers training programs for the next school years
- In our works emphasis will be placed on practical work with students and improvement of their school spaces
- Creating a concept of sustainable school on a concrete example of one of local schools in Boka Kotorska, with a list of interventions that need to be implemented in order to make the school more sustainable
- Extending Facebook page Sustainable cities and education by including teachers attending new trainings that will be organized