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*experiences from a Master's programme*

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# PBL in a Multicultural Environment

## *Experiences from a Master's programme*

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**Abstract:** Increasingly, it seems that problem-based learning (PBL) is regarded as a useful example of student centred learning and of dealing with the complex relationship between theoretical knowledge on the one hand and practical problems and issues on the other hand. Through more than three decades, Aalborg University has developed its own version of PBL, based in project work organised in groups of students. The result is a focus on the development of student abilities and competences related to discipline knowledge as well as to cooperation, communication, management and self-reflection. So far, the Aalborg version of PBL has mainly been implemented in settings of Danish students. However, in the last 10-15 years an increasing number of international students have joined Aalborg University. This has entailed new challenges to the Aalborg way of PBL; challenges associated with a move from a monocultural to a multicultural learning environment.

This presentation focus on the considerations, reflections and specific actions concerning the implementation of PBL in a specific and multicultural environment at Aalborg University, namely that of the Master's programme in Urban Planning and Management. The presentation will be framed on re-establishing the chronology of events, material and products associated with the implementation in autumn 2005 of the first semester (term) of this programme. In particular, the presentation illustrates the challenges of establishing a common learning environment including both (Danish) students who are already familiar with PBL and international students who are mostly inexperienced with PBL.

## INTRODUCTION

For more than three decades Aalborg University (AAU) has developed and applied its own method of problem-based and student centred learning. The method emphasises the development of student abilities and competences related to both discipline knowledge and the handling of complex working processes. Study programmes are mainly organised around problem- and project-oriented work in groups. This implies attention to interdisciplinary approaches as well as to cooperation, communication, management and self-reflection.

With this method a great part of the semester teaching and student work revolves around complex real-life problems that the students wonder about and try to find answers to in scientific manners while working together in groups. A recent evaluation from the Organisation for Economic Co-operation and Development (OECD) has shown that this form of teaching is close to optimal for the learning process. Through this work process and supported by courses, literature and the cooperation with companies and organizations, the students arrive at a deeper understanding of the subject investigated than what they normally would have learned from just reading and listening. Apart from the strictly professional outcome of this work method, it also brings the students other specific and important qualifications like e.g. good cooperation skills. (AAU main website, March 2006)

However, this method has mainly grown in a context of Danish students. Through the last 10-15 years an increasing number of international students have joined AAU, thus entailing new challenges to the Aalborg way of PBL; challenges associated with a move from a monocultural to a multicultural learning environment. In addition, a number of new international study programmes have emerged at AAU, and the university officially profiles itself as being oriented towards internationalisation.

Hence, it seems relevant to ask how the Aalborg PBL method copes with these changes. How does the move towards internationalisation and increased cultural complexity influence the Aalborg PBL method? What challenges arise, and how can they be handled?

This paper and presentation aim to focus on and learn from the considerations, reflections and specific actions (and hence goals and means) concerning the implementation of PBL in a specific and multicultural environment at Aalborg University, namely that of the

Master's programme in Urban Planning and Management (see <http://www.urban.aau.dk/>). It is the intention to do so by re-establishing the chronology of events, material and products associated with the implementation in autumn 2005 of the first semester of this programme. The paper and presentation will conclude by tentatively suggesting some lessons for doing PBL in a multicultural environment.

## **PREPARING THE SEMESTER**

During 2004 and early 2005 it was decided by the study board responsible for the Master's programme in Urban Planning and Management (UPM) that the programme should become fully international, implying that all relevant programme material, courses and teaching material should be transformed into and carried out in English. The programme had started in a Danish version a couple of years earlier, however with the intention from the outset that the programme should change into English when marketing material etc. had been prepared. After having added the English version of UPM to the main university website, international students (with bachelor degrees) started to apply for the programme. Danish students also applied, mainly from the Plan & Environment and Geography bachelor programmes. As a result, 31 students were accepted into the first semester (autumn 2005) of the revised UPM master's programme. A total of 12 nationalities (from 5 continents) were represented – 16 Danish students and 15 international students (7 guest students for one semester only + 8 students for the entire master's programme).

Apart from posing a challenge to courses and teaching material, this new mixture of students also posed a challenge to designing the teaching methods of the semester. In particular, the establishment of problem-based projects and student groups working with these projects were seen as a new challenge, given the significant differences in the background of the students. It was likely that Danish students would be keen to get started forming groups and projects. Having been through similar procedures for at least 6 semesters, it was reasonable to expect that Danish students would be interested in and able to establish groups and projects quite fast; perhaps in just a couple of hours. However, it also seemed fair to expect that most, if not all, international students would have no or rather limited experiences with PBL-learning in groups, and that the

international students would feel left alone or without knowing what to do in the group and project formation process.

Hence, a new agenda and procedure for this process had to be established. Inspiration for dealing with PBL in a multicultural environment was sought in an associated Master's programme in Environmental Management (EM) at AAU. The EM programme had several years of experience in dealing with a mixture of Danish and international students. In particular, the EM programme had experimented with applying an introduction period, in which students were administratively put into multicultural groups in order to do a predefined pilot project. The idea of an introduction period was also considered useful for the UPM programme. However, the design was revised and changed somewhat.

The introduction period of UPM was reduced to two weeks only and without a prior establishment of groups or a pilot project. Assuming that all students would arrive with their own expectations and ideas for studying UPM, it was considered important to use this prior engagement to let the students themselves build ideas and settings for projects and groups. Furthermore, it was considered important to let the project and group formation aim at the entire semester period, meaning that the introduction period should avoid pilot projects and instead use the students own ideas to build the project and the group that would carry them to the end of the semester. The intention was to avoid discouraging the students unnecessarily by exposing them to a predefined pilot assignment that may not fit well with their initial and different motivations for joining UPM.

Based on experiences from the EM programme, the advantage of doing a pilot project in forced multicultural settings seemed to be that the students would accumulate experience with working problem-oriented in a multicultural group before building the projects and groups for the remaining part of the semester. However, in designing the UPM introduction period it was assumed that gaining sufficient (useful) experience with PBL in a multicultural environment would not come from a compressed and predefined pilot project only, but rather from one or two full semesters of group work. Nevertheless, it was not without worries that the new design was established, and already before starting the semester it was planned that the working processes and its outcome should be monitored closely, e.g.

through a steering group (semester coordinator, student co-coordinator and student representatives from each group), the compulsory semester evaluation (performed by the students) and a questionnaire (composed by the semester coordinator in cooperation with the students).

The presentation at the conference will discuss the preparations for the semester in further detail – including preparation of material and informing students, teachers and supervisors in order to prepare them for new roles and working processes.

### **THE INTRODUCTION PERIOD**

The first semester of the UPM master's programme was started on 1<sup>st</sup> September 2005. The introduction period was designed as follows:

-Introduction seminar: On the first day, the semester coordinator introduced the students to the entire master as well as to the semester. This included information concerning the programme in general, the contents of the first semester and some practical information. Most importantly, however, was to inform and discuss the general idea and design of the introduction period with the students themselves. In particular, it was emphasised that working across cultural differences might produce some very useful experiences and develop new competences. Finally, the process of forming ideas for projects was initiated.

-On the same evening, the students and some teachers attended a UPM welcome party.

-The following week, the students attended introductions to and lectures in several courses. Some courses were aimed at providing inspiration for the upcoming project work. Meanwhile, the students were encouraged to add, to the semester website, their own ideas, suggestions and proposals for projects.

-Halfway through the introduction period, a project café and LEA-seminar on learning in a multicultural environment was carried out. The project café focused on further building and discussing project ideas and topics, aided by a team of supervisors. As a result, the students and the coordinator agreed to end the process of establishing new ideas and topics by settling for a few well-discussed topics, but to continue the

process of establishing groups based on these fixed topics in the following days. While the project café focused on the possible contents of projects, the following LEA-seminar focused on the process, in particular on the expected challenges as well as opportunities in working across cultural differences.

-In the second week of the introduction period, the students continued attending course activities, while discussing possible group settings. On the semester web-site, the students could add their own name to one or more of the fixed topics – in order to make visible their interests.

-A final project and group formation seminar was carried out by the end of the two week introduction period. As the topics for projects had already been settled, the seminar concentrated on the concluding establishment of student groups. The students worked hard on their own for two hours – resulting in the establishment of 7 groups; with only one group consisting only of Danish students.

The conference presentation will describe the introduction period in more detail, e.g. by providing examples of the material, the slides, and the methods used to get the students started.

## **THE REST OF THE SEMESTER**

Having formed projects and groups, each group was appointed a supervisor with relevant experience or knowledge concerning the chosen topic for the project. The remaining part of the semester was designed so that course activities were most intensive in the beginning, with still more time for doing project work as the semester progressed. The final course activity took place in late November, leaving the students with a good month to finish their project. Halfway through the semester, a seminar discussed the status of the project work; based in student group presentations of each project and following discussions among all students and supervisors concerning how to proceed with the work.

Two additional seminars concerning PBL, learning in groups and professional communication were also carried out; one in late September and the other in late October. These two seminars aimed to aid the students in the processes associated with working in groups. In particular it was the intention to assist international students in understanding

and handling the working processes that they were now becoming increasingly experienced with.

Through email correspondence and two meetings, the above mentioned steering group aimed to identify and deal with challenges or problems occurring along the progress of the semester. However, the main task of the steering group turned out to be to discuss and choose topics and candidates for guest lectures.

At the conference, the presentation will give more insight into the dynamics of the problem- and project-oriented work in groups, e.g. by providing a specific example.

## **EVALUATION OF THE SEMESTER**

The semester has been evaluated in two ways: through a compulsory semester evaluation performed and written by the students, and a questionnaire initiated by the semester coordinator. The semester evaluation concluded the following (of special relevance to the issues in this paper and presentation):

- The introduction period for the group formation worked well, but there still were some problems on the final day where the groups were formed, however this properly can not be avoided because of the very different backgrounds and the normal problems in coordinating how the groups will structure themselves. Overall the group formation was a good process.
- The foreign students missed a more in dept explanation on how to do projects, witch could make it easier starting up projects.
- The LEA (Learning in a multicultural environment) seminars covered a broad aspect of problems, but the students would have liked to use more time on [individual] stereotypes. A discussion on how to do project/group work would be a good add-on. Only a few of the international students followed this course, therefore it is important for the next semester that it is amplified for all students the importance of this course. The semester coordinator underlined the importance of this course several times, unluckily without effect. An idea would be to hold all lectures in the first week.

-Some of the Danish students sees a lack of knowledge in computers, GIS, word and excel among some of the international students. This can cause problems in the project work. An idea is to use Danish students as tutors in an introduction course on how to use the above.

The questionnaire was answered by 19 out of 31 students. The questionnaire specifically encouraged the students to identify and describe their experiences with working in a multicultural environment. The answers support the remarks above, however in much more detail. Most students exemplified both problems and advantages in working in a multicultural environment. Interestingly, the problems described were mostly claimed to be related to individual differences, rather than to cultural differences. Many Danish students described their difficulties in teaching international group members how to do PBL and project work in groups, while on the other hand acknowledging the benefits from having expanded their worldview through the eyes of international students. However, most Danish students do not feel that such efforts are appreciated in the learning objectives of the study programmes. Most international students emphasised their difficulties in learning how to do project work in groups, but they also emphasised rather strongly that they have learned and benefited from having experienced those difficulties. For instance by becoming more open-minded and being pressed to defend ones own thoughts and ideas, and to use this situation to build common ground: 'When group writing really worked, it was a unique and pleasant feeling'.

The conference presentation will present the evaluation and questionnaire in more detail.

### **LESSONS LEARNED FOR PBL IN A MULTICULTURAL ENVIRONMENT**

The experiences with the new UPM programme illustrates some challenges of establishing a common learning environment including both (Danish) students who are already familiar with PBL and international students who are mostly inexperienced with PBL. Based on those experiences, the following lessons for PBL (in groups) in a multicultural environment are tentatively suggested:

-Use an introduction period in order to get new and international students started, but also in order to signal to local students that a revised version of the PBL methods well-known to them is about to be implemented. It is recommendable to take a starting point in the students own experiences and expectations, rather than to assign predefined tasks.

-The introduction period should be aimed at, and used for, letting the students discover, discuss and develop their mutual expectations as well as their interdependence.

-Include last year's experiences when introducing the semester, in particular concerning PBL working processes.

-Use the local students to actively integrate the international students, e.g. by tutoring arrangements or by letting the local students explain the local PBL style seen from their experience.

-Put (even) more focus on PBL working processes during the introduction period; in the UPM case by scheduling all LEA-seminars during this period, and by including more knowledge and discussion concerning individual stereotypes in these seminars.

-Individual differences seem to matter more than cultural differences. However, it is recommendable to avoid too many different cultures or nationalities in one group as it sometimes proves to be very time-consuming just to get the group to work socially – with negative consequences to the actual contents and quality of the project work.

-International study programmes should include learning objectives related to working process competences and to learning across differences and cultures. Thereby, the hard work of learning how to work in multicultural groups and settings can also be acknowledged and evaluated. This may also increase the motivation for the students to aim for more peer-learning across differences and cultures, e.g. to make a greater effort to make the groups work even better.

At the conference, these lessons will be explained further, and more lessons will be added and exemplified.