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UrbanSCOPE

Urban Sustainable Mobility in Focus: Student Education, Community Involvement and Participative Planning

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Urban sustainable mobility in focus: student education, community involvement and participative planning

Learning Methodology for Sustainable Urban Mobility

For secondary education



June 2022

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1) Introduction

The concept of Sustainable Urban Mobility Plan (SUMP) has been developed by the European Commission in order to facilitate the transition of European cities towards sustainability. Sustainable Urban Mobility Plans are planning tools for cities that bring together different sectors and stakeholders in order to improve urban mobility. While sustainable urban mobility planning is primarily aimed at policy makers, specialist professionals (urban planners, transport engineers, etc.) and local governments in cities, it is extremely important to also introduce this concept into education. By familiarising students with SUMP, we not only educate future specialists, but also responsible citizens, who will be more positive towards adopting and promoting sustainable urban mobility practices.

The objective of the UrbanSCOPE educational methodology is to provide the necessary guidance for the development of a flexible, adaptable and innovative educational program for various target groups, such as university students, secondary school students and adults, in order to educate them on sustainable urban mobility.

This document adapts UrbanSCOPE Learning Methodology for application in secondary education. The following parts focus on the main learning objectives, the presentation of the general educational model and the implementation of the foreseen stages of the methodology. Examples of learning activities for each stage, which facilitate their implementation by secondary school teachers, and the achievement of learning objectives are included. Moreover, this document presents findings from the pilot-testing of the methodology in the 2nd Gymnasium of Glyfada, Greece, and lessons for the transferability potential of the methodology to secondary schools in Europe.

2) Educational objectives and principles

Basic Principles of the Educational Methodology:

In recent decades, the approach to urban transport planning has changed significantly both in academia and in design practice. In line with the *Guidelines for the Development and Implementation of a Sustainable Urban Mobility Plan* (2019), there are several differences between traditional planning approaches and sustainable urban mobility planning. The following table shows 6 main differences:

Traditional Transport Planing	Sustainable Urban Mobility Planning
Focus on vehicle traffic	Focus on citizens
Main objective: Traffic flow capacity and speed	Main objective: Accessibility and quality of life
Focus on the means of transport	Integrated approach of all mobility means. Emphasis on the possibility of choice.
Short and medium-term implementation plan	Long-term vision and strategy
Design by specialists (transport engineers)	Planning involves stakeholders and citizens (interdisciplinary approach and civic engagement)
Limited impact assessment	Systematic monitoring and evaluation of impacts

Source: own version, based on Rupprecht Consult 2019

Basic Principles of SUMP

PRINCIPLE 1: FOCUS ON PEOPLE

By introducing urban mobility in schools, it is important to understand that mobility can only be sustainable if it meets the basic mobility needs of all citizens and provides access to all. There may be conflicts between the needs of different users, but this needs to be revealed and addressed accordingly.

PRINCIPLE 2: ACCESSIBILITY AND QUALITY OF LIFE

Students must understand that not only economic sustainability, but also social equality, health and environmental quality must be taken into account when planning urban mobility. Although cost-effectiveness is a crucial factor, so is the attractiveness of the urban environment, sustainability, quality of life and public health.

PRINCIPLE 3: INTEGRATED DEVELOPMENT FOR ALL MOBILITY MEANS

SUMP is not just about reducing car traffic. Students should become acquainted with the definition of balanced and integrated development of all means of mobility, while learning the practice of prioritisation. They should familiarise themselves with the concepts of collective mobility, active mobility, combination of means, door-to-door mobility, road safety and mobility management.

PRINCIPLE 4: LONG-TERM VISION AND STRATEGY

Students need to understand the need for a long-term vision for the development of urban mobility. Although a SUMP also includes measures to achieve different aims and objectives in the short term, this is embedded in long-term strategies.

PRINCIPLE 5: INVOLVEMENT OF STAKEHOLDERS AND CITIZENS, INTERDISCIPLINARITY

As SUMP focuses on meeting the mobility needs of people living in a particular area, students need to understand the importance of a transparent and participatory approach, and how citizens and other stakeholders are involved in the process. Furthermore, the interdisciplinary approach should be emphasised, as urban mobility planning is no longer just a problem for transport engineers.

PRINCIPLE 6: SYSTEMATIC IMPACT ASSESSMENT

A crucial part of SUMP is the continuous monitoring of the current and future performance of the urban mobility system. To this end, students need to understand how to identify objectives and ways of monitoring.

Educational objectives:

In addition to the horizontal principles, specific educational objectives are presented here. Although these objectives may vary depending on the level of education they target (higher, secondary, adult education), there are three main objectives applicable in all educational contexts:

- Introduction of an interdisciplinary educational programme exploring the topic of the SUMP and its components for citizen engagement
- To provide a unique opportunity for students to come closer to their local communities
- Using digital tools and encouraging the students' active participation in education, making it more attractive.

Specific objectives of the UrbanSCOPE methodology are set out below:

For educational institutions:

Introduction of new innovative educational methodologies and programmes

Enhancing the school curriculum with educational approaches based on school projects (project-based learning)

Providing education based on the real economic and social needs of the local area and region

Developing flexible and innovative learning methodologies, supporting social and economic digitalisation processes

Introduction of unique sustainable models in education

Definition of scope

Understanding the importance of urban mobility planning and how it relates to sustainability

Understanding the steps leading to the elaboration and implementation of a SUMP

Understanding and recognising that participatory planning can positively influence the acceptance of new policies towards sustainable development

Developing a culture of exploring, critical and creative thinking, and problem-solving

Analysis

Research, data collection and analysis, as well as evaluation and synthesis work within the analytical context of urban mobility problems and difficulties

Organisation and evaluation of material collected on the field (photos, videos, etc.)

Identifying strengths and weaknesses in changing citizens' behaviour towards more sustainable mobility practices

Obtaining information on the selected study area through field research and documentation, and linking them to the content of the digital tool and the creation of urban mobility scenarios

ICT skills/digital competences

Adopting digital tools to analyse and exchange information on mobility issues in a city or region

Discussion, collaboration and participation in a creative process.

Developing different scenarios on urban mobility issues using mobile devices and ICT tools

Exploring the use of digital media and educational resources

Reporting and presentation

Analysis and documentation of results from the creation of scenarios

Presentation of the final results (orally and in writing)

Other Competences

Debate and argumentation, showing respect for different views and developing a spirit of cooperation and responsibility

Raising awareness on sustainable urban mobility in the city resulting in a positive attitude

3) Stages of the Learning Methodology

Stage 1: Definition of the planning framework

The first stage and starting point of the learning methodology is the introduction of SUMP elements and the definition of the design framework. The aim is to create a framework in which students can further elaborate the Sustainable Urban Mobility Plan.

Stage 1 can be divided into 3 steps:

• Step 1: Introduction and basic knowledge on SUMP

As a starting point, it is recommended to provide basic knowledge on SUMP, as well as first-hand experience in infrastructure and sustainable urban mobility plans. Students will be introduced to the typical problems of infrastructure and urban transport planning, also focusing on solutions and examples of good practices.

The SUMP methodology and the key principles of sustainable urban mobility are presented by the facilitator/teacher, while examples of good practices can be explored by students.

• Step 2: Identification of the study area

The study area can range from a single route (from point "A" to destination "B") to a wider area or neighbourhood of the city. The complexity and size of the selected study area should reflect the level of education and skills of the participating students. Choosing the study area may be a free choice of the students, however a teacher/facilitator should guide students in the process.

• Step 3: Definition of the target group

The basic principle of Sustainable Urban Mobility Planning is that planning takes into account the mobility needs of all users. However, in each area we can identify many different user profiles with different mobility needs, which can lead to conflicts of interest when planning. Therefore, the students should be able to identify different user profiles and their specific mobility needs (e.g. people with disabilities, elderly people, parents with strollers, pupils going to school or other activities, etc.). The design that will follow should balance between the different mobility needs of the identified users.

After Stage 1, students should be able to:

- Understand the basic concepts and principles of SUMP
- Show their study area on a map
- Describe the main characteristics of the selected study area
- Identify the target group of the SUMP and in particular the different user groups with their specific mobility needs.

<u>Learning Activities — Stage 1</u>

Activity 1

Title: Introduction to School Project and Sustainable Urban Mobility Planning (SUMP)

Duration: 90 minutes

Techniques: presentation, discussion & conclusion

The teacher makes an introduction to the school project that students will implement, presenting the 5 different stages it consists of and making a brief reference to some of the actions included.

The teacher or invited specialists (transport engineers, urban planners, local authority engineers etc.) introduce Sustainable Urban Mobility — what it is, why it is necessary, how it affects the everyday life of all of us. Reference is made to examples of good practices from European cities, and students are invited to discuss which of them could be transferred to their city/neighborhood.

Homework: Students are invited to search online for good SUMP practices that could/would like to be implemented in their city and present them at the next session. Indicative sources for good practices in English:

- Good practice factsheets on SUMPs: <u>https://www.eltis.org/in-brief/news/new-sumps-fact-sheets-reveal-sump-good-practices</u>)
- EU good practices for sustainable mobility planning and SUMPs: <u>https://www.eltis.org/resources/tools/eu-good-practices-sustainable-mobility-planning-and-sump</u>)
- European Mobility Week Guide to good practices (2017-2018): <u>https://mobilityweek.eu/fileadmin/user_upload/materials/participation_resources/2018/2018%</u> <u>20EMW% 20Best% 20Practice% 20Guide% 20LR.pdf</u>)

Please note: It is recommended that the teacher creates a common online repository of educational material and results of the students' work, which will be accessible to all participating students (e.g. e-class platform or Google Drive) and can consult for instructions, information and material at all stages of the project.

Activity 2

Title: Definition of study area

Duration: 45 minutes

Techniques: discussion, use of Google Earth

Using Google Earth, the teacher and students determine exactly the study area of the project. This is the area where students will focus their research and suggestions later on in the project. It must include an area around the school and, if possible, include the neighbourhoods where all students live, or at least the vast majority of them. The area must be precisely defined in Google Earth using the "Add polygon" tool located on the toolbar at the top. For better visualisation of the study area, it is recommended in the section "Style, Colour" width 3.0 and color yellow with opacity of the area at 0 %. Don't forget to give a title to the polygon you created, e.g. "Study Area", and press OK.

Once the study area is defined on a computer, students in groups per computer or individually can repeat the task of defining the study area to familiarise themselves with Google Earth and the boundaries of the study area.

Homework: Students are divided into groups. Each group undertakes to describe different aspects of the study area:

- Description of the boundaries of the study area (streets), area in square metres or stremmas (calculation by Google Earth using the "Measurements" section), and a concise history of the area.
- Description of important roads, public transport routes serving the study area, cycleways, pedestrian streets etc. and identification of particular areas where there is concentration of public, such as schools, kindergartens, public services, sports venues, entertainment venues, shopping centers, etc.
- Identification and summary description of related organisations active in the study area, such as the Municipality, non-governmental organisations, associations, formal groups of residents etc.
- Description of different user profiles of the study area and their specific daily mobility needs (e.g. students going to school or other activities, adults moving to work and daily shopping, groups of citizens with special mobility needs such as people with disabilities, elderly people, etc.).

At the next session the groups present their descriptions in the classroom, discuss their results and unite their contributions in a single description of the study area.

Stage 2: Analysis of the urban mobility situation (main problems and opportunities)

The second stage focuses on examining urban mobility conditions within the study area. The aim is to analyse from the perspective of multiple mobility means and related sustainability aspects (environmental, economic, social).

Stage 2 can be divided into 3 steps:

• Step 1: Explore the main features of the study area

After defining the study area and target group, students explore the main characteristics of the area. The topics to be explored can cover a wide range of topics including: the history of the area/neighbourhood, particular characteristics of the area, infrastructure network (streets, avenues, cycleways, pedestrian ways and crossings, etc.), institutions, existing strategies and concepts.

As part of this stage, students can conduct desk research, but they are also encouraged to visit on-site, use digital tools and familiarise themselves with the views of selected individuals (experts, parents, teachers, representatives of the Municipality, etc.).

• Step 2: Data collection and analysis

Once familiar with the characteristics of the area, students plan and conduct their own research, focusing on a selective range of problems and difficulties. Students are encouraged to collect their own data (e.g. in relation to the condition of the pavements, the existence of access ramps and/or special routes for people with disabilities). By using different digital tools, students should geographically map the problems and challenges of sustainable mobility in the study area.

• Step 3: Discuss problems and opportunities

After data collection and analysis, students should review the results, present and discuss their findings. At the end of Stage 2 a detailed analysis of the main problems in the selected area should be obtained with regard to the target groups.

After Stage 2, students should be able to:

- Collect and analyse their own data on the mobility issues and mobility problems of the selected target group
- Geo-report (locate on the map) the main problems of sustainable urban mobility

Learning Activities — Stage 2

Activity 3

Title: Field visit to the study area and data collection/mapping of urban mobility problems using the Siftr tool on mobile phones.

Duration: 120 minutes

Techniques: Presentation, field visit and data collection

Presentation of student descriptions (from the Homework of the previous Activity).

Preparing students for an on-site visit to the study area close to the school. Students should carry with them smartphones or tablets with an internet connection, where they should have installed the Field Day Lab's 'Siftr' app (available for Android and iOS mobile devices). Before the on-site visit, the study area is divided into sub-sections with the help of Google Earth. Each sub-section is assigned to a group of students who will undertake to use Siftr to map the current urban mobility problems and infrastructure.

During the on-site visit, accompanied by a teacher and possibly an expert, the students will be invited to test the Siftr application to map with their mobile devices urban mobility problems and infrastructure in an area around the school. The aim is for students, under the guidance of their teacher/expert, to become familiar with the use of the app and be able to use it later to collect data in the sub-sections of the study area assigned to them.

Until the next meeting, students in their designated groups are responsible to map with Siftr the current SUM problems and infrastructure in the respective areas assigned to them. It is recommended that students work together for safety reasons and in order to be able to solve issues that will arise in collaboration.

Activity 4

Title: Survey on the views of residents on urban mobility issues

Duration: 45 minutes

Techniques: Presentation, discussion

The teacher presents a simple survey questionnaire aimed at investigating the views of residents of the study area regarding mobility issues and current practices, and defines the target group of the survey (e.g. students' parents, relatives, neighbours, local business owners, etc.). The teacher invites students to comment on the questions in the questionnaire and propose new questions if they wish.

The questionnaire may be available online for completion on the internet or in printed format. Using the online electronic questionnaire format is preferred because on the one hand it saves paper (more environmentally friendly), on the other hand by using free available applications for online surveys with questionnaires (e.g. Google Forms, Survey monkey etc.), the results are presented automatically, saving time.

By the next meeting, students undertake to administer the questionnaires and make sure that they are completed. The teacher undertakes to monitor the completion of the questionnaires and to intervene accordingly with guidance.

Please note: The questionnaire can be addressed exclusively to school students and focus on their own views on issues of commuting to school, sports activities or other destinations. In this case it can be administered to all students in the school.

Activity 5 (2 meetings)

Title: Analysis and evaluation of results.

Duration: 90 minutes

Techniques: Analysis, discussion

Students, under the guidance of the teacher, analyse, discuss and formulate the main results/conclusions of the mapping (Siftr) and the survey. The drafting of the conclusions may, for example, follow the following structure:

- Mobility on foot
- Urban and municipal transport
- Movement and parking of cars and motorcycles
- Bicycle mobility
- Mobility through micromobility vehicles (electric scooters, rollers, scateboards, self-balancing vehicles etc.)
- Degree of awareness among residents/students on Sustainable Urban Mobility (SUM)

This Activity is very likely to be implemented in two 45-minute sessions, one dedicated to the results of mapping and the other dedicated to the conclusions of the questionnaire survey.

The overall results/conclusions are recorded in a single report of conclusions posted in the common electronic space of the project.

Stage 3: Creating scenarios and jointly evaluating them (options for the future)

The objective of Stage 3 is to define the strategic direction of sustainable urban mobility and to create realistic and sustainable scenarios for the study area and the identified problems. Students should be able to answer the question: *what are our options for the future*? In addition, they should be able to visualise their ideas and present them in the UrbanSCOPE digital tool available or on the map.

Stage 3 can be divided into 3 steps:

• Step 1: Creating a common vision: options for the future

A common vision within the SUMP concept means a qualitative description of the desired future for urban mobility in the city/study area, which is then defined by specific objectives indicating the type of change sought. Students agree on a set of objectives they should pursue in the short/medium term or long term, which are potentially able to provide an appropriate solution to the problems identified in Stage 2.

• Step 2: List of alternative strategies and measures

After defining the common vision (and the desired future situation), students draw up a list of alternative strategies to achieve the objectives. Students assess the potential impacts of different measures, are able to prioritise them and choose realistic alternatives.

• Step 3: Identification of alternative SUMP scenarios

Students are guided in creating 2-3 alternative SUMP scenarios. The use of the UrbanSCOPE digital tool is essential at this stage. The tool is designed to allow users to create their own routes and visualise them on a digital map. Examples of SUMP scenarios can be presented to students in advance (e.g. scenarios developed by the Task Force groups within the UrbanSCOPE project, available at the project website <u>http://urban-scope.eu/</u>), but they are encouraged to formulate their own ideas. The scenarios created should be presentable and focus on the identified mobility problems.

After Stage 3, students should be able to:

- Understand the concept of a common vision/target and strategies to achieve the selected objectives
- Formulate ideas to solve a specific mobility problem by encouraging sustainable ways of urban mobility
- Create alternative SUMP scenarios (focusing on a specific area and target group)

<u>Learning Activities — Stage 3</u>

Activity 6

Title: Create a common vision and formulate goals for sustainable urban mobility

Duration: 45 minutes

Techniques: Presentation, discussion

Based on the results/conclusions formulated, the teacher invites students to describe a common vision for the study area: After a brief retrospective of the results/conclusions formulated, the students are invited through the method of brainstorming to write down on the classroom board the sustainable mobility characteristics that their study area should ideally have (e.g. free access for pedestrians, infrastructure for the free movement of people with disabilities and older people, safe cycleways for the movement of bicycles and micromobility vehicles, parking and charging stations for electric bicycles, reduced car traffic on certain roads or areas, etc.). The teacher should encourage all students to participate and emphasise that it is important to be free to share their thoughts, and in this process there is no wrong and right answer, nor should the thoughts added to the board be criticised.

Once the process is completed, students are invited in groups to choose which of the characteristics that have been formulated are the main ones and should be included in a common vision for sustainable mobility in their area. It is possible to put together similar characteristics expressed in different ways.

The different groups present the characteristics they have come up with and all groups agree to a list of commonly accepted features. This list is posted in the common electronic space of the project.

Activity 7

Title: Formulating short, medium and long-term objectives

Duration: 45 minutes

Techniques: Presentation, discussion

Real change cannot happen at once or by magic. Guided by the common vision they have formulated at the previous session, students should formulate specific objectives in the short, medium and long term, following the structure they have used to formulate the conclusions of the research:

- Mobility on foot
- Urban and municipal transport
- Movement and parking of cars and motorcycles
- Bicycle mobility
- Mobility through micromobility vehicles (electric scooters, rollers, scateboards, selfbalancing vehicles etc.)
- Degree of awareness among residents/students on Sustainable Urban Mobility (SUM)

Objectives in the short term: What needs to be achieved relatively quickly or at least within the next 2 years?

Objectives in the medium term: What should be achieved in the next five years?

Objectives in the long term: What needs to be achieved in the next 10 years in order to achieve the vision outlined?

Please note: The short, medium and long-term objectives work cumulatively. In other words, the medium-term objectives include and expand the targets in the short term, and similarly the long-term targets include and expand the targets in the medium term.

These objectives are posted in the common electronic space of the project.

Activity 8 (2 sessions)

Title: Formulating alternative scenarios with measures and interventions

Duration: 90 minutes

Techniques: Presentation, discussion

This Activity is divided into 2 sessions:

Session 1

Based on the objectives expressed in the short, medium and long term, the teacher with the contribution of experts guides students in formulating proposals for measures and interventions necessary in the study area to achieve the objectives.

The measures and interventions proposed by the pupils should be specific and have a real reference to the study area (e.g. reconstruction of the pavements of Liberty Street, construction of a bicycle lane on St. Joseph street, organisation of a school festival to raise awareness for sustainable mobility, etc.).

Students can be divided into 3 groups, and each can undertake the formulation of proposals for each of the Scenarios:

Scenario 1 — Necessary interventions — short-term horizon

Scenario 2 — Medium-term intervention

Scenario 3 — Dynamic intervention — long term

Teams can continue working from home.

The resulting scenarios are posted in the common electronic space of the project.

Session 2

In this session the groups of students present the scenarios they have formulated and discuss any

overlaps between the scenarios. The necessary corrections or additions are made and the Scenarios are finalised.

Stage 4: Develop a vision and strategy with stakeholders and citizens (what kind of city we want)

This phase will introduce one of the main elements of sustainable urban mobility planning: the component of involving stakeholders and citizens in planning. Students communicate/present their project results and proposed scenarios, and based on the feedback they receive and their level of acceptance, they can further improve the scenarios created in Stage 3.

Stage 4 can be divided into 2 steps:

• Step 1: Preparation for the presentation

Students prepare for the presentation of their scenarios created in Stage 3. The teacher can give an example for the structure of the presentation.

• Step 2: Presentation of scenarios and collection of comments from interested parties

An event dedicated to SUM is organised with the help of the school and the local municipality. Experts, members of the target group/local community, parents of students, representatives of the local municipality, interested citizens, etc.) can be invited to attend the event. Following the presentations, participants are invited to comment on the scenarios presented and discuss.

After Stage 4, students should be able to:

- Present their ideas in front of a selected audience
- Understand the importance of public participation
- Revise/improve their initial ideas based on feedback from participants

Learning Activities — Stage 4

Activity 9

Title: Preparation of Presentation of Scenarios

Duration: 45 minutes

Techniques: Working in groups, discussion

With the guidance of the teacher, the students prepare the presentation of the 3 scenarios they have formulated. They use photographs, maps and other material they have gathered with Siftr or use the Siftr itself to explain their choices and describe their proposals for measures and interventions in the study area in favour of Sustainable Urban Mobility.

The Scenarios will be presented in the context of a workshop organised by the Municipality on Sustainable Urban Mobility and/or as part of an event at the school.

The aim is to involve the public with observations and suggestions for the 3 Scenarios that students can integrate.

Stage 5: Evaluation (reflection and lessons learned)

As the final stage of the school project, students complete their deliverables and are encouraged to reflect on the positive and negative aspects of their work. The students are invited to provide an assessment of the school project as a whole, with a particular focus on improving their skills and meeting the educational objectives set.

Stage 5 can be divided into 2 steps:

• Step 1: Assessment of the course

The teachers evaluate the students' performance (with emphasis on the feasibility and quality of the scenarios), while the students evaluate the course and reflect on the lessons learned. An evaluation framework should be provided.

• Step 2: Looking to the future

As an act of ending the project, students are invited to look to the future and consider new challenges and solutions.

After Stage 5, students should be able to:

- Assess the competences they have acquired or improved in the context of the course
- Understand the design difficulties and complexity of sustainable urban mobility planning, in search of new challenges

<u>Learning Activities — Stage 5</u>

Activity 10

Title: Reflection and evaluation

Duration: 45 minutes

Techniques: Group discussion

With the guidance of their teacher, students discuss about the knowledge, skills and new interests acquired through their participation in the course/school project. They evaluate their work and their results, as well as the project as a whole. They mention what they liked when implementing the project and what in their view would need to be improved.

They are also discussing the planning process for sustainable urban mobility, and new projects they would like to implement.

At the end of the discussion, students complete an evaluation questionnaire online.

4) Findings of pilot-testing

The pilot-testing course in the 2nd Gymnasium of Glyfada

The above UrbanSCOPE learning methodology and learning activities were pilot-tested in the 2^{nd} Gymnasium of Glyfada with a class of the 3^{rd} Grade of the Gymnasium (i.e. students in the age of 15 years old). The course was introduced to the school programme as a school project, commenced in February 2022 and ended in May 2022 (4 months duration). Teachers of the school were responsible for the day to day management of the course, while experts in SUM were also involved in the foreseen learning activities, i.e. Activity 1 – Introduction to the concept of SUMP and good practices, Activity 2 – Definition of the study area, Activity 3 – Field visit and data collection, and Activity 8 – Formulation of alternative SUM scenarios. The experts who were involved included the transport engineer responsible for developing the Sustainable Urban Mobility Plan for the City of Glyfada, and an urban planner from project partner PRISMA who assisted in guiding the students in the use of the UrbanSCOPE digital tools (Siftr, MEES platform).

One teaching hour per week (every Wednesday) was dedicated to the project course, when class sessions took place, and students also worked from home and in their own time (e.g. going out in groups on the study area to map existing SUM infrastructure and problems using Siftr).

The main results of the students' work in the project are presented below. The study area defined was a mainly residential area around the school including the homes of all students who participated, in the south of the city and at the south west foot of mount Hymmetus (see the Google map below where the school location is indicated with a yellow pin).



The study area defined by the students corresponded to the school catchment area, including the homes of all participating students

The students used Siftr in groups to map problems in SUM infrastructure around the study area and discussed them in class. The Siftr created by the students during the course is presented below and can be accessed at the following link: <u>https://siftr.org/2ndGymnasium/</u>



During the formulation of their SUMP Scenarios, the students decided to focus on 2 target groups, the first being the school students and the persons with special mobility needs (i.e. elderly persons, persons with disabilities, parents with strollers etc.), and dedicated a scenario to each target group. The scenario dedicated to the school students focuses on using the bicycle to access the city centre, integrating the existing cycleway infrastructure and proposing new cycle lanes to connect it with their study area and their school. The scenario dedicated to citizens with special mobility needs, on the other hand, combines the use of a proposed bus itinerary and the use of the existing tram service to enhance accessibility from the study area to the city centre. The scenarios were designed using the UrbanSCOPE MEES platform tool, and are presented below.



Scenario 1 – focusing on the target group of school students, and employing the bicycle



Scenario 2 – focusing on the target group of persons with special mobility needs (i.e. persons with mobility disabilities, elderly citizen, parents with strollers etc.), and employing a combination of the bus and the tram

Evaluation of the project course

The project course was evaluated by the participating students, teachers and experts through interviews and a group discussion/reflection at the end of the course. The main findings are presented below:

Effectiveness of the course in raising the teachers and students' awareness with regard to SUMP, and developing knowledge, skills and attitudes: The teachers and students involved agreed that the project course was very effective in raising their awareness and developing their knowledge on SUMP. At the beginning of the course the students and most of the teachers were not familiar at all with the concept of SUMP. They were aware of the problems the citizens of Glyfada (and most citizens in the greater Athens Metropolitan Area) face every day as a consequence of the dependence from the car and motorcycle, like traffic problems, accidents, serious problems in finding parking and the stress this generated for their parents, the poor state or absence of walking or cycling infrastructure, etc. However, they had to an extent "accepted" these circumstances as the norm. Their participation in the course fundamentally changed their attitudes towards urban mobility in favour of SUMP and active citizenship. Moreover, the students developed new knowledge on SUMP, learning about the concept of SUMP and the principles around it, the complexity and importance of participative planning, and about the importance of integrated interventions that can change the quality of life in the city. Finally, the students said they has developed new skills, in terms of teamwork and cooperation, creative and critical thinking, and developing new digital skills through the use of the UrbanSCOPE digital tools for collaborative mapping (Siftr) - some students stated they were going to use Siftr again in the future to collaboratively map elements of the city of their own interest – and for designing their own SUMP scenarios and presenting them.

Inclusion of stakeholders outside the school (experts, parents, etc.): The teachers and students valued the role of the experts and parents in the project, and stated they appreciated their engagement and assistance during the project course. The experts who participated stated they found the experience rewarding and they would be willing to contribute to future projects. Some of the students

asked the experts to visit their school again in the next school year and work with them in a new project.

Integration to the school programme: The teachers raised the issue of the course integration in the school programme and the challenges this brought in terms of logistics. Finding the necessary time in the school programme to implement the school project was a challenge, and was overcome mainly due to the personal engagement of the teachers and the school principal. The teachers stated that although the Greek secondary education system is strict in terms of the curriculum and does not provide the flexibility necessary to integrate additional learning activities, it is possible to overcome this challenge by integrating the school project course into the school programme prior to starting the school year and organising the school resources in a suitable way.

Room for improvement: The teachers who participated stated that they wished the local authority would be more involved in the school project, through the participation of a representative from the local authority specialising in the field of SUMP policies and/or the SUMP monitoring – the City of Glyfada does not yet have a department dedicated to SUMP, however this is soon going to change. The teachers and students stated they wish they'd had more time to work on this project; implementing the project throughout the school year would be preferable, giving the teachers and students more time to map their study area, collaborate with the local community, formulate their scenarios and present them.

Overall comments: Overall, the participating teachers, students and experts stated they would like to implement the course again next year. The teachers in specific stated they would like to implement it with more classes during the whole school year, and believed other schools in Glyfada and beyond would be positive in integrating it to their educational offer. They would therefore suggest it to their colleagues from other schools. Moreover, they suggested that if more schools in Glyfada implemented the learning course next year, there should also be a SUMP competition between the schools, stimulating the engagement of the students and achieving a wider impact in promoting the SUMP concept.

5) Transferability potential

The present UrbanSCOPE learning methodology is flexible in order to enhance its transferability potential to other schools in Greece and other countries all over the EU. The necessary stages and steps provided can easily be adopted to the specific contexts of schools and secondary education systems in other European countries, especially in more flexible systems where the schools are free to develop part of their curriculum or include project-based learning courses.

When implementing the methodology, it is important to create or reinforce the schools' networks with the local authority, academic institutions, NGOs or individual experts in SUMP, and confirm their interest and commitment to contribute to the school project course. In addition, it is important to integrate the project course into the school programme early on in the school year (ideally when planning the school year) in order to make all necessary preparations and organise the distribution of the necessary resources in terms of teachers and experts' involvement, time in the school programme, equipment etc. as necessary.