



## Problem solving project: Finland

University of Helsinki  
Ruralia Institute

Ritva Mynttinen  
Eeva Uusitalo

### Contents:

1. Problem solving project in Finland
2. The material and tools supporting the teaching and learning process
3. Learning objectives and outcomes: general working life skills
4. Course timetable: 25.1.- 31.3.2016 (10 weeks)
5. Groups, stakeholders, topics
6. Student feedback and teacher self-evaluation
7. Some conclusions based on student feedback and teacher self-evaluation

Attachment 1

Attachment 2

## 1. Problem solving project in Finland

The problem solving project was part of the intermediate level course 'Study projects in Organic Food and Farming'. The teachers/tutors were Irina Herzon from the Department of Agricultural Sciences and Ritva Mynttinen and Eeva Uusitalo from the Ruralia Institute. 11 students participated and finished the course. Three of them were exchange students, two from China and one from Central America. Thus, one group was working in English. That is why also the instructions and other communication (mainly by e-mail) with the students was in English.

Independent group work was used as a working/teaching method. The assignment for the groups was to find an answer to a problem expressed by the customer (stakeholder). Students were explained the background of the course, given instructions in how to work in a group. Also, the stakeholders were chosen for them, and preliminary discussion with the stakeholders about the topics and problems were made by the tutors. Otherwise, the groups were supposed to work fairly independently and autonomously.

## 2. The material and tools supporting the teaching and learning process

The teaching was supported by a syllabus (see Attachment 1), containing the necessary information on the course practicalities, timetables etc. Also, rather detailed work instructions (see Attachment 2) were given to the students. A Moodle-platform was constructed to support communication and as a place for submitting the assignments and course feedback.

The tutors were located in Ruralia Institute in Mikkeli, which is about 200 kms from Helsinki, where the students were. Although distance-tutoring was active, and the students were encouraged to contact the tutors anytime by e-mail, phone or in the Moodle, some additional meetings would have been beneficial.

## 3. Learning objectives and outcomes: general working life skills

The learning objectives of the course did not have so much to do with learning about organic production and organic food chain, as with learning some general skills that are needed in the working life. The aim of the course was that after completing it students are (better) able to:

- apply theoretical knowledge to practical problems in a real life context
- carry out a small-scale project
- practice skills in oral and written presentations,
- communicate in and with a group of experts
- work as a team-member
- adapt to new and changing situations
- analyze and solve problems

## 4. Course timetable: 25.1.- 31.3.2016 (10 weeks)

Although most of the time was spent in doing independent group work, the students were given a detailed schedule to structure the working during the course. With hindsight, there could have been pre-scheduled meeting dates and times also for the groups to meet to have some more structure in their working process. Furthermore, there were only two face-to-face meetings, most instructing was done by e-mail. However, this kind of course would require more presence from the teachers, in order to motivate the students, and discuss their work with them during the process.

| Time                      | Activities   |
|---------------------------|--|
| Week 4 (25.1. - 31.1.)    | <p>Introductions in Moodle 25. - 26.1.2016</p> <p>Orientation event Thursday 28.1.2016.</p>  |
| Weeks 5-6 (1.2. - 14.2.)  | <p>Independent group work: submitting the preliminary project plans, including timetable, in Moodle, DL Friday 5.2.2016.</p> <p>Teachers will approve the plan, or suggest changes.</p> <p>After this start collecting the material and data: contacting, meeting and interviewing the stakeholders, finding relevant concepts and theories from the source material, and other tasks related to project work.</p> |
| Weeks 7- 9 (15.2. - 6.3.) | <p>Independent group work continues. A mid-course report of the progress of the project must be submitted to Moodle by Wednesday, 24.2.2016.</p> <p>The reports are commented by the other students, teachers and network of expert commentators in Moodle 29.2.2016 the latest. Groups post one comment on a chosen report.</p>   |
| Weeks 10-14 (6.3.- 31.3.) | <p>Final seminar during the week 10.</p> <p>Feedback from the stakeholders.</p> <p>Group self-evaluation: submit in Moodle during the week 10.</p> <p>Compiling and submitting group portfolios.</p> <p>Course feedback.</p> <p>Final assessment and feedback from the teachers (week 12).</p>   |

*A brief summary of the phases of the course:*

The course started with introductions in the Moodle: each student and the teachers told some basic facts about themselves, and also the motivations behind the participation to this course. After this preliminary meeting there was also a face-to-face –meeting, which every participant was expected to attend. In the meeting the students were given the background information of the course and they were also given a lecture on how to work in a group. It was emphasized, that working together with other people in a project is one of the core working life skills.

Before the meeting the teachers had generated six topics with certain stakeholders. In the meeting students could freely choose which topic they would prefer to work with, and the groups were formed rather smoothly that way.

The groups also started planning their task in this first meeting, and the teachers had also an opportunity to comment the plans. The groups had one week time to write a preliminary project plan and leave it to the teachers to be commented. After the comments they could proceed with their work by contacting the stakeholder for further discussions and the final formulation of the problem to be solved. Also, collecting background material, meeting and interviewing informants, finding the relevant theoretical discussions and building the conceptual framework was started.

Mid-course reports were due in Moodle after 2.5 weeks of work. A small network of expert commentators were created for the purpose of having diversity in the comments. There was also a peer review: each group posted one comment on some other group's report.

For rehearsing the presentation of the findings to the stakeholders, a final seminar was organized. Each group presented their works, and they were commented by the teachers and other students. After the seminar the students were ready to present their findings and solutions to the stakeholder as Power Point (or other) presentation, and get the feedback from the stakeholders. Also, to wrap up the course, they wrote a report on their project work, and submitted group evaluations on their work. The course was closed by detailed feedback form the teachers to each group.

## 5. Groups, stakeholders, topics

The students were free to choose which group they would join. Most participants were students of agroecology, but some other disciplines were represented as well. One of the topics was about agroecology, but two others were about practical issues of increasing sales, marketing and consumer behavior. In that sense the task was quite challenging for the students, but at the same time also very rewarding. In the fourth group there was only one member, because the student had his own product that he has been developing in real life. His case could be seen more as an example of entrepreneurship in the early stages of product development. The stakeholders and the topics are listed below:

| Students   | Stakeholder   | Topic (problem)  |
|--|---|--|
| 4 students   | Retail (a grocery store selling local and organic food) | How to communicate the difference between conventional and organic products    |
| 2 students   | Primary production (a agroecological symbiosis farm)    | How to use the residues of bioenergy production process as fertilizer          |
| 4 students (3 were exchange students)                      | Expertise (Finnish Organic Research Institute)          | How to export more organic berries to China                                    |
| 1student<br><a href="http://www.keruu.fi">www.keruu.fi</a> | Expertise (Ruralia Institute)                           | How to increase forest certifications (for organic non-timber forest products) |

## 6. Student feedback and teacher self-evaluation

Student feedback was collected during our final seminar, and also by e-form. The feedback can be summed up as follows:

Positive:

- Flexibility, no compulsory attendances
- Quick reaction to student's e-mails, students were encouraged to contact the teachers (low-threshold)
- interesting topic
- Learn how to report clearly (communication skills)

Negative:

- Some companies were not willing to co-operate and some info was difficult to get
- More information about groups and group work before the course
- At least one additional face-to-face meeting necessary for check up etc
- More discussions
- Course instructions were not clear enough
- Some language issues with the group working in english

We were happy to learn that one of the projects actually produced real contacts for the students, and some further opportunities. Two members of this group were invited in an expert seminar to present their findings:

*"The course was a good opportunity to apply one's own skills, even those that I did not no I had. The course was also useful as a way to learn group work and understanding other people. This kind of courses a good to find useful contacts, and there opened some new opportunities for me. We were asked to give a presentation to an event organized by Arctic Flavors [an association for non-wood forest products specializing in wild berries, mushrooms, herbs and special forest products] There would also have been a chance to write my MSc thesis for them, but I am not yet so far with my studies. I think I had an opportunity to learn new skills more than other group members, because I was the one to contact to enterprises and other actors. Studying is mostly individual work, and that is why all this kind of activities is good variation. I also think that the project offered better training for working life than any other university course that I have attended so far."*

There was criticism on eg. the guidance of the students – some need and expect clear instructions and guidelines:

*"The cases could be improved - even though this is about problem solving, students still need more necessary information about the case they work with. The clear problem to solve and the clear study questions are the key drivers."*

The teachers made a self-evaluation after the course, in order to improve the weak points observed during the course:

- Making the 'moments of learning' generic skills more visible
- Course duration should be doubled
  - Project solving process needs time
  - More time for guiding the students
- More face-to-face –meetings with the students (Eeva and Ritva were in Mikkeli, students in Helsinki = physical distance = a problem)
- Course instructions should be as simple as possible
- The final seminar could have been more workshop-like
- Network of commenting teachers/experts
  - The workload was more evenly distributed
  - Enables: more diversity into the comments
  - Requires: the course must be properly introduced to the commentators
  - Did the students understand what was expected from them? Were they familiar with eg. a concept of stakeholder?

## 7. Some conclusions based on student feedback and teacher self-evaluation

After the course the teachers have been discussing, based on their experience and self-evaluation, about the improvements of the course.

1. *Making the 'moments of learning' generic skills more 'visible'*: more attention will be paid to emphasizing the learning outcomes in different situations the students come across during the process and also when reflecting on the process and outcomes. For example, if the students meet some difficulties while working with the stakeholders, there should be analysis of the situation, and reflection on how similar situations would be generally dealt with in a project.
2. *More support for the students' working process*: preliminary topics will be made known to the students already before the beginning of the course, in order to activate the thoughts and mental processes. Also, more support is needed for formulating the problem to be solved, eg. more discussions and dialogue between teachers and students. More examples could be used to show how to formulate a problem to be solved.
3. *Enough time to accomplish the project work*: the length of the course should be stretched to 20 weeks: a lesson learnt for the teachers: formulating the problem and the process of solving it is a lengthy process.
4. *More contact teaching / between teachers and students, but also more regular meetings for the students' groups*: during our course there were face-to-face meetings only twice, during the starting and ending seminars. That, although accompanied by e-tutoring, is not enough to support the learning process as much as required. Also, face-to-face meetings increase the discussions and support the instructing and guiding the students. Pre-scheduled weekly meetings for the groups are also needed in order to create order and pace for the students.

5. *Clear instructions*: the course instruction / assignment must be simple and compact.
6. *Workshop-like final seminar*: instead of / in addition to presentations, time for fine-tuning and finalizing the project works is required. The teachers would be available to help and comment. Also, using more activating and participatory teaching methods in general in the final seminar.
7. *How much responsibility and autonomy is expected from the students*: student's individual capacity to independent work is different. Some are used to more guidance and do as the teachers say, others take initiative and show more self-confidence and readiness to accomplish the task. The teaching means balancing between flexibility and trust on one hand, and more instructing and guidance on the other. The emphasis should, however, be on the former: the course is about learning how to work with others, but not having an authority telling what to do or which way to go. That is why also those who wait for instructions should be encouraged to take initiative.
8. *The network of experts as commentators is a good solution*: with the network of expert commentators the workload was more evenly distributed, there was more diversity in the comments. It also requires that the course must be properly introduced to the commentators.



## SYLLABUS

### PROBLEM SOLVING PROJECT IN THE ORGANIC FOOD PRODUCTION CHAIN

18.1.-6.3.2016

University of Helsinki

Department of Agricultural Sciences

3 ECTS

The course is part of the existing course: Projects in Organic Agriculture and Food Systems / Luonnonmukaisen maa- ja elintarviketalouden projektityö (812052).

1. **GENERAL BACKGROUND:** The course is based on collaboration among seven European Universities: Warsaw University of Life Sciences, University of Kassel, University of Helsinki, Tuscia University, Technical University of Madrid, Estonian University of Life Sciences, and University of South Bohemia in Ceske Budejovice. It is part of "Innovative Education towards the Needs of the Organic Sector" (EPOS) -project, which has the aim to develop, test and implement innovative educational materials and methods addressing the needs of the labour market in organic sector and beyond.
2. **CONTENT:** The course will be organised around work on real life cases that support development of the organic sector. During the course, students carry out a problem-solving project in co-operation with stakeholders operating in the field of organic food production chain. The stakeholders will define a development challenge connected to their activities, and the students, working as a small group, will attempt to find a solution or solutions. During the project, students learn from the experts in such fields as organic food production, processing, retail, administration or research. More detailed description of the course tasks is available as a separate document.
3. **LEARNING OBJECTIVES AND OUTCOMES:** On completing the course the student will be able to:
  - apply theoretical knowledge to practical problems in a real life context
  - carry out a small-scale project
  - practice skills in oral and written presentations, and communicate in and with a group of experts
  - strengthen team-working skills, ability to adapt to new situations, analytical and problem solving skills

4. **WORK MODES AND TEACHING METHODS:** The project is carried out in mini-groups. The course consists of the orientation meeting, group work including visits to the chosen stakeholder organization, and the final presentation. The course leaders will choose the cases and assist in forming the groups around the cases. Project work involves interviews with stakeholders and other experts, use of scientific literature and other materials. All the course material will be available in Moodle, and all submissions will be made in Moodle, unless otherwise told.
5. **ASSESSMENT:** Each group will produce a presentation on their case. The presentations are assessed as accepted / failed. The groups receive feedback during the course as well as final oral feedback in the final seminar.
6. **COURSE REQUIREMENTS:** In order to successfully complete the course, the students need to:
  - introduce themselves in Moodle.
  - participate in the orientation meeting.
  - actively participate in the group work. This will be peer-evaluated with a separate self-evaluation form.
  - submit as a member of a group the mid-course report in Moodle.
  - read and comment in Moodle one mid-course project report.
  - contribute to the group's final product, presented in the final seminar.
  - actively participate in the final seminar.
  - participate in producing a group portfolio containing project material
  - submit the self-evaluation form
  - fill in the feedback e-form in Web-Oodi
7. **COURSE READING AND STUDY MATERIAL:** There is no separate reading list for the course. Each group seek independently the relevant literature and research results to be used as background data and tools for analyzing the collected data.
8. **COURSE TIMETABLE:** 25.1.-13.3.2016 (7 weeks)

The course consists mainly of independent group work. The timetable is tentative and sets the ultimate dead-lines. Otherwise, groups can proceed in their own pace. The students must report twice in Moodle how their project proceeds (week 5 and week 8). The teachers are available and prepared to answer the students' questions during the project.

| Time                   | Activities   |
|------------------------|--|
| Week 4 (25.1.-31.1.)   | Introductions in Moodle 25.-26.1.2016<br>Orientation event Thursday 29.1.2016. Detailed programme will be sent to the students.  |
| Weeks 5-6 (1.2.-14.2.) | Independent group work: submitting the preliminary project plans, including timetable, in Moodle, DL Friday 5.2.2016.<br>Teachers will approve the plan, or suggest changes. After this you can start collecting the material and data: contacting, meeting and interviewing the |

|                          |  |
|--------------------------|--|
|                          | stakeholders, finding relevant concepts and theories from the source material, and other tasks related to project work.  |
| Weeks 7- 8 (15.2.-28.2.) | Independent group work continues. A report on the progress of the project must be submitted to Moodle by Wednesday, 24.2.2016.<br>The reports are commented by the other students and the teachers in Moodle 29.2.2016 the latest. Each student post one comment on a chosen report. |
| Week 9 (29.2.-6.3.)      | Final seminar during the week 9.<br>Feedback from the stakeholders.<br>Self-evaluation: submit the self-evaluation form in Moodle during the week 9.   |
| Week 10 (7.-13.3.)       | Compiling and submitting group portfolios.<br>Course evaluation.<br>Final assessment and feedback from the teachers.   |

9. TEACHERS: The project is guided by Ritva Mynttinen and Eeva Uusitalo from Ruralia Institute and Irina Herzon from the Department of Agricultural Sciences. Because Eeva and Ritva are located in Mikkeli, it is best to reach them by e-mail or phone. You are also welcome to visit them in Mikkeli!
- Contact details:
- [ritva.mynttinen@helsinki.fi](mailto:ritva.mynttinen@helsinki.fi); 044 5906832
- [eeva.uusitalo@helsinki.fi](mailto:eeva.uusitalo@helsinki.fi); 044 336 6910
- [iryana.herzon@helsinki.fi](mailto:iryana.herzon@helsinki.fi); 0405330946, Viikki campus, C-building (Latokartanonkaari 5-7), r. 211 (by appointment).

## Attachment 2



PROBLEM SOLVING PROJECT IN THE ORGANIC FOOD PRODUCTION CHAIN (3 ETCS = 81 hours)

TASK: To identify stakeholders' problems/weaknesses and develop strategies to help solving the identified problems.

WORK INSTRUCTIONS

1. Introduce yourself in Moodle by Tuesday 26<sup>th</sup>, and describe what kind of problems in the field of organic food and farming you would like to solve. Tell also the stakeholders / sectors you would be most interested to work with. Participate in the orientation event January, 28<sup>th</sup> 10.15-12.00.
2. Plan the project, set the goals and decide the methods.
  - a. Teachers will suggest you the groups and project themes according to the interests shown in the introductions in Moodle. These can still be changed during the orientation meeting if necessary.
  - b. Discuss in the group about the theme given. Why is it important to be solved? What questions do the theme include? Formulate the project question/ development challenge, to solution of which you would like to contribute à Set the goal to your project work. Your project plan, the goal and questions, may develop/change during the project itself. Through interviews your challenges and questions may turn into unexpected directions. Be prepared to make changes into your preliminary plan.
  - c. Decide the group's working schedule and roles: what do you have to do to solve the challenge; who should you discuss with, what should you read, when you meet as a group, how often, how do you communicate, who does what etc. Keep in mind, time limits set by the course credits.
  - d. Think about different sources which might help you to solve the challenge. Don't rely only on one source.

- e. Write the plan and submit it in Moodle within the DL.
3. Collect the material and data according to your plan, for example
  - a. Interview experts in the stakeholder organization.
  - b. Learn from other experts.
  - c. Read research and other literature. Remember to be critical about sources.
  - d. Make small surveys if necessary.
  - e. Find out if there are any other projects and writings about the theme.
4. Present and discuss (mid-course reports)
  - a. mid-course reports (work-in-progress –versions) are presented in Moodle. The report can include literature, theories, concepts to be elaborated, description of the tasks undertaken so far; description of the phase of the fieldwork. The teachers will give feedback on how realizable the plans are and what other possibilities or sources or dimensions may be, or what are best ways of approaching the tasks etc.  
  
Each student posts one comment on one report in Moodle forum. There will be further instructions on how to do this, and which plan to comment.
5. Analyze and conclude
  - a. Analyze the material and data.
  - b. Make conclusions.
  - c. Provide suggestions on addressing the challenge.
6. Present the results
  - a. Present your project and results to the other students and teachers at the final seminar. Prepare a Power Point (or other type) -presentation introducing the main points of all your project phases and results. Your presentation should last about 15 minutes. Be prepared to discuss about your presentation for about another 15 minutes. Due to the international nature of the course, we encourage you to give the presentation in English.
  - b. The stakeholders will be invited to the seminar. However, if she/he cannot attend it, arrange a meeting with the stakeholder to discuss the results and get the feedback, either face-to-face or online. Include the feedback in your portfolio.
7. Run self-evaluation
  - a. How did it go? Write an individual self-evaluation. Evaluate how the group worked together. Did everyone do their share, including yourself? There is a separate form for this. Submit the evaluation in Moodle during the week 9.
8. Compile a group portfolio
  - a. Project plan.
  - b. Power Point -presentation of your project and its results.

- c. Material and data: List of the material used; Possible survey questions and results; Main points of the literature and research used.
- d. Brief feedback from the stakeholder on the group's performance.
- e. Any other products produced in the project or proofs of your activities/performance level.