Get started with the P0 project

PV 3 Autumn 2012
Medialogy
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Learning goals for today

- Knowledge of problem-oriented project work at Aalborg University.
- Knowledge of tools for project work
- Knowledge of project phases and report writing to such an extent that you can use it in P0 period

Problems - WHAT?

- The project group unpicks and formulates the problem embedded in the project
- The problem has to be analyzed within a relevant context before it can be solved
- The problem determines the choice of methods and theories to be used in the analysis as well as in the solution

Problems – WHY?

- ‘Real life’ problems are interdisciplinary and complex
- Working with ‘real life’ problems meets the learners’ interests and enhances motivation
- It emphasizes development of transferable skills, i.e. analytical, problem solving and information processing skills
AAU students on problems

- "We are engineers – our responsibility is to solve real technological problems."
- "This is the first time we found a real problem ourselves rather than getting something from supervisors. It is really exciting. It fits my way of learning. I learn better when I find the way myself. This way of learning is much better than only attending lectures, because I have to know why I need to learn this. When I know the objective clearly, I learn much better."
- "When working on a problem, I am strongly motivated and attracted. We need to solve this problem."

Xiangyun Du, 2005

So, what is “problem-oriented”?

- To wonder
- To question
- To challenge
- To be goal oriented
- To think in hole (see the big picture)

What is a problem?

- A (for some) unsatisfying situation
  - E.g. an increasing number of Danish kids are getting fat
- A possibility for improvement
  - The homepage of AAU is outdated
- A situation where the consequences and possibilities are unknown.
  - We want to investigate if and how IT and new technology can be used to improve kids habits towards doing regular exercising

Three professions

- The contextual professionalism
  - What, Why, Who, Where, When - at both micro (individual), meso (network) and macro (community) level
- The technical-scientific professionalism
  - How - in relation to the product
- Project Work professionalism
  - How - in relation to the process

The New Aalborg Model

- 50% courses
  - Course 5 ECTS
  - Course 5 ECTS
  - Course 5 ECTS
- 50% project
  - Project 15 ECTS
  - In groups up to 8 persons
  - Individual assessment
  - Self-selected groups
  - Appointed supervisor(s)

What is a project?

1 ECTS (European Credit Transfer System) = 30 working hours
Definition of a Project:
- A unique task, with a lot of complex activities
- Needs several people with different skills
- Have a final goal/objective
- Limited resources (time, money, people)
- Have to deliver a result at a given time:
  - As a minimum a written report

Project – WHY?
- A survey carried out in 1997 showed that 75% of companies wanted new employees to have good skills in project work.
- Working with realistic projects is motivating for students.
- It increases student activity and thereby increases the learning.
- Develops transferable skills, incl. project management, documentation etc.

To work in an unsecure world

Stages of a Project work

The initiating problem
- are openly expressed
- is driven by interest and motivation
- has or seeks societal relevance

Problem analysis
- Problem Understanding - relevant definitions and explanations in order to understand the nature of the problem
- Problem occurrence and extent
- Possible problem solutions framework for problem solutions and the potential buyers.
Problem analysis

- Technology Comprehension - relevant definitions and explanations in order to understand a technology's characteristics and potentials
- Potential buyers of technology - a quest for problems
- Technology social relevance and the possibility of realization

The Problem analysis is:

Motivating
Well argued
Bound
Able to "show the route"

Working with the Problem:

- In depth with one aspect of the problem.
- Is focused in relation to "what we should know more about", and possibly. "What can we do about it" questions.
- Is systematic (vs. methodology) and along-linking theory and practice.

Four steps of the Conclusion

- Results
- Answer to problem formulation
- Reflections of methods
- Perpectives

Remember to be honest

Teamwork

LEARNING BY DOING!!

It is important
- to be aware of the different roles in the team
- to learn to use strengths and improve weaknesses

Team work – WHAT?

- 6 - 8 students co-operating on the same project (at later semesters 1 - 3 students per group)
- They have to carry out the project and document the results
- An oral group presentation is the starting point for an individual exam based on the documentation, held at the end of the project period. Individual marks are given.
Team work – WHY?

- A survey carried out in 1997 showed that 75% of companies wanted new employees to have good skills in group work.
- The individual student in the group learns from the others (Peer Learning)
- Responsibility towards the group makes the individual student work hard

AAU students on team work

- “I think that it becomes easier when you learn technical matters in groups. Normally we use the blackboard to discuss things. ... You gain more from the time you have to spend in the university in this kind of education when you work in teams. We are getting energy in this way.”
- “Working in groups we get mental support from each other; it is also a responsibility so that we won’t drop out easily.”

(Xiangyun Du 2005)

Team work – HOW?

- Students are in charge of forming their own groups
- Project groups choose their own project

It is important
- to be aware of different roles in the group and
- to learn how to use strengths in a constructive way while improving on weaknesses

A Contract of Cooperation (CoC) is a useful tool in making mutual expectations explicit.

Group contract – an example

Collaboration agreement for the members of group B347

In order to ensure the best collaboration, following must be respected:
- We are all under obligations to attend meetings. If it is impossible to make it, notify another member of the group. Call phones must be silent or turned off at all meetings.
- A laptop will be used to take summary at meetings with the supervision. Everyone must get a copy.
- Group meetings must be at least once a week. Preferably after 9 am. Regular meetings must be held on the following evenings between 7pm and 10pm. This must be observed before the meeting. If members did not get out in time, there will be time to catch up, but the other group members at the meeting.
- In order to keep the motivation up, there must be breaks to relax and “breathe free”.
- If a member of the group has difficulty getting started, we are all under obligations to help the member getting started.
- If someone has a problem with the group, the project or any other conflict, it must be discussed and a solution must be found ASAP.

If the above is not respected, the members of the group will have to discuss the problem and get to a solution.

If a member of the group repeatedly does not respect the above, it might lead to exclusion from the group.
A supervisor is

- A person who through facilitating questions encourages your learning process
- A person who points out the potentials in your work
- A person who gives loyal and constructive criticism of your work
- A person who at the project exam is one of the examiners

A supervisor is NOT

- A teacher who is responsible for your learning process
- A person who tells you what to do
- A person who decides what should be the content of your project
- A member of your project group
- An inexhaustible resource – therefore: Use your supervisor hours carefully

Break for 15 minutes

Use the break to "vote" once more on experiences with the AAU educational model 2

Remember!!

References and quotations:

The Chicago method (Jensen, 2001a:21)
http://libguides.murdoch.edu.au/Chicago

By numbers [2]
http://libguides.murdoch.edu.au/vancouver
http://libguides.murdoch.edu.au/IEEE

Literature is the listed alphabetically:

We have to know all possible information’s to be able to find the quoted source:
Books: Author(s), year, title, publisher, ISBN or ISSN no.
Journals: As above + name of journal, number and date
Internet: URL and date for downloading
Persons: Name, title, company

Working papers – WHAT?

All types of written documentation, whether on paper or as an electronic file, which is related to

- the project task,
- the project management
- the group work
Working papers – WHY?

- To capture, coordinate and distribute the information collected and/or created by individual members of the group, to the other group members as well as to the supervisor.

Working papers – HOW?

If written text the working papers should contain the following four parts:

1. Header for identification
2. Introduction (What? Why?)
3. The main text
4. Summary (What did we learn?)

Working papers – HOW?

If diagrams, drawings etc. the working papers should as a minimum contain:

- Header for identification
- Explanatory text

Working papers – HOW?

In the Contract of Cooperation you could include points on production of working papers:

- How to distribute the work tasks
- How many persons write in a sub-group
- How to give response to working papers
- How and when to get response from the supervisor

Diary

- A diary documents the most important activities and decisions in the group
- The group has to decide upon a suitable format for and content of the diary

Blocking contribution to communication

- Defense / attack attitude
- Disagreement without constructive alternatives
- Blocking discussion
- Speaking about other topics
- Speaking constantly
Contributions that promotes communication environment

- Praise and encourage others
- Supporting others to be heard
- Follow and support ideas
- State change of position
- Demonstrating openness
- Have control of the decisions taken

Contributions that promotes discussion directly

- Make suggestions
- Search information through questions
- Provide information
- Summarizing discussion
- Develop suggestions and ideas
- Testing own and others' comprehension of the discussed

Check communication flow

Tools for structuring

A map would help

Brainstorm

Brainstorming is a tool for idea generation
Game rules are: (Asborn, 1941/1948)
- The defined theme / issue should be familiar to all participants.
- Set the mind free.
- Criticism takes place only later
- The more ideas the better.
- Be inspired along the way.

Post-It brainstorm

- Agree on what the starting point for brainstorming shall be
- Generate ideas individually and write them on Post-It notes
- Read each other's ideas and structure ideas together by moving the flaps in the same category together
- Discuss and evaluate the proposals based on selected criteria, for example. interests, resources or relevance
Structure and charts


Mind-map

Provides overview and ideas by:
Writing a topical issue at the center of a large piece of paper
- Brainstorm from this question and mark them as hybrids on the issue.
- Draw branches between questions and ideas, and use the branches to detail the proposals.

Example of mind-map

http://www.brainboxx.co.uk/A3_ASPECTS/images/JFmindmap.gif © SLP-gruppen, Aalborg Universitet

Example of mind-map

http://www.emu.dk/gym/projektarbejde/vaerktoej/mindmap5.html © SLP-gruppen, Aalborg Universitet

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A few examples of sequential structures

Flowchart

Group task in group room: Experience and expectations

1. Make a round to present experience with problem orientation, project work and/or group work from previous education and/or work.
2. Compare your experience with the Aalborg model, both according to size of projects, number of group members, freedom in choice of subject and methods and interdisciplinarity – what are similarities and what are differences?
3. Discuss how you can draw upon your experience in the project.