

Methods of promoting student participation
Service-Learning - community activities in connection with professional learning
Sustainable student companies - fair ecologically and socially managing
Educational work of the organization Sunce



Sustainable development – understanding - implementing - creating **Guideline for school and extracurricular educational work with children and young people**

UDRUGA ZA PRIRODU, OKOLIŠ I ODRŽIVI RAZVOJ

sunce



IMPRINT

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This publication is available as an online resource in German, English and Croatian on the website of the publishers. In addition, a printed version is available in Croatian (ISBN 978-953-7810-00-9).

Schwerin (Germany) and Split (Croatia) 2015

The guideline was created within the frame of the project "Take Part in Sustainable Development - a qualification and participation project for young people in Croatia" (2013-2015), funded by the German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt). The printing of the publication was also supported by the Croatian Ministry of Science, Education and Sports.

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FOREWORD

Throughout the world the protection of nature and environment belongs to the major challenges. Whether water protection, biodiversity or climate change - environmental issues cross borders, not just geographically. Ever since the UN conference in Rio de Janeiro in 1992 it has been known that the solution of environmental problems connected to sustainable development includes the consideration of social and economical relationships.

To achieve a culture of sustainability, education and participation are prerequisites. The Agenda 21 adopted in Rio emphasizes this. A broad participation of different actors is essential in order to shape a sustainable society, to implement existing laws and regulations for environmental protection and conservation and to address existing deficiencies there. The civil society involvement will play a central role in this case.

Participation is more than just the integration of professionals and associations. A particularly important group here is the young generation. Children and young people are tomorrow's decision makers. For the purposes of intergenerational fairness they have a right to participate in shaping the future society and thereby to address the protection of the environment and nature.

To make an active participation culture and a responsible behavior of young people possible, it is important to give them the necessary knowledge and skills and the necessary space. In that way they can bring their vision to real situations and contexts.

The project "Take Part in Sustainable Development - a qualification and participation project for young people in Croatia" funded by the German Federal Environmental Foundation (DBU) is connected precisely to this issue. It has focussed on the promotion of socially active participation of young people in the context of sustainable development. With the funding DBU wants to support Sunce as a non-governmental organization in the field of nature and environmental protection to increase civic commitment for nature and environmental protection in Croatia, both for the young generation as well as for training designers through targeted training and qualification activities.

The close partnership between Sunce and the German Foundation for Environmental Education (DGU) has helped to import successful approaches from Germany to Croatia. On the other hand it has also ensured that experience and knowledge have flowed back to Germany. The mutual exchange and joint dialogue "at eye level" is a special value of the project.

Dr. Ulrich Witte, German Federal Environmental Foundation (DBU)

Head of Environmental Communication, Cultural Heritage Protection and International Relations

PREFACE

In today's dynamically changing society we are faced with the increasingly complex challenges to maintain the quality of life on our planet, to create our life together and to exist within a rapidly changing economy. To cope with these tasks we must have knowledge and skills enabling us to find creative, innovative and flexible solutions for existing and future challenges.

The aim of the project was to promote the (still) underdeveloped participation of children and young people particularly in the field of nature conservation and environmental protection in Croatia. Therefore various educational activities have been developed and implemented especially regarding participatory teaching and learning methods. During the design and implementation of these activities, amongst others, experiences and knowledge in the field of education for sustainable development (ESD) in Germany have given valuable input.

The creation of this guideline have preceded a wide range of project activities. Their goal was to enhance the understanding of participatory teaching and learning methods, to promote the participation of teachers and students in environmental protection and conservation and to motivate young people for active citizenship and for volunteering in environmental protection and conservation. The organization Sunce, with the help of teachers involved in the project, has therefore identified the difficulties in the implementation of ESD in the Croatian education system - with a focus on schools in the cities of Split and Trilj. In addition, Sunce has initiated and supported the implementation of the acquired knowledge and practical experience of the project and their adaptation to the needs and possibilities of the Croatian schools. Important components of the project activities were also seminars for young people and students. Their content was the promotion of environmentally responsible behaviour and social commitment in the form of volunteer work in conservation and environmental protection. Thanks to the intensive cooperation and joint implementation of project activities, both organizations were able to expand their knowledge and experience in this field.

As a result of the joint project, a large part of the activities has been processed in the form of this guideline. It combines theoretical foundations, experience and practical suggestions from the time of the project. This publication is aimed primarily at teachers of primary and secondary schools as well as all those who work with children and young people and want to contribute to active citizenship and the responsible use of our natural environment. We invite you to use the guideline as stimulation both in the professional and private sector (school and/or community) and to understand and implement the principles of sustainable development in environmental and nature conservation area together with children and young people, thereby making society a little more sustainable.

The guideline is published not only in Croatian and German, but also in English. This will help to ensure spreading of the experience and knowledge of the project also beyond the national boundaries of the two project partners, providing educational designers in other countries around the globe with suggestions and support for their work.

We hope you enjoy it and wish you good luck!

Gabrijela Medunić-Orlić (Sunce) & Stephanie Proepsting (DGU)

INTRODUCTION

In today's dynamically changing society we are faced with the increasingly complex challenges to maintain the quality of life on our planet, to create our life together and to exist within a rapidly changing economy. To cope with these tasks we must have knowledge and skills enabling us to find creative, innovative and flexible solutions for existing and future challenges.

Global challenges

Already at the United Nations Conference on Environment and Development (UNCED) in June 1992 in Rio de Janeiro more than 170 countries around the world have agreed on a catalogue of action for the 21st century. Within the Agenda 21 necessary actions for the *sustainable development* of society are described. A *sustainable development* requires us as people to actively create our world that is experiencing dynamic changing and increasing environmental risks, economic imbalances and social inequalities in an environmental, economic and social responsibility. For the Agenda 21 the promotion of education and public awareness of issues related to sustainable development is of fundamental importance. In addition a central issue of Agenda 21 is the participation of - if possible all - people or groups of people in social development. One chapter gives children and adolescents a crucial key role and highlights: "It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account."¹

In order to fix the concept of sustainable development in all areas of education and for a stronger promotion of education for sustainable development (ESD) the UN Decade "Education for Sustainable Development" was proclaimed by the United Nations for the years 2005-2014.² Amongst others, Croatia and Germany have participated in the implementation of the Decade.³ For the continuation of global initiatives a successor agenda for the UN Decade, the roadmap for the World Programme of Action "Education for Sustainable Development" has been published. This is aimed at governments, intergovernmental institutions, civil society organizations, teachers and trainers as well as each individual learner. In the roadmap five priority areas for action are listed which are attributed special importance for the anchoring of ESD in the educational system. One field of action is aimed especially at young people and demands to support them in their role as "change agents"⁴ for sustainable development. The youth is said to be particularly interested in shaping a better future for themselves and for future generations as well as being a driving force for educational processes, particularly with respect to the non-formal and informal learning.⁵ Another field of action refers to teachers and demands to strengthen the skills and competences of these actors and to extend them in terms of relevant topics of sustainable development and appropriate teaching and learning methods. Of particular focus are learning-centered, non-formal and informal learning opportunities and the promotion of presentation skills that empower young people to function as "change agents".⁶

Education for Sustainable Development

According to the requirements of the Agenda 21 children and young people must be empowered to actively participate in social processes, for example to solve problems relevant to the future and to have specific capacities to act. The educational concept of ESD therefore provides learning opportunities and learning contents that contribute to children and young people acquiring knowledge, values, attitudes and capabilities to act for a sustainable shaping of the society. ESD begins at the living environment and the experiences of children and young people, in particular involves innovative participatory learning methods and is dedicated to environmental, economical, social, and locally and globally oriented issues.

In formal and informal educational work with children and young people should be taken into account that

- learners are involved in the design and selection of topics and learn to work together with others in order to develop solutions in terms of sustainable development,

8 ¹ BMU (o. J.); ² see: www.bne-portal.de/un-dekade/un-dekade-deutschland and www.desd.org (04.02.2015); ³ Information about implementation of the UN-Decade in Croatia: www.odraz.hr/media/96820/akcijski_plan_za_odrzivi_razvitak.pdf and www.azoo.hr/images/izdanja/OOR_2011_web.pdf (04.02.2015); ⁴ "Change Agents" are individuals or groups who are actively working for change and promote these Vgl. WBGU (2011) S. 265ff; ⁵ see UNESCO (2014), p. 22f. and p. 36; ⁶ see. UNESCO (2014), p. 20f. and p. 35f.

- work should be interdisciplinary and across themes,
- project work is especially in the foreground,
- learners are able to learn 'self-directed', initiative is promoted and work is done in teams.⁷

A fundamental principle of ESD is participation. The word participation comes from Latin and means "participation, inclusion, involvement, codetermination". The term "participation" is used in a variety of ways. Colloquial understanding is the participation in decisions that affect both their own lives and the greater community. Here the school can offer a protected space where participation can be practiced and necessary skills such as communication and cooperation, ability to network thinking, planning and reflection skills can be developed through participatory learning arrangements. The participation of students via participatory learning methods and techniques should always be combined with central themes of sustainable development such as climate, energy, water, fair trade, biodiversity and healthy eating and is an indispensable condition for the acquisition of competencies for a responsible shaping of the future (shaping competence).

Participation of students

Especially more traditionally oriented schools need a guide on how students can be involved in the participation and involvement of teaching and school life. Students should learn to participate in decision-making in selected areas, to shape the implementation and ultimately share the consequences of the decision. In return, teachers must learn to cope with it and to give room for student participation. Therefore changes are required in the organizational structure of education and school life as well as the self-understanding of school which relates to the role of the teacher (teaching) and the role of the pupil (participation or involvement). Of central importance are clear mandatory structures, rules, expectations and obligations that are defined with the students in negotiation processes and for which the students will take on responsibility.⁸

In the frame of discussions about the transformation of teaching and learning culture and the promotion of more student participation the following ideas are central for participation of pupils:

"Student participation is understood as actions of learners, by which these learners systematically influence planning, design and reflection of learning and school culture.

Conditions for success are:

- a didactic design of teaching and learning arrangements that help to enable participation and support.
- an attitude of teachers towards learners, accepting those as experts in teaching and school.
- experiences of students that student participation is taken seriously and has consequences.

Aims of student participation are the use and development of skills of self-regulated learning and democratic action." Participation of students is essentially associated with the assumption of responsibility on the part of the students as well as the release of responsibility on the part of teachers. Depending on the situation and possibilities pupils should be consulted, co-decide or may be involved in the implementation of decisions.⁹

Due to the increasing participation of students in the planning and design of teaching and school life also the forms of teaching, behaviour and the role of teacher will change. Teachers should develop skills that will allow them not only to convey knowledge, but to accompany students while learning, to organize their learning processes and to moderate. Their attitude towards pupils has to change. They must be ready to hand over responsibility and to trust students to take over responsibility. In this way students can learn to take responsibility for their own learning process as well as for the process in each study group. Thus they can acquire the necessary participation competencies of communication, cooperation and assessment. It has been shown that because of a participatory classroom culture the well-being and motivation of students and their willingness to share responsibility has been increased to a considerable extent. In addition, studies of school and classroom research show that the performance of students is encouraged through participation in class.¹⁰

⁷ see program Transfer-21 (o. J.) a, p. 6; ⁸ see program Transfer-21 (o. J.) b, p. 22 f; ⁹ Bastian (2009), p. 8; ¹⁰ see: program "Demokratie lernen und leben": www.demokratielernenundleben.rlp.de (19.01.2015).

Theme "Sustainable City" as a learning object

The theme "Sustainable City" offers a variety of possibilities for connections with ESD. The city is particularly well suited as a learning and teaching subject, as students are directly related to the learning content. There are themes from the living environment of students, such as the use of natural resources (e.g. waste management), sustainable mobility (e.g. cycling), sustainable management (e.g. recycling/upcycling). Students can participate and get involved locally. Also in terms of taking responsibility for their own environment and their own surroundings the city offers an ideal teaching and learning approach. Since the theme of "Sustainable City" is particularly well suited for the implementation of participatory projects, in the project "Take Part in Sustainable Development" educational activities such as the educational program "composting" have been designed and implemented.

Construction and operation of the guideline

In the guideline "Sustainable development – understanding - implementing - creating" selected educational activities have been listed that were conducted within the framework of the project "Take Part in Sustainable Development". The presentation of participatory teaching and learning methods will each be supplemented by examples from the practical education with children and young people in Croatia and Germany. As a result the reader gains insight into the different implementation approaches in the two countries and is invited to benefit from this change in perspective for the own work.

The manual is aimed particularly at teachers in primary and secondary schools. Both the practical part, including worksheets and materials, as well as the theoretical part of the guideline are related to the implementation in these schools. However these methods and learning arrangements are also applicable to other study groups through didactic-methodological transformation. The guideline therefore provides valuable practical suggestions for incorporating participatory methods in educational work for educational professionals outside the school as well as university teachers.

Chapter 1 "Methods of promoting student participation" offers a variety of simple methods for the participation of learners in order to encourage participation or involvement in school and extracurricular learning processes. Methods are listed that can be integrated easily and without much effort into the work process and that require no special structural conditions. Amongst others these methods support the joint gathering of ideas and visions to make decisions, to express the own opinion and to plan the implementation of projects. Examples from the practical education at the Croatian organization Sunce within the frame of the project in which the guideline was developed round off the collection of methods.

In **Chapter 2 "Service-Learning - community activities in connection with professional learning"** and **Chapter 3 "Sustainable student companies - fair ecologically and socially managing"** innovative learning arrangements are presented for the promotion of student participation that need some more time and have a stronger impact on the structure of teaching and school life. Thus an important aspect of service-learning is, for example, that this learning arrangement is connected to the classroom and, as during the establishment of a sustainable student company, certain structures in the classroom and school life are a prerequisite for the implementation. To begin with, in the first part of the pedagogical approaches, the aims and implementation options of the two learning environments are presented. This is followed by a respective second part with examples from the practical implementation in primary and secondary schools in Germany and Croatia.

Chapter 4 "Educational work of the organization Sunce" has a special position since further insight is given into the educational services of the organization Sunce that were carried out under the project "Take Part in Sustainable Development". The workshops, educational programs and seminars are aimed at students, teachers and other educational professionals and young people who want to be actively involved in shaping a sustainable society. With these educational proposals Sunce would like to help raise awareness of the (environmental) problems of society and to develop skills to solve them in collaboration with others.

The **Annex "Practical materials"** offers a collection of worksheets and materials for practical implementation. These are intended as support for educational work in primary and secondary schools and should be adapted - if required - to each study group by didactical transformation. Furthermore the **literature and links** that have been used to compile the guideline are bundled in the Annex for further information and consolidation. In addition brief information about the two organizations responsible for the project, Sunce and DGU, and the authors of the guideline is given. Furthermore the appendix contains an acknowledgement to all Croatian and German organizations, educational institutions, teachers and volunteers who participated in the project and to all organizations that have provided financial support for the implementation.

We also want to inform that the personal and professional designations used in this guideline always include male and female persons.

1. Methods to promote student participation

In the following, various methods are listed with which help to promote and implement the participation or involvement and participation in decision-making of students. These are simple methods that can be integrated into the work process easily and that require no special structural conditions. The methods presented can be used depending on requirements and content orientation of the teaching unit or project. After a short presentation of the target and the implementation of the method, an example is given in practice that shows how the method - in the frame of the educational activities of Sunce - was used in the educational work with teachers, students and education professionals.

1.1 Simple Methods

Partner Interview

The *partner interview*¹¹ is a "get-to know-somebody" game where the participants form pairs to interview each other within a predetermined time, asking questions about the other person. Besides personal issues also opinions, the discussion of tasks, presentations or texts can be subject of the interview. Finally, the respective partners or the result will be presented briefly in the whole group.

At first pairs are created. In case of an odd number of participants a triad may be allowed. It should be ensured that couples are formed who know little or nothing about each other. The pairs receive concrete questions (in writing if possible: e.g. flip chart, worksheet) from the moderator and an indication about the time available. In a partner interview about personal questions this means ten minutes. The partners ask questions about the person and take notes. Interviewers and dialogue partner exchange their roles after half the time (the interviewer becomes the dialogue partner). For more extensive forms of tasks the time period should be longer respectively.

The pairs return to the plenary and form a circle of chairs. Now the presentation starts, taking turns. The participants, however, do not present themselves but each other. The participant introducing his partner does not present the contents of the entire interview. He should mention things that appear to be particularly important and noteworthy for him and that the other participants should necessarily know about the partner (two minutes per pair). For more extensive forms of tasks all significant statements and factors that were obtained during the interview are reported to the plenary.

Duration: 30 to 45 minutes

Material: sheets for notes, pen for each participant, blotting pads

Example: Getting to know as part of the service-learning program with Sunce

The method partner interview was applied at the beginning of the cooperation between Sunce and the school of natural science and engineering from Split within the service-learning program (see chapter 2). At the first meeting the seven graduates, the accompanying teacher and the four mentors from the organization Sunce met each other according to this method. The twelve participants were divided into six pairs. To carry out the interviews they received prepared worksheets with different issues (see figure 1.1 and 1.2) and had altogether ten minutes to answer (five minutes per interviewee). After the interval all participants presented their partner to the entire group telling the most important information about him.

Partner interview (for mentors)*First and Last Name:**Do you have hobbies? If yes please list:**What did you study, where and why you have chosen this course?**How long have you worked in the organization Sunce / in the Technical School?**How do you want your students? What qualities should they have?***Figure 1.1** Example of the worksheet for the method partner interview (mentors)**Partner Interview (for students)***First and Last Name:**Do you have hobbies? If yes please list:**What do you want to study? Where and why?**Which new things learned in the subject "Ecology" (12th grade) have you enjoyed the most?**How much time you are ready to use for your practical work?**How good are your skills in dealing with Microsoft Word?**Have you ever been on a trip outside of a school program? If yes - where and for what reason?***Figure 1.2** Example of the worksheet for the method partner interview (students)**Brainwriting**

*Brainwriting*¹² is a method to collect ideas, suggestions, expectations, wishes etc. about a specific problem. Participants receive blank cards to write an answer about a target question. Therefore they have five minutes. There can be written as many ideas as the participants think about. It is important that only one idea per card will be written. Following the time for consideration the results are communicated to the others by sticking or pinning each cards to a wall and explaining them the other participants. After that all the answers are assigned to main topics or themes so that a good overview is given. This method can perform several and - depending on the task - different functions. For example it can stimulate reflection, help to find common themes or work rules can be created.

Duration: 45 minutes*Material:* cards for writing, pens, tape or thumbtacks**Example: Selection of environmental issues for the final work**

In the frame of the service-learning program (see chapter 2) Sunce has conducted in collaboration with seven graduates of the school of natural science and engineering the method brainwriting has been applied to determine relevant topics for the thesis on environmental problems in the city. The pupils were given the question *Which environmental problems do you recognize / do you identify in your city?* During individual work the students have thought about this issue and identified problems such as illegal dumps, lack of garbage bins for separate waste collection, water and marine pollution, lack of bike paths as well as untended gardens and the decrease of the amount of green areas in the city. Their answers were written on cards. Then these were presented in the group and summarised into main themes. Finally participants discussed the different answers and solutions and also discussed how they could actively participate in the implementation of the proposals.

¹² Source: Deutsche Kinder- und Jugendstiftung (2009), p. 23, 32:

Brainstorming

In *brainstorming*¹³ the same objective is pursued as in *brainwriting*. Different to *brainwriting* participants give their proposals orally on a specific question, ideas, etc. These are written on the blackboard or a sheet of paper by the moderator. When the flow of ideas of participants stops the result will be read out. Thereafter everyone has once again the opportunity to add further ideas. If there are no more additions the brainstorming is finished.

Duration: 20 minutes

Material: at least two large sheets of paper, tape to hang sheets on the wall or pin boards with pins or a flipchart, one or two thick felt pens

Example: Workshop "Participatory learning methods"

In a workshop on "Participative learning methods" the participants had to deal with targets and possible thematic areas of participation of students in the school. The involved teachers, volunteers and employees of the organization Sunce - in the form of a brainstorming - gathered ideas and answers to questions like: *What are important aims of participation of pupils in school?*, *Which topics in the field of "Sustainable City" affect the daily lives of students?* and *Why are they particularly well suited for the implementation of educational projects?* The moderator noted the responses to a wall poster for a conclusive discussion in the group.

Point decision

The method *point decision*¹⁴ is a voting procedure for all situations where a fast and participative decision has to be taken. This may for example be a decision between different ideas, solutions or suggestions for topics. The proposals have already been collected in advance and have been written on cards or as words on a sheet of paper and are clearly displayed (e.g. via the method *brainwriting/brainstorming*). All participants will receive adhesive dots from the moderator. For a multipoint decision at least three dots should be distributed per person, but no more than half as many dots as the number of choices. (e.g.: ten proposals correspond to five adhesive dots per participant.) In a singlepoint decision participants will receive only one dot that they can stick to the favoured proposal. According to a specific question such as *Which issues are most important to me?* participants now distribute their dots. It is also possible to assign several or all dots to a single proposal. If all parties have used their dots, the points are counted and recorded for each proposal. This is followed by an evaluation and discussion.

Duration: ten to 20 minutes

Material: adhesive dots (for the number see description above), dots (the points can also be painted alternatively), one large sheet of paper (or more)

Example: Workshop "project management and preparation of project proposals"

During the seminar for young people (see chapter 4) the method *point decision* was applied in the workshop "project management and preparation of project proposals". The aim was to select the most successful project proposal created at the workshop. For this purpose an "evaluation cake" was divided into four parts and provided with the headlines of the project proposals (see figure 1.3):

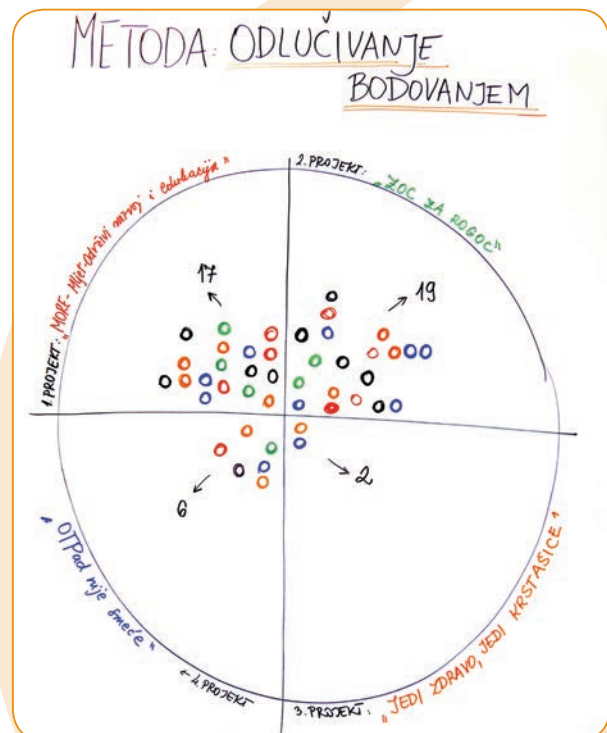


Figure 1.3 "Evaluation cake" with point decision

14 ¹³ Source: www.kinderpolitik.de (27.05.2014); ¹⁴ Source: www.kinderpolitik.de (27.05.2014).

"Sea - Mljiet - Sustainable development and education", "ZOC ZA ROGOC! - Keep the tradition of the cultivation of carob trees on the island of Vis", "Eat healthy, eat cruciferous plants" and "waste is not garbage". Each participant received three adhesive dots, of which at most one point could be assigned to their own group. The other two points either to be all assigned to one project or split between two other projects. After all participants had distributed their points it could be clearly identified which project had received the most points. As a result of the workshop the jointly selected project "ZOC ZA ROGOC! - Keep the tradition of the cultivation of carob trees on the island of Vis" was registered for the competition of the OTP Bank.

Group interview

The *group interview*¹⁵ is a method where a question can be answered not only individually but also together with others. Several groups of four to five participants are formed. Each group is given a large sheet of paper where a field is defined in the middle. The outer edge around this field is equally divided into as many fields as there are participants in the group. First each group member answers alone in one of the outer fields a question such as *How can student participation be implemented?*, *How can cooperation with extracurricular partner look like?* or *Which issues should be part of our general vision?* (about 5 minutes). Then the group members discuss their individual responses. Finally they agree on three key messages and write them down in the middle (about 30 minutes). These statements are then presented in the plenary (10 minutes).

Duration: 45 minutes

Material: large sheets of paper (according to the number of groups), pens (according to the number of participants)

Example: Workshop "Waste and Composting"

The method *group interview* was applied at the workshop "Waste and Composting" at the seminar for young people (see chapter 4). The participants were divided into groups of four to five persons and each group was given a large piece of paper. Then the participants were asked to draw a field in the middle of the sheet of paper and divide the remaining space according to the number of participants. In a first step the participants answer the question for themselves: *How can I personally - and together with others - contribute to waste avoidance?* and wrote down the answer in the external field. In a second step the participants discussed the various ideas, agreed to their most important statements and listed these in the middle (see figure 1.4).

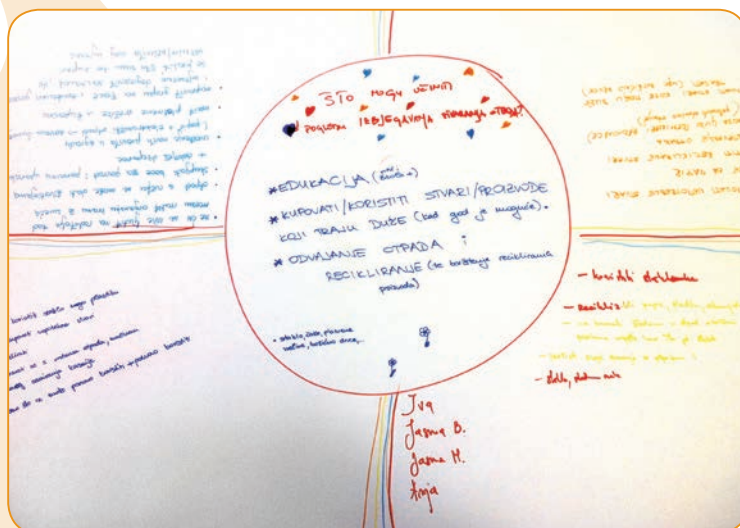


Figure 1.4 Method group interview

¹⁵ Source: www.demokratielernenundleben.rlp.de (28.07.2014).

Small group work

The method *small group work*¹⁶ helps to edit a task and find ideas together. Small groups have to be formed to deal with questions or tasks like *How can we design our project?*, *How can we implement more environmental compatibility and sustainability in our school?* or *How should this aspect be formulated in our vision?*. The small groups are made of three to five people and get a time of 20 minutes to deal with the issue. Each small group will receive pens and cards to write or draw their thoughts on the subject. Subsequently the results of the small group work will be presented to the whole group. Participants have to be active and contribute with their own experiences. Here it becomes apparent that students do have their own ideas.

Duration: 40 to 60 minutes

Material: cards for writing, pens, tape or pins

Example: Workshop as part of the educational program "composting"

The method *small group work* was used in the workshop "You should also compost!" as a part of the educational program composting (see chapter 4). The twelve students (7th grade) of the primary school Trilj were divided into groups of three people. Each group answered - based on the template "Concrete planning steps towards the implementation of the project" (see working material 1.1) - the question: *How do you want to win your fellow classmates for composting?* After all proposals had been devised the small groups presented their results to the whole group (see figure 1.5a and 1.5b). The most important mottos the students would like to use to advertise for composting in their school were: "Composting is good for the environment" and "The program is entertaining and informative."



Figure 1.5a and 1.5b Small group work and subsequent presentation of results

World Café

The *World Café*¹⁸ method is well suited for the exchange of knowledge and ideas among the participants. In a relaxed, café-like atmosphere (see figure 1.6a and 1.6b) a creative process is set in motion over several roundtables in order to develop new ideas, to gain new insights and to find opportunities for action.



Figure 1.6a and 1.6b The *World Café* method is characterized by a pleasant atmosphere

16 ¹⁶ Source: Deutsche Kinder- und Jugendstiftung (2009), p. 31; ¹⁷ remark: primary school in Croatia is from 1. to 8. grade ; ¹⁸ Source: www.partizipation.at/worldcafe.html (28.07.2014).

In three successive roundtables of about 20 to 30 minutes four to six people connect in a relaxed atmosphere at a table. Each table receives a café-etiquette (see figure 1.7), a large poster or a paper tablecloth and pens.

Café-etiquette

- focus on what is important
- contribute own views and perspectives
- talk and listen with heart and mind
- listen to really understand
- link and connect ideas
- pay attention to the discovery of new knowl-edge and in depth questions
- playing, scribbling, painting: it is desirable to write on the tablecloth !!!!!

Have fun!!!



Figure 1.7 Café-etiquette

Duration: 1.5 to two hours

Material: paper tablecloth or large sheet of paper, a Café-etiquette (see working material 1.2) for each table, where appropriate, drinks, tea / coffee, biscuits, flowers (café atmosphere), pens, cards, tables and chairs according to the number of persons

Example: Workshop "Healthy Diet - chemical pollution of food by additives"

The *World Café* method was conducted in the workshop mentioned above taking place at the seminar "Encouraging environmentally responsible behaviour and active citizenship" (see chapter 4). Before the *World Café* was able to start the participants had come together in small groups and had tested various foods using observation sheets for additives in surrounding grocery stores. Four groups had been formed, each with four to five people, with each small group deciding for a particular group of food (dairy products, soft drinks, bread and bakery products, convenience food, meat products, sweets). The participants had the task to pay attention to the list of ingredients of products and any vagueness or difficulties in the labelling of the product composition. After the participants returned to the workshop the results were first evaluated in small groups. Participants had about 20 minutes to classify the examined foods in terms of the criterion "additives: problematic/harmless" with the help of the book "Food Additives: A Guide through the E-numbers"¹⁹ and a card enclosed with the E-numbers²⁰.



Figure 1.8 Work in the *World Café*

¹⁹ see Vinković Vrček/Lerotić (2010). ; ²⁰ see www.e-brojevi.udd.hr (16.07.2014).

After the products had been classified in accordance to the given evaluation criteria the *World Café* was able to start.

In the *World Café* the participants discussed the following questions: *Were there problems with the identification of additives in food?, Do you pay attention to the ingredients list when buying a product?, Do you pay attention to the ingredient list of the product when buying one?, Are there adverse effects of additives on health known to you?* The participants were also given the task of "Name the additives known to you." All responses, ideas, thoughts and insights were written on posters (see figure 1.8). Instead of three roundtables, as intended by the method, a total of five roundtables with 10 minutes each were set because of the number of questions. In these roundtables all participants had the opportunity to get to know the test results of the other groups and to share their opinions. After each round of talks a table host kept his place and informed the new participants about the ideas and insights of the previous group. At the end each group presented (in their initial constellation) their findings and proposed solutions for dealing with the problem of chemical agents and additives in food.

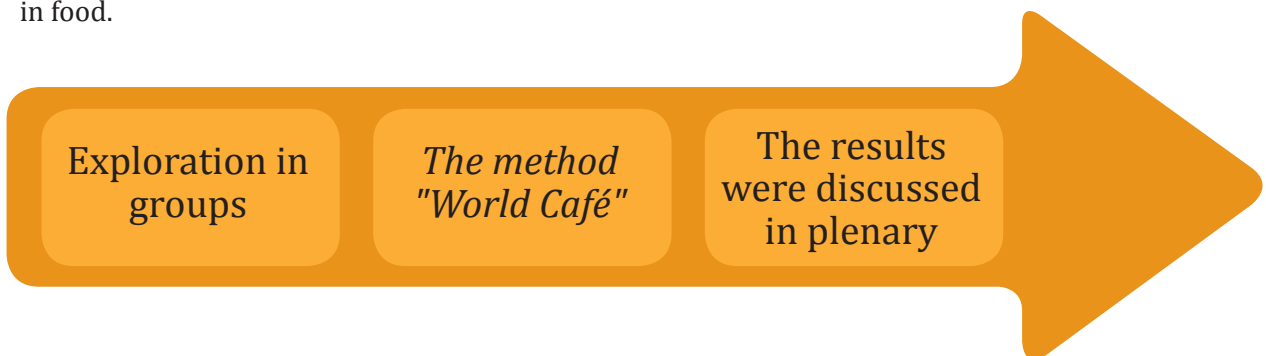


Figure 1.9 Graphic presentation of the workshop on food additives

Wishful thinking/way to the future

When working with the method *wishful thinking/way to the future*²¹ students paint or write their ideas, visions, wishes and dreams on big feet. These feet are put on the floor as a way to the future. This method can be used in many situations. It keeps ideas, wishes, dreams and visions:

1. The teacher distributes large sheets on which feet are displayed (note the equal number of left and right feet) to all participants.
2. Students have the task to record their ideas, wishes, dreams and visions about a topic (e.g. "My dream school" - "My environment-friendly school of the future has ..." etc.). It is allowed to paint, draw and write.
3. Now students begin with the writing and drawing. When all have finished, the works are put down as a long way to the future and evaluated.

Duration: about 15 minutes

Material: one foot for each participant (see working material 1.3), as large as possible (e.g. in A3), enough pens or felt pens

Example: Workshop within the program "Training of volunteer environmental educators of the organization Sunce"

The successful involvement of volunteers in the work of the organization Sunce depends to a large extent on how the activities and needs of Sunce meet the wishes, interests and skills of volunteers. As part of the training program for volunteers (see chapter 4) the environmental education team of Sunce did a workshop for volunteers who in the future will be involved in the environmental education area. In order to develop a joint vision of future cooperation the method way to the future was applied. Participants were given the task to write down their expectations and wishes regarding their participation in the environmental education program on paper feet that had been cut out. Then the written feet were placed in a row as a way to the future. Finally the individual steps into the

future were discussed with all participants. Based on the results a plan regarding the inclusion in the educational work at Sunce and the personal development in the context of the volunteering has been developed for each volunteer.

My Opinion

Based on the method *My opinion*²² students can write down your wishes, criticisms and problems about a particular concern in the school on an "opinion sheet". For this they receive a corresponding sheet and the task in the form of impulse questions such as: *What do you wish?*, *What do you like?*, *What don't you like?* or *What has to change?* The questions are listed on top of the sheet. Students write their wishes, criticisms, etc. into a large balloon. Finally all students present their "opinions" and create an "opinion exhibition" on a wall newspaper (or clothesline). The results are discussed, equipped with a photo of the student, where appropriate, and can be publicly displayed.

Duration: about 30 minutes

Material: an opinion sheet for each participant (see working material 1.4), pens, material for the design of an exhibition, digital camera, where appropriate

Example: Workshop "Evaluation of the training program for volunteer environmental educator"

In order to get a feedback from the participants of the training program, an evaluation workshop was conducted at the end of the first half of the program. For this, among other things, the method *My opinion* was used. Participants were given sheets with the following questions: *What did you like about the training program?*, *What could have been different?*, *What ideas do you have for the training program?* The participants recorded their opinions in accordance with the questions on three different coloured cards and presented them on the pin board (see figure 1.10). Following this, the results were discussed with all participants.



Figure 1.10 Presentation of the opinions

²² Source: www.kinderpolitik.de (27.05.2014).

Interview forays (surveys/polls)

The method *Interview forays*²³ is well suited to obtain information or to take an inventory. An interview guideline is developed together with the students. This includes the issues that students would ask to classmates, teachers, caretakers, parents, citizens of the city or relevant institutions on their excursions. In addition it should be noted when and where the interview was conducted and who was interviewed. Small groups are formed with two to five students. Each small group is given the interview guide together with sheets and pens. Before the start one person in the group is appointed as the interviewer.

The others can also get involved with asking questions but they are primarily responsible for taking notes. A time is agreed upon when the small groups meet again at the starting point (after about 60 to 90 minutes). Then the small groups start and do the interviews. At the time agreed upon the small groups come back together at the meeting point and exchange their results, talking. For the analysis of the interviews a further meeting should be agreed with the students.

Duration: procedure between 60 to 90 minutes, about an hour for the preparation and follow-up

Material: interview guide, sheets for notes, clipboard and pens where appropriate

Example: Conducting a survey on the use of disposable plastic cups in kindergartens

One intention of waste management is "reduce and re-use". Therefore the problem of the use of disposable plastic cups in different kindergartens in the city of Split in Croatia was investigated. Parents whose children go into the kindergarten and give a large amount of disposable plastic cups to them every month were interviewed using a questionnaire. The aim was to find out why the priorities of waste management - "reduce and re-use" - were being ignored. The survey was conducted as part of a service-learning project. Two graduates of the school of natural science and engineering in Split were involved in the drafting of the questionnaire (see figure 1.11 and work material 1.5) and in the implementation of the survey. Then the students evaluated the survey, prepared the results in the final theses and discussed them. In addition the organization Sunce informed and enlightened the educators of Split kindergartens with a presentation on "Conscious handling of waste - reduce, re-use and recycle in kindergartens".

Working material 1.5: Survey on the use of disposable plastic cups

Name of the student:
Name of the school:

PARENT SURVEY ON THE USE OF DISPOSABLE PLASTIC CUPS IN KINDERGARTENS

Kindergarten/town:	
Age (please mark):	a) <25 b) 25-30 c) 30-40 d) 40-50
Sex (please mark):	f m
Occupation (please mark):	yes no
Education (please mark):	unskilled, GCSE, college, university, other

1. Do you know which cups are used in the kindergarten of your child?

- a) Yes
- b) No

If yes, please specify what kind of drinking cups are used _____

2. If disposable plastic cups are used in the kindergarten of your child, please take a guess how many plastic cups are used by your child every day?

- a) from 0 to 1
- b) 2 to 3
- c) 4 to 5
- d) If more, how many?

3. Do you believe that disposable plastic cups are helpful to the hygiene in the kindergarten

Figure 1.11 First page of the survey on the use of disposable plastic cups

Inspection and observation or exploration

The method *inspection and observation or exploration*²⁴ is a way of taking an inventory. The students review, for example, the school building and the school yard and during the process thereby record certain characteristics and irregularities in accordance with the monitoring task. This can be for example the handling and the use of energy. Before that the group worked together on an observation sheet about which aspects should be observed or explored. Then small groups of three to five students are formed. Each group reviews their respective area and fills out the observation form. Then the groups discuss their results in a joint round. In order to prove certain results, photos can be taken additionally. The important thing here is to make sure that the photos are assigned to the relevant notes.

Duration: about two hours

Material: sheets for notes, observation sheets, pens, if possible clipboard, if possible digital camera.

Example: The Green patrol of Marjan

As part of the training program of the organization Sunce an exploring mission, a "Green Patrol", was carried out in the Forest Park Marjan in September 2013 which was attended by students of the girls boarding school in Split. One aim of the "Green Patrol" was to promote awareness about environmental issues among students. Before the start the procedure of the patrol was discussed with the students. The task consisted of two areas about which pupils were to write down their observations or information: cleanliness, maintenance and infrastructure as well as use of the forest park Marjan. Students were divided into four groups of four to five participants. Each group received questions about an area on which they had to write down their observations or information, documented by a photo (e.g. waste on the road, broken waste bins, etc.). After the completion of the two-hour patrol a plenary session was conducted in which each group presented their results. Finally these were discussed.

If-then-Poster

The method *If-then poster*²⁵ is good to find out what each participant can and want to do for the project in advance of the decision about the selection of a topic/project. The moderator prepares a poster for each available topic/project available for selection. Under the title you find: "If this project is selected, then ...". Then stripes of paper or index cards and pens are distributed to each participant and the process is explained. Now the moderator asks a maximum of four questions that are answered by the participants on their cards and that are written down on the posters. The questions must be clear and unambiguous and allow for concrete answers. Examples of questions are: *What will I do if I participate in this working group?*, *What I will do for our project?*, *What will change in our school?*, *How much time am I willing to use for this project?* It is important that only one thought is written on a card using headwords. When all participants have finished they present their statement before the whole group and attach it next to the written question on the poster. Afterwards the group tries to decide on a topic/project. It is essential to ponder where e.g. the largest positive or most long-term effect is expected, which project get most support in the group, where everyone can contribute particularly well, where most skills are available and which topic/project has the biggest chance of success.

Duration: about 20 minutes

Material: a prepared poster for each topic / project (large sheets of paper), paper strips or moderation cards in sufficient numbers, tape or pins, felt-pen for each participant

Example: Workshop as part of the educational program "Composting"

The method *If-then poster* was used in the workshop "Composting! How can that work?" as part of the educational program "Composting" (see chapter 4). It was attended by 20 students of the 8th grade of the primary school Pujanke from Split.

The facilitator prepared a poster with the heading "Composting! How can that work?". Underneath was written: "When composting is done at school, then ...". The students received paper cards and

²⁴ Source: www.kinderpolitik.de (27.05.2014); ²⁵ Source: www.kinderpolitik.de (27.05.2014).

pens. Then the facilitator asked the following questions: *How would you like most to get involved in composting?*, *How can you win other students and teachers for composting?*, *How do you motivate other students and teachers to separate waste?* The students answered the questions on their cards (see figure 1.12). It turned out that some students prefer to collect organic waste while others prefer to redeploy the compost heap or want to water it during dry conditions. In order to motivate their classmates the participants wanted for example to create containers for organic waste during art education and distribute them in the classrooms. They also had the idea to advertise for composting with classmates, in the family home and among friends by word of mouth.

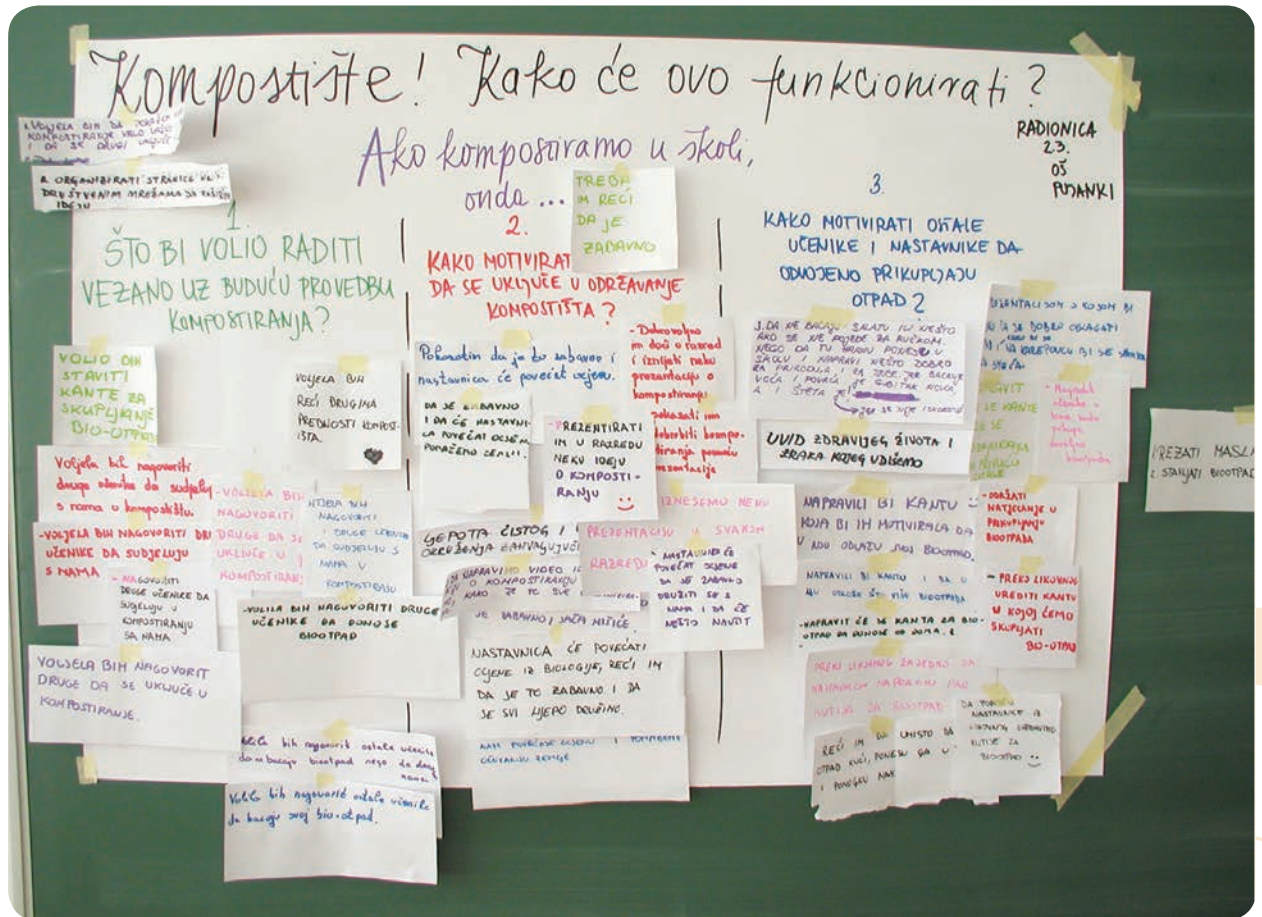


Figure 1.12 If-then poster

Our Way

The method *Our way*²⁶ is suited for the development of a strategy for action for the implementation of a project within a short time. The moderator prepares a large wall newspaper. At the top the aim of the project is written. Below there are from bottom to top - symbolizing a path - glued "footsteps". Examples of topics are: *How can we achieve more participation?* or *What can we do to make our school more environmentally friendly?* The group is divided into small groups of three to four people. The teams have the task to look for solutions and to write on cards in keywords. They have 30 minutes for this task. Following this all the small groups come together and present their proposed solutions. The cards are attached to a pin board next to the wall newspaper. Together first the duplications have to be summarized and then the proposals have to be thematically arranged. In a next step the group turns its attention to the wall newspaper "Our Way". How can the proposals be brought together into a way meaning a concrete action strategy to achieve the objective? It is recommended to write the solutions into the "footsteps" again. Here also small adjustments can be made. If not already done the steps are brought into a meaningful, mostly chronological order at the end (*What do we do first?, What comes next?* etc.).

The resulting action strategy "Our Way" is the starting point for more detailed planning: *What do we have to do to achieve the first step?, Who takes over what task?, Who can we win as a supporter?* etc.

Duration: about two hours

Material: a large wall newspaper, "footsteps" (left and right feet, see working material 1.3), moderation material (cards, pins, felt-pens), working template "Concrete planning steps towards the implementation of the project" (see working material 1.1)

Example: Workshop on participatory teaching and learning methods in environmental protection and in sustainable development

During the workshop on participatory learning methods (see chapter 4) the participants dealt with various environmental issues which are suitable for educational work in the school. Finally they developed a strategy of action and more concrete planning steps for the implementation of ideas on the basis of the method *Our Way*. For this purpose the participating teachers were divided into groups of four people. The small groups were given the task to agree on one of the project topics that had been developed during the workshop. Then they had to write suggestions on how these issues could be integrated into the educational work. Once the proposals had been created and presented in plenary, the participants developed a concrete action strategy. For this purpose they wrote their ideas into "footsteps" and arranged them into a meaningful sequence regarding time and organisation.

Finally the participants concretized their ideas using a planning template with the following questions: *What will we do?, How will we do it?, Who is responsible?, What do we need?* and *Who can help us?* (see figure 1.13 and materials 1.1). The results were written into the wall newspaper and each group presented their idea to the other participants.

Plan grupe: RADIONICA: ISPITIVANJE KVALITETE ZRAKA U BLIZINI ZGRADE AUTOMOBILA		
Što ćemo raditi?	Kako ćemo to uraditi?	Tko je odgovoran?
Uzeti uzorke: 1. Zraka u blizini škol. zgrade 2. Zraka ceste/šćenog (u blizini auspuha automobila)	hemjskim metodom ispitivaju zraku	Voditelj grupe učenici
Što nam je potrebno?		
Uzorci zraka, laboratorijski pribor i kemikalije		
Tko nam može pomoći?		
H.T.T. - laboratorij za ispitivanje kvalitete zraka		

Figure 1.13 Concrete planning steps towards the implementation of the project

²⁶ Source: www.kinderpolitik.de (27.05.2014).

1.2 Relaxation games/creativity-stimulating exercises

Brain-Gym-exercise

The aim of the *Brain-Gym-exercise*²⁷ is the activation of the left and right brain hemisphere. For this purpose the participants stand in a circle having enough space around them. The moderator gives the instruction: "With your left hand touch the right ear and at the same time with your other hand touch the nose - then touch the tip of your knees crosswise with both hands - now reversed, means the right hand to the left ear and the left hand to the tip of the nose, go ahead and continue the exercise in constant change." Through this crosswise movements both the left and the right brain hemisphere is activated and its performance linked.

Duration: five to ten minutes

Material: not needed

Knots loosening

The aim of the exercise *Knots loosening*²⁸ is to relax the participants and to work together in order to solve a problem. The participants form a circle, all stretching their hands out to the front. On a command all do one or two steps towards the centre of the circle with the eyes closed and each one take a stranger's hand. It has to be ensured that not both hands of one person are taken. The resulting knot has then to be loosened without the hands being released. The exercise is finished when all participants again stand in a circle. It should be carried out with 12 to 15 participants.

Duration: about five to ten minutes

Material: a sufficiently large space

Secret Friend

The aim of the exercise *Secret Friend*²⁹ is to promote group solidarity through another and more intense getting to know among the participants and to create a positive atmosphere. In addition this exercise can be used as a final event of a workshop. Initially all participants write their first and last names on a piece of paper. Then each participant draws a name and gets the task to present a gift to this person at the end of the workshop. The person who has been drawn is the "Secret Friend" not to be revealed until the end of the event. During the workshop now everyone is trying to find out discreetly about his "secret friend" and prepares a gift. The gift should not be a material thing but could be, for example, a praise for something you have learned from that person during the workshop, or the highlighting of a positive feature. With the distribution of the gifts the completion of the workshop will be celebrated.

Duration: throughout the workshop

Material: not needed

Activation game

The aim of the *Activation Game*³⁰ is to promote group cooperation and to create a positive atmosphere. The moderator explains how the sounds of rain or the springing up and the easing of a storm can be generated, and gives instructions about these. Blowing of the wind: to blow out of the mouth, light rain: to snap the fingers, heavy rain: to clap the hands, thunder and very heavy rain: stomping with the feet on the floor. Then all participants close their eyes and listen to the instructions of the moderator simulating the slow beginning of the rain, the storm and the easing of the weather.

Duration: about ten minutes

Material: not needed

24 ²⁷ Source: Teršelič/Mladineo (2006), p. 106; ²⁸ Source: Albers/Broux (1999), p. 117; ²⁹ Source: Teršelič/Mladineo (2006), p. 106; ³⁰ Source: NESsT (2011).

2. Service-Learning - Civic engagement in connection with professional learning

In biology class, learners of a secondary school will engage with ecosystems and native plants and design a nature trail with information boards in collaboration with the environmental group in their community.

"Service-Learning - learning through civic engagement is a form of teaching and learning that combines community involvement of students with professional learning".³¹ Within Service-Learning projects, students are committed to issues of their city, their neighbourhood and society and thereby make a service to the common good (service). The involvement of pupils can be in the social, cultural, political or environmental field. It is essential that they are doing something for other people and for society and thereby gain experience with democracy. In addition there is a close connection between the classroom and the projects that are carried out by the students. Students engage from the lessons, closely linked to the professional learning and deal with lesson content in a practical way. The Service-Learning project is planned in the classroom, the students' experiences are reflected and linked with the lesson content (*Learning*).³²

The origin of Service Learning comes from the "Civic Education" from North America and England, an education for democratic action and civic engagement. Civic Education has the "aim to equip citizens of the society with the knowledge necessary for civil society actions, to give them appropriate practical skills and to build democratic positions and attitudes. Here the school plays an important role as an intermediary institution."³³ The basic idea of Civic Education is to have students learning democratic thinking and acting through social learning and civic engagement. As part of Civic Education, Service-Learning is a practical approach. As already mentioned above the civic engagement may be in the social, cultural, political or ecological field. However, practice shows that - probably due to the close connection to social learning - Service-Learning projects are usually placed in the social sector. But the environmental field also offers a variety of connecting points for Service-Learning and in recent years has been discovered more and more as a field of activity. After all, the requirements of environmental protection and nature conservation are also in very close connection with the promotion of common welfare and contribute to a better nature and environment. The Service-Learning projects listed in section 2.5 show this as an example.

2.1 Service-Learning as a link between civic engagement and practice oriented learning

Service-Learning projects are characterized by a close link between civic engagement and practice oriented learning. Civic engagement means that students in the municipality or city voluntarily contribute to support people, organizations or public institutions. To learn practice oriented means that students learn in the classroom through hands-on experience. In most cases the projects take place in out-of-school places of learning. In Service-Learning projects the students will be given the opportunity to try out civic engagement in society out of the lessons. This connection of citizenship and practice oriented learning is twofold: on one hand, students are introduced to civic engagement. They develop democratic and social skills and can develop their personality. On the other hand, the students learn to use practical knowledge and skills and thereby understand lesson content in a more holistic way.³⁴

2.2. Connection of Service-Learning with the curriculum

Service-Learning is suitable for primary school students as well as for secondary school students and is conducted in connection with various subjects. The following examples are taken from Seifert/Zentner/Nagy (2012).

³¹ Seifert/Zentner/Nagy (2012), p. 13; ³² Seifert/Zentner/Nagy (2012), p. 12. f; ³³ Frank (2005), p. 2; ³⁴ Seifert/Zentner/Nagy (2012), p. 13

Examples of Service-Learning

Social studies

In social studies lessons students of a primary school learn about native animals **and** plants and organize an adventure day in the city forest with games, nature excursions and lunch for kindergarten children.

Geography

In the intensive course in Geography learners will deal with the development of their district, with historic changes and the possibilities of participation of citizens in their area **and** prepare their research results in the form of a public exhibition.

Civics

In civics secondary school students deal with equal opportunities and discrimination in our society **and** get involved by different projects in social institutions of their community.

Science Education

In a project lasting several weeks in science classes of a secondary school, the students deal with complex scientific contexts **and** develop simple interactive experiments to make experimental afternoons for preschool children in a kindergarten.

Computer science

In the computer science education of a secondary school students develop a computer training for older people **and** offer this in the neighbouring nursing home on a regular basis.

These examples clearly show the content connection between engagement and school learning. In practice this means that learning objectives are formulated and harmonised with the curriculum. Students use their knowledge and skills in real contexts. The practical experiences are reflected in the classroom, related to the learning content and the students' performance is documented. Moreover, alongside the content curricular connection, there is a structural curricular connection because the project is not an additional activity or volunteer work but a compulsory part of the curriculum and integrated into the regular subjects.³⁵ Because of the integration in the regular classes Service-Learning can bring all children and young people to community engagement. The main aim is "that all children and young people can have this experience - especially those who do not take voluntary, extra-curricular involvements or have no access to these due to lack of role models or lack of time, willingness, knowledge or skills".³⁶

2.3 Implementation of Service-Learning projects

Timeframe

A Service-Learning project can be a time-limited teaching project such as a ten-week project that is carried out in science classes. However, it can also run for an entire school year, e.g. related to a compulsory course. Normally the implementation depends on the school context where (e.g. subjects, teaching themes) a project can be carried out, the starting position (e.g. existing contacts and cooperations, existing needs in the school environment) and the educational objectives to be achieved. Experience has shown that Service-Learning projects should have at least six to seven weeks available.³⁷

Conditions at school

It is important that the teacher is motivated to design the lessons in a different way, to offer a participatory way of learning to the students as well as a way to get involved in society. It is especially helpful to win the school administration to support the project.³⁸

Insurance of students

Service-Learning is a teaching activity, therefore the students are insured through the school like at field trips or school trips, even if they leave the school premises. The education act provides more detailed insight into the provisions of the accident and liability insurance.

26 ³⁵ Seifert/Zentner/Nagy (2012), p. 74; ³⁶ Seifert/Zentner/Nagy (2012), p. 20; ³⁷ Seifert/Zentner/Nagy (2012), p. 18; ³⁸ Seifert/Zentner/Nagy (2012), p. 19.

2.4. Quality standards for Service-Learning projects

Service-Learning projects are very diverse. Depending on what type of school, age group or in which school subject they are carried out, they differ from each other. Therefore there are six criteria for orientation, so-called quality standards, to assist in the implementation of Service-Learning:³⁹

1. **Real need:** The engagement of the students is responding to a real need and is perceived as meaningful and significant by all stakeholders.
2. **Connection to the curriculum:** The Service-Learning project is part of the curriculum and is linked to the lesson content.
3. **Reflection:** There is a regular reflection of the experiences of the students.
4. **Student participation:** Students are actively involved in the planning, preparation and organization of the project.
5. **Civic engagement outside of school:** The practical engagement takes place outside the school in cooperation with extracurricular engagement partners.
6. **Recognition and finish:** The engagement of the students is appreciated by a continuous feedback during the project and by a finish with compliments.

Discover needs

It is important during planning and implementation of a Service-Learning project that the project responds to a real need. Students should take care of a real problem and take on a responsible and meaningful task. Their engagement should be really needed by their partner (e.g. municipality, kindergarten, environmental organization) and provide a real support. Whenever students realize this to be the case their motivation increases to get involved and contribute. The interests of the engagement partner should show a balanced relationship to the interests of students and teachers. It is also important that the engagement of the students is valued and that they are not only seen as a "cheap assistants". At the beginning of the project research is done about the demand. This should also be done if the engagement partner and the concrete idea have already been established. At all costs, students have to be involved into the required research and the subsequent planning process in order to contribute their own ideas and suggestions and thereby identify with their projects and are motivated. It is essential for both the required research as well as the planning process that the project makes sense for everyone involved and is not planned past the needs of the target group/engagement partner.⁴⁰

Exemplary questions for the required research

What are our ideas for an engagement?, Where are the needs?, What kind of engagement is really needed by whom?, How can we prepare sufficiently for the engagement?, How exactly it should be designed so that it is really useful? And what can we learn?⁴¹

Methods for brainstorming

To find ideas for engagement the following methods are available: Brainstorming, Interview forays (surveys/polls) as well as inspection and observation and exploration. To agree on an idea e.g. the method *point decision* could be used.⁴² Using the *SMART method* the project aim can be checked whether it is specific, measurable, attractive, realistic and terminable. Eventually the project will be planned together (see working material 2.1).

Links to the curriculum

Service-Learning is part of the curriculum. Compared to similar concepts of promoting engagement the links to the curriculum are a special feature. On the one hand Service-Learning is structurally embedded in school, e.g. as a several weeks project in a subject, as an interdisciplinary project or as a required elective course. On the other hand the engagement is linked as regards content: themes from the engagement, e.g. early childhood development with an engagement to small children, aging and dementia with an engagement to seniors or local ecosystems with an engagement to nature, are prepared

³⁹ Seifert/Zentner/Nagy (2012), p. 14; ⁴⁰ Seifert/Zentner/Nagy (2012), p. 55 ff; ⁴¹ Seifert/Zentner/Nagy (2012), p. 59; ⁴² The methods mentioned are described in chapter 1 in detail.

in class, reflected and related to the action of the engagement. This way a direct use of knowledge and skills is possible in real contexts. The close professional support also has the aim to have students feel competent and safe in their activities, better evaluate situations and respond appropriately and to have them respond appropriately to the needs of the engagement partner and audience. The regular reflection on the experience of the engagement hereby plays a special role.⁴³

Reflection

Reflect means to think about something. With Service-Learning reflection is a connection between the engagement and the lessons and runs like a central theme through the Service-Learning project. Reflecting on one's own actions is planned in a structured and targeted way and is done simultaneously with the implementation and completion of the project. The aim is that students think about what they have done and what they have learned. Thereby success can be made visible, own skills and competencies can be discovered and problems can be identified and solved. In addition the reflection helps at planning and controlling of the project progress. It is also essential that the project is placed in a larger social context in order to consider the own experiences in this regard and to understand the impact of the own actions on environment and society.⁴⁴

The reflection is divided into four themes:⁴⁵

- **reflection about yourself:** to understand own abilities, attitudes and developments
- **reflection on the course of the project:** to solve problems, make success visible
- **reflection on the relationship between learning and engagement :** to apply knowledge and skills, to understand the meaning of classroom learning, using experiences for learning
- **reflection on the social context of the engagement :** to perceive the own role in society, to look at experiences in a larger context, to highlight own values

The reflection should be done before, during and after the engagement. Below two questions are given respectively about the three phases of reflection. More detailed questions about reflection can be found on the worksheet "Reflection of the Service-Learning project" (see working material 2.2).

Example questions for reflection:⁴⁶

Reflection about yourself:

- *Where do I want to get involved?, What does the engagement partner expect from me?*
- *What do I really like?, What did not run so well?*
- *What new things have I learned?, What does it mean to me to stand up for others?*

Reflection about the project development:

- *What do we want to achieve?, How can we optimally support the engagement partner?*
- *What has worked really great this week?, What would I do in a different way next time?*
- *How have our actions been received by the engagement partner?, How did we overcome difficulties/challenges?*

Reflection on the social context of the engagement:

- *What is civil engagement and how does it benefit society?, What do I know about the social or environmental problems and their backgrounds in my city/my environment?*
- *What contribution do I do to society with my engagement ?, Why are there the environmental/social problems that my engagement deals with?*
- *In my opinion, what has changed because of my engagement ?, What would have happened if we had not engaged?*

Methods for reflection:

In order to answer these questions it makes sense to do for example a *brainstorming* or *brainwriting* and to discuss the results in the group afterwards. Selected topics (e.g. for reflection on the social context) can also be discussed using the method *My opinion* or *small group work*. The method *flash light* is useful for any reflection phase as it allows some feedback about the project.⁴⁷ Other methods are listed in the worksheet "methods of reflection with students" (see working material 2.3).

28 ⁴³ Zentner/Nagy (2014), p. 3 f; ⁴⁴ Seifert/Zentner/Nagy (2012), p. 94 f; ⁴⁵ Seifert/Zentner/Nagy (2012), p. 96; ⁴⁶ Seifert/Zentner/Nagy (2012), p. 98 ff; ⁴⁷ The methods mentioned are described in chapter 1 in detail.

Student participation

In Service-Learning participation means student participation both in school and lesson as well as in society. Students contribute their own ideas to the planning and execution of the project, search for solutions to the problems/challenges they are dealing with and reflect on the course of the project. They also get involved outside of school, contribute to the common welfare and learn to co-form society. It is essential that students can take informed decisions and responsibility and in this way experience showcase social participation in their Service-Learning projects.

In practice, student participation be implemented by:

- creating a trusting work environment and
- letting students participate in the selection and planning of the engagement and
- the course and the completion of the project.

A trusting work environment can, for example, be created through the setting of common rules on cooperation, the implementation of teambuilding activities and through the exemplary role of the teacher in terms of a respectful, appreciative cooperation among each other. The extent of student participation in the selection and planning of the engagement depends on how many specifications already exist for the project. It is important - even in projects where specific conditions are already given - that not all is certain beforehand. There should always be the possibility that students can get involved with their ideas and proposals. Even if the engagement partner, the needs and the project have already been established, the students can be involved in, for example, the actual planning and design. Here it is particularly necessary to ensure that students actually have a say and that not only verbal participation is granted. During the implementation phase of the engagement students from the project in a responsible way and are challenged by finding solutions to problems independently and by acquiring necessary knowledge and skills. Here the teacher has the role of a tutor and supports and accompanies the students.⁴⁸

Civic engagement outside of school

A cooperation with extracurricular engagement partners from the district or the municipality is part of every Service-Learning project. The school opens up to the environment and provides students with the opportunity to discover new places of learning where they can apply their knowledge and skills in authentic contexts. The students help to solve real problems, make a real contribution to society, can have new self-experience, experience self-efficacy and gain more motivation for learning and teaching.⁴⁹

Recognition and finish

A motivational recognition culture and an appreciative attitude running through the entire project are an integral part of Service-Learning. The engagement of all participants is valued from the beginning and is also duly celebrated at the end of the project. Recognition is given, for example, by the fact that the students take a self-determined and responsible task and that they get familiar with being able to cope with their skills and abilities. Furthermore students get recognition through the feedback and reflection throughout the course of their engagement. These intermediate reflections and regular feedbacks make, for example, the achievements and progress of each student visible. Also the public acknowledgement of the Service-Learning projects during or at the completion of the project are part of the culture of recognition. Last but not least a personal appreciation and personal thanks is motivating for all participants. A joint final ceremony and the awarding of individual certificates (see materials 2.4) complete a due recognition.⁵⁰

In principle the implementation of Service-Learning projects can be divided into three phases. In the first phase the requirement is explored and concretized, in the second phase the idea about the engagement is implemented and reflected, and in the third phase the project will be evaluated and finalized. The worksheet "Three phases of Service-Learning" (see working material 2.5) provides a summary of the contents of the three phases.

⁴⁸ Seifert/Zentner/Nagy (2012), p. 118 ff; ⁴⁹ Seifert/Zentner/Nagy (2012), p. 142 ff; ⁵⁰ Seifert/Zentner/Nagy (2012), p. 154 ff.

As a supporting structure for schools and partners engaged in Service-Learning in Germany a nation-wide network was initiated in 2007. Common goals of the Netzwerk Service-Learning – Lernen durch Engagement, which is funded and coordinated by the Freudenberg Foundation, are to connect the pioneers in the field, to continuously improve the quality of Service-Learning practice and to increase awareness of Service-Learning in public and (educational) politics. The schools of the network are in regular contact with each other to exchange ideas, reflect experiences, receive further qualification and work in depth on the quality of their Service-Learning-pedagogy. More information about Service-Learning in Germany can be found here: www.freudenbergstiftung.de/en/key-tasks/learning-through-civic-engagement/learning-through-civic-engagement.html

2.5 Service-Learning in practice

Below an insight is given into the practical implementation of Service-Learning projects in Croatia and Germany. In the beginning a Service-Learning program will be presented which was implemented in Croatia in cooperation between the environmental organization Sunce and the Natural Science and Engineering School in Split. This is followed by two civic engagement projects from Germany which were carried out in cooperation between the Eduard Spranger-School and the environmental centre Listhof in Reutlingen and between the Werner-Heisenberg-Gymnasium and the daycare Pusteblume in Weinheim.

Learning through participation - the environmental organization Sunce is cooperating with the Natural Science and Engineering School of Split

In the course of a school year the students deal with environmental issues such as pollution and waste management in the subject "Nature and Environmental Protection in the Republic of Croatia" and carry out the practical part of the thesis by taking part in relevant activities of the environmental organization Sunce.

Engagement outside of school

The environmental organization Sunce is dedicated to environmental issues such as waste management, marine pollution and management of protected areas. For four years Sunce has performed a Service-Learning program where a group of five to eight students of the final year of the natural science and engineering school in Split participates each year. To meet the quality standards for Service-Learning, Sunce has worked intensively on the further development of the existing Service-Learning program in the school year 2013/2014. The engagement project of the students will be accompanied by five workshops of the organization Sunce where all students participate together (see material 2.6). There is also an individual cooperation of mentors from Sunce together with students who realize the practical part of her thesis in connection with the participation in activities of the environmental organization Sunce. Students in the framework of this project deal with the role of the civil society, legal aspects of certain environmental problems and causes and effects of various environmental problems in their surroundings or in the city of Split.

The Service-Learning program of the environmental organization Sunce was further developed and implemented within the project "Take part in sustainable development". The cooperation so far between the Natural Science and Engineering School and the environmental organization Sunce was supported in part by the Croatian Ministry of Science, Education and Sports, the city of Split and by Sunce.

The Service-Learning program is performed for the period of an entire school year (September/October to May). Depending on the nature of the practical work the duration of the project can also be shorter for some students. The practical involvement is taking place to some extent on the premises of the Organization Sunce and in part in different locations of Split, depending on the activities where the students participate (e.g. surveys

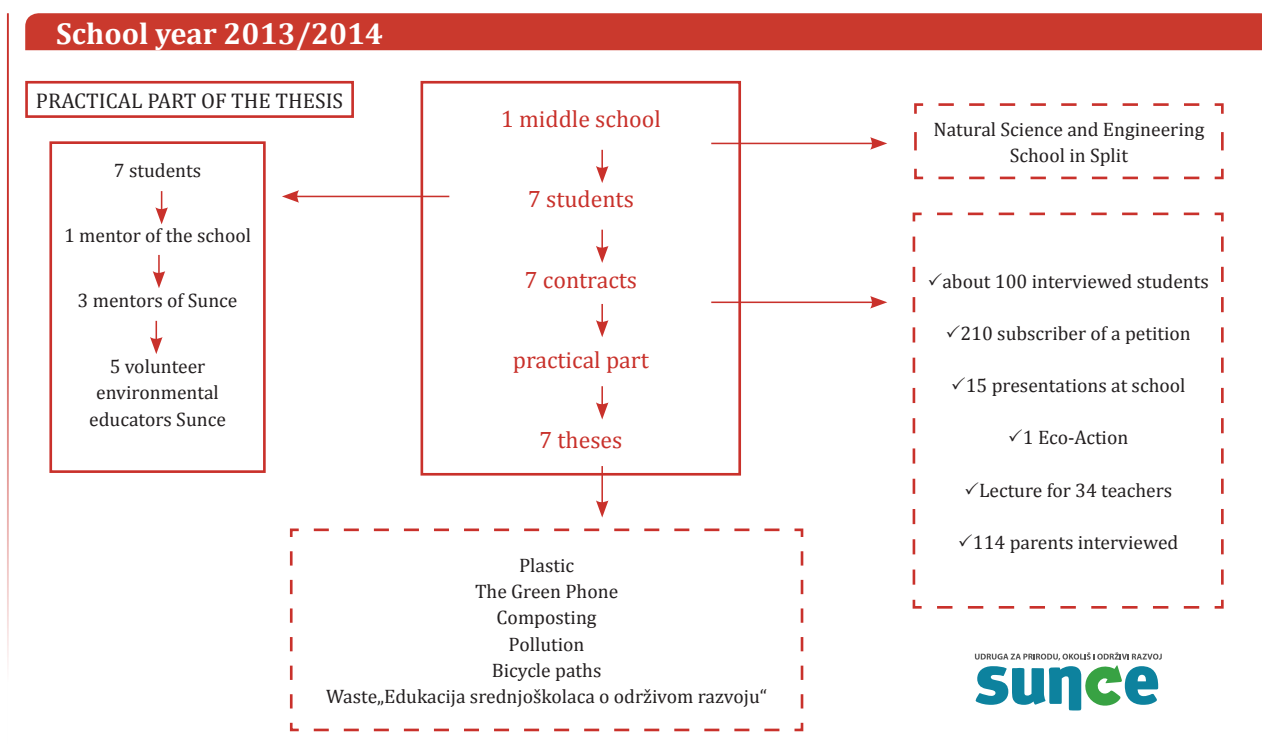


Figure 2.1 Representation of the practical part of the thesis, graduates 2013/2014

in kindergartens or at places where environmental problems have been reported by the Green Telephone etc.). Sometimes the activities of students are carried out at school. Mostly this involves peer education or a survey of fellow students. The following figure provides an overview of the practical part of the thesis which was implemented in the school year 2013/2014 in cooperation with the organization sunce within the frame of the Service-Learning program.

Real need

At the beginning of the school year employees from Sunce do an internal workshop. The aim is to identify projects and activities that are suitable for the Service-Learning program. At the same time mentors are defined who will accompany the program on the part of Sunce for the coming school year. After that the workshop "Environmental problems in the city of Split - selection of topics for theses" will be attended by the students and the mentors of Sunce. During the workshop the students deal intensively with the problems of the city and the needs of the society. In addition they select topics that are of personal interest, that are connected to their thesis and where they see opportunities to contribute to the solution of a problem through their commitment. Throughout their practical activities in the organization Sunce students as active citizens of the city of Split eventually get an insight into the importance and impact of their commitment to civil society.

Links to the curriculum

The Natural Science and Engineering School is a Croatian professional school for environmental engineers. In Germany this school represents a vocational high school with an emphasis on scientific subjects. In the final year of the last school year the students do 40 lessons of professional experience that are done outside of school. Here the Service-Learning program comes into effect which is carried out during the school year with 30 to 40 lessons, depending on the commitment project of each student.

An environmental engineer tests, monitors and controls processes in the industry, business, municipal service companies, in public environmental protection facilities and in research, control, audit and measurement laboratories with an emphasis on environmental protection and nature conservation.

By participating in the activities of the organization Sunce the students gain insight into the

environmental problems of the city of Split and into possible solutions for correction and prevention. They get to know institutions that deal with these issues and they also deal with the role of civil society. The Service-Learning program is designed in a way that students can use the results of their practical work in the organization Sunce for developing their thesis as part of the subject nature and environmental protection in Croatia. In the final exam, which will take place in accordance with the curriculum of the natural science and engineering school before the conclusion of the respective last school year, in addition to the mentors of the school also the mentors of the environmental organization Sunce take part.

Reflection

In the first workshop together "We get to know each other and talk about our expectations" where both the students and the mentors participate in, mutual expectations are identified and arrangements for a good working relationship are made (see figure 2.2). Depending on the activities that are carried out within the framework of the selected subjects, the mentors of Sunce and the students meet for a total of about 15 to 30 times (including the meetings in the joint workshops). In each meeting with the mentors the experiences of the students are reflected. The meetings last about one to two school lessons and take place every week or every two weeks. In the final workshop "And how was it?" both the students and the mentors assess the Service-Learning program and the activities. Here all have the opportunity to express their opinion and to identify possible problems in the implementation of the program. This is done using the participatory method "My opinion" (see chapter 1) as well as individual questionnaires. The results of these evaluations form a basis for an optimization of the Service-Learning program.

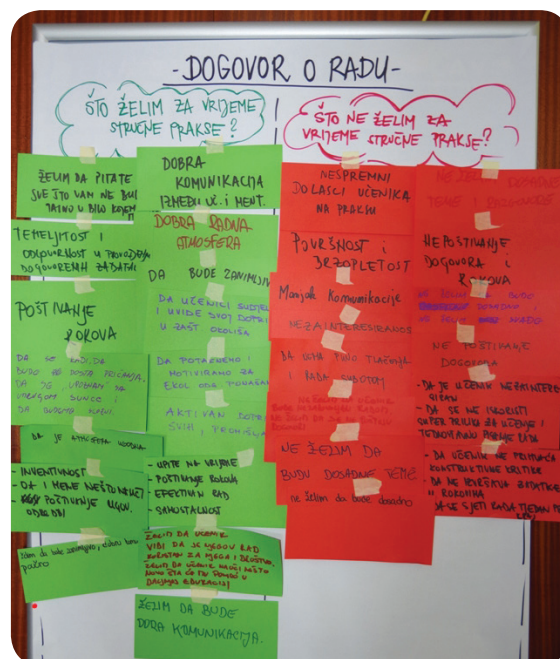


Figure 2.2 Agreement on work rules during the practical involvement in the environmental organization Sunce

Student participation/Implementation

Depending on the current projects of the organization Sunce and on the ideas and interests of the participating students, the Service-Learning program is structured differently in each school year. In the school year 2013/2014 the seven participating students have dealt with the following issues and prepared their final papers accordingly: "Plastics in today's society", "the Green Phone", "Composting", "Pollution of the seas", "Bike paths", "Waste management" and "Peer education on sustainable development". In the practical part, meaning in cooperation with the Organization Sunce, the following activities were carried out: "Parent survey about the use of disposable plastic cups in kindergartens", "Survey of fellow students about composting", "Students petition for the preservation of the park forest Marjan", "Participation in the 'green' and 'blue' cleaning action (see figure 2.3), "Peer education" (15 presentations on "the Green Phone" and "Composting").



Figure 2.3 "Blue" cleanup on the beach in Split

The "Green Telephone" is a device which has been available to citizens in Split-Dalmatia and Dubrovnik-Neretva as a telephone hotline for environmental questions since 1999. It is part of Croatia's "Green Telephone Network" where currently ten environmental organizations are involved. Sunce is responsible for calls from the County of Split-Dalmatia and Dubrovnik-Neretva. Objectives of the hotline are the public awareness of environmental issues, the involvement of the local community in solving environmental problems and to promote the attention of local authorities and media with regard to environmental issues. The "Green Phone" can help to better identify problems and solve these more quickly in the community. Depending on the nature of the problem, the caller will be referred to the competent authorities or the organization Sunce establishes contact with the relevant institutions or persons. If necessary, Sunce conducts control visits, contacts the media or organizes public actions.

Recognition and completion

Students experience recognition by having a responsible task entrusted to them. They are given credit that they can handle this task with their skills and abilities. Throughout their involvement they also experience the recognition during the intermediate reflections and the regular feedbacks where the achievements and progress of each student will become visible. Furthermore, recognition is experienced by the students in the workshop "How was it?" at the end of the project, dealing with the final evaluation of the entire Service-Learning project. In addition, their commitment is recognised by the public announcement of the Service-Learning project on the Internet and Facebook pages of the environmental organization Sunce and on the website of the Natural Science and Engineering School. Not seldom the media pay attention to the activities of the students because of that. The appearance in radio or television broadcasts and articles in newspapers the students also experience as a recognition of their work. In addition, they will receive - after successfully passing the final examination where in addition to the Mentors from the Natural Science and Engineering School also mentors of the organization Sunce take part - an individual certificate in which their personal commitment is honored. Small gifts such as T-shirts or a free membership in the environmental organization Sunce complete the recognition.

Schoolyard Project - Eduard-Spranger-School in Reutlingen collaborating with Environmental Education Center Listhof e.V.

During a four-week project in NWA lessons (scientific working) and in EWG lessons (geography, economics, civics) student deal with animal husbandry, regional and global food production and apply the acquired knowledge during their work in the environmental education center Listhof by directly implementing animal welfare and sustainability in the garden management.

Engagement outside of school

The community school in Reutlingen organises the Service-Learning project in cooperation with the environmental education center Listhof e.V. from Reutlingen. In the "Schoolyard Project" students learn about how complex animal husbandry is and acquire knowledge about a range of ecological contexts. They are involved in animal care all the year, build stables and actively work on landscaping in the environmental education center. The environmental education centre provides an exciting extracurricular place of learning to the students. A group of ten students of each grade 5 and 6 are involved for a month of daily work twice a year. In this time pupils independently plan and carry out projects - from road-building to the construction of a "green classroom" in the so-called "foxhole"



Figure 2.4 Students at work in the goat enclosure

to animal care and stable building. They are accompanied by a teacher from the school, Listhof staff and volunteer project assistants. The project can be realized because the Listhof offers staff (through volunteering, etc.) and material support for the work that gives benefit to the center for environmental education. In addition, the project is funded through donations from various supporters and from profits that are realized by participating in various competitions.

Real need

For more than six years the environmental education centre Listhof has already offered students during orientation stage (elementary school) an extracurricular place of learning in the form of an AG (working group) for one afternoon per week. In Autumn 2010 the school and the Listhof wanted an extension of the good cooperation. It should be possible for the children to explore this new learning space before entering the difficult stage of puberty.

The aim of the environmental education center Listhof is to make available and to extend its high expertise in the field of environmental education and its extensive outdoor facilities by using the "Schoolyard Project".

Simultaneously, with the Listhof the Eduard-Spranger-School found an excellent partner for extracurricular learning in order to strengthen the knowledge and skills conveyed in the classroom. In the school year 2010/2011, a team of teachers and the school administration came together. In various meetings they planned the project together with the staff and the board of the Listhof as well as other educational experts and craftsmen. The upcoming demand is determined for each group at the beginning of the four-week Service-Learning project and the implementation is planned together. Students work for example in the field of animal care or take care of stables, gardens, orchards and the protected area.



Figure 2.5 Lettuce planting in the garden

Links to the curriculum

As part of the Service-Learning project, the extracurricular, hands-on learning is linked with the content of the educational plan. The Eduard-Spranger-School expects an immediate learning and motivation increase with the students. In the subjects NWA (scientific working) teaching areas include anatomy and diet of animals, construction of stables, love of animals, animal welfare and regional and global food. In the subjects EWG (geography, economics, civics) themes such as sustainable development and the marketing of agricultural products are discussed. In German lessons contents like the documentation of the project by students, keeping a learning diary and presentation techniques are covered. On the Listhof the theoretical content of the lessons is supplemented by real-life experience. Students for example inform themselves about the diet of various farm animals on the Listhof and continue this theme during the teaching of subjects in school. In addition to these links to traditional teaching traffic education is also integrated into the project. Students reach the Listhof by bike in about ten minutes, the bike has to be maintained during the time at the Listhof.

Reflection

The reflection takes place in the form of a daily retrospective, a week reflection, within the class representatives (class council, social lesson) as well as during the regular lessons. Here, for example, a reflection and perspective is done at 3:30 pm every day within the four-week daily commitment. During the Friday presentation at the end of the four weeks also the reflection and review about the experience gained while working on the Listhof is carried out. Here the "Listhofler" present their working and learning progress to all students of the orientation stage. They present, for example, all the materials and tools they have needed for road building, they show the encounter of a donkey with a horse in the form of a play or they give a PowerPoint presentation about a special topic.

Student Participation/Implementation

Students are involved in all necessary activities and, if possible, at all decision-making processes. Here, for example, the ideas and wishes of the students are collected at the beginning of the four-week activity. Then all think together about what can be implemented on the Listhof during the time available.

The daily routine of the students usually looks like this:

School Yard - day plan		
time	activities	remarks
11:35-11:50 (15 Min.)	Arrival	
11:50-12:15 (25 Min.)	Discuss work areas, change clothes	Days' objectives are defined and recorded in writing
12:15-12:45 (30 Min.)	Taking care of animals/prepare lunch	changing groups (on Thursdays bicycle maintenance is possible)
12:50-13:25 (35 Min.)	eating together, discussing further process	together! at the beginning, at the end
13:25-13:50 (25 Min.) Mittwoch 14:15 Ende	Dish-washing, chill-out, playing	Students stay on the premises, games available (changing groups)
13:50-15:15 (ca. 1 Std. 30 Min.)	Action in the fields of work discussed (in groups)	among other things, selection of contents of the Friday presentation and photo documentation
15:15-15:45 (30 Min.)	changing and cleaning, reflecting the day, state of the working groups, perspective of the next day	Writing session about the day's work and feedback session
15:45 - 16:00 (15 min)	Departure to school	

Figure 2.6 Daily routine of the students during the school yard project

Recognition and completion

During the reflection at the end of the day on the Listhof the results of the day are discussed and recognised by peers and adults. During the project time the students also get feedback and recognition by the staff and visitors of the Listhof and by teachers. During the presentation of the results on the last Friday of the four-week activity classmates and colleagues show appreciation and interest. The students receive a certificate with an individual feedback and recognition. In addition, parents are invited to the Listhof at the end of the school year for a tour and a barbecue. Here they can get information about the work of the students during the year.

Great experiments for little people - Werner-Heisenberg-Gymnasium in Weinheim co-operates with kindergarten Pustebblume

In a multi-week project in science teaching⁵² the students deal with complex scientific contexts and thereby develop simple interactive experiments to create experimental afternoons for preschool children in a kindergarten.

Engagement outside of school

The gymnasium in Weinheim is doing the Service-Learning project in cooperation with the daycare kindergarten Pustebblume. During the preparation and development of interactive experiments, the students deal with scientific phenomena and the challenge to explain this to the learning level of preschoolers. In the classroom they deal with the technical background knowledge and prepare the experiments which later they perform at the daycare center with the preschoolers. The Service-Learning project is designed for a period of about ten weeks in the subject science and technology (NwT), which is taught for four lessons per week. Students prepare the experiments during the first five weeks and then implement the lessons of experimentation in the second five weeks. Finally, the completion of the project will be celebrated together.



Figure 2.7 Participation experiment on the topic of water

Real need

For the new school year the teachers of the gymnasium had planned to make science teaching more project oriented for the 8th grade. During a further education the headmaster and some teachers got into contact with the concept of Service-Learning. Then they developed the idea about combining this teaching and learning form with the subject NwT. The headmaster learned about the needs of the kindergarten through personal contacts: the kindergarten management sought assistance in the frame of science education for pre-school children, as this is designated in the new orientation plans for early childhood education. The result was idea that eighth-graders could organize experiment lessons for preschoolers. This could be arranged well with the requirements of the training plan in the subject NwT and the idea of project-based teaching. The proposal was presented by the teachers to the day care management who were enthusiastic about the idea. During several meetings it was considered how the experimental lessons could be integrated best into the operation of the school and the day care and what is important for both partners.

Links to the curriculum

The Service-Learning project is connected to the subject NwT. Students get the specialized knowledge in the classroom and are looking for suitable experiments for preschool children. On this basis they explain - according to the level of development of preschool children - complex scientific contexts in simple terms. Of the total of four NwT lessons students use one as a testing lesson at the daycare center and two lessons for the preparation and evaluation of the experiments as well as the reflection of the experience.

Reflection

Accordingly to the experiments in the kindergarten the experiences in the subject NwT were reflected and the experiments revised and optimized. During the project the students involved also started a learning portfolio.

A learning portfolio is a learning diary where students document the completed project work and learning progress.

Student Participation/Implementation

At the beginning of the project the kindergarten management came to the school and presented their needs and the project idea to the students. This was followed by an observing afternoon of the students at the kindergarten. On the basis of research questions they observed the behavior of children in order to get information for the organization and content planning of the project. The visiting day was evaluated together using Mind Maps - and formed the basis for further planning. The students ultimately chose the themes of water, air, fire and senses and split themselves into four small groups. They were given the task of researching experiments about the respective topic. The experiments and the corresponding explanations were independently developed by the students and tested in the classroom in front of a class. After five weeks of preparation ten dates were set which took place on two days per week. During each date two or four groups of students presented their experiments. Each group performed a total of five lessons of experimentation.

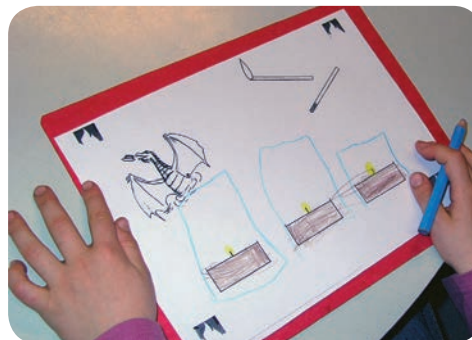


Figure 2.8 Worksheet for kindergarten children about fire

Recognition and completion

The students have considered to invite the children to school at the end of the Service-Learning project and to organize a little party with games, drinks and food. At the ceremony students then also received a certificate for their commitment from the school administration and the kindergarten children presented self-painted letters as a thank you to their "experimental teachers".

3. Sustainable student companies - ecologically and socially just managing

Student companies are wonderfully suitable to offer a (protected) area to students in which they can learn business skills and apply them in practice. The activities in student companies provides experiences in the economy, and especially in sustainable student companies the managing in an ecological and social responsibility. In Germany the first student companies appeared already in the eighties. In the nineties and during the first two decades of the new millennium this form of teaching and learning was and has been further promoted and disseminated steadily through various educational programs and projects.⁵³ Unlike in Germany, in Croatia this learning arrangement is not called a student company but a student cooperative (=Zadruga). The Zadrugas have a long and accepted tradition as cooperatives in Croatia.⁵⁴ Already in 1880 a student cooperative was registered for the first time. In addition there is a close connection to the tradition of school gardens, becoming an integral part of Zadrugas in the middle of the last century. Even today the school garden plays an essential role within the Zadrugas because it has an important educational function within school. In addition, today's Zadrugas see their task in preserving the biological and cultural heritage and caring for the traditions of the region.⁵⁵

In this chapter in particular experiences and sources from Germany are used for the presentation of basic information on student companies. It should be noted that besides the similarities there are also some differences in the implementation of student companies in Germany and Zadrugas in Croatia. At the appropriate parts of texts the differences that are encountered in Zadrugas are therefore explained.

3.1 What are student companies?

Student companies are companies led by students where products or services are offered and real profits are made. There are many analogies to real companies. Student companies have similar corporate structures and are oriented according to the market. Ideally they have a business plan, there is an accounting system, a market analysis is carried out and advertisement is made. Students take over - independently as far as possible - different roles and responsibilities, such as, for example, management, planning, production, sales and finances. But despite the proximity to real businesses this learning arrangement is an educational school project. Therefore a student company is an event with an educational objective organized within the frame of the school. In student companies students can learn about life. They experience economic relations in a very close way, acquire professional knowledge and skills and develop important personal, social and methodological key competences. In addition student companies promote an increased learning motivation, better marks, the experience of self-efficacy and self-organized learning, self-initiative, self-reliance, entrepreneurship and - in general - an improved employability.⁵⁶

3.2 Participative learning in student companies

Learning in student companies is based on real-life requirements. Knowledge is acquired through dealing with a real situation and can be used to solve problems and challenges in the student company. Learners participate, take an active, responsible role and are involved in joint decision-making processes. They are central to the learning process, take self-responsibility for their learning and have the opportunity to control and to organize to a large extent, for example, the learning as the management or management of a department. Each student is integrated and can bring in own abilities. In a student company also the traditional roles of teachers and students changes. In an optimal way the students are equally important to the supervising teacher. The teacher has an advisory and supporting role, he/she is facilitator and learning assistant, stays in the background and promotes the self-organization of students. In addition the work in student companies increases the motivation and self-esteem of students. They see an increase of their own skills and they experience that they can act competently on their own. Learners identify with the work, develop with their tasks and increase their independence and self-confidence. Especially in the experience of self-efficacy there is a significant potential for learning in student companies.⁵⁷

38 ⁵³ see Haan de/Grundmann/Plesse (2009), p. 6; ⁵⁴ in 2014 there were registered 380 members of the Croatian Association of Student Companies on the website, see. www.huuz.hr/POPIS-UCENICKIH-ZADRUGA-S8392 (12.11.2014); ⁵⁵ see www.huuz.hr/Ucenicke-zadruga-S7857 (12.11.2014); ⁵⁶ see de Haan (2009), p. 6 f; ⁵⁷ see Henze (2013), chapter 4.

3.3 What is special about sustainable student companies?

Basically student companies are a good method to convey learning content in a practical and action-oriented way. The members of a student company increase, as already mentioned, also essential skills such as reliability, team spirit and independence. However, the work of sustainable student companies goes farther: sustainable student companies do not only want to be economically successful, they are also pursuing environmental and social objectives. The principles of sustainable development are the basis of economic activity. So the decisions of the business are challenged by the environmental, social, local and global repercussions. The impact on the environment, the social interaction and the enterprise are taken into account.

To manage ecologically in terms of sustainability means that students can consider, for example, how material, labour and energy can be saved or how regional, organically produced products can be used. Other student companies (also) pay attention to social or global aspects and sell fair trade products or support not-for-profit projects in developing countries. The production conditions are carefully examined too. Here it is checked if, for example, pre-products were produced with child labour or whether environmental and safety measures were considered. Their creative ideas the students therefore implement in an environmentally friendly and social just way. Thus products are recycled or upgraded like, for example, bikes repaired, sport bags made of recycled gym mats or key chains made from used bicycle tubes. When offering services, among others, the social needs in the area will be considered. Here, for example, computer courses or a shopping service for the elderly are offered.⁵⁸

A good insight into how sustainable management in a student company may be implemented or how this can be further developed into a sustainably managed student company is provided by the checklist "Towards a sustainably managed student company" (see working material 3.1).

3.4 Integration in the classroom

In Germany student companies are particularly used in secondary modern schools and special schools as well as secondary schools. They are mostly be found in grades 7 to 10 and are often carried out related to vocational preparation and vocational training. Student companies can be involved in the classroom in different ways. Firstly, they are realized in an extracurricular way, for example, in the form of a voluntary working group (AG). Secondly, they are integrated into the compulsory curriculum and implemented, for example, in connection with the subjects economy, housekeeping, technology, mathematics, crafts and German. Depending on the business area of the company there are many connections to the teaching of subjects. In the subject group management, engineering, housekeeping students can, for example, develop and reflect contents of economic education like basic operational and economic concepts and business prospects starting with the business idea until the production, sale or accounting. Also subjects like German, mathematics, science, art, computer science and religion can be associated in a useful way with the work in student companies. In German classes, students can write business letters or create application documents. Calculations and determination of profit can then be taken up in the mathematics classes. In science classes the students can deal with, for example, interaction between human beings and environment and discuss the issue of a careful use of natural resources. Posters or flyers for the student company may be developed in art and/or computer science education. In religion or ethics classes students can discuss issues of social justice and fair living conditions.⁵⁹

In Croatian schools Zadrugas are mainly operated in primary schools and are mostly implemented in the classes 6th to 8th.⁶⁰ The Zadrugas are generally realized outside the regular classes and are the only extracurricular activity that allows students to develop entrepreneurial skills. Since Zadrugas play an important role in the education of pupils, it is desirable to integrate this form of teaching and learning into the compulsory curriculum of the school. Here a good opportunity is given by the Croatian curriculum framework for school education. It has been planned that the development of entrepreneurial skills and the promotion of entrepreneurship should be done within the framework of the education system on the basis of Zadrugas. So in some schools the interdisciplinary theme "entrepreneurship" has already been integrated into the activities of Zadrugas.

⁵⁸ see Berger/Pröpsting (2013), p. 6 ff; ⁵⁹ see de Haan (2009), p. 20 f; ⁶⁰ see Henze (2013), p. 18; ⁶¹ remark: primary school in Croatia is from 1. to 8. grade.

See Ministry of Science, Education and Sport (2010): The curriculum framework provides eight key competences which are to be promoted in the course of the school education. One of these key competences, called the entrepreneurial competence, including amongst others the abilities to develop and implement ideas, initiative, decision making, enthusiasm, self-realization, risk assessment, self-confidence, perseverance, trust, teamwork, solidarity, sharing of ideas and knowledge, cooperation, research and purposefulness. In addition to the eight key competences, the national curriculum framework also provides six interdisciplinary themes/learning modules including entrepreneurship.

3.5 Ten steps to a student company

1: Preparation

The idea of founding a student company has been developed. The founding team consisting at best of five to seven students and a teacher now has the task of starting the student company and make it run. It is important that other allies are found at school and all act in concert. These are, for example, the school administration, the teaching staff and other members of the school like the caretaker, parents or extracurricular partners. When founding a student company it is particularly important that the school board recognizes this company as a school project right from the start. Together with the school administration further points can then be discussed like the organization of the premises or the connection to the curriculum or the connection to other subjects. In addition, it makes sense to sign a cooperation agreement with the school administration (or school authority) to describe the further development of the student company. In the part "working material" an example of a cooperation agreement in Germany can be found, which provides a good template for orientation (see working material 3.2). Any other issues that should be addressed, discussed or completed are presented in the following steps.

2: Business Idea

During the initial phase of the student company a good business idea is searched for. The brilliant idea can be hidden everywhere: a specific need in the school (e.g. healthy eating) or in the community or the neighbourhood (e.g. range of computer courses for seniors). It is therefore important to keep the eyes and ears open in all directions and to exchange ideas with each other. For this purpose, a brainstorming session (see chapter 1) can be done followed by a discussion of what idea can be realized best. Key questions for developing a business idea can be found in the worksheet "Key questions for the development of a business idea" (see working material 3.3). It is important to agree together on what should be done and to assess whether the business idea is realistic and can be implemented effectively. Key questions about the feasibility of the business idea can be found in the worksheet "Key questions about the feasibility of the business idea" (see working material 3.4). Has the business idea been found the student company needs a short and concise name that, for example, already indicates what is being offered. Additionally it is a good idea for the representation in public relations to develop an own company logo. Here a symbolic reference to the business idea gives an advantage. It is particularly important to pay attention that patents, names or copyrights are not violated that belong to another company. Also a competition to nearby businesses should be avoided. Rather it is recommended to sign, if necessary, a co-operation with neighbouring companies.

3: Legal form

During the foundation of the student company there should be paid attention, as already mentioned, to ensure that the school administration or the school authority recognize the student company as a school project from the very beginning. In Germany, the student company therefore has the same status like any other school projects. There are certain rules for student companies as well as for other school projects. For example, the duty of supervision must be taken by a person of full age or an educational specialist that, among other things, guarantees the accident protection as provided by the law. Students who are not yet of age need a consent of parents or guardians. Although student companies - as a school project - do not have a legal form, the common legal forms are simulated by the following of real companies and their operation within the scope of the student company (e.g. S-GmbH = student limited liability company or S-Gen = students cooperative). Basically it is important that certain sales and profit limits are not exceeded in order not to pay taxes. Here it is important for the student company to have a proper accounting. In Germany information to clarify points of law are offered, for example, by the local tax office. For doing financial transactions it makes sense to create an own business account, e.g. in the form of a checking account related to the project. With regard to insurance coverage the students are

insured against accidents the same way like during school lessons. Basically the regulations regarding labour, youth protection and fire safety apply for student companies. Depending on the offer of the student company specific regulations and laws like, for example, hygiene and licence also have to be respected.

Since the student companies in Croatia are always founded as a Zadruga in the form of a students cooperative, the choice of a legal form is omitted here. After the foundation, to be approved by the school administration, the Zadruga is registered with the association of students cooperatives. Similar to the students cooperatives in Germany a statute is adopted during the establishment where the objectives and tasks of the cooperative, activities, members, administrative duties, accounting, measures to promote and support the students, etc. are listed.

4: Structure of the student company

Depending on the business idea there are different tasks for the members of the student company. These tasks are organized within various departments. Areas to be found in almost any student company are management, production, human resources, finance, marketing and office organization. The tasks of the various departments should be divided according to the interests and talents of the personnel. Each department should have a leadership also taking on the responsibility for their area. It is useful when the personnel take turns in the departments and therefore have the opportunity to learn about other departments.

5: Teamwork

Unlike in the real world of business most decisions in a student company are made jointly by all members of staff. Regular staff meetings are therefore important to discuss new orders, pending purchases or work plans. The members of staff should have regular opportunities to address and to clarify potential conflicts like, for example, anger about the unreliability of an employee. It is also useful to establish rules for cooperation in the student company and thereby prevent potential conflicts. To secure a long-term and successful existence of the student company attention should be paid on the passing of acquired knowledge and main functions to the subsequent generation of students.

6: Offer of the student company

Staff members of the student company decide together on the type and quality and, if applicable, the packaging and the service related to the offered product or the provided service. They deal for example with how the product should look like, what regional or environmental raw materials are used for production and how it could be packaged in an environmentally friendly way. There will also be a decision about the price of the offer. All issues are taken into account that the student company has spent for the production. In addition, a small surplus for the profit that the student company wants to achieve will be included. Here, of course, also what the customer is willing to pay for the product or service will be taken into account. Ultimately, the question of distribution has to be clarified. How should the product reach the customer? Should it be, for example, sold directly in a kiosk at the school or through the Internet? It is important to avoid competition with real companies in the area. It is an advantage to detect and to use market niches. In addition, the student company may also actively approach companies with similar business ideas and win these as a cooperation partner.

7: Communication

In order to make many people aware of the range of the student company, communication is of utmost importance. Here various ways to promote the product or service are possible: for example using flyers, posters, advertisements in newspapers, information booths and days of action. It is also advisable to inform local media such as newspapers, radio and television stations regularly about the activities of the student company. For interesting actions and events of the student company you can also invite journalists and carry out a press conference. Using its own website that may be linked to the school website, the student company can present its offers and allow contacts for interested persons via email.

8: Finances

An important prerequisite for the development and the long-term existence of a student company is a good financial management. The annual accounting therefore has a top priority. Each income and expense of the student company must be carefully documented and the documents must be filed. An important

principle of accounting is: no accounting without receipt. In addition, the balance should be monitored regularly and the bank statements filed properly. The attendant teacher should always be informed about the financial affairs because of the responsibility together with the students to ensure that the figures are correct and the student company is not in debt. At the end of the school year an annual report should be written where general information about the company, the profit of the financial year, a summary report of the various departments, special events, any co-operation, public relations and the projects for the new fiscal year are listed. The annual report will be presented at the annual meeting of the student company. If the student company has made profit, the staff should decide together how to use it. The money can be used, for example, for new acquisitions for the company or the school as well as for supporting social projects.

9: Training

In order to expand the knowledge in the student company and to master the tasks that are given to the employees in the various departments the student company should seek support. This can be done, for example, through the regular classroom subjects such as economics, engineering, biology and art, but can also take place via own Internet and literature research. Also parents or acquaintances can help with good suggestions and information through their own work experience. Also valuable are collaborations with real companies. Here an expert of a company could support the student company with experience and firsthand knowledge.

10: Future

Participation in a student company can be very helpful for choosing a career and influences many students when choosing their future profession. In a student company students learn for life and acquire extensive knowledge and diverse experiences and skills that are, amongst others, important for entering into work life. At the end of the activity in the student company it is recommended that the staff is provided a reference or certificate that describes the work areas, the individual skills and the duration of work. In addition to the personal recognition of the students this also provides a higher chance when applying for an apprenticeship.⁶²

3.6 Business Plan

For the success and the long-term existence of the student company it is recommended to plan the implementation of the business idea in detail and to work out how to implement these. Especially in the initial phase it is helpful to deal with the potential customer, the required premises, the integration of the student company into the school lessons, the price of the product or service, the selling arrangements, the distribution and the marketing. From the experience of real economy it is known that business start-ups depending on a gut instinct usually go wrong. All considerations done should be recorded in writing. Such a written report is called corporate concept or business plan. This will be developed step by step and filled with content. The following issues should be included:

- general data about the student company
- business idea
- market
- marketing
- organization/staff
- capital required/financing
- legal form
- risk analysis

In addition, a cover sheet and an annex should be added at the beginning and at the end of the business plan. When preparing a business plan it is convenient to go along specific guiding questions (see working material 3.5). These should be worked on with the students in a team⁶³.

3.7 Social Entrepreneurship

As described in chapter 3.3., the students in a sustainable student company learn to question their business activities with regard to the impact on the environment and social interaction and to develop creative and innovative offers. This entrepreneurial spirit within the meaning of sustainable management is closely related to social entrepreneurship. The aim of social entrepreneurship is to take over social responsibility and to contribute to a positive change in society via innovative and creative solutions. The commitment lies, for example, in the field of education, environmental protection, integration, poverty reduction or human rights. Profit orientation for social entrepreneurs is of minor importance.

Social entrepreneurship - the example of "Green Trips" of the organization Sunce

As already mentioned, with social entrepreneurship not profit, but the social objectives are of major importance, in contrast to the traditional economy. Social Entrepreneurship is currently developed and operated by a growing number of organizations and companies nationally and internationally. So also the organization Sunce participated in a NESsT⁶⁴ program in 2011 and 2012. NESsT provides training and support for the promotion of social entrepreneurship. Under this program Sunce developed a business plan for "Green Trips". These involve workshops for children and young people that take place in nature and are guided by the environmental education team of the organization Sunce. Currently Sunce offers "Green Trips" to schools in cooperation with travel agencies, where Sunce is responsible for the implementation of the environmental education program. By special educational exercises the students get to know nature and its ecosystems on a local level. The whole-day stay in nature should also contribute to the development of a healthy lifestyle and at the same time encourage a responsible approach to nature and the environment. The profit achieved by the "Green Trips" of Sunce goes into the development of further training programs to educate the public, keeping the importance of nature and environmental protection and sustainable development and its implementation in the foreground. At the planning and implementation of "Green Trips" participate the environmental education team of the organization Sunce as well as young unemployed people (see chapter 4). Through this activity they can expand their knowledge and skills and thus improve their opportunities in the labor market.

3.8. Sustainable student companies or student cooperatives in practice

Here an insight into the practical implementation of sustainable student companies or student cooperatives in Croatia and Germany is given. The student cooperative "Lavender" from Croatia shows the activities of students at the primary school Mejaši in Split. Another insight into the implementation of student companies is given by the company "Sunflower" of the secondary school Hanstedt and the student company "The Kitchen Mice" from the primary school in Bardowick from Germany.

Student cooperative "Lavender" of the primary school Mejaši in Split - the school garden as a supplier of raw materials

The student cooperative⁶⁵ "Lavender" of the primary school Mejaši in Split was founded in 2001. The school is surrounded by a Mediterranean garden where plants grow such as lavender, rosemary, juniper, wild laurel, oleander, strawberry tree, olive and fig trees. This is also the origin of the business idea of the student cooperative "Lavender" because it gets the majority of its raw materials for the manufacture of their products from this school garden. The staff of the school cooperative thus have the opportunity to see and design the entire production process from getting the raw materials to the finished product. The student cooperative follows the aim to meet the individual needs of students and to contribute to career orientation. In addition, knowledge and skills like, for example, critical and creative thinking and a positive attitude to aesthetic values are promoted in a practical way. The students also learn entrepreneurial thinking and acquire an understanding of natural processes and their importance for life as well as a corresponding environmental awareness. In addition to the development of entrepreneurial skills the preservation of cultural heritage is an important task of the student cooperative "Lavender". Students learn about ancient crafts, customs and recipes from Split

⁶⁴ see Berger/Pröpsting (2013), p. 30 ff; ⁶⁵ see www.nesst.org/croatia/ (12.11.2014).

and the surrounding area and produce, for example, traditional hair decoration. Also cosmetic concoctions are made according to old recipes. Whenever students offer their products (e.g. at fairs, festivals, exhibitions) they appear in traditional costumes from the region of Split.

Products of the student cooperative

Students produce olive and lavender oil, small fragrance bags of lavender and the Dalmatian insect flower, herbal sweets, essential oil, scented candles, eco-cosmetics, traditional hair decoration and packaging for their products. By distillation of lavender from the school garden lavender essential oil is produced, for example, which is further processed in other products (e.g. as soap perfume). Moreover small fragrance bags are made from the lavender flowers. Olives from the school garden become olive oil which is sold or used as a raw material for soap making.



Figure 3.1. Students of the student cooperative "Lavender" at the 25th Student Cooperatives Fair in Split, Dalmatia.

Departments of the student cooperative

The student cooperative consists of 13 departments with a total of about 15 to 25 students:

- olive department
- medical plants department
- flower department
- young gardener department
- environmental protection department
- eco-cosmetics production
- manufacture of essential oils
- art department
- packaging production
- candle making
- textile department
- small-embroiderer-department
- manufacture of traditional jewellery

All departments are constantly active, albeit not with the same intensity. So the school garden, for example, does not need so much work during winter time. In return the students are very busy in the cosmetics production or the art department at this time. In spring and summer time the departments that are directly connected to the school garden are again more active. In the art department students develop, for example, packaging where they have to take into account that materials are environmentally friendly and biodegradable. They also design the product labels together and learn more about product labelling and consumer rights. The student cooperative does not have an accounting department. These tasks are taken over by the teacher in cooperation with the students. Students together determine, for example, the prices of their products. They learn that the cost of production (e.g. material and work equipment for the departments, such as tools, accessories, fabrics, as well as fairs and exhibitions) should be covered. They are encouraged to earn a small profit at least. Here each product is evaluated in terms of its cost-effectiveness. If a product is selling badly the students decide together if they further want to offer it or whether they will offer another product with greater demand.

Organisation of the student cooperative

The projects carried out by the student cooperative "Lavender" so far are not integrated into the compulsory curriculum. However, there are a variety of links to the educational content of the subjects general studies, biology, ecology, chemistry, mathematics, Croatian language and art education. The student cooperative is led by the council of the cooperative elected by the cooperative assembly (all members). It is composed of representatives of students, parents, teachers and the local administration. Depending on the type of activities the council of the cooperative, the head of departments and the students of the student cooperative are participated in the implementation of the student cooperative. Depending on the contents further members of the school, parents and external partners take part. The participation of students in the student cooperative is voluntary and can extend over several years, according to their interest. At the beginning of each school year the students opt for work in a particular department. The student cooperative is active every week, with the working hours according to the time available of the students or the management. Generally the working hours is four hours per week or 140 hours per school year.

In the student cooperative three teachers are working within their regular teaching load and are paid accordingly. All other teachers participate on an extracurricular basis (e.g. Eco-team, Nature friends-team).

All major decisions (e.g. pricing, new products, presentations at trade fairs) are taken by the council of the cooperative. The task of the teacher is to provide everything necessary to implement the planned activities. Students can propose and develop a new product and, depending on their interests, suggest new departments to do a specific project. They are actively involved in the planning and implementation of the project.

Among the students there is no competition because they are dependent on each other. Students work in teams, discuss their progress together and analyze errors.

In the student cooperative also the traditional role of the teacher changes. The teacher accompanies the students in their work and provides them with advice. This good co-operation with the teacher as well as the cooperation with parents and the community help students to acquire important knowledge and skills. A feedback for their work the students receive, amongst others, by participating in competitions and exhibitions and by the sales of their products.

Cooperation with external partners

The cooperation of the student cooperative with external partners is diverse. Primarily it is a collaboration with parents. Parents, for example, transport the student and the products of the student cooperative to fairs and exhibitions and support with material things. So parents who run their own shop provide the student cooperative with stalls. Parents who run a nursery donate seedlings for school gardens. Seedlings are furthermore donated by the Split Institute for Mediterranean Agriculture and Karst Soil Improvement. The cooperation of the student cooperative with the environmental organization Sunce is done primarily through the participation of students in various educational activities of Sunce. In collaboration with the tourist office, the student cooperative also takes part in various events, such as the flower exhibition on the occasion of the celebration of the patron saint of Split, at the applied art and craft festival "Busy hands of the islands and the coast" or in the international fair for machines, tools and equipment "SASO". Since no cooperation between the student cooperative and companies has been able to be initiated this should be promoted more intense in the future.



Figure 3.2. Harvest of Lavender in the school garden.

Project presentation, prizes and awards

The student cooperative is invited to various events (fairs, festivals, exhibitions). All students very much like to take part in these events and perceive this as recognition of their work and achievements. Students take turns with this task in order to offer each employee the opportunity to present the student cooperative.

For their work in the student cooperative the students neither receive marks nor credits. Their commitment is merely noted as an extracurricular activity in the final certificate. Occasionally students will be rewarded with a symbolic visit to the cinema or an ice cream. They also experience recognition when projects are awarded in competitions, such as the project "Stop plastic bags!" of the student cooperative "Lavender" (see below).

Contribution to nature conservation and environmental protection

The student cooperative "Lavender" cultivates regional plants and processes these environmentally friendly and in compliance with traditional manufacturing methods of various products. The packaging of the products are also mostly made of biodegradable natural materials. Moreover, the student cooperative implements various projects as a contribution to nature conservation and environmental protection such as the project "Stop plastic bags!". In preparation for this project the students have first dealt in class with the harmful effects of plastic bags as one of the products of daily life followed by the design of a questionnaire. The aim of the survey was to investigate the knowledge of consumers about plastic bags and their consumption in the area of the primary school Mejaši. The results motivated the students to design a flyer with clarifying information about plastic bags and their impact on the environment. The shops where students carried out the survey allowed the students to hang out the flyers at the front doors. To contribute to the prevention of plastic bags, the students also created and sewed textile bags. These were presented to members of the student cooperative and sold at the fairs of student cooperatives for a special price.

Sustainable student company "Sunflower" from the secondary school Hanstedt - products for a better world

The student company "Sunflower"⁶⁶ was founded in 2006 out of the idea to make the lessons in textile design more up to date and sustainable. Instead of buying materials for the manufacture of bags, Capri-Sun drinking packs were collected, cleaned and processed to bags with the sewing machine. As the colourful bags were well received, a student company was founded that made the business of collecting used packaging materials from students, their friends, parents and surrounding enterprises to process these to a variety of products.

Products of the sustainable student company

From Capri-Sun drinking packs and other plastic films, for example, colorful bags, wallets and key cases are produced. With the move to a new school building the old map room was cleared out and thereby separated maps were used as new material. After some time these were even delivered nationwide so that a wide range of historical and contemporary maps was available. From the maps diverse products such as unique bags, luggage tags and gift packages are made. When unusable gym mats were sorted out in the sports hall, another material was added. From the inner pads of the mats cushions are produced which are coated with fabric remnants. The robust outer material is used for the production of stylish bags, key cases or pencil cases.



Figure 3.3 Staff of student company "Sunflower" selling their self-made bags

Departments of the sustainable student company

During the production of the products mentioned above, the students get to know all areas of a company and thereby gain their experiences. The student company "Sunflower" consists of the following departments:

- purchasing: If additional material is needed to manufacture the products must be researched and ordered
- sales: the products are sold, amongst others, via the Internet or at fairs and events. Customer talks are done.
- marketing: website maintenance
- production: the sewing is done by the students. In some cases these are also supported by external employees for more complicated processes.
- product development: in collaboration with production and sewing processes ideas for new products are developed
- accounting: the account management is controlled and invoices are written and sent



Figure 3.4 Design- and sewing workshop of the student company "Sunflower"

Organisation of the sustainable student company

The work in the student company is bound to the elective course "Designing Textiles" which is offered to students of the grades 9 to 10. Participation in the course is obligatory for one year, ideally it should be taken 2 years consecutively. The elective course will be held for two lessons once a week. In total around 29 students take part. Always at the beginning of the weekly working time a discussion between employers and employees takes place. The staff discuss about, for example, present requests, the feasibility of new product ideas, gather positive and negative feedback and vote democratically about their participation in events or fairs. In addition to the students and the supervising teacher, external staff assist in the sewing. This is especially true when a more complicated model has to be dealt with or if during high season like, for example, during Christmas a larger amount is required and has to be produced according to demand. The student company is currently managed in the legal form of an individual enterprise. For the future, however, the establishment of a student cooperative is intended. This legal form is particularly interesting as it offers many opportunities for participation. The focus is on democratic decision-making, solidarity and the equal promotion of all members. In addition, the cooperative shares that can be issued to parents, students and teachers put seed capital into the company. They also provide a way to present the main features of the company to the public. Representatives of cooperative associations can inform students about this topic so that these get to know a mostly unknown legal status not only in theory. Last but not least the shareholders, meaning also the students, are very much interested in the well-being of the student company because they have invested money in the company themselves.

In the school year 2013/2014, for example, 23 invoices were written, with some customers ordering more than one product. In addition, the selling of bags or products for cash at fairs or exhibitions took place.

Cooperation with external partners

The student company "Sunflower" cooperates, for example, with various sports clubs and specialty shops such as cloth merchants and publishers that manufacture or repair maps, and receives used materials for the manufacture of their products from these partners. In addition, the student company takes part at the project Startup@school-Projekt, which is carried out in cooperation with the Chamber of Commerce (IHK) and thereby gets support of students for vocational orientation. Furthermore an exhibition was done at the local department store during which the students were able to present their products in the form of a large window dressing.

Project presentation, prizes and awards

The student company "Sunflower" regularly participates in trade fairs, exhibitions and other events, presenting the students work, for example in: student companies fairs, environmental fairs, art and country markets in the region as well as in workshops on education for sustainable development. Besides awards for the most beautiful booth or the product of the year the student company "Sunflower" was awarded as a project of the UN Decade "Education for Sustainable Development" by the German UNESCO Commission. The award is given to initiatives that exemplary implement the objective of this global education initiative of the United Nations: they provide sustainable thinking and action to children and adults.

Contribution to environmental protection and conservation

In the student company "Sunflower" the students help to conserve nature because the products consist for the most part of materials that would have actually ended up in the waste (recycling films of all kinds, separated maps or sports mats). These materials are processed to nice and useful things during autonomous planning and implementation. Students learn that packaging materials are very valuable raw materials which can be processed into attractive products. In addition it is prevented that the material is put into waste incineration or other processes such as melting which results in inferior plastics as a result. The manifold bags indicate that raw materials are valuable materials that should not be simply and carelessly thrown away as waste.



Sustainable student company "Kitchen Mice" of the primary school Bardowick - healthy eating at school

Every Monday during the first long break, the student company "The Kitchen Mice"⁶⁷ of the primary school Bardowick sells healthy breakfast offers to the children and staff of their school. The idea was developed in the framework of the implementation of a diet license for the students of the 3rd class because some children have come to school without breakfast but with money for bread rolls from the bakery. Since then the students, the teacher and seniors of the local multi-generation-house have produced vegetable bags. Shortly afterwards the idea of founding a student company was developed and the offer was extended, amongst others, to delicious fruit sticks and bread faces. For the future it is planned to offer a hot dish, for example, potato soup on one weekday.



Figure 3.5 The student company "The Kitchen Mice" at their booth at the state fair of student companies in Lower Saxony

The aid - diet license is a ready to work teaching concept for the third class, in which the focus is on practical handling of food and kitchen appliances. During six or seven two-hour sessions the students prepare delicious salads and fruity junket and other small, cold dishes. They learn to deal with real food and to cut, stir, grate or taste like professional cooks. At the end of the project a written test and a practical examination have to be done. Here the children can show what they have learned: They host their guests with a cold buffet. As confirmation of the acquired kitchen skills each child receives a personal license document with a passport photo and a stamp of the school. (see www.aid.de/lernen/ernaehrungsfuehrerschein.php)

Products of the sustainable student company

The classic of the student company, the vegetable bag, is stuffed with fresh vegetables sponsored by the farms in Bardowick and chopped with great support from seniors of the multi-generation-house. A delicious curd-herb-dip completes the bag and inspires the students. The vegetables are filled in bags which are made of recyclable packaging by the student company "ModaReMa" from the secondary school of Bardowick. In addition, fruit sticks, bread faces, bread sticks, curd dishes and fruit drinks are offered.

Departments of the sustainable student company

The student company "The Kitchen Mice" consists of the departments of manufacturing, sales and accounting. How the individual departments are organized is presented in the following section.

Organisation of the sustainable student company

Within one school year all third classes are active in the student company. Breakfast is prepared and offered by students of the third class during the first long break on Mondays. Always eight children taking turns are responsible for the preparation and sale of the breakfast. The children from the previous week always select the children for the current week - equitably shared among boys and girls. The work of the student company is connected to the subject general studies (9:00 to 10:00). While the group is working in the kitchen, the other children of the class have the subject general studies. The student company gets the fruits and vegetables partly through donations and partly they are bought at a local supplier, which has also been visited by the students.

For the production the students cover workbenches with clean plates, peel and cut the fruit and vegetables, produce the fruit juices and make sandwiches. Of course the cleanliness and infection precautions are taken. Students use aprons, wash their hands, put off jewellery and tie up long hair. In addition, children with colds are not allowed to participate, cutting injuries are immediately taken care of and rubber gloves are used. During the long break the sales counter is open by 10 o'clock

⁶⁷ source: www.grundschule-bardowick.de/index.php?option=com_content&view=article&id=498&Itemid=168 (30.10.2014).

and the healthy products will be offered to students and adults. The sale is supported by parents, the teacher and seniors of the multi-generation-house. After the selling the counter is cleared and cleaned. The dishes and cutlery are washed in the kitchen and the cover plates are wiped and put away. The empty bags are collected in baskets and cleaned in the dishwasher. The income is finally counted on the number board and registered in the book of accounts on the computer. After that it will be put into a money bag and kept in the school safe.

At the end of the month the money will be paid into the account of the student company and the bank statements are provided at the same time. At the beginning of the new school year the third graders are instructed and supported about the work by the fourth graders.

Cooperation with external partners

The seniors of the multi-generation-house in Bardowick support the student company in the production and sale of fruit and vegetable products. In addition there is a cooperation with various Bardowick farms that donate a part of fruit and vegetables. "The Kitchen Mice" also work closely with the student company "ModaReMa" of the neighbouring secondary school. From this they buy the cases for vegetable bags, which are tailored from recyclable packaging by this student company. In return the student company "ModaReMa" takes vegetable bags from the Kitchen Mice and sells these in their school.

Project presentation, prizes and awards

The student company "The Kitchen Mice" has already presented their business idea on different fairs (for student companies). In addition there are a variety of publications in the local newspaper, the "Hamburger Abendblatt" and on the website of the Ministry of Education and the State School Authority. The Bardowick fruit and vegetable bag has been awarded under the action "We Like It Fresh" by the Lower Saxony Ministry of Food, Agriculture and Consumer Protection. In addition the student company "The Kitchen Mice" has been qualified as a sustainable student company by the Lower Saxony State School Authority and Ministry of Education.

Contribution to environmental protection and conservation

In general the student company "The Kitchen Mice" promotes healthy food for children of their school and uses, amongst others, fruits and vegetables from the region for its healthy products. In addition the cases of vegetable bags are made of recyclable packaging to be collected after usage, cleaned and reused up to six times.



Figure 3.6 The vegetable bags are very much liked by the children

4. Educational programs of the environmental organization Sunce

Since its founding in 1998 the environmental organization Sunce has focussed on the importance of education and information of all generations as a fundamental requirement for the protection of nature and environment as well as a sustainable development of society. An essential part of the educational activities of Sunce is therefore to communicate appropriate values and behaviours and to inform about the need of proactive actions.

The organization Sunce has made it its business to inform about the latest findings that contribute to the understanding of the nature and environmental protection as well as the causes of environmental damage on local and global levels. The aim is to provide the young generation with a sustainable relationship with the earth and to promote the acquiring and development of necessary knowledge and skills in order to prevent and solve environmental problems. To achieve this, it is necessary, amongst others, to promote and apply innovative teaching and learning methods in the schools. Students should develop from passive recipients of information to active designers of today and tomorrow in appropriate learning processes. They should learn to use their rights and obligations and the possibilities and opportunities of social commitment and to apply the knowledge and skills acquired in school in everyday life.

The aim of the educational activities carried out by Sunce for children and young people is to promote an awareness for the networking and interdependence in nature as well as a readiness for active and responsible participation, to raise awareness of problems in society and to develop abilities to solve problems in cooperation to with others.

In order to push the change in teaching and learning methods and the inclusion of the topics "environmental protection" and "sustainable development" into the education processes, Sunce performs workshops, training programs and seminars for both teachers and students. Below these are briefly introduced.

4.1 Workshop for educators/teachers: Participatory teaching and learning methods in environmental protection and in sustainable development

The workshop is aimed at teachers of primary and secondary schools and universities and all those who work in the educational field with children and young people. During the workshop participants will acquire knowledge about real-life oriented themes in the field of sustainable development and in particular environmental protection, such as: sustainable waste management, nature protection and conservation areas or active citizen participation in nature and environmental protection. At the same time they get to know about various participatory teaching and learning methods because they actively deal with these issues on the basis of those methods actively. According to the motto "learning by doing" they do not only learn about these in theory but directly apply the methods in the workshop. These are participatory methods that are well suited for use in the participants' own educational work such as Brain Writing, Group Interview or World Café.

Number of participants: 15-20 participants

Duration: 1-2 days



Figure 4.1 Workshop for educators/teachers: collecting ideas for educational work about the theme *sustainable city*

4.2 Educational programs for children and young people

Education Program "Composting"

Why to compost at school?

- By composting organic waste we connect the natural cycle of substances.
- We contribute to environmental protection because organic waste in landfills is causing climate-damaging methane emissions.
- We produce humus. Humus contains nutrients required for plant growth and development and improves the soil fertility.
- We do not use artificial fertilizers.
- We avoid the purchase of fertilizer or potting soil for the school garden.
- With a practical example the students learn about the cycle of substances in nature and learn to appreciate the value of natural resources and to deal responsibly with bio-waste.

The educational program "Composting" is aimed at schools that are interested to dispose their organic waste environmentally friendly, thus contributing to environmental protection. Generally students of the age range of twelve to 15 years are addressed. It is also planned that the involvement of students of other ages takes place through peer education.

Peer education has the objective that young people pass on their knowledge and skills to their peers. Experience shows that young people accept information and advice from their peers more readily than from adults.

The program consists of six workshops, each with two to three lessons, and is performed together with pupils and their teachers (see material 4.1). At the workshops can participate either a whole class or a single group of students who are interested in environmental issues. In addition, a workshop for teachers is carried out where the links for the integration of the program into the school curriculum will be developed. The training program ends with a small closing ceremony and the award of an individual certificate to the participants.

The aim of the training program "Composting" is to provide the importance of composting and the basics and benefits of composting of organic waste at school to the participants. The program plans for pupils involved to design own their promotional and educational activities on the subject of composting for their classmates. An important part of the program is also the teacher workshop where the participating teachers create a concept for the integration of composting into the curriculum in order to secure a long-term composting at school. As part of the educational program a variety of the participatory methods described in chapter 1 of this Guide are used.



Figure 4.2 Workshop for students as part of the educational program "Composting"



Figure 4.3 Workshop "Composting" in the primary school "Mejaši"

Number of participants: 10-15 students and their teachers. If required, the program can also be adapted to a larger group of students.

Duration: 2-4 months (six workshops for students, one workshop for teachers, final ceremony), depending on the period of time between the individual workshops (1-2 weeks), 2-3 lessons per workshop.

Education program "Green Reporters"

The educational program "Green Reporters" is aimed at schools and teachers who want to raise the ability of their students to perceive environmental problems, to introduce them to search for solutions in cooperation with others and to support active and responsible student participation in the community. The program consists of six workshops for students as well as one workshop for teachers and a final ceremony (see material 4.2). By participating in the training program the students develop abilities for critical thinking teamwork and collaboration with peers. These skills will help students developing proposals for the prevention or solution of various environmental problems.

Existing environmental problems:

- Scientists have discovered that the extinction of species today is 100-1000 times faster than the natural extinction, here also the survival of human beings on earth is threatened.
- Almost a quarter of the earth's surface is used for agriculture.
- An estimated 70% of the original forests of the temperate zone, meadows and Mediterranean forests have been destroyed since 1950.
- 20% of the coral reefs have already been destroyed, another 20% are damaged.
- 90% of large predators in the ocean, like tuna and sharks, have disappeared due to overfishing

Why "Green Reporters"?

- Students are made aware of environmental issues.
- Students get to know environmental organizations.
- Students learn to know and appreciate volunteer work.
- Student involvement in the community is encouraged.
- Students learn to apply their acquired IT skills.
- Students get to know presentation techniques.
- Students contribute to solving environmental problems.

The program is aimed at students in the range of 12-15 years. Participants are selected and/or suggested by the teacher. Mainly those students participate at the program who are already showing interest in environmental protection and are active in an environmental or journalism working group.

Number of participants: 10-15 students and their teachers. If required, the program can also be adapted to a larger group of students.

Duration: 2-4 months (six workshops for students, a workshop for teachers, final ceremony), depending on the period of time between the individual workshops (1-2 weeks), 2-3 lessons per workshop.



Figure 4.4 Workshop *Me as a journalist* in the primary school Mejaši

Education program "Sustainable student companies/student cooperatives"

Why sustainable student companies/student cooperatives?

- Sustainable student companies/student cooperatives pursue both economic and social as well as environmental goals.
- In a sustainable student company/student cooperative students are made aware of environmental issues. They question the effects of their business activities on people and the environment and learn to take them into account in their business decisions.
- Students deal with the interactions between human beings and nature and become aware of, for example, the scarcity of natural resources and the shortage of energy. They develop ideas about how they can manage challenges like an economical use of raw materials and energy for the development and implementation of new business ideas. This promotes, amongst others, problem-solving skills and creativity of the students.

The educational program "Sustainable student companies/student cooperatives" is aimed at schools and teachers who want to start a sustainable student company/student cooperative or want to make the work of the existing student company/student cooperative more sustainable in terms of social, environmental and economical orientation. In addition, the participation in the educational program "Sustainable student companies/student cooperatives" should promote entrepreneurship of students, give them an insight into the function of a student company and encourage them to critical thinking and teamwork. The program consists of several successive workshops for students and teachers. The number and the content of the workshops are adapted according to the needs of each school. This depends on whether a sustainable student company/student cooperative is to be founded or whether the work of an already existing student company/student cooperative is to be designed and developed in more sustainable way.

The educational program is aimed at students in the range of 12-14 years. Participants are selected and/or suggested by the teacher. Mainly students take part at the program who show interest in entrepreneurial activities and environmental protection or who are active in an environmental working group.

Number of participants: up to 25 students and their teachers

Duration: 1-3 months (five workshops), depending on the needs of each school, the number of workshops and the period of time between the individual workshops (1-2 weeks), two lessons per workshop.

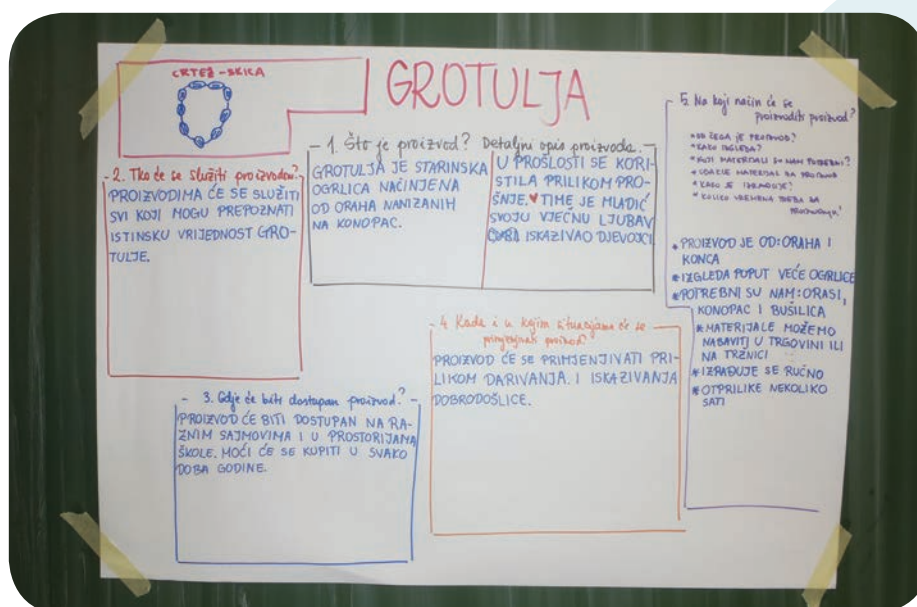


Figure 4.5 Workshop *Is our business idea realistic?*, primary school Trilj

Education program "Green Trips"

The "Green Trips" are services offered by the organization Sunce in the field of social entrepreneurship (see chapter 3). This offer has been designed to enable students to increase their knowledge about the values of different ecosystems and learn to understand the way nature works, to implement environmentally aware behaviour in everyday life and to protect nature. The "Green Trips" are offered in cooperation with various travel agencies and lead to attractive preserved areas where different ecosystems (e.g. river, sea, karst, forest, wetland, spring, meadow and mountain) appear exemplary. Destinations are: Žrnovnica spring, nature trail Leopold Mandić in Omiš, Red and Blue Lake, Two Eyes, Green Cathedral in Imotski, wetland Pantan, Krka spring and Krka education center in Knin, foot of a mountain Mosors and forest park Marjan. New programs for other destinations are constantly developed.

The "Green Trips" are aimed at pupils in the range of 7-15 years. They connect to the Croatian framework curriculum for school education. Thus these "Green Trips" are an excellent addition to the lessons in the subjects of general studies and biology. In addition there are links with interdisciplinary topics, such as health, environmental protection and political education/civic education. Depending on the kind of tasks that the students work on during the "Green Trips", these are interrelated to mathematics, geography, history, language, physics, music, culture and art education. The exercises are designed to enable learning through experience, encourage learning with fun, provide an opportunity to explore and promote problem-solving skills. They are worked on in pairs or small groups so that the students develop their communication skills and practice teamwork. By participating in the "Green Trips" education becomes more diverse and richer in content and independence, responsibility and creativity are encouraged with the students. The "Green Trips" are carried out by employees of the organization Sunce together with voluntary environmental educators.



Small steps for a sustainable society



Figure 4.6 Green Trip *The ecosystem river and karst*, primary school Marjan

More information about the "Green Trips" can be found at: <https://facebook.com/zeleni.izleti>

Seminar for young people to promote environmentally responsible behaviour and active citizenship

The seminar is aimed at young people with the aim of training in the field of environmental protection and sustainable development and encouraging environmentally responsible behaviour and active citizenship. During the seminar the participants acquire knowledge and skills in order to understand different topics and issues of environmental and nature conservation and to be able to act accordingly. They get to know the national and international *mechanisms for the protection of the environment and nature and acquire tools* for the implementation of sustainable development in everyday life. Through participatory methods the participants are encouraged to think critically and act proactively.

The seminar consists of three one-day workshops and a two-day workshop (see material 4.3) about the following subjects:

- Waste and composting
- Healthy Diet - chemical pollution of food through additives
- Nature Protection
- Project cycle management and development of project proposals

During the first three workshops selected environmental topics will be dealt with. The participants deal with how and what they can contribute to the solution of environmental problems and how they can motivate themselves and others to participate actively. The selection of the environmental themes of the first three workshops depends on the needs, interests and previous knowledge of the participants. In the fourth workshop participants learn about how a project is designed and developed. They get to know methods and tools for identifying problems and deal with aspects such as needs, activities, results and objectives of a project. Then the participants formulate - in group work - project proposals on environmental issues that have been dealt with during the three previous workshops.

Number of participants: 15-20 participants

Duration: 5 days (three one-day and a two-day workshops), 7 hours per workshop.



Figure 4.7 Workshop *Healthy diet - chemical pollution of food*

Training program for volunteer environmental educators

This training program is aimed at young people with a university degree who are interested in voluntary work in the environmental education area of the environmental organization Sunce. It includes several workshops which make the future volunteers familiar with participatory learning methods in a practical way.

Why volunteering?

For volunteer work those people decide for who want to do more than just what is expected of them. They get involved outside the predetermined social roles. They want to try out new areas, meet new people, influence social change, help others to feel useful and stand up for values in which they believe.⁶⁸ Voluntary activities can promote personal and professional development. It can help to identify personal interests and to link them with life goals as well as help to make practical experiences in the field of environmental protection and sustainable development in order to participate in environmental protection and conservation. By volunteering new contacts can be established, experience gained in the world of work and the prospect of a job opportunity increased as well as fun, socializing and an enriching leisure activities obtained

In the training workshops, future volunteers of the environmental organization Sunce think about possibilities of participation in the activities of Sunce. Depending on the capabilities, preferences, and the background of the volunteers as well as the needs of the environmental organization Sunce, individual plans to engage in educational work at Sunce are created. Amongst others, volunteer work includes:

- Participation in the preparation and implementation of educational activities of Sunce in primary and secondary schools, such as the "Green Trips"
- Support for high school graduates in the drafting of their final works in the context of the Service-Learning program (see chapter 2)
- Participation in the promotion of educational activities of Sunce: participation in the development of new and the improvement of existing training programs and education and information materials, participation in workshops and lectures on specific topics of civil society and environmental and nature protection, participation in training programs of national and international organizations (whenever these are offered)

After completion of this program the volunteers are able to conduct workshops, lectures and "Green Trips" independently. They are familiar with the work and function of Sunce and other civil organizations and have acquired knowledge and skills to practice environmentally responsible behaviour and active citizenship in everyday life. Some volunteers continue their volunteer work at Sunce. With other participants of the training the cooperation will be maintained in the context of their professional activities. In addition, volunteers who have successfully participated in the training program can become employees of Sunce when needed.

Number of participants: up to 8 volunteers

Duration: 100 hours during a school year

⁶⁸ Ministry of Social Affairs and Youth in collaboration with the National Committee for Development of Volunteering (2013): A guide for organizers of volunteering and volunteers. Zagreb. 57



Figure 4.8 "Green Trips" as part of the training program for volunteer environmental educators

Verification of volunteering - certificate

The verification of the skills acquired through volunteering, with the frame given by the Croatian Ministry of Social Affairs and Youth (article 34a of the law on volunteering), should support the volunteers by the recognition of their acquired competencies (knowledge and skills and the connected independence and responsibility) and allow them to document their commitment accordingly to third parties. The certificate is issued at the request of the volunteers for a long-term volunteer work. It is necessary that the volunteer informs the organisation about the interest in the certificate right from the beginning so that it a plan can be made to accompany the work of the volunteer and the promotion of his/her capabilities. The certificate shows information about the organization, the volunteer and his/her work, including the obligations, tasks and responsibilities. Furthermore, any additional training (description, type and duration) as well as the skills acquired through the volunteer work are listed .

If you are interested in the activities listed above, please use the contacts of the environmental organization Sunce given in this manual.

Materials for practical work



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Working material 1.1: Concrete planning steps towards the implementation of the project

Project:		
Participants:		
What are we going to do?	How are we going to do it?	Who is responsible?
What is needed?		
Who can support us?		

Source: DGU (2014)

Working material 1.2: Café-etiquette

Café-etiquette

- focus on what is important
- contribute own views and perspectives
- talk and listen with heart and mind
- listen to really understand
- link and connect ideas
- pay attention to the discovery of new knowledge and in depth questions
- playing, scribbling, painting: it is desirable to write on the tablecloth !!!!!

Have fun!!!



Café-etiquette

- focus on what is important
- contribute own views and perspectives
- talk and listen with heart and mind
- listen to really understand
- link and connect ideas
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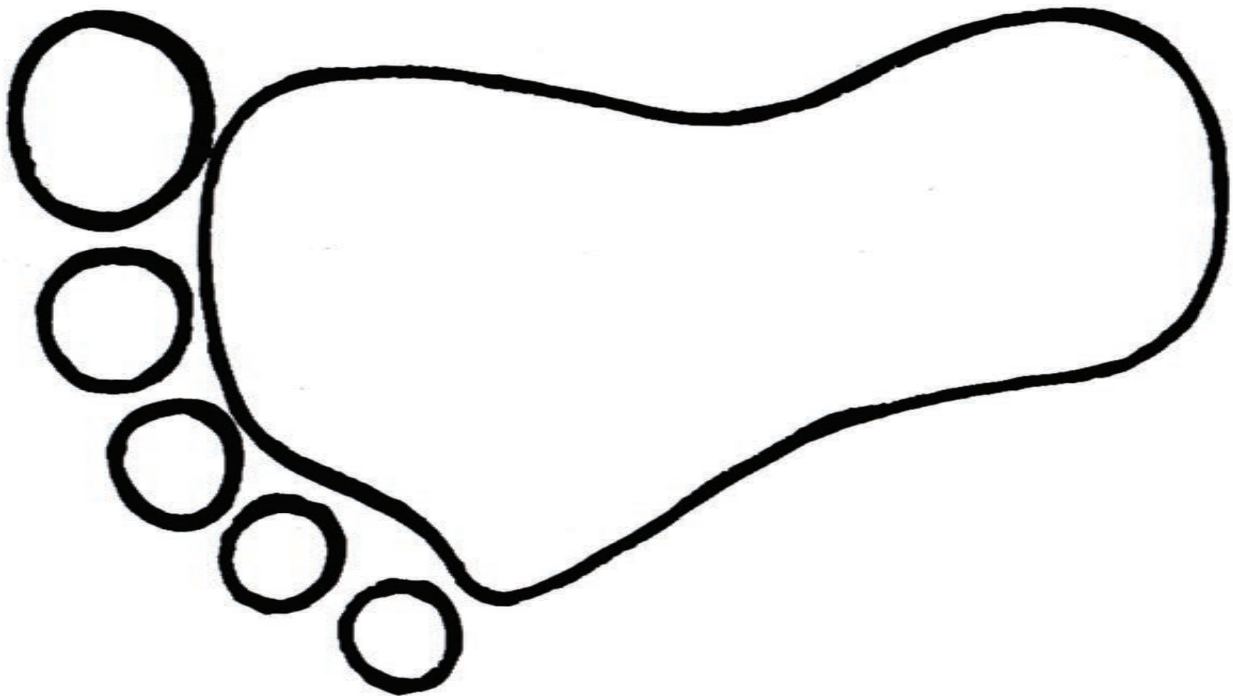
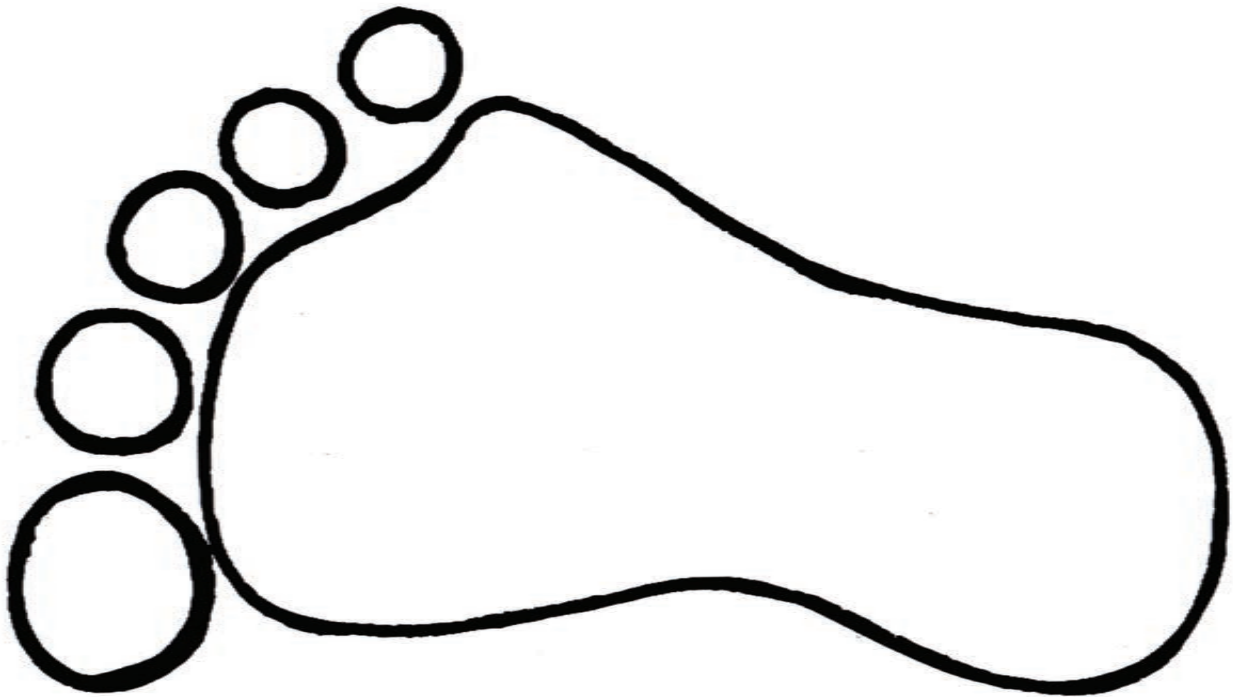
Café-etiquette

- focus on what is important
- contribute own views and perspectives
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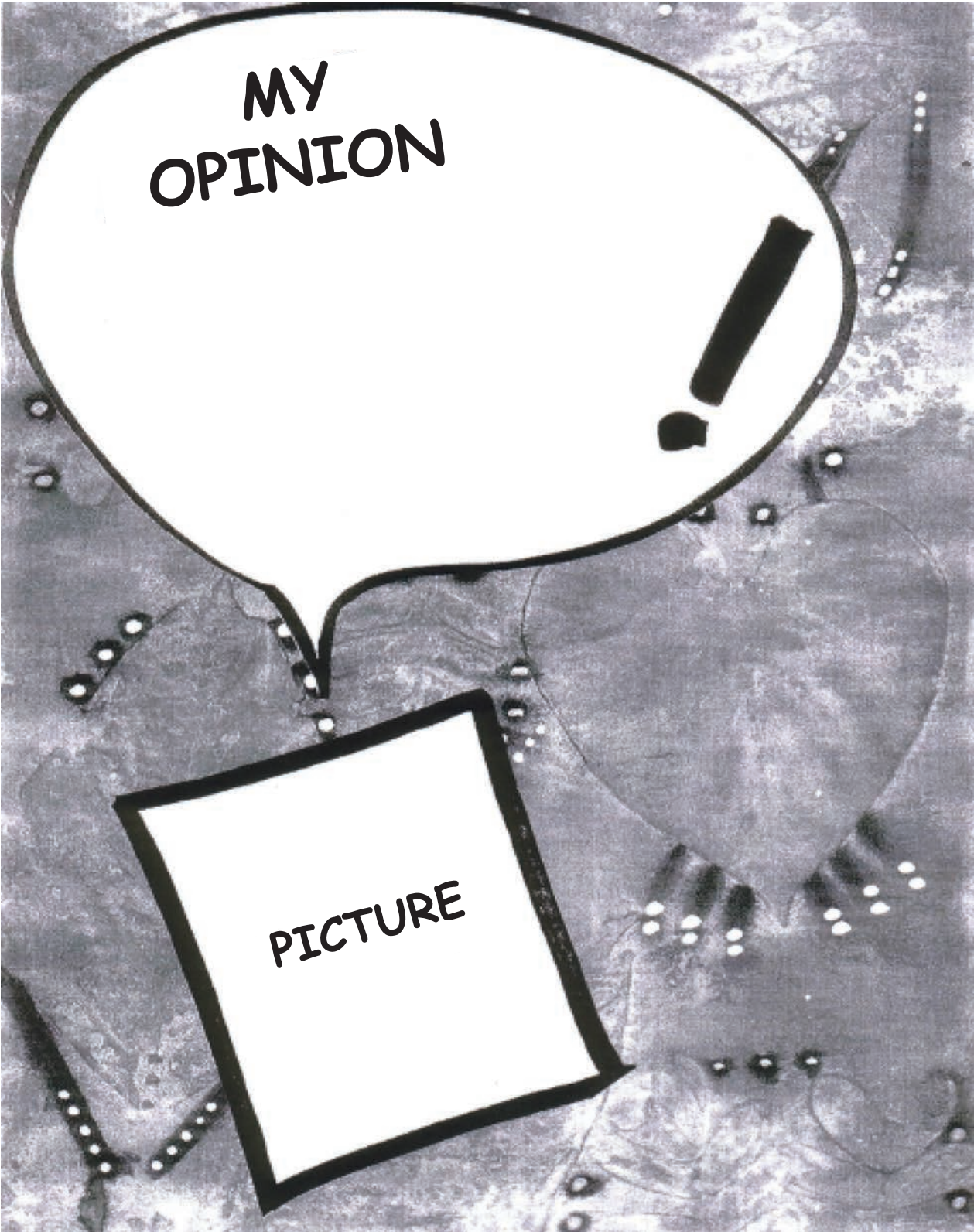
Have fun!!!



Working material 1.3: Footsteps



Working material 1.4: Opinion sheet



Working material 1.5: Survey on the use of disposable plastic cups

Name of the student:

Name of the school:

PARENT SURVEY ON THE USE OF DISPOSABLE PLASTIC CUPS IN KINDERGARTENS

Kindergarten/town:	
Age (please mark):	a) <25 b) 25-30 c) 30-40 d) 40-50
Sex (please mark):	f m
Occupation (please mark):	yes no
Education (please mark):	unskilled, GCSE, college, university, other

1. Do you know which cups are used in the kindergarten of your child?

- a) Yes
- b) No

If yes, please specify what kind of drinking cups are used _____

2. If disposable plastic cups are used in the kindergarten of your child, please take a guess how many plastic cups are used by your child every day?

- a) from 0 to 1
- b) 2 to 3
- c) 4 to 5
- d) If more, how many?

3. Do you believe that disposable plastic cups are helpful to the hygiene in the kindergarten and thus for the health of your child?

- a) Yes
- b) No
- c) I don't know

Your comment

4. Do you know that some types of plastic contain pollutants?

- a) Yes
- b) No
- c) I don't know

Your comment

5. Do you think that disposable plastic cups are environmentally friendly?

- a) Yes
- b) No
- c) I don't know

Your comment

6. Do you know how disposable plastic cups are disposed of? Please mark one answer.

- a) Together with all other waste
- b) They are collected separately
- c) I don't know
- d) Other: _____

7. How much money do you spend monthly for disposable plastic cups that are used by your child in the kindergarten?

- a) 5.00 to 10.00 kn
- b) 10.00 to 15.00 kn
- c) I don't know
- d) Other: _____

8. Are these expenses acceptable to you?

- a) Yes
- b) No
- c) I don't know

Your comment

9. Please take a guess how much money parents spend for disposable plastic cups in kindergartens in Split?

- a) About 60.000,00 kn
- b) About 240.000,00 kn
- c) About 130.000,00 kn
- d) Other: _____

Please indicate how much you agree with the following sentence:

The use of disposable plastic cups promotes the consuming behaviour of my child.

- a) strongly disagree
- b) do not agree
- c) neither agree nor disagree
- d) agree partly
- e) fully agree

Arbeitsmaterial 2.1: Planning the Service-Learning project

Before the start of the project the aim, the tasks and the timeline must be clearly defined. The following questions will help:

Aim of the project	
<p>This is to be achieved: What is the project idea? What are the concrete (measurable) aims of the project?</p>	
<p>The project helps others, because ...: Why is this project important? (needs for the project)</p>	
<p>This is to be learned by the project: Knowledge, skills, attitudes ...</p>	
Tasks	
<p>What tasks need to be done? What are the major work packages? Which are easy and which are difficult? How can difficult tasks be done more easily?</p>	
<p>Who does what? Who can do what particularly well? Who is responsible for what? Are all satisfied with their tasks?</p>	
<p>Which rules are agreed upon for the collaboration?</p>	
<p>How is mutual support achieved? What support is desired and by whom?</p>	

Timeline

When?	What?	Who?
1. Week		
2. Week		
3. Week		
4. Week		
5. Week		
6. Week		
7. Week		
8. Week		
9. Week		
10. Week		

Working material 2.2: Reflection of the Service-Learning project

Exemplary questions for reflection:

Reflection about themselves

a) **Prior to the engagement:** What can I do particularly well, what are my strengths and interests? What do I expect from the engagement? What am I looking forward to? Where do I want to get involved? What is the engagement partner expecting from me?

b) **In the course of the engagement:** What do I really like? What am I proud of? What has not run so well? What challenges have appeared? What have I learned this week?

c) **After the engagement:** What new things have I learned? What have I learned about myself? What am I most proud of? What has it meant to me to stand up for others and the society? How and where am I going to commit myself further?

Reflection as the project develops

a) **Prior to the engagement:** For what and how do we want to get involved? What do we want to achieve? How do we want to proceed? How can we support the engagement partner in an optimal way? How can we cooperate and interact in a good way?

b) **In the course of the engagement:** What has worked really well this week? What have I specifically achieved? What has not worked so well? What would I do differently next time? Where do I need help?

c) **After the engagement:** What was my best experience? What have I done during the engagement? How was our action perceived by our engagement partner? Was the partner happy? What feedback have we got? Were there any difficulties/challenges in our project? How have we mastered these? How has our cooperation worked in the team? How could the engagement continue?

Reflection on the connection between learning and engagement

a) **Prior to the engagement:** What knowledge and skills do I need in order to realise my engagement in a good way? What do I already know and what do I need to learn before that? What do I want to learn during the engagement?

b) **In the course of the engagement:** How could I use and apply the things learned at school this week for the engagement? What have I learned at the engagement this week about which I would like to know more now? What practical experiences in the engagement help me to better understand theoretical topics from the classroom?

c) **After the engagement:** Have I achieved the learning goals? What have I learned in the engagement that I should have learned in my subject? Which of my practical experiences help me for my future lessons?

Reflection on the social context of the commitment

a) **Prior to the engagement:** What is civil engagement and how does it benefit society? How does it benefit us as active participants? What does it mean for me to live in a democracy? What do I know about the social or environmental problems and their backgrounds in my town or in my environment? What solutions could be there?

b) **In the course of the engagement:** What kind of contribution to society do I do with my engagement? Why are there the environmental/social problems my engagement is about? What do I learn and experience during the engagement? How does this problem/challenge affect the society? What support systems are there?

c) **After the engagement:** In my opinion: what has been changed by my engagement? What would have happened if we had not engaged ourselves? Has my engagement made the world a little bit "better"? Where are the limits of what an individual/a group of students can do? What have I learned and experienced about my engagement topic? Three things that I wish for the people/environment for which I have committed myself ...

Source: Seifert, A./Zentner, S./Nagy, F. (2012): Praxisbuch Service-Learning. »Lernen durch Engagement« an Schulen. 69 Weinheim/Basel, p. 98 ff.

Working material 2.3: Methods of reflection with students

Curriculum Detectives

At the beginning of the Service-Learning students look into the curricula of their subject and search for hints as "Curriculum detectives". Here they can answer the following questions: *What are the required skills and contents that match with our planned engagement project?, What should we learn in order to perform the engagement in a good way? or What will we learn during the engagement?* Discuss with the class and ask students to agree on the most important skills they want to learn in Service-Learning and write them down. For example you can create a wall newspaper which is put into the classroom, and used again in the course and at the end of the engagement. Here questions may be: *Where are we now?, What have we already achieved?, How do I currently evaluate myself for which competence?, How do my classmates see that?, What do I want to learn and what support do I need?, How satisfied are we with our overall learning outcomes?*

Human being with head, heart, hands and feet

Each student draws the outline of a person (e.g. of a classmate). The human being is dealing with a specific topic (e.g. Service-Learning in general, the own engagement project, a concrete experience during the engagement):

- Into the head students should write/paint: *What do I **think** about the topic?*
- Into the hands: *What do I **do**/have I already done?, What have we done?*
- Into the heart: *How did I **feel** myself?*
- The feet symbolize next steps: *Where do I still want to go (in my project/...) ? , Where does ... (my project/the concrete experience/...) **lead** me to?*

The images are then discussed and exchanged, for example in groups of two.

Objectives: mood query, make aware thoughts, experiences and actions, reflect on one's own person (and possible changes because of the engagement).

Ball-bearing

The study group is divided into two equal subgroups and forms two circles: an inner and an outer one (around the inside one). The students of the inner and outer circle look at each other and always two students are eyeball to eyeball with the other. The whole group receives a reflection question that is discussed by the pairs, for example: *What am I most looking forward at the engagement?, What was my best experience this week?, What will I particularly keep in mind about the service-learning?* The inner circle reports, the outer circle listens and asks additional questions. After a few minutes and on a sign all walk three places further. In this case the inner and outer circle move in opposite directions so that new dialogue partners are meeting. Now the outer circle reports and the inner circle asks. Further rounds follow, usually four or five.

Objectives: communication training, reduce constraints, talk freely with random dialogue partners.

Opinion - contrary opinion

Students read, for example, books, texts, essays or newspaper articles by authors who represent different opinions on controversial matters that are related to the engagement of the students. For example: waste problem: *Who is responsible?* genetic engineering: *Chance and/or risk? What is an environmentally responsible society?* Then they discuss (everybody for himself in an article, in small groups, in the classroom ...):

- *How does my experience with the engagement fit to the positions that I have read?, Which of my experiences correspond to position XY, which contradict each other?*
- *How would the authors of the texts interpret and evaluate what I observe and experience during the engagement?*
- *What is the opinion of the people within my engagement about the controversial issue?*

- *What do I personally think about the issue?, Will my opinion be supported by what I experience in the engagement?*
- *Has my opinion changed because of the engagement?*

Service-Learning theatre

At the end of the Service-Learning students create a play for those students who will participate in the next school year. With sketches, small scenes and pantomimes they show experiences, emotions and learning successes they want to share with the "new". The hall where the theatre takes place is decorated with pictures that tell stories from their engagement. In preparation for the Service-Learning theatre the class reflects: *What have we experienced in Service-Learning?, What has interested us most, what did we particularly like?, What have we done for others?, What have we learned ourselves?, What were obstacles and challenges in Service-Learning and how have we coped with them?, What do the new students expect and are afraid of and how can our theatre prepare them well and give them pleasant anticipation?*

Alternative: The performance may be part of the completion and recognition ceremony at the Service-Learning.

According to: learning through engagement (LdE) at the Heinz-Brandt-Oberschule Berlin, participant in the network LdE.

Tree of Knowledge

The students draw a tree with a crown and a trunk on a large sheet of paper. On this tree now fruits can be put. Students receive chits in red, green and yellow or brown colour:

- **Red fruits** (chits) are the delicious ripe fruit: positive and wonderful experiences during the engagement, an encouraging phrase that someone has said, a goal that has been achieved, a successful learning ...
- **Green fruits** (chits) are not yet ripe. At these buds you want to continue working, to improve them: things that have remained unclear, learning processes that have started but should go further, wishes for the next time ...
- **Yellow or brown fruits** (chits) are windfall: things gone wrong, experiences and adventures during the engagement that were not so nice ...

Students each hang their personal fruits at the tree of knowledge and share their experiences. The tree gives reason to additional questions and reflection in class.

Time: intermediate reflection in the course of the service-learning or final reflection.

Working material 2.4: Certificate



Logo school



Logo engagement partner

CERTIFICATE

Natalie Kleemann has participated successfully from February to May _____ at the **Service-Learning-Project „Big experiments for small people“** of the school _____.

The project took place in the **subject "science and technology"** and was based on the method *Service-Learning - learning through engagement*. Here social engagement of students is combined with professional learning. The young people thereby expand knowledge and skills and at the same time learn that it is worthwhile to be active for the common good. They train important social and democratic skills.

Natalie has volunteered in the project in the day-care centre _____ in _____ for six weeks, one hour per week. She has taken over responsibility and has **independently designed scientific experiments for the preschool children of the day-care centre**. Thereby she has introduced the children playfully to scientific phenomena and has supported the educators in fulfilling their early childhood educational tasks.

Natalie has done the following activities, amongst others:

- Selection and didactic preparation of experiments suitable for children on the subject of air and fire
- Preparation and testing of the experiments
- Creation of worksheets suitable for children
- Implementation of experimental lessons as a moderator and an expert in the day-care centre
- follow-up and documentation of the experiments

Here Natalie could enhance and use her professional skills in science. During the Service-Learning she also gained experience in dealing with children, proved her communication and team skills and has experienced and reflected the importance of civil engagement for our society in her own actions.

We express our gratitude and our appreciation to Natalie for her commitment!

signatures engagement partner and school

Working material 2.5: Three phases of Service-Learning

In the first phase Service-Learning projects begin with the research on existing problems and challenges in the city or municipality. Ideas to solve any of these problems are then developed together with the engagement partners, and the implementation of the project regarding content and organization is planned. In the second phase the project is carried out, accompanied by reflection during teaching lessons and continuously feedback to the learning content. With a final reflection and appreciation of the project results the Service-Learning project is completed in the third phase.

Phase 1: Prior to the engagement - explore and concretize needs

- discover needs
- concretize idea
- arrangements with the cooperation partner
- planning of the project regarding content and organization
- preparations

Phase 2: In the course of the engagement - implement and reflect the engagement idea

- implementation of the project
- accompanying reflection in the classroom

Phase 3: After the engagement - evaluate and conclude engagement

- final reflection
- presentation of results, joint final ceremony

Material 2.6: Education program "Service-Learning – Learning through participation"

Service-Learning program "Learning through participation"

The Service-Learning program "Learning through participation" consists of five workshops and is performed together with students and Sunce mentors. In addition, the program includes individual work units that are performed by Sunce mentors together with students. The involvement of students in the activities of the organization Sunce is also an element. The program ends with a small closing ceremony and the award of an individual certificate where the personal commitment of all participating students, teachers and Sunce staff are appreciated. Before the start of the Service-Learning program, the employees of Sunce conduct an internal workshop to identify projects and activities that are well suited for the program.

WORKSHOP	AIM OF THE WORKSHOP	METHODS OF THE WORKSHOP
We get to know each other and talk about our expectations	Getting to know each of the participants of the Service-Learning program (students, Sunce mentors and the accompanying teacher of the school), presentation of possible contents of the Service-Learning projects, identification of expectations, development of an agreement on work rules during the practical activities in the environmental organization Sunce	Partner interview, Brainwriting
Environmental problems of the city of Split, choice of topics for the theses of the students	Selection of topics for the theses of students	Brainwriting, Point decision
Work on the practical part of the theses	Create individual plans for the practical engagement in the Service-Learning program	Who is doing what until when? Brainstorming
Peer Education	Presentation of the engagement of individual students in the Service-Learning program and exchange of information on environmental issues that have been dealt with in the final theses	PowerPoint-presentation, Discussion
And how did it run?	Evaluation of the Service-Learning program	My opinion

Working material 3.1: Checklist "Towards a sustainably managed student company"

Checklist - A guideline for student companies towards a sustainably managed student company

What is a sustainably managed student company?

Sustainable student companies do not only want to be economically successful, they are also pursuing environmental and social aims. Product, production and operation are designed in a way that nature is stressed as little as possible, that students are strengthened personally in their social skills, practice cooperation and thereby also experience societal problems such as economic activities in the One World. Linked thinking regarding economy, environment, social matters and culture (in a global context) is learned and encouraged.

Sustainably managed student companies

- seek a company concept based on principles of sustainability, implement sustainability in their vision and use their profit in a responsible way in terms of a sustainable development.
- consider an environmentally friendly production (e.g. energy saving, waste reducing, CO2-reducing).
- choose their products (of purchase and sale) according to resource-saving criteria (e.g. short transport routes, biodegradable, free of harmful substances, recyclable).
- promote the marketing of fair trade products and organic and regional production (e.g. purchase, as far as possible, organic, regional, fair products and do without products from child labor).
- maintain regional cooperations with sustainable companies / organizations / associations in the region (e.g. world shops, innovative companies, social institutions, environmental organizations).
- work across school years and regularly educate new employees.
- cooperate with other student companies.
- use parts of the profit especially for other sustainability projects.
- pay attention to transversal skills in their work: dialogue skills, team orientation, conflict solving skills, sense for public spirit orientation, tolerance, engagement and participation.
- seek for good public relations and presentation of their sustainable way of economy (advertising, school newspaper ...)

Why this checklist?

The checklist serves as a support towards a sustainably managed student company. The road to a sustainable student company that meets all criteria (all answers with two points, see below) is not so easy. Here the ideas of the student company employees are needed: How can the student company develop towards a sustainably managed student company, with the aim to possibly fulfill all criteria?

How do you deal with the checklist?

The questions can be answered either in individual work and then discussed together in the group. Or the individual points can be discussed together in the group. Important: The questions and answers should be read carefully.

There are given 25 questions with three possible answers. For each answer points will be awarded. These show the current level of the student company. Wherever two points are reached the student company has been working really well. Where one point is reached it should be considered how the work can be made more sustainable. If zero points have been reached in response to a question, it should definitely be considered what could be changed to really manage in a sustainable way.

Have fun!

CHECKLIST

ABOUT US		
1.	In our student company ...	
	a) we work in a team.	2
	b) only some people work together. The others are working alone.	1
	c) everybody is working on her/his own.	0
2.	Our student company works...	
	a) across school years (mixed-grade).	2
	b) only within one grade.	1
	c) only within one class.	0
3.	New employees in our student company...	
	a) are recruited early and educated well.	2
	b) can ask questions to everybody in our student company at any time.	1
	c) are completely on their own.	0
4.	Active decision making in our student company	
	a) In our student company all are allowed to take part in decision-making in the same way.	2
	b) During decision-making students discuss but decisions are made by the accompanying teacher.	1
	c) Decisions are made by the accompanying teacher without consultation of the other employees.	0
5.	Dealing with conflicts	
	a) Disagreements and conflicts we are discussing at once and immediately try to solve them.	2
	b) Disagreements and conflicts we are almost never discussing and a solution can only be found with a teacher.	1
	c) Disagreements and conflicts are solved by our teacher.	0
6.	Social engagement	
	a) We are regularly supporting sustainability projects with our student company.	2
	b) We are sometimes supporting projects with our student company.	1
	c) We have not yet thought about this.	0
PRODUCT DESIGN (NO FOOD PROCESSING)		
7.	Our product is durable.	
	a) True completely.	2
	b) True partially.	1
	c) We have not yet thought about this.	0

8.	During the manufacture and design of our products we pay attention to eco-friendly ingredients and material coming from the region.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
9.	During the manufacture and design of our products we make sure that the materials used have been produced and traded in a fair way.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
PRODUCT DESIGN (FOOD PROCESSING)		
10.	The products that we process and offer are organic or have an organic label.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
11.	The food that we process and offer are seasonal and purchased from a producer from the region.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
12.	Food that do not come from our region are fairly traded.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
THROWAWAY SOCIETY? NOT WITH US!		
13.	We separate our waste.	
	a) True completely.	2
	b) True partially (we separate only some kinds of waste).	1
	c) Rarely or never.	0
14.	We produce and trade in a waste avoiding way.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
15.	We use recyclable and recycled materials, also for shipping.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0

16.	Before we throw something away and buy new we consider the possibility of repair.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
17.	During the manufacture of our products or the provision of our services we pay attention to energy efficiency (energy saving production), low CO2-use and economical consumption of resources (e.g. water).	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
DEALING WITH OUR REVENUE		
18.	We invest a part of our revenue into our student company so that it can develop further towards a sustainable production (we take environmental and social aspects into account).	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
19.	The distribution of our revenues ...	
	a) is understandable for all of us and seems to be just to us.	2
	b) is sometimes incomprehensible for us.	1
	c) is decided by our supervising teacher.	0
VISION OF SUSTAINABILITY IN THE STUDENT COMPANY		
20.	We have formulated principles that inspire us to create environmentally friendly products and produce these in an environmentally friendly and socially just way.	
	a) True completely.	2
	b) True partially, but we produce in a sustainable sense.	1
	c) Not applicable.	0
21.	We have a responsible corporate concept with short cycles regarding material and economy.	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0
COOPERATIONS/PARTNERS		
22.	We have partners in the region who support our project.	
	a) Yes, we have completed (a) co-operation agreement (s).	2
	b) From time to time we are working together with partners in the region.	1
	c) No, we do not have partners outside the school.	0

PUBLIC RELATIONS		
23.	Our student company shows publicly that it operates and produces in a sustainable way.	
	a) Yes, we regularly show this in our advertising and our products.	2
	b) True partially.	1
	c) Rarely or never.	0
LOOKING TO THE FUTURE		
24.	We cooperate with other student companies.	
	a) True completely, we regularly cooperate (exchange of experience, help with advertising and marketing ...).	2
	b) True partially, from time to time we work together with others.	1
	c) Rarely or never.	0
25.	Development perspective: The results of this checklist ...	
	a) help us to set new aims for the future.	2
	b) are interesting and have stimulated us to think about.	1
	c) are checked off and do not matter for us in the future	0

Suggestions (tips to think about)

BANKOVNI RAČUN, POSLOVNA IDEJA		
	Our student company has their bank account ...	
	a) at a socially and ecologically oriented bank.	2
	b) at an ordinary bank.	1
	c) no account.	0
	Our business concept aims for making usable things from used materials (re-store e.g. old bicycles, produce bags from old materials ...)	
	a) True completely.	2
	b) True partially.	1
	c) Rarely or never.	0

This list was created with the support of "FairBindung e. V." (www.fairbindung.org).

Working material 3.2: Cooperation agreement

Cooperation agreement School - sustainable Student company

Cooperation agreement on the establishment and operation of the sustainable Student company

(business purpose: _____)

at the school _____

between

school administration _____

and

student company (represented by) _____

with effect from _____

Content and principles

The student company is a project recognized by the school administration. The agreement governs the internal relationship between the school and the student company in the framework of the implementation of the school project.

In addition to an orientation of participating students for education and work the project aims in particular for the development of key skills and entrepreneurial activity as well as education for sustainable development. In their actions the student company takes environmental and social issues into account. Students learn the economical use of resources and working as a team.

Agreement

1. The work of the student company should be essentially the responsibility of the students involved.
2. The teacher, Mrs./Mr _____, advises and supports the students and takes over the duty of supervision.
3. Prerequisite for the participation of underage students in the student company is the written informed consent of the parents/guardian.
4. The student company receives the following premises rent-free, for a specific purpose and for a largely autonomous usage:

_____.

For the use of the rooms the following rules and conditions apply:

a) _____

b) _____

c) _____

The cleaning of these premises is carried out by:

The provided space and resources have to be dealt with carefully.

5. All members of the student company must be instructed in the use of tools and equipment before work. The safety of yourself and others is to be strictly observed at all times.
6. All members of the student company should be informed on company-specific legal regulations before starting work and will follow these in all conscience.
7. In addition to the support mentioned above, the school makes available for the student company the following material and financial resources (on a loan basis or permanently):

8. For the revenue and expenditure of the student company a separate checking account is set up that is authorized jointly for:

Ms/Mr (teacher) _____

Ms/Mr (student) _____

For the account no overdraft is requested or used.

9. The student company complies with the limit values for the annual turnover amounting to EUR 35,000 (for one student company within the school if there is no other similar student company at this school). If there are several student companies at a school with similar business content the revenues are added. Here a coordination of all student companies is necessary.

For a student company under the umbrella of the school friends' association the rule applies that all economic activities are not allowed to lead to a revenue of the association exceeding the limit of EUR 17,500.

The sales must be certified by a properly completed cash journal.

10. A homepage of the student company may be created as part of the school website.
11. The student company shows in its external representation and in all contracts to their business partners that there is a student company and a project at school.
12. Students, who were busy in the student company for at least ____ months will be certified for their work by the school in writing.
13. The liquidation of the student company is carried out by the persons in the student company (teacher and students) according to the orders of the school board or school authority.

14. Changes to this agreement are only valid if they are recorded in writing.

place and date

headmaster

representative of the student company

Working material 3.3: Key questions for the development of a business idea

Develop your sustainable business idea!

List your ideas for the business field of your student company. The following key questions can serve as orientation:

- What are you annoyed about if you go shopping?
- What services or products are missing in your school or community?
- What should be improved in your school or community?
- Are there any products or services that can make your life or life in society more eco-friendly or more social?
- What needs do the students and teachers of your school have?
- What projects or working groups (AGs) are already being implemented in your school and how could the sustainable student company connect to these?
- How could the product or service look like or taste, where could it help or be used?
- What skills and interests do you have?
- What conditions does the school offer (location and organization)?

Formulate your business idea(s) from the results.

Consider your business idea. Is it ecologically sustainable and socially responsible? If so, how can you recognize this? If not, how could this be achieved?

Working material 3.4: Key questions about the feasibility of the business idea

Is the business idea realistic?

Consider your business ideas. Are all the ideas realistic? Which ideas are suitable for a concrete implementation?

Select the potentially feasible ideas and check them individually according to the following aspects:

- How much time and money does it take to implement the idea?
- Can the idea be implemented by you as students alone?
- What skills and knowledge could you bring in?
- Can a teacher take over responsibility and assist you in the project?
- Does the business idea offer a real benefit for the customer? Which one?
- Is the price attractive to customers? Does any profit remain?
- Can the idea be realized in the immediate vicinity?
- Can the idea be implemented before someone else discovers the business field for themselves?
- Is there basically the opportunity at the school to establish a student company?

Working material 3.5: Key questions for creating a business plan

Answer the following questions in writing and discuss your results. They provide the basis for your business plan.

1. General information on the sustainable student company

- What is the name of your student company?
- When was it founded?
- Why is there a student company at your school?
- How many hours of your lessons are dedicated to your student company?
- Where is your student company placed (within the school)?
- How many employees are there at your student company?
- Which business idea (outline briefly) does your student company have?
- Why is your student company a "sustainable student company"?
- Is there an organizational structure? Which?
- Are there departments? Which?
- Is there a specific legal form? Which?
- Are there partner companies or cooperation partners? Which?
- Is there cooperation with a program or a working group?
- What successes has your student company had so far?

2. Business idea - marketable and sustainable

- What is so special about your business idea?
- What is sustainable in your business idea?
- In which areas of your enterprise is sustainability anchored?
- How can somebody see that the offer (product / service) is sustainable?
- Who do you want and can you reach with the idea (students, teachers, parents, outsiders)? Who are your customers?
- What benefits can your customers have because of the existence of your student company?
- What tasks can be adopted by all employees?
- What skills and what strengths does each individual bring into your student company?
- What are you not able to do, for example, because the equipment does not exist and because you (especially at the beginning) are no professionals?

With the following questions the offer (product / service) of the student company is described more in detail:

- What exactly is the product/service? (Here the business idea is to be described as precisely as possible.)
- What is the origin of your product/your service?
- Are there (additional) business fields which could be derived from the very idea? Which?
- What is the price of the product/service?
- What operating objectives can therefore be derived?

3. Market

- Who are your potential customers/buyers/users of your offer?
- What is the potential customer base (number of customers)?
- What are the needs of your potential customers?
- How much purchasing power (income) do the customers have?
- What makes the product interesting for your customers?
- Are there competitors?

4. Marketing – sales strategy

- Who are the real customers?
- With what kind of do you want to reach your customers?
- How intense should advertising be?
- Which raw materials / basic materials will be used?
- How is the product manufactured?
- How is the product designed/packaged?
- How will the benefits of the product/service be explained to your customers?
- How will the product reach your customers (distribution channels)?
- What prices (price calculations, trade margins) can be achieved for the products/services?

5. Organisation and staff

- How many employees does your student company have?
- Which classes do the employees come from?
- What are the tasks and functions of the individual employees?
- Do the employees need to bring/have certain skills?
- Does it make sense to create departments? If yes, which?
- Will department managers be needed and wanted in your student company?
- Who takes over which responsibilities?
- How are decisions made?
- How is the communication/flow of information regulated?
- How are new employees (=new recruits) recruited/advertised for?
- What are the opening times of your student company?
- Are there minimum working hours? If yes, what numbers?
- What remuneration/certification/education do the staff get?

6. Need for capital and financial planning

- What acquisitions do you need for your business?
- How much money do you need for these?
- Do you have own resources?
- What sum of money or what things/material assets are missing?
- Do you need more money than available (= financing gap)?
- How can funding gaps be financed?
- What are the regular costs of your company (= fixed costs)?
- How often do you need to pay the fixed costs (daily, weekly, annually)?
- What is money being spent for?
- What is the selling price?
- What turnover do you expect?
- What needs to be done to achieve profits?
- What will be done with the profits?
- Which bank do you choose and by what criteria?
- How do you organize the banking transactions?

Material 4.1: Education Program “Composting”

The program “Composting” consists of six workshops and is performed together with students, one accompanying teacher and Sunce mentors. In addition, a workshop for teachers is carried out where the links for the integration of the program into the school curriculum will be developed. Ideally, 10-15 students take part in the program. If required, the program can also be adapted to a larger group of students. The training program ends with a small closing ceremony and the award of an individual certificate to all participants.

Workshop-Overview

WORKSHOP	AIM OF THE WORKSHOP	METHODS OF THE WORKSHOP
Disposal of waste or organic waste What is composting?	Getting to know each of the participants, discussion of the topic waste disposal with a focus on organic waste	PowerPoint-Presentation, Partner Interview, Brainstorming
We create a compost heap.	Setting up a compost heap in the school yard or school garden	Learning by Doing
How do we maintain the compost heap?	Dealing with the question of how composting can be implemented at school, developing an implementation plan	Who does what until when? When-Then-Poster
You compost as well!	Working on the application for composting at school	Brainwriting, Work in small groups
Me as a teacher	Develop a plan for peer education in school	Brainstorming, Work in small groups, Point decision
And how did it run?	Evaluation of the educational program “Composting” by all participants	My opinion

Material 4.2: Education program “Green Reporters”

The program “Green Reporters” consists of six workshops and is performed together with students, one accompanying teacher and Sunce mentors. In addition, a workshop for teachers is carried out where the links for the integration of the program into the school curriculum will be developed. Ideally, 10-15 students take part in the program. If required, the program can also be adapted to a larger group of students. The training program ends with a small closing ceremony and the award of an individual certificate to all participants.

Workshop-Overview

WORKSHOP	AIM OF THE WORKSHOP	METHODS OF THE WORKSHOP
Identification of environmental problems in my city	Getting to know each of the participants, identification of environmental problems	PowerPoint-Presentation, Partner Interview, Brainstorming
I as a photographer?	Getting to know basic characteristics of documentary photography	PowerPoint-Presentation, Practical work: Exercise for photographing
How can the environmental problems in my city be solved?	Getting to know tools/ opportunities for civic engagement and active participation in the solution of environmental problems	PowerPoint-presentation, Memory game, Group interview
I as a journalist?	Getting to know basic characteristics of a report, acquisition of knowledge and experience of reporting	PowerPoint-presentation, Station learning, Exercise for reporting
Green Reporters report on environmental problems	Drafting a report on environmental problems where the students have been working on as a Green reporter, presentation of proposals aimed at preventing or solving environmental problems	Brainwriting, Brainstorming, Work in small groups
And how did it run?	Evaluation of the educational program “Green Reporters” by all participants	My opinion

Material 4.3: Seminar for young people to promote environmentally responsible behaviour and active citizenship

The program of the seminar for young people to promote environmentally responsible behaviour and active citizenship consists of four workshops for 15 to 20 students and young unemployed people.

Workshop-Overview

WORKSHOP	AIM OF THE WORKSHOP	METHODS OF THE WORKSHOP
Chemical pollution of food through additives, promoting active citizenship	Transfer of knowledge and skills about the use of additives in food, critical examination of issues about the need for additives	Partner interview, Game <i>Secret Friend</i> , Ideas-carousel, PowerPoint presentation, Game <i>Surprise bag</i> , Small group work, Inspection and observation/ reconnaissance, World Café
Nature conservation and active citizenship	Transfer of knowledge about nature conservation with an emphasis on protected areas and Natura 2000 areas in Croatia and sustainable tourism in protected areas, Stimulating active participation in conservation	Medial knowledge transfer (movie), PowerPoint presentation, Activation game, Brainwriting, Point decision, Presentation of experiences of active citizenship
Waste, composting and active citizenship	Transfer of knowledge and skills regarding waste disposal, dealing with possibilities and limitations of separate waste collection and recycling, Identifying possible solutions	Brainwriting, Game <i>separate and win</i> , PowerPoint presentation, Group interview, Presentation of experiences of active citizenship
Project cycle management and development of project proposals	Basic knowledge about project cycle management, acquisition of knowledge and experience in the development of individual components of project proposals, preparation of project proposals about various conservation topics	Flash light, PowerPoint presentation, Activation game Small group work, Point decision

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About us

The **Association for Nature, Environment and Sustainable Development, Sunce** was established in Split in 1998 as a response to the growing social demand for an independent expert panel dealing with issues of environmental and nature protection. Sunce has developed into one of the leading non-governmental organizations (NGOs) in the field of environmental and nature protection, with their knowledge, skills and competences recognized both on national and international level. Moreover Sunce is committed to the improvement of environmental and nature conservation standards, promotes public participation, contributes actively to the development of a responsible society and promotes an awareness of interconnectedness and interdependence in nature. Sunce protects the interest and the public's right to a healthy environment and encourages a sustainable use of natural resources for the benefit of all citizens. Since its foundation Sunce has underlined the importance of education and information of all generations regarding the need for environmental protection, nature conservation and sustainable development and has implemented educational activities in primary and secondary schools through various projects. Therefore - also in the frame of other programs of the association - numerous educational materials have been created, both for students and for teachers.

Gabriela Medunić-Orlić, executive director of the **Association for Nature, Environment and Sustainable Development, Sunce**. In 1998 she completed the chemistry studies at the Faculty of Natural Sciences and Mathematics in Zagreb. In 2005 as part of further training she finished the bachelor's degree of environmental science and technology, which was implemented as a model at the Faculty of Natural Sciences and Mathematics in Split in collaboration with the University of Molise (Italy). Since 2001 she has been working at Sunce in various positions (volunteer, freelancer, employee), until she took over the position of the executive director and co-ordinator of the program of environmental protection and sustainable development in 2012. From the beginning she was involved in the development and implementation of numerous educational activities of the association Sunce, including workshops, lectures and educational programs for primary and secondary schools on issues of environmental and nature protection and a sustainable development. She is the editor and co-author of teaching materials (CD-ROM) on the subjects of waste and biodiversity. Promoting awareness of the role and responsibility of every citizen motivates her to initiate, shape and implement programs of non-formal education of children and young people to promote ecologically responsible behavior and social commitment.

Margita Radman, employee/environmental educator in the **Association for Nature, Environment and Sustainable Development, Sunce**. She has studied marine biology and ecology at the Center for Marine Studies, University of Split, where she received her master's degree in 2010. 2011/2012 she completed a one-year internship at the Museum of Natural Science in Split. In 2012 she took the examination as a museum educator at the Center for Museum Documentation in Zagreb. At the same time she was active as a volunteer at Sunce, in particular in the programs nature conservation and education /nformation. Since 2012 she has worked as an environmental educator at Sunce. She participates in the design, preparation and implementation of various educational activities. These include, amongst others, Green Trips as part of the social entrepreneurship of Sunce, environmental education programs for primary school students, training programs for Sunce volunteers as well as attending and supporting students during their practical activities in the organization Sunce. In addition she participates in projects under the program for the protection of the marine ecosystem. She is currently participating in a two-semester training program (psychology, didactics, methodology) at the Centre for Lifelong Learning of the Faculty of Philosophy, Split.

Josipa Banić, a teacher at the **primary school Mejaši in Split**. In 2005 she graduated as a teacher in biology and chemistry at the Faculty of Natural Sciences and Mathematics in Split. Since 2006 she has been a member of Sunce. As a volunteer she has participated in environmental education programs and in the implementation of public events of Sunce. She is co-author of the teaching materials on the subject of waste published by Sunce. Since 2008 she has taught nature study, biology and chemistry at the primary school Mejaši in Split and has been in charge of the student cooperative "Lavender". In addition she implements environmental projects in schools. As a mentor she accompanies students

who achieve outstanding results in regional and national competitions and festivals. In 2012, for example, they won the first place in the nationwide eco-quiz "Our beautiful home" with their project "What do we feed our skin?". Since July 2011 she has been the director of the expert panel of student cooperatives of the four Dalmatian regions. She regularly organizes symposia, gives lectures and leads methodological workshops for the directors of student cooperatives.

Dada Lerotić, freelancer in the **Association for Nature, Environment and Sustainable Development, Sunce**. She studied economics at the University of Applied Sciences for Economics in Split and German philology at the Christian-Albrechts-University of Kiel. She co-founded the first Croatian environmental citizens' initiative "Split Green Action" (1988). From 2004 to 2007 she directed the nationwide educational project for primary school teachers "Protect your environment" of the Association for a Democratic Society (UDD) in Zagreb. The project was based on the same brochure she wrote on behalf of UDD in 2001. In the period of 2007/2008 she directed the UDD project "Helpdesk for E-numbers", based on the book "What's behind E-numbers?", concerning additives in food, which she published together with Dr. Ivana Vinković Vrček in 2004. Within the project, for example, workshops on healthy eating were performed with Zagreb primary school teachers, kindergarten teachers and school cooks. Since 2009 she has managed workshops about healthy eating as well as responsible handling of waste, such as composting of organic waste in schools, in the frame of the education activities of the environmental organization Sunce in primary schools of the Split-Dalmatia region.

The **German Foundation for Environmental Education (Deutsche Gesellschaft für Umwelterziehung, DGU)** was founded in 1983 and promotes environmental education or education for sustainable development (ESD) as an educational and scientific discussion with the natural, social and built environment. DGU wants to realize this intention primarily in the form of an intensification of real environmental experience of children, young people and adults. Fields of activity include, amongst others, the promotion of education and training in environmental education according to ESD and the promotion of international cooperation, especially with the "Foundation for Environmental Education" (FEE). DGU has wide experiences in the field of implementation of contents and methods of ESD. In cooperation with FEE the program "Eco-Schools", amongst others, has been carried out in Germany by DGU since 1994. The application for the award "Eco-School" has been further developed by DGU into "Eco-School in Europe/International Agenda 21-School" (USE/INA).

USE/INA is a program for school development giving the possibility that the entire school is reviewed systematically in terms of ESD and is further advancing. Moreover the qualification of school and extracurricular educational professionals, who offer technical and methodological adequate ESD issues for students and who prepare topics of sustainable development in an action-oriented way during concrete projects, is subject of various projects of DGU.

Stephanie Pröpsting, German Foundation for Environmental Education (DGU). She studied pedagogy at the Wilhelms-University Münster, Westphalia. During and after her studies she worked in several projects in the field of Education for Sustainable Development (ESD). As a project manager in the project "COURSE 21 - Schools undertake the future" (KURS 21 – Schulen unternehmen Zukunft) she has built up learning partnerships between schools and enterprises with the focus on sustainable business practice. Since 2005 she has worked as a research associate at the Institute "Futur" of the Free University of Berlin and worked on, amongst others, the conception and organization of training programs, public relations and development of educational materials in the program Transfer-21 "Education for Sustainable Development" and in the project "Training of Multipliers for Sustainable Student Companies". Currently she coordinates the implementation of an online platform for sustainable student companies at the Institute "Futur". Since 2009 Stephanie Pröpsting has worked for DGU on cooperation projects with environmental organizations from other European countries. In the period from 2009 to 2011 she directed the project "Eco-Schools - Environmental Management with Student Participation" in cooperation with the Slovak environmental organization Zivica. Currently she manages the project "Take Part in Sustainable Development" in cooperation with the Croatian environmental organization Sunce.

Acknowledgement

We thank all who have supported and accompanied us during the course of the project and in the preparation of the guideline. We especially thank all the participating teachers and educational institutions without whose commitment and enthusiasm the project "Take Part in Sustainable Development" and this guideline would not have been possible. Our thanks also go to all young active volunteers who have supported the environmental organization Sunce in the successful implementation of the educational work.

In particular we thank the following Croatian educational institutions and their teachers who have been actively involved in the implementation of the project as well as other institutions and organizations that have supported the project:

- Primary school Mejaši, Split, Josipa Banić
- Primary school Pujanke, Split, Mila Bulić
- Primary school Žrnovnica, Split, Paula Podrug
- Primary school Trilj, Trilj, Ivana Marić Zerdun
- School of Science and Engineering, Split, Jasna Slišković, Zrinka Lončar, Vera Mičić and Ana Zamberlin
- Faculty of Philosophy, Split, Vesna Kostović-Vranješ
- Faculty of Chemistry and Technology, Split, Ivana Carev
- University Centre for Marine Studies, Split; Mirela Petrić
- Croatian Employment Office, Split, Miroslav Delić
- Priority Actions Programme/Regional Activity Centre (PAP/RAC), Split, Željka Škaričić and Lada Jakelić

We would also like to thank for the gainful examples, experiences and suggestions of the following organizations and educational institutions from Germany:

- German Children and Youth Foundation (Deutsche Kinder- und Jugendstiftung, DKJS), Berlin, Juliane Winkler
- ASHOKA Germany, Berlin, Christin Heuer
- Network for teaching entrepreneurship (NFTE), Berlin, Prof. Wolf-Dieter Hasenclever
- Independent Institute for Environmental Issues (Unabhängiges Institut für Umweltfragen, UfU), Berlin, Florian Kliche
- Primary school Beerwinkel, Berlin-Spandau, Ulla Ondratschek
- Primary school Kastanienbaum, Berlin, Marko Schmicker
- Freudenberg Foundation, Berlin, Carla Gellert
- Pfefferwerk, Berlin, Claudia Dell
- Eduard-Spranger-school, Reutlingen, Irene Mutschler
- Werner-Heisenberg-gymnasium, Weinheim, Gerald Kiefer
- Secondary school Hanstedt, Hanstedt, Gertrud Trieb
- Primary school Bardowick, Bardowick, Iris Pottek


Last but not least we thank the German Federal Environmental Foundation (DBU), the Croatian Ministry of Science, Education and Sports and the Development Fund Environmental Protection and Energy Efficiency for financial support for the implementation of the project "Take Part in Sustainable Development" - the framework for the creation of this guideline - and the Croatian National Foundation for Civil Society Development supporting the work of the environmental organization Sunce.


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Service-Learning – Civic engagement in connection with professional learning
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The guideline was created within the frame of the project "Take Part in Sustainable Development - a qualification and participation project for young people in Croatia" (2013-2015), funded by the German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt, DBU). The printing of the publication was also financed by the Croatian Ministry of Science, Education and Sports and the Development Fund Environmental Protection and Energy Efficiency.



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The work of the environmental organization Sunce is financially supported by the Croatian National Foundation for Civil Society Development.

