

Peer teaching and co-operation between different academic study programmes

Abstract

Participating teachers

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The aim of this project is to put into practice different forms of peer teaching as a mode of handling restricted resources as well as giving students influence over, and responsibility for, their education. Research has shown that peer teaching is academically advantageous to students. At the same time there are positive effects to be observed with regard to the attitude of students towards their studies and on their self-confidence in the study situation.

In traditional teaching there is an uneven distribution of power and responsibilities between the teachers and the students. Peer teaching may increase the students' responsibility in the educational setting at the same time as power differences will be decreased or minimised. Of course power differences may arise, in these kind of situations, especially if senior students are assigned grading or assessment authority. However, in the present project such referee duties will not be a part of the peer teaching programme.

The main purpose of this project is to test and refine the implementation of the following types of peer teaching:

- a. "Senior students" leading reflection seminars with newcomers on the same programme.
- b. Students from different programmes acting as co-trainers to each other.
- c. Group interventions in study groups by "senior students" from another programme.

The university programmes involved in this project will be the Programme for Psychologists, consisting of ten terms, and the Programme for Human Resource Management, consisting of eight terms. The idea behind this is that in the peer teaching situations, students of proven experience meet newcomers who are either on the same or a different programme; while students from different programmes, who are at the same level in their particular course of studies, are also given the opportunity of meeting each other.

In (a) the newcomers will meet fellow students with more experience who will give them opportunities to reflect on the learning content and the learning process at hand. In (b) students at the same level, but with different educational experiences of similar or complementary subject areas, will meet in discussions of common subjects and problem areas but from different vantage ground and educational experience. In (c) senior students are expected to intervene in project work carried out by students at another programme. This can be seen as a form of process consultation, which also is a part of the professional training of the becoming psychologists. As a result of the interventions of these senior students, more effective study groups are expected to be created among their less experienced fellow students on the other programme.

Update

Activities in 2001

Three different parts of the project will be described.

Senior - junior students in "reflection groups"

In this part "Senior students" from the Programme for Human Resource Management were trained to supervise groups of 6-8 "newcomers" from the same programme when those groups regularly met for reflection on their study situation. In 2000 we had 10 "reflection groups" in the programme. Based on the evaluations made we made some changes for 2001. The groups started earlier, and the focus was more on the establishment of the groups and the development of structures and communication to enhance the group's capacity to work together.

In 2001 26 senior students wanted to be supervisors. Of those 15 were chosen to supervise 10 groups. The groups meet every second week and after each session the supervisors meet in groups of 5 with a teacher/supervisor. These groups will be evaluated in March 2002. This part of the project was presented at the Quality Conference in Norrköping in september 1999 (National Agency for Higher Education home page <http://www.hsv.se/>) (Elinor Edvardsson Stiwne, e-mail: elied@ibv.liu.se).

Students as co-trainers

Students from different programmes acting as co-trainers to each other. In spring 2001 a conference was arranged where students from a Teacher training programme and a Psychology training programme met to discuss a common case concerning bullying and harassment of pupils. The students first met to discuss within their programme group and after that they met in mixed groups and the day was closed by two mixed seminar groups. The conference was evaluated by students from both programmes. In the spring 2002 another conference will be arranged between HRM students and Psychology students. This part of the project was presented at the ECER conference in Lille in september 2001. (Anders Hempel, e-mail: andhe@ibv.liu.se).

Co-operation between study programmes

Group interventions in study groups by "senior students" from another programme. In the Psychology training programme students work in teams that offer their services as consultants to various organisations. In one group, the consultant team, the students support and supervise groups of students in the Programme for computer science and information technology during their project term. Students from the Business administration programme are also involved, acting as team leaders. The co-operation between students from the different programmes has been evaluated by means of questionnaires to all the participating students using quantitative and qualitative response categories. The preliminary results reveal a number of positive effects from the co-operation on the learning of the subject matter associated with the project term.

Parts of the results from the project have been presented at the ECER conference in Lille, September 2001. Coming evaluations will focus on the effects of a change in the organization of student cooperation involving a more pronounced coordination between the groups of participating students as well as the reactions of the teachers responsible for the coordination of the study programmes (Lauritz Brännström, e-mail: laubr@ibv.liu.se).

**LINKÖPINGS UNIVERSITET
INSTITUTIONEN FÖR BETEENDEVETENSKAP**

PEER-TEACHING AND CO-OPERATION

IN AND BETWEEN DIFFERENT STUDY PROGRAMMES



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Introduction

According to researchers from different disciplines (Handy, 1997; Sennet, 1998; Aronsson & Karlsson 2001) the ability to manage multiculturalism and differences will be a crucial competence in working life, which demands students and teachers to learn interactive competence. One aspect of this competence is the ability to build trustful relations, another is the ability to code social situations and to adapt to various circumstances (von Wright, 2000). Social, interactive competence is applied knowledge learned through negotiations in social relations where meaning is constructed and reconstructed. Working in groups are situations where social learning is of significance for individuals self-evaluation, self-confidence and identity as well as for the individuals' experience of prejudice, competition and co-operation.

During the 1990:s the resources in Higher Education, for teaching and researching, have decreased parallel to an increase in the amount of students and the growing heterogeneity in those groups (SULF, 2002). It is during this time an increasing interest in student centred learning and peer-teaching evolves. But it can also be noticed that TCO and SFS have reported an increase in long-term sick leave among teachers and an increase in study-related stress problems among students. One reason for this could be that labelling a group of people a team evokes expectations of co-operation, support and sharing and if this is not fulfilled it creates stress and conflicts.

For two years, 2000-2002, we have been working with a project, aiming at the development of learning situations where students learn from other students and where the traditional role of the teacher primarily is that of organiser, tutor and supervisor. Within the main project three sub-projects have developed, rather independently from each other.

PhD. Elinor Edvardsson Stiwne has worked with senior – junior students in “reflection groups”.

Ph.D. Lauritz Brännström has worked with student learning in co-operating study groups from different study programmes.

Senior lecturer Anders Hempel has worked with students from different study programmes acting as co-trainers.

We are all senior lecturers at Linköping University, the Department of Behavioural Sciences. We have different research profiles, but we all share an interest in developing the pedagogy from both a student and a teacher perspective. When working in this project we have collaborated with other departments in and outside our University and we have presented elaborated parts of our work in progress at national and international educational conferences.

We thank the Council for the Renewal of Higher Education for supporting the project.

We also thank the students from the five different study programmes who have participated in the projects and contributed to our learning. In this paper we will give a short background to the project and make a short description of the three sub-projects. Finally, we will discuss our joint experiences and how the work will continue.

Background

For the last ten years the focus in higher education has been on more student-centred learning strategies, i.e. problem based or project based learning. Working in projects and problem based learning also requires working in groups. Our experience is that it is mainly the way we *talk* about student learning that has changed. In most classrooms and seminar rooms it is still the teacher who sets the agenda, feeds back results, evaluates and plans courses. Taken

seriously, student-centred learning means a radical change in student-teacher relations. If learning is to be understood as socially interactive rather than one-way transferred or pre-packed by a teacher or any authority of knowledge, student empowerment, cultural diversity and lifelong learning take on new meanings. The role of the teacher is challenged when the teacher becomes a tutor or supervisor. The concept of "authority" is challenged when groups of students join in knowledge construction and problem solving. In study programmes where students are socialized into a profession where critical thinking, self-knowledge, feed-back and reflection are crucial i.e. for those becoming teachers, psychologists, personal managers etc, the changing relationships are at the core of the professions and working with this should be an important issue during their education. But this kind of applied knowledge still suffers from the lack of status as "real academic" knowledge. In this project one aim was to focus on this teacher-student relationship

In this project the main focus has been on the process of psychosocial learning defined as a change in the students *self efficacy* and *self evaluation* and in their way of relating to others. The issue of developing the ability to take on the perspectives of other persons without losing or giving up your own is very important in the development of a professional identity. A basic assumption in the project has been that this learning is best achieved when students work together in groups, but we also acknowledge that *being* in a group is not the same as *learning* in a group, and that *what* you learn is different from *what you expect to learn*.

BACKGROUND TO THE PROJECT

The aims of the project were twofold. One was to learn how to deal with a situation where we experienced a decrease in resources for teacher led lectures and an increase in students demands for individual feedback, flexible learning situations and flexible teacher availability. The other was our common interest in pedagogy and learning and an urge to explore different ways of arranging learning situations where the students had to take more responsibility for their learning as well as for the co-operation in the study groups. We also experienced that "student centred learning" often was synonymous with "working in groups" and that this was a prescribed working method in many classes. In spite of that we also experienced that teachers, lecturing in the same course and in the same programme, rarely co-operated.

The study programmes involved in this project were

- Psychology programme (PP) a five-year master programme. After one year of training the students are authorized Psychologists
- Human resource management (HR) a four-year programme. A multidisciplinary programme with a focus on behavioural sciences.
- Teacher training programme (TT) a four-year multidisciplinary programme
- Information Technology (IT) a four-year programme with a focus on computer science and engineering.
- The program of business administration, (E) a four-year programme with a focus on management, accounting and business administration.

The project focuses on three different relations

- *The relation between junior and senior students in the same study programme (HR).* This part of the project is "Student tutoring – time for reflection"
- *The relation between students in two different study programmes (PP and TT) when ethical and professional dilemmas are at hand.* This part of the project is "Students from different study programmes acting as co-trainers".

- The relation between groups of students from different study programmes, acting in specific organisational roles as consultants (PP), project managers (E) and project workers (IT). This part of the project is reported in “Student learning in co-operating study groups from different study programmes

STUDENT TUTORING – TIME FOR REFLECTION

The study programme of Human Resource Management

The study programme is a master program of four years with a main focus in behavioural sciences. The students also attend classes in economy, work and rehabilitation and law. After graduation students come to work in the public sector as well as in private companies, as personal managers, counsellors and administrators. Within the programme there are no periods of supervised training to prepare the students for their future work roles. The idea of the reflecting groups came as a solution to two issues that were brought up by the students.

1. When they were close to graduation many students felt that they had theoretical but no applied knowledge in how to work with a group, how to act as a leader of a group or how to deal with group conflicts as a third party.
2. A growing dissatisfaction among first-year students when they found that working in groups were expected of them but they got no training in how to make the groups effective and in how to co-operate and give feed back to each other.

At the HR-programme the about 70 first-year students are assigned to small work groups of 6-8 persons from the very beginning, but they have no tutor. These work groups are assigned tasks which they are expected to accomplish and report jointly. The groups are held together for the first semester and it takes very special reasons for an individual to change group.

A reflecting group

In this context a reflecting group means that a senior student in the HR-programme (year 3) on a regular basis tutors a first year work group during the first semester. As ”tutor” and ”tutorial groups” signifies the teachers role and the organising of students in problem based learning, PBL, we name the work group a ”reflecting group” at these sessions and the senior student is named a ”counsellor”

The aim with the reflecting group is twofold

For the first-year students the aim is

- To get acquainted to a small group of classmates
- To get to know a few senior students and share their experiences
- To offer them a forum for the exchange of feelings and experiences related to entering their studies at the University and to establish themselves in a new social context.
- To learn about group dynamics and leadership and how to structure and evaluate their work in the group and reflect on the work process as well as the results of their work.

For senior students the aim is

- To get an opportunity to share their experiences of being students at the University and to study in this programme.
- To have the opportunity to apply and reflect on the theoretical knowledge they have acquired in group dynamics, leadership and organisational psychology.
- To have the opportunity to try and reflect on their own role as the leader of a group and their counselling skills, in a real life situation.
- To participate in group supervision where they can reflect on their own learning

The first-year students are informed of the aim of the sessions of reflection and how these sessions are organised. This information, orally and in writing, is given the first day. The students are informed that the sessions are scheduled for 1 1/2 hours every two weeks and that a senior student will be their counsellor. They are informed that participation is not compulsory and that it renders no credit points, and that they should regard the sessions as opportunity for their work group to build a co-operative relationship in the group. It is pointed out that the time for reflection is not only necessary when there are conflicts or perceived problems in the group.

By the end of their second year all students are invited to announce their interest in being a counsellor. They are informed that the mission is voluntary, it gives no credit points, it takes time and that they are not paid. They are also informed that they are expected to meet with their group 10-12 sessions of 1 1/2 hours every two weeks and participate in group supervision for 1 1/2 hours the weeks in between. They are offered training, supervision, the experience and a certificate stating that they have participated as counsellors.

For the last two years we have had about 26 applicants to 10 groups and in order to meet this demand we have let 10 students work in pairs and thereby we could enrol 15 students. But this means that we have to make some kind of selection and that 10 students every year are not accepted.

Formal evaluations have been executed the last two years due to the grants from the Council of the Renewal of Higher Education. First-year students as well as senior students have filled in separate questionnaires and the result of this will be presented.

First-year students expectations and experiences of participating in a reflecting group

From the evaluations make the students expectations can be summarized:

- Very few students had any substantial expectations of what it would mean to participate in a reflecting group because they had neither heard of it before nor participated in one. But from the information they received they thought it seemed like a good idea. It is difficult to know if the expectations that were articulated by some students really were expectations or reconstructions.
- First-year students image of what senior students could contribute with is very much that of a traditional teacher, someone who will teach, tell and provide the students with new and interesting material to discuss and elaborate on. They also expected the senior student to be “the good mother” who is there when they need her, who intuitively recognises what they need, without them articulating their needs themselves. But this also contrasts to some extent to the vague ideas the first year students had of what reflection and counselling in a group meant.

In some groups the activity of the group members was high and they brought to the group a variety of study-related issues, i.e. leaving home and trying to establish a new social life; prejudice against teachers and students in other programmes; how to handle social loafing, free-riding and lack of respect of agreed on time limits and assignments; when some members want a very strong social group and other students want an effective work group. In these groups the senior students sometimes felt superfluous as the group seemed to discuss and reflect very much on its own. In some groups the first year students relied heavily on the senior student for topics to discuss and put a strong pressure on her/him to bring interesting exercises for the group to solve. They also found reflection a waste of time when they did not

experience open conflicts or substantial problems. The senior students experiences in these situations were brought to their group supervision where it was elaborated and reflected on and related to theoretical frames of reference.

As many students associated “reflection” with problems and/or conflicts the counsellors had to work hard to motivate participants to come to the group meeting when problems and conflicts were not perceived a serious issue.

The students have come up with suggestions about the structuring of the sessions, the training of the counsellors and the group composition. These suggestions have been considered in the planning and during the last two years the first year students have, on the whole, been very satisfied and also impressed by the professional attitude of the counsellors

Student evaluation show that most rewarding has been:

- Get acquainted in the small groups
- A for a where they are encouraged to articulate delicate issues
- To give and get feedback under supervision
- Develop a critical stance to their studies

Expectations that were not met were the urge to be fed with activities

Senior students expectations and experiences

Those who were accepted got an invitation for an introductory training program at the beginning of the semester. They were also informed of the conditions and a preliminary time-schedule was presented to them before they accepted.

Expectations

They had very high demands on themselves at the beginning. They hoped that they would be able to counsel the first-year students in their study environment as well as in their studies, but also to be able to give support when needed and to inspire the first-year students to use the potentialities in the program and at the department. Due to their own experiences they also found it difficult to handle the somewhat conflicting goals of being a good counsellor but at the same time being in training. It was also difficult for them to emancipate themselves from their own senior counsellors as role models, for good or for bad.

Experiences

The senior students found the group supervision indispensable for their task as counsellors and what they had learned was

- The discrepancy of talking about a group and being in one.
- The difficulty of giving and receiving feedback
- A change in social identity
- To become aware of and accept one’s potentials and limitations as a group leader and counsellor.

Conclusions

The idea of reflective groups must be given a meaning in the context where it should be implemented and can not be copied. The implementation of group based work methods in the academic context highlights the fact that faculty often lacks knowledge in group dynamics as well as in organising and leadership. But knowledge or pedagogical courses are not enough. It also takes courage to leave the position as ”director” or ”teacher” and take on the role as

”tutor” or ”facilitator” and it takes the will and indulgence to explore, learn and reflect on the relations in class as well as in faculty. Group based work also demands good planning and organising if it should not be considered merely chaotic. The responsibility and the authority of teachers/tutors/supervisors must be clear and contradicting information be avoided. This can be achieved through some kind of formal agreement or ”contract” between participants. A prerequisite for all this is that the aim of the intervention is clearly articulated and known.

STUDENTS FROM DIFFERENT PROGRAMMES ACTING AS CO-TRAINERS

In this project the aim was to try out a structure for collaboration between students from two study programmes through programme-crossing seminars or meetings. The first step was to organise an arena where the students could meet in a common task. Teachers and students from the two programmes arranged a workshop where the students worked with a case about peer bullying in a primary school. After an introduction with the whole group of 47 students (16 PP-students and 31 TT-students) they were divided into 8 small, homogenous groups and instructed to have an inter-professional discussion of the case. This discussion lasted for about 1,5 hours. The different groups did not communicate with each other during this session.

After that the students were divided into small, mixed groups with both PP-students and TT-students. In these groups they were instructed to discuss possible causes to the bullying in the presented case, and also to make up a preliminary plan of how to change the situation. After the mixed group discussions there was a gathering in two groups. These concluding meetings were (led) monitored by a teacher in each group. The two groups were mixed and the teachers came from both Programmes. These two meetings were held with the ambition to sum up the discussions from the entire day. How did they manage to make up preliminary plans? Were the plans different and in what ways. Did their views of the case change during the day? Finally there was a short oral evaluation of the day.

Short after the workshop, four students, two from each programme, interviewed 37 students. The purpose of that was to evaluate the experiences of the day and to find out whether the students found design and content of the day meaningful and stimulating to their learning. The interviews were performed by use of an interview guide. The topics were defined through six (6) broad questions; some completed by additional questions.

The students experiences

Since the idea of this collaboration day was to give opportunities for training in communication, listening, arguing and sharing even with other students than their own mates, the *content* and the *topic* of the day were important. The students found the topic relevant. They meant that the case worked well and was suitable as a starting point for discussions of issues relevant for the coming professions of them all. The topic was found relevant for the members of both groups. Although some few students from the TT programme meant that the topic had been discussed so much that one could be tired of it.

Group composition and group climate were mentioned as important issues in relation to the goals of the co-operative case work. The students should meet other students and also be able to compare the discussions in both homogenous and heterogeneous groups. All the informants experienced different qualities in the two group settings (homo- and heterogeneous). There were differences in the moods of treating the case. In the mixed groups was the work more pragmatic, down to earth and on individual level, but in the homogeneous groups there was

more of theorising, more tuned by Problem based learning, e.g. by using brain storming (PP-students). The teacher students had it the other way. The discussions were more pragmatic in the homogeneous groups and more on individual level, than later in the mixed groups.

In the interviews nearly all students reported that they learned to think on a problem from different perspectives and to see different solutions (settlements) of the problem. Some TT-programme students said they learned to see problems from different perspectives and focus on different organisational levels, while some PP-students reported they learned about how schools are organised

Did the students see the day as meaningful according to their *professional training*? Our aim was to create an occasional arena for inter-professional co-operation. Nearly all informants found this collaborative form important to their vocational role training. Some told they had asked for collaborative situations with external students, as they later will have to co-operate with persons from many other professions. There was a slight difference between the two subgroups, i.e. teachers were not 100% positive, but psychologists were. The more sceptical (3/21) saw it more as stimulating but not as necessary in the professional training. Of course we hope for grounds to organise further collaborative events like this. Did the students have positive expectations for the future? Almost all informants were positive and would participate again, but some wanted another subject (kind of case). Psychologists were positive to 100%, some wanted collaboration with other types of professions (as medical students).

As it is important that the students felt a bit challenged by this workshop, but also enough content to seek collaboration with other, external students, we were very interested of their view on *the workshop as a whole*. Most students found the mixed groups most rewarding. The discussions there were more interesting. Good to collaborate with another profession (could have happened earlier, some claimed). Experiences were exchanged and theory was turned into reality (applied). Some more negative views were (a) Some vagueness from introduction, especially concerning the aim of the day, and (b) it was too lengthy (introduction). (c) The reassembling (in two large groups) was too long, and (d) too little of discussion during that part.

Conclusions

The attitudes toward collaboration with students from other study programmes are generally very positive. After summing up we can note that the students had little influence on the planning of the event. Learning could be broadened provided that students had also planned the day, either completely or in collaboration with a lecturer. In the coming event we will probably plan for that. Our own experiences are (a) the value of planning, and (b) the need to use long-term planning. The last issue is among other things motivated by the need to co-operate with the director in each of the other programmes, in proper time due to schedule planning and other practical issues.

A later experience of an unsuccessful attempt to arrange another Case day confirms the problem of early planning to make it possible to avoid schedule clashes. Crucial is also the ideas of the teachers involved. Do they see the actual feature as important to the quality of their Programme? Here is possibly a difference between the three main parts of this project.

Finally the positive reactions from the students are probably explained by the fact that the students through the contact with external students (from other programmes) both view and experience themselves and their own knowledge in a new way. They turn into more viewable

to themselves, but also detect the value of the knowledge from others. One precondition for learning is motivation, and for learning in group settings both trust and challenge (cp. Jarvis et al., 1998) is needed. The topic of the day was of interest to the students and the meeting with external students was a good enough challenge. We also think the start in homogenous groups gave a safe start of the day and also served as base to compare the quality of discussions in the mixed and homogenous groups. There was enough time for reflection and listening.

STUDENT LEARNING IN CO-OPERATION STUDY GROUPS FROM DIFFERENT STUDY PROGRAMMES.

Within the Programme for Psychologists which encompasses 10 academic study terms there are a number of courses or themes that have both a theoretical and a practical focus in order to give students adequate teaching and training in preparation for their coming professional career as diploma psychologists. One important aspect of the coming professional role is the students' capacity to handle group problems and processes in organizational settings. The other study programme involved is a technical engineering programme which has the goal to teach and train the students for a professional career as information technology engineers during their 10 terms of study. As regards students of the IT Programme much of their studies are organized within student study groups as a means of supporting the individual learning process of the students. On one semester (the fifth one) of the programme this focus on study groups is even more accentuated when the students are demanded to work within created project teams of a fictitious (simulated) organization.

Process consultation is a method for helping the client group become aware of its own way of functioning and how it can be improved by changes searched for and implemented by the members of the client group itself. The method can be described as "helping the group and its members to help themselves" Process consultation can be contrasted to an expert consultation, where an external expert is telling or advising the group what to do. An expert model often makes the client dependent of the expert while a process model is aiming at making the consult redundant.

The purpose of the project was:

- 1) Provide PP-students with a platform for the training of process consultation.
- 2) IT-students are supposed to create more efficient teams or study groups.
- 3) The creation of a platform for individual learning of content as well as learning "the psychology of work teams/groups"

Procedure

The project work is running through 20 study weeks. During this time the IT-students attend a class in group psychology with the leader of this project as a teacher. Parallel to this course, PP-students introduce themselves as process consultants. The PP-students are offered supervision by the project leader. Recruited as project team leaders were students from the department of Business Administration.

The PP-students were organised as a group of consultants and each project group had to ask for consultation and negotiate a contract. The project was evaluated at the end of the term with questionnaires to IT-students and PP-students separately about their experiences.

The IT-students expectations and experiences

All students expected the consultants to intervene but some expected this to be as consultants who should help the teams to help themselves, and these students also found their expectations met. Some students expected the PP-students to become members of the project teams and act as experts on problems of individuals and the group as a whole. Those expectations were not met, and a frequent comment of the students in general is that it takes time to understand what will take place of process consulting in the project teams. Over the two annual groups the aims of the psychologist students were better understood in the 2001 group

About 75 % of all the IT students reported a high degree of participation and involvement in the interaction with the PP- students. The content of these interactions were issues like role conflicts, communication, decision-making and leadership. A small number of IT students were initially somewhat sceptical to the co-operation but as the project proceeded they changed their minds. Finally, there were some IT-students who did not engage so much due to problems of finding a schedule for meeting the consultants

What has been the most rewarding

A challenge was to work with students who represented a different culture, a “technological culture” meeting a “humanistic social scientific culture”. A majority of the IT students had positive expectations from the very beginning and these feelings lasted.

The IT-student valued the following aspects most positively

- getting feedback about the work process
- different interventions and exercises

The development of the project

Ninety six (96) per cent of the IT students wanted the project to continue and develop. The reason for that was:

- The learning of a number of new things related to the working in a group
- The PP- students as process consultants have strengthened the individual IT student’s ability to cope with the process of working in groups

The students had suggestions for further development

- Better information in advance about what “process consultation” means
- Role definition and role enlargement.
- Feedback adjusted to the students personality.
- Starting the consultation at an earlier moment of time.
- Emphasizing positive attributes of the co-operation without any explicit demands to make changes.

From the answers of the IT students one can conclude that reducing uncertainty might be beneficial for the student co-operation.

The PP-students expectations and experiences

The PP-students expected that the IT students had little knowledge about group psychology in general. Therefore they anticipated some resistance from the IT students towards the co-operation. The answers reveal that the expectations were met to some extent but some students declare that they had underestimated their knowledge in the field of psychology. The PP- students were highly motivated in doing their job and reported a high degree of awareness of the demands associated with the work as consultants.

The role of the PP- students was to be active the co-operation with the IT students without being experts on the IT students way of developing work and work group. Their task was to

diagnose the needs of group development the project groups articulated and in a dialogue suggest what kind of actions would be beneficial for the project teams. The PP- students problem was to understand the IT students way of working and communicating.

What has been most rewarding

The PP-students found the following aspects of the project most rewarding for their learning an professional development:

- To experience the role of a consultant
- To apply their psychological knowledge in a realistic learning context of group development.
- To struggle with their own professional development regarding psychological and personal competence in relation to working interactively with others:

Administrative hurdles were frustrating for the students as they found themselves tangled up in a pre-planned, complex organisation, where schedules and timing sometimes became more important than the content. The PP-students also found it time-consuming and frustration to come to 'working terms' with the client groups.

The development of the project

All the PP- students gave an affirmative answer. The arguments were:

- a good learning experience
- an opportunity to co-operate with people with an other professional background and work environment
- an opportunity to confront a "real-life" situation as a consultant working in a group of consultants
- an opportunity to implement theoretical group-psychology knowledge

Their suggestions for the future planning were:

- More time for and more involvement for the students to plan their co-operation.
- The roles of those involved should be more clearly defined.
- Expand the co-operation between study programmes to other programmes as well.

Conclusions

The project show that this kind of student co-operation task is much appreciated by the students from all three programmes involved. One argument is that it provides them with an opportunity to integrate theoretical and practical knowledge and thereby contribute to their learning. An other argument is that they have an opportunity to co-operate with students who have different theoretical and professional background, to develop their interactive competence. When they are to co-operate with others in a complex organisation they also realise the necessity of administrative and social frame in order to fulfil the goals of the IT-project as well as in the group of consultants. The project also high lights the very importance of co-operation between the programmes on an administrative level and the importance of clearly defined roles.

Finally we have learned that working with change and work processes takes time, trust and a positive attitude to mistakes and failure. This can be difficult to accept in an organisation where achievement, consumer satisfaction and competition for resources are high in priority.

COMMON EXPERIENCES AND PLANS FOR THE FUTURE

Finally we will summarize our common experiences as each sub-project has been organised, implemented and evaluated by one of us. During this time we have met on a regular basis to exchange experiences and prepare conference presentations.

Management of the project and student involvement: When the project was accepted many steps were already taken where students and colleges were excluded, i.e. the main focus and the design of the project. As a consequence they did not share the same motivation or the same goal as us. In all three projects students have been involved in the implementation. During the two project years we have very brutally become aware of the unhealthy stress that lack of resources, time pressure and increasing demands have on students and teachers. This is most obviously manifested in the difficulty of arranging meetings, taking time for joint discussions and evaluations and periods of sick leave. This means that the management of the project very much have been ad hoc with reference to the goals already set in the application for grants. From the start we created a reference group who met a couple of times when the projects were launched. The group has not been actively involved in the evaluation of the project as this has been carried out somewhat differently in the three sub-projects

Support. A common experience is the importance of support and recognition for both students and teachers. Due to the tight schedule for teachers as well as students as well as lack of common arenas for the presentation, discussion and evaluation of the pedagogical work within a department (or the university) we seldom get the necessary feedback from other people. We find that this holds true for the co-operation between teachers in and between different study programmes. Priority is given to the presentation of research projects and administrative matters. This has been an astonishing experience in a project where we learn how students struggle to co-operate and co-ordinate their work in order to pass the requirements of the programmes as well as of a future professional career.

Evaluation. The demand for evaluation can sometimes be a burden and a contradiction when it is perceived a prescribed ritual rather than a tool for improving quality. The way we have evaluated the three sub-projects differ to a great degree, depending both on the length of time of each intervention and the need of documentation. The paradox of making summative evaluations of projects aiming at personal and social development and reflection is that the immediate experiences of those involved is often confusion, resistance and frustration as this kind of knowledge is challenging the image of knowledge as hard facts and uncontested truth. In the evaluation of the reflection groups we have learned that it is in the second year, when the students get the opportunity to apply for a position as senior student tutor they realise the importance of reflecting sessions during the first semester. We also experience a tendency that students are fed up with evaluations as ritual with little significance. The students' argument for that is that they seldom see the results of their evaluations and that they find it difficult to make peer-evaluations and to give and to take feed-back.

Learning in co-operation. If the projects have lacked in recognition from colleagues and management they have been met with great interest and positive reactions from the students. They have appreciated to be met as adults with knowledge and experiences that they have had the opportunity to share with others. In the interaction with students from other study programmes or with junior/senior students in the same programme, they also get new perspectives on their own learning and development. But we have also met the "student consumer"- attitude, that it is the teachers' job to provide the student with knowledge and instructions and that reflection and group discussions is just a waste of time. We mean that it

is important to take those comments seriously, as merely "being" in a group does not mean that meaningful learning is taking place.

Time: Learning in co-operation takes time. Establishing trustful relations between study programmes is a mutual process. The content as well as the organising of the activities are crucial for the motivation to continue working together. For a relation to be meaningful all parts must feel that they can contribute to the relation as well as gain something from it. In these projects we have noticed the impatience among the students when "nothing" happens. This situation is difficult for the students to handle themselves, as those who insist on letting things take time, i.e. giving less verbal participants verbal space in a discussion, are afraid of being considered busybodies or "bosses". An important task for the leader of a group seem to be the guarding of time limits and time boundaries. The aspect of time has lately been given new dignity in research on work- and study related stress and sick leave related to psychological and social issues in the work- and study environment. It seems to be necessary that teachers as well as students are "forced" to take time for reflection, recreation and rest.

The teacher as tutor or supervisor. In our projects we have the experience that students (and teachers) have very vague ideas about what a "tutor" or a "supervisor" is or what can be expected of them, in comparison to a lecturer. Students can express feelings of frustration and anger when the supervisor refuses to bring to the group new topics to discuss or tasks to fulfil. It takes training and experience not to get forced into a traditional teacher role as this often feels more comfortable and the teacher is in control. A trained tutor can make the students contributions of their experiences the topic of learning and create a learning situation where the group elaborates on the material and feeds back to each other. A couple of questions have been put in our reflections on our experiences from the projects. What happens if the students do not find the contribution from the teachers as tutors and/or supervisors worth reflecting on and the teacher does not have the traditional ways of showing his/her knowledge? What will the role of the teacher become if the students find their peers easier to understand and communicate with and easier to identify with as role-models? If working in small groups with a tutor or supervisor enhances learning more than lectures and seminars, how come that it is giving lectures for large groups of students and giving key note speeches at conferences that are most prestigious and give more credits to a teachers CV than being a tutor and supervisor of small groups of "newcomers" with non-academic background?

We do not have the answers to these questions but from our experiences and research in this field it seems obvious that the teachers working context, group dynamics in faculty and the consequences of evaluations must be considered important aspect of the student centred learning approach.

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