

# Outdoor classroom

Igor Vitrih

Primary school, OŠ Neznanih talcev Dravograd  
Dravograd, Slovenia

**Abstract:** *The article is related to the idea of making an outdoor classroom. The classroom is supposed to serve elementary school students, to conduct outdoor lessons. It would be set up as part of the school eco-garden. In this way, students would be more in genuine contact with nature, even during the lessons. Classes would be held in all classes and in all subjects, of course, depending on the learning content and other conditions, such as time and weather. Many teaching aids and examples in the classroom could be taken from nature in the outdoor classroom. Thus, through learning processes, students would establish appropriate contact with nature, which is lacking among students today. The article talks about how we worked with the students to design the idea of making an outdoor classroom, what we had to pay attention to when designing the idea and who we had to connect with external collaborators to finally realize the plan of the outdoor classroom, which in reality will soon come to life.*

**Keywords**— outdoor classroom, ecology, school eco-garden, natural materials, architecture, design, plan, idea, creation.

## 1. INTRODUCTION

As we at school began to discuss with our colleagues how to make the most of our school garden during class, the idea of an outdoor classroom quickly fell through. This classroom should be designed so that classes could take place in nature, in the fresh air and where students would also have all the conditions for work. This means the possibility of a workspace, explanations of the teacher with didactic aids and meaningful organization of lessons for practically all grades of primary education, vertically. Many teaching aids and examples in the classroom could be taken from nature in the outdoor classroom. Thus, through learning processes, students would establish appropriate contact with nature, which is lacking among students today. The following describes the process of how we worked with the students to design the idea of making an outdoor classroom, what we had to pay attention to when designing the idea and with whom we had to connect from external collaborators to finally realize the classroom plan. outdoors, which in reality will soon come to life.

## 2. FROM IDEA TO DRAWING AND MODELING

The target group were students of the elective subject art design I, II and III (students from 7th to 9th grade), within the field of spatial design, the contents of which are related to the curriculum of the subject [5]. Based on the conversation about the idea and desire of the school, regarding the realization of the outdoor classroom, we started with "brain storming". Through the conversation, we quickly found out what we need to pay attention to when making an idea sketch.

Some criteria for the subsequent construction of the classroom were the following:

- The classroom must be large enough (for a maximum of 28 students, according to the norms);
- the classroom must be functional (the student can follow the lessons smoothly, on the seat and has the opportunity to work with literature, such as a notebook, workbook, textbook, etc.);
- the classroom must be made of appropriate natural materials, as it will be included in the school eco-garden.

According to these criteria, we started to post conceptual sketches with the students. These criteria were also some guidelines for us, guidelines for setting up all the necessary elements in the classroom. Before that, however, we had to obtain the necessary dimensions of the space provided for the layout of the classroom (Figure 1).



**Fig. 1.** *Measuring the area for the classroom*

According to the given measurements, we were able to approach the idea of how to provide appropriate seats and other equipment for students (even up to 28 students per class). It was necessary to think holistically and in the sense that the classroom will serve for a longer period of time. In the case of student seats, it was important that they were functional, stable, of appropriate height (universal height for all students) and made of natural materials (mostly wood). Also for the board (appropriate dimensions, functionality,

layout and material) and any table. It was necessary to think about all the possibilities of conducting lessons (working in groups, in pairs, individually, etc.) and thus adapting the aforementioned seats and other equipment in the classroom. We also had to think about the very foundation on which the classroom will be placed.

Based on these guidelines through the criteria, the students tried to make conceptual sketches according to their abilities. The technique was a collage with a basic photograph of a garden space where a classroom could later be placed. The students, who also had some experience in the field of digital drawing of 3D spatial sketches, were able to help themselves in this way as well. The resulting interesting examples are shown below.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.

In the examples (Figure 2-5), the collage technique used as a technique for making a conceptual sketch is shown. These contents could also be transferred to the compulsory subject of fine arts (grades 6 to 9), the contents of which also refer to spatial design [2].

The following examples (Figures 6 and 7), however, show examples using a computer program to make 3d digital sketches.

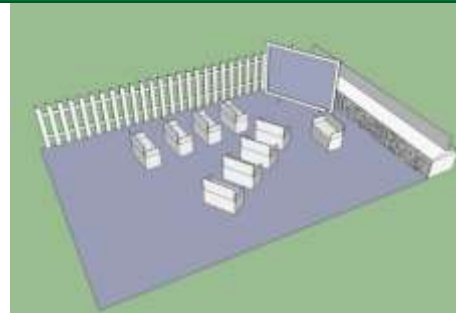


Fig. 6.

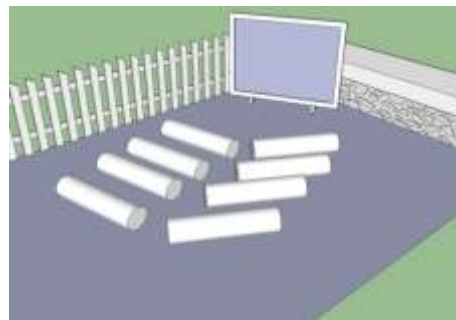


Fig. 7.

In this kind of realization of conceptual sketches (Figures 6 and 7), students who have experience with the computer program Google Sketchup and contributed to another way of making conceptual sketches also participated. These are students who have attended the optional subject of drawing in geometry and technique, within which, the curriculum also includes learning about digital 3d modeling [1].

In the next step, we made 3d models with the students (of course on the basis of conceptual sketches), and thus connected to the next step, which is performed by an architect, as part of creating a project. This is also evident in the following examples (Figure 8-11).



Fig. 8.



Fig. 9.

Fig. 8. and Fig. 9. The process of making a 3d model

When making the model, we had to make sure that we used materials and appropriate art technique, through which we could realize ideas, on previously made sketches. We

decided to use paper materials with techniques like cutting, gluing, etc.



Fig. 10.



Fig. 11.

Fig. 10. and Fig. 11. Examples of final 3d models

### 3. MAKING A PLAN

After the very stage of making the conceptual sketch, the concretization of these ideas followed, in the sense of making a plan. Architects from the Center of Slovenian Architecture came to our aid here. They helped guide us and presented their view of the day's problem. With their help, we successfully made plans (Figures 12-15), which we will use together with the Slovenj Gradec Secondary Woodworking School in the construction of the classroom. Here, in the later realization, the students of the elective subject material-wood processing, whose curriculum is related, would be included, precisely to such learning contents [4]. The teaching material itself, namely, deals with the contents of the project approach to solving a problem. It is a project task that students also learn about in the compulsory subject of technique and technology (from 6th to 8th grade), step by step, which is mentioned by the didactic

dr. Amand Papotnik (idea development, prototyping, construction, etc.) [3].



Fig. 12.

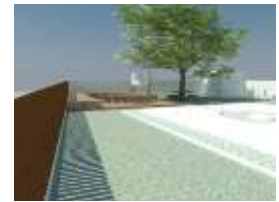


Fig. 13.



Fig. 14.



Fig. 15.

The examples shown above (Figure 12-15) show the drawing of the classroom in different views by the architect (Authors: Igor Hovnik and Barbara Petek). It is drawn with the same computer program that the students also used. This gave the students extra motivation, in terms of what all can be done in the program itself.

### 4. CONCLUSION

With this way of working and with this kind of cooperation of architects, the students gained a complete insight into the profession of an architect and the work performed by an architect. They got to know all phases of the work, from making a conceptual sketch, making a 3d

model and learned how to make a plan, as concrete technical documentation, which will be needed in the later making of the classroom.

## 5. REFERENCES

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