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Integration of Theory and Practice in Higher Education

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Introduction

An important condition for the integration of theory and practice in higher education is the interaction between the higher education institution and trade and industry and also that the interaction is seen as a natural component of the activities of the higher education institution. The yearly study carried out by the Confederation of Swedish Enterprise [Svenskt Näringsliv] shows that eight out of ten students choose higher education to improve their qualifications on the labour market. The possibility to be set up after obtaining one's degree has been shown to be bigger if the students already during the studies are given access to contact areas in the working life. The interaction between programmes and working life is, consequently, an important matter for both future students and higher education institutions and universities (Svenskt Näringsliv/The Confederation of Swedish Enterprise, 2010). The interaction aspect is also confirmed by the Swedish Higher Education Act which states that the mandate of the higher education institutions include interaction with the surrounding community and the provision of information about their activities, as well as ensuring that benefit is derived from their research findings (The Higher Education Act 2 §).

The idea for the programme in Social Science for Organisation and Public Management has its origin in our interest in how theoretical and practical knowledge through interaction with the surrounding society may be integrated in higher education. Our earlier experiences of interaction have, especially, been a matter of students having had contacts with different workplaces on a few occasions during their education. From these experiences we now wanted to systematically work together with a limited number of organizations/public managements and through interaction create conditions for the integration of theory and practice. The basic idea was to have recurrent contacts with a workplace during the whole programme enrich the student's learning process, something that eventually should strengthen the possibility of employment after completing the programme.

From programme idea to implementation

When the programme idea began to take shape the prerequisites were that Sociology, as the main field of study, would constitute the Bachelor's subject of the programme and that the

areas of applied information technology and sustainable development would be given special space in the programme courses. Early on in the development process discussions with personnel managers and civil servants at different public and municipal organizations were conducted. An introductory question was, then, how a new programme of social sciences should be designed and what competences were in demand. A number of suggestions were presented, like being able to apply knowledge of economic means of control, understand current legal rules, use information technology, practically carry out investigations and evaluations and acquire knowledge of society, group processes and social relations. In consultation with some organizations, a first programme proposal was developed, which resulted in the establishing of the programme syllabus in 2006.

The organizations/public managements that were deemed as possible interaction partners were thereafter invited to an information meeting. These were public and municipal organizations, the County Council, humanitarian and non-profit organizations and the Church of Sweden. The meeting resulted in a tentative proposal of making the workplace-related studies constitute the hub and create conditions for the integration of theory and practice. The proposal also included giving the name of “sponsor organisations” to our interaction partners. The next step of the process was the forming of a programme council, consisting of students and teachers, with the task of developing the integration ideas in the new programme. To have every student during her/his programme period tied to an organization/public management, a short practice period as element of the programme, contact with different professional categories, possibilities to find practical applications with the departure point in a theoretical basis are examples of some of the ideas that this council brought out. Other matters that were discussed were, for example, how we in different ways would interact with the sponsor organisations and be able to benefit by their existing competence.

The learning process for integration of theory and practice

The dialogue carried on with students, teachers and representatives of organizations/public managements led up to three learning outcomes: to deepen the understanding of the relation between theoretical knowledge and practical application, create meeting places for students, teachers, researchers and practitioners and to strengthen the student’s professional identity. The formulated outcomes constituted the basis for the figure below.

Figure 1: Learning process for the integration of theory and practice.

The learning process for the integration of theory and practice departed from the supposition that learning is an active meaning-creating process where the individual obtains an altered understanding of the surrounding world, increased competence and new readiness for action (cf Ellström, 1996; Schön 1983). The active learning, where the personal, emotional and cognitive aspects are in interplay, also presupposed that time was allocated as knowledge-making processes require dialogue in interplay with others, but also time for one's own reflection. This corresponds with Molander's idea on reflection meaning "to take one step back in order to see and reflect on yourself and what you do, to get perspective on a situation" (our translation, Molander, 1996, p 143). The learning process is surrounded by a structure to form a whole and a common framework for different forms of interaction and workplace-related studies. The value of a clear structure gains support by Cahill et al., who mean that it is a condition for both the learning and the knowledge development (Cahill et al, 2008).

Part of the structure was to make the programme a three-year programme. At the comprehensive level, the programme syllabus directed the programme contents, something that at the course level was concretized through a number of course syllabi. These contained learning outcomes with requirements of examination and course literature. Further, general skills were given, which the student during the whole period of the programme would practice and that in dialogue with the teacher would be assessed continuously. The general skills were:

- Seek and assess knowledge at a scientific level
- Ability to make independent and critical assessments
- Ability to independently distinguish, formulate and solve problems
- Preparedness to face changes in the working life

The structure also included the student having contact with one and the same sponsor organisation/contact person during the entire programme. Already during the introductory weeks of the first semester, one of the programme's fourteen sponsor organisations was therefore chosen, something that brought the matter of cooperation agreements to the fore. The solution was to implement oral agreements. Another standpoint was to have all the material gathered in connection with the workplace-related studies put in use only within the programme.

To have each course module include an assignment with focus on integration of theoretical and practical knowledge also formed part of the structure. With this point of departure the

student, with her/his sponsor organisation as the practical example, on 4-6 occasions each semester, would problematize, ask questions, gather information, reflect and analyze. The course syllabi contained specific learning outcomes for how theory and practice would be integrated in the workplace-related studies. The importance of clear learning outcomes within higher education is pointed out by Watson. According to him the learning outcomes serve as guidance for both teachers and students. They show what expectations exist concerning the student's learning but the learning outcomes also need to be assessable and be able to form the basis of grading. Thus, there needs to be a constructive adaptation between learning outcomes, learning activities and examination (cf. Watson, 2002). The progression of the learning outcomes was made clear by having them related to the three study years of the programme. In the first study year, the learning outcome was to "show understanding for how theoretical and practical knowledge is integrated in workplace-related studies", the second study year emphasized that the student should "show a deeper understanding for how theoretical and practical knowledge is integrated in workplace-related studies" while the learning outcome during the third year of the programme was expressed in the terms of the student "showing a deep theoretical and practical knowledge and critical reflection in workplace-related studies".

Forms of interaction

The interaction forms were organized so that representatives of the sponsor organisations recurrently lectured or participated in seminars and the students were offered possibilities to participate in different educational contexts in the public management. Furthermore, each semester the University invited the fourteen collaborating organizations to open lectures.

The meetings between student, sponsor organisation/contact person, teacher and researchers were seen as a foundation for learning from one another. At an early stage, the idea of having the sponsor organisations participate in the programme in different ways was raised. An example of such participation was when our students participated in lectures/seminars arranged by the sponsor organisations. The subject areas treated were youth culture, politically governed organizations, equality and non-profit aid contributions. The students also visited the sponsor organisations with the purpose of deepening the knowledge of information technology in the public sector. Another example of interaction is the common research project "Living conditions for youth in Karlskrona and Pretoria".

Workplace-related studies

The workplace-related studies became the pedagogic form that aimed at stimulating a learning process where students and teachers in theoretical contexts encountered interesting issues and problem areas, which could be illustrated in practice. At least one such study assignment was carried out in each of the courses within the programme. The introductory assignment dealt with making the student get an insight into the sponsor organisation with emphasis on activities, organizational structure and number of employees. By visiting the organization during one day, speaking with the employees and studying the homepage of the organization, the student could find answers to questions that concerned this first assignment. In the next course module, which dealt with theory of science and methods, interview methods were practised. In the following course modules, the workplace-related studies were tied to organizational structure, power, decision-making, diversity/equality and leadership.

Within the subject fields of political science and electronic administration, the progress of change was studied in respective sponsor organisation. Particular attention was given to internal debates around values and rights, problems regarding management by objectives, renewal of leadership, team development, the professionalizing process, follow-up systems, the 24-hour authority and the phenomenon of New Public Management.

Examples of workplace-related studies during the second year of the programme was when the students conducted participatory observations with the purpose of examining what takes place at a workplace in everyday situations between people, for example in work-related meetings but also at informal gatherings like coffee breaks and lunch. In the course "Law in the Environment of Public Law," matters concerning employment, equality and positive discrimination (affirmative action) were treated.

During the third year of the programme the students carried out several tasks, among them a critical review of the mission of the sponsor organisation in relation to the welfare state and welfare politics. In the concluding course, "Bachelor's project", the students chose a problem area in consultation with their sponsor organisation.

Method

The overall purpose of the research project was to, from an interactive research approach, describe and analyze a learning process where both practicable and theoretically anchored knowledge are in the foreground.

As coordinators of the programme and courses we had the overall responsibility for the content of the programme. At the same we wanted to use a systematically collected empirical material, and the development process of which we were a part of, in a delimited research project. We were, thus, valid and permanent members of the context that was being investigated, something that positioned us close to the insider researcher (cf. Sandberg & Svensson, 2004; Adler & Adler, 1987).

The interactive research approach is suitable when, as in our case, it is a question of following and influencing the development of a degree programme within the social science. Characteristic is that it is practically oriented, that change is seen as an integrated part of the research, that the research is conducted as a cyclic process and that the participants are central in the research process. It is also based on the hermeneutic knowledge ideal where a common value-system in the participants and researchers is emphasized as well as the striving for the attainment of a close relation between researcher and participants. Another point of departure is the overall understanding of problems and the idea that the research should lead to both practical problem solving and theory development. To put practice in the centre during the entire research process and to view the field work as something more than collecting empirical material also constitute common traits (Denscombe, 2009; Hansson, 2003). The interactive research approach also emphasizes the knowledge formation and the common learning between participants and researchers. The difficulty of planning and having control over the interactive research is a characteristic trait as meetings between people are in focus. It can, thereby, not be described as a logical process from closeness to distance but rather as a constantly on-going pendulation where change is seen as an integrated part of the research (Svensson et al., 2007; Svensson & Aagaard Nielsen, 2006; Westlander, 2006).

Interactive research embraces several different scientific methods (Aagaard Nielsen & Steen Nielsen, 2006). In our case it meant that the collection of empirical material was seen as an on-going process during the entire research project. In a systematic dialogue, where reflection and the learning process where central matters, a knowledge exchange took place between

researchers, programme students, teachers and representatives from public administrations. This dialogue created conditions for shifting perspective, which deepened the knowledge formation. In conformity with the qualitative research approach, our ambition was to attain a close, subject-subject relation between teachers, students and practitioners (cf. Cohen et al., 2007; Patton, 2002). Recurrently, different forms of seminars were carried out where representatives of different organizations/public administrations, teacher and programme students participated. At these gatherings, one of us functioned as moderator with the task of initiating new angles of approach in the subject that was being discussed while the other one observed and took care of the documentation. The type of questions that were brought out by the seminar groups changed during the development process. In the beginning the discussions had a comprehensive character, for example, cooperation agreements, conditions for the common learning and the forms for integration of theory and practice. Further on in the process the questions became more related to problems that arose during the implementation phase. Such questions could concern the students' and contact persons' mutual expectations or suggestions of fields and questions that were particularly interesting to illustrate both from the student's and the sponsor organisation's point of view. Empirical material was also gathered in the form of course evaluations made by programme students, reflection papers, interviews in focus groups and dialogues with contact persons for the sponsor organisations and the course-coordinating teachers at the programme.

During 2010, interviews in focus groups with 5 programme students in each group were carried out. The purpose was to collect our students' opinions, attitudes and thoughts and ideas but also to capture the interaction between the group members. The interpersonal factors that we thereby were able to consider were that the group consisted of different types of people where age, sex and earlier education varied (cf. Wibeck, 2010; Denscombe, 2009; Bryman, 2008). The selection included students from the semesters three and five. The purpose with the interviews in focus groups was to increase the understanding for one's own experiences and those of others concerning the integration of theory and practice and then in dialogue deepen the analysis. At the putting together of the focus groups, the choice was to have each focus group consist of fellow-students from the same course (cf. Wibeck, 2010; Denscombe, 2009; Bryman, 2008). The interviews were carried out in a small room, where all the participants sat around a table. Our understanding was that the choice of the physical environment stimulated the interaction in the group and contributed to making the participants share their experiences (cf. Wibeck, 2010; Denscombe, 2009; Bryman, 2008). The focus group was to

have the character of a learning group where the interaction between the individual and collective experiences could be made use of. Our role at the interviews was to create a structure for the dialogue at the same time as it was important to be supportive, inspiring and have a sensitive ear. There was, further, an aspiration towards problematizing and questioning in order to promote new thinking in the participants. At the interviews we took different roles with one of us being active and oriented towards raising enthusiasm in the participants regarding their will to deeper reflection over their learning and integration of theory and practice within the programme. The other one answered for documentation but had, also, the possibility to ask follow-up questions with the purpose of clarifying or deepening the discussion (cf. Wibeck, 2010; Denscombe, 2009; Bryman, 2008). In a similar way, the interviews with our interaction partners were carried out in focus groups with 4-5 participants in each group. At these interviews, the discussion concerned the experiences of how theoretical and practical learning had been integrated in the programme, in which way the study programme and the sponsor organisation had learnt from one another and what questions, insights and perspective the interaction had contributed to.

Empirical material was also collected at our programme meetings with the coordinating teachers where recurrent themes concerned the implementation of the integration of theory and practice, the workplace-related studies, the shaping of assignments and course evaluations. At these programme meetings, one of us took care of the documentation.

Experiences of integration of theory and practice in higher education

The students' perspective

When the students reflected over the connection between theory and practice and how things work in practice many were of the opinion that the regular contacts with the sponsor organisations during the three years of the programme had led to increased understanding. The gap that exists between theoretical knowledge and working life could in this way be bridged over. One student expressed it like this:

Through the workplace-related studies I have acquired an anchoring in both theory and practice. Theoretical anchoring by means of concretely looking at an organization from the theories that have been studied in different fields

and subjects. I have acquired practical knowledge by meeting people in different positions in the organization and through observations and interviews (student).

The students brought out the importance of having the workplace-related studies clearly formulated and linked up with the course content. Some of them considered that the teachers had the main responsibility for selecting the matters that would be discussed, while others did not want to be governed and wanted greater independence. There was, however, consensus around having the purpose of the assignments made clear to be experienced as motivating and meaningful. The angle of sociological issues in the workplace-related studies as the main field of study was considered as relevant and applicable in most of the cases.

The workplace-related studies were generally introduced by the student, via email, presenting a problem area or question and the contact person would, on the basis of this information, select a suitable co-worker that could assist with the assignment. Meetings with different experts were experienced as inspiring. Some students meant that many contacts was a positive thing but could also lead to one remaining anonymous within the organization. The wish of having access to a guest place of work was brought up, something that would lead to a natural participation in the daily activities of the sponsor organisation.

A recurrent matter in our interviews was that the students in their contacts with the sponsor organisations asked for "sharper" assignments, such as evaluations or mapping of a problem area that the sponsor organisation particularly wanted to shed light upon. One appreciated example of this was when the students were given the possibility to affect the content and form of the web pages of their organizations. The students who had had the possibility to write their Bachelor's thesis within the framework of an on-going research project experienced this as very positive. It was particularly motivating to choose the thesis subject in consultation with the sponsor organisations:

I was very pleased when my contact person asked if I wanted to immerse myself in the on-going organizational change. The fact that this resulted in my thesis was a good idea. My sponsor organisation seems to have had good use from my results and conclusions (student).

Several students also brought forth the circumstance that the regular contacts had increased their knowledge of the organization significantly, but had also added perspectives of what it is like to work and which rules, regulations and limitations govern the working life. The many external lectures and study visits that were offered within the study programme were experienced to deepen the understanding of the relation between theoretical knowledge and practical application.

Insight into the work of the sponsor organisation also led to the students feeling that their interest in the public debate had increased. Several students stated that they now read articles and listened to news more critically and showed a greater understanding of the decisions made by different authorities.

The overall picture of whether the workplace-related studies had contributed to practising the ability to perform independent and critical assessments was that the students had learnt to view phenomena from different angles, something that had contributed to critical thinking and reflections. The students who had several semesters' experience of workplace-related studies were of the opinion that the ability to reflect and analyze was developed during the programme. They also pointed out that at the end of the programme the understanding of the value of contacts with their sponsor organisations had grown bigger, something that contributed to an increase of the motivation and interest.

A general understanding among the students was that integration of theory and practice had led to a deeper understanding for working life. By being in an organization on a recurring basis there was the possibility of obtaining an overall picture, which was valuable to understand one's own future working life. Particularly interesting fields that were brought out were ethics, diversity, equality, leadership, people's thoughts, interaction patterns and political aspects.

The teachers' perspectives

The teachers who taught at the programme emphasized that integration of theory and practice and interaction with sponsor organisations were important elements of the programme. The workplace-related studies, as a form of teaching, were time-consuming but understood as stimulating the learning process. One of the teachers reflects on the learning process:

Usually I identify the problem areas that are to be studied together with my students. Our starting point is then the curriculum learning outcomes but it's also important to achieve progression between the different grades. Another point of departure is that the students are training general skills such as knowledge at a scientific level and independent and critical assessments (course-coordinating teacher).

Regarding content and form of the workplace-related studies some were of the opinion that they at the planning of the course would prepare the problem areas and questions while others believed that the students independently should give form to the questions that would be put to the sponsor organisations. In some courses it was difficult to find relevant problem areas. There was then a risk of having the questions too theoretical and that the assignment would be experienced as meaningless. The possibility to invite officials to participate in different course modules was brought out as very important. Taking part of their competence made it possible to anchor the theoretical arguments in reality.

Within the group of teachers there was an awareness of the fact that certain problem areas placed particular demands on both the form of the assignment as well as the student's possibility to obtain answers. An example of an assignment that led to reactions in two sponsor organisations was when a comparison between the two was going to be made concerning their disposition to change.

The contact with the sponsor organisations was above all managed by us in our capacity as programme coordinators. A course-coordinating teacher felt that it could, sometimes, be a good thing if he to a greater extent had more direct contact with the interacting organizations:

On several occasions I have personally phoned or visited the contact persons to clarify assignments or give suggestions for possible ways to seek answers to the questions. This has been greatly appreciated and I think it's something that should be further developed (course-coordinating teacher).

A recurrent problem discussed in the group of teachers was that there among the students were those who lacked motivation for the workplace-related studies. This group of students contacted their sponsor organisation too late for a possibility to solve the assignment or felt

that they did not get sufficient help. In these situations it was, as a teacher, easy to give in to the wish to carry out the assignment in an alternative way or in a different context.

The contact persons' perspectives

The group of contact persons experienced the workplace-related studies as important and some considered that they had lacked this way of learning in their own education. Interaction with the University was not seen as an extra task but was accommodated within the mission of the organization itself. This was expressed by a contact person who was of the opinion that:

/.../ it's an important task for our authority. We want to take part in letting the students get insights into how society works and what role our organization has. Contact with the university on regular basis is very stimulating. I think we learn a lot from our students (contact person).

The fact that the students presented their study assignments in good time was, according to the contact persons, a condition for offering guidance. One of our informants meant, however, that:

Of course we must be prepared for that the students sometimes have questions they would like to have answered preferably the same day. An approach with short setup times is by the way in line with how we work. As I see it's nothing strange about that (contact person).

At the discussion around the tasks of education it was pointed out that a condition for giving help and support was that the assignments were clearly stated. According to the contact persons the students rather quickly learnt to search for knowledge, find interesting problem areas and put questions to their sponsor organisations. Motivation and preparation then became particularly important, our contact persons felt. The workplace-related studies were seen as relevant and interesting, but the sponsor organisations would also, in the long term, need to work with the developing of new forms of interactions.

A few contact persons were of the opinion that even if in the meeting with the student there was loyalty towards one's organization, the new perspectives that were added could, over time, lead to a questioning of the activities within the organization.

The extent of the workplace-related studies was assessed as reasonable to reach continuity. The students' participation in lectures and training days was seen as positive as was the feedback of assignments to the sponsor organisation. The contact persons also expressed a great interest in participating in the study programme, as lecturers, seminar participants or supervisors. A well-functioning interaction form was also made up by the open lectures to which the university regularly invited the sponsor organisations.

For someone, the meeting with students meant keeping updated about the course literature in the different courses of the programme. The interest in learning from one another became particularly clear when applied information technology within the public sector was studied. One contact person pointed out that her discussions with students about information technology within public administrations had provided new angles of approach and deepened her knowledge.

One of our contact persons spoke of the value of having some of the programme students as vacation substitutes in her organization. Within several sponsor organisations the activities were, however, limited during the summer months wherefore vacation substituting positions could not be offered.

Sustainable learning through integration of theory and practice in higher education

According to Gamble educational quality becomes high if theory and practice are joined together. She represents a view of knowledge where theoretical and practical knowledge are either independent or dependent on context. Common to both is that they are defined by principled and procedural aspects. When these concepts are integrated an understanding of abstract concepts related to a practical reality becomes possible as well as problems in the context can be understood in relation to theory. Gamble argues that integration must be carried out in a conscious way. Neither theory nor practice must take over (Gamble 2009; Gamble, 2006; Gamble, 2004; Gamble, 2003). Layton believes that there is a qualitative difference between theoretical and practical knowledge. Integration does not mean that theory is transformed into practice or that practice transforms into discursive knowledge. New knowledge is created only when theory and practice are joined together (Layton, 1993).

When several actors interact in the development of a study programme the process becomes nuanced and complex. The driving force is with the actors, that is, with the teachers responsi-

ble for the programme and the courses, interacting sponsor organisations and students. In this article we have, from an interactive research approach, described and analyzed a learning process where both practicable and theoretically anchored knowledge has been in the foreground. The analysis has resulted in the development of a model for sustainable learning. The purpose of this model is to create conditions for long-term and strategic work with the integration of theory and practice as recurrent elements in the courses of the programme. At the design of the model, theories of learning are insufficient and for that reasons we have chosen to add the activity theory as a theoretical reference framework. This theory brings together both social and psychological factors into an integrated whole. The human being is seen as a subject whose feelings and needs arise in the collective and societal activities. The concept of activity is related to the field of tension between the individual and society (cf. Knutagård, 2003). The concepts that are included in the figure below have, from an interactive research approach, been developed together with course-coordinating teachers, the contact persons from the sponsor organisations and students.

Figure 2: Sustainable learning through integration of theory and practice.

In the centre of the model is a learning process for integration of theory and practice where learning outcomes, general skills, course literature and time constitute the established framework. The learning process is surrounded by a structure consisting of workplace-related studies and forms of interaction between which there is a dialectical relation. In this study mutual learning, pedagogic competence and a delimited problem area constitute important aspects for making possible sustainable learning. The model should be seen in relation to a reality. The reality is constituted by individuals who have a reciprocal relation to culture and society and the model rests on a common definition of learning. The actors, being students, teachers and contact persons, can be understood from a perspective of the activity theory, thereby put in relation to the societal structure and culture in which she/he lives. With this approach, the individual is in society and society is in the individual. The learning is described as something that is acquired in an active dialectical process between the actors of the study, the social others and society. These actors integrate society and culture in their actions that are carried out in accordance with the goals and needs that the individual has at that point in time. Goals and needs are therefore not understood as being static. As a consequence of the interplay with other individuals and the surrounding world, the goals change over time; they do, however, constitute conditions for the actor becoming involved in different activities.

The actors, meaning the students, teachers and contact persons, are actively acting subjects and their actions are affected by the different activities in which they are involved. The activities can be described from a continuum where some are of a routine nature while other activities are advanced and require conscious attention, thinking and creativity (cf. Knutagård, 2003). The model also departs from the ideas of the learning organization within which processes are mutually adapted by a group of people (cf. Franklin et al., 1998).

Mutual learning

A condition for the integration of theory and practice in higher education is that a mutual learning takes place between students, teachers and contact persons/sponsor organisation. Here we adhere to Dewey's view on learning as a movement and as related to pragmatism. A learning process starts when the actor's habitual thought patterns are not sufficient and lead to the searching of new knowledge and new alternatives of acting. The actor's learning can also be understood from a common interest in and aspiration to reach set goals (Dewey, 1933/1989). To the individual learning, Engeström's activity theory is added where the interest is directed at the learning at different levels within a study programme. It is, thus, not enough to use theories on individual learning; to obtain an understanding of the mutual learning between student, teacher and contact person, a socio-cultural perspective is required, one that stresses the interplay between people, the collective learning. In this meeting, the exchange of thoughts, ideas and reflections over phenomena then become central matters. The actors' interaction and actions are governed by explicit rules and implicit norms and values where the common goal for education and working life is to deliver results (cf. Knutagård, 2003; Söderlund, 2000; Engeström et al 1999). The mutual learning is also a matter of being involved in a network of relations, something that creates conditions for openness and for daring to be critical of one's own thinking (cf. Senge 1990).

Engeström's reasoning about learning taking place in a dialectic process together with Dewey's argumentation for knowledge developing through action gain support by the activity theory perspective. The development-oriented learning process is strengthened by adding re-creative, reproducing and innovative, producing actions. These actions presuppose and affect each other. The re-creation, the reproducing actions, consists of remembering, repeating and making use of experiences and can be seen as a condition of thinking, imagination and creativity. The creation, the producing actions, is that which changes and expands the actor's reality, creating new activities. The actor's activities are found in the field of tension between

her/his own demands and possibilities and those of the surrounding world (Vygotskij, 1998). Transferred to the students' learning process this was begun by the students, with the basis in earlier experiences, new knowledge. With the course literature as a point of departure interesting questions to the organizations were formulated. The innovative, producing action took place in the meeting with the practitioner.

When the learning in our sponsor organisations is related to the activity-theoretical perspective and to Dewey's view on learning, it becomes clear that the knowledge development that is relevant for the practitioner was based on the connection between action and reflection. The reflecting practitioner learns through "reflection-in-action" and proceeds by trial and error to reach new solutions. Here is a difference to the idea of the "reflection-on action", which means, often afterwards, to analyze something that did not turn out the expected way (Johansson, 2008). The different forms of interaction and the workplace-related studies became mediating tools, that is, they gave conditions for a mutual learning that was built around questioning and reflection both in and on action.

According to the activity theory, the driving force for mutual learning is communication and the separate actors' will to learn from one another. The communication consists of an outer process where the actor's thoughts materialize into words and an inner process where language creates thoughts. The will to learn from one another and the ability to communicate are two of the most important conditions for mutual learning in this study. Reflection and analysis constitute examples of the dialectics in the communication process. Both the spoken and the written languages are used in the dialogue, something that makes possible a pendulation between different levels of abstraction (cf. Knutagård, 2003). The students that we followed practiced both oral and written communication during the period of the programme.

In mutual learning the actor appears as an individual, part of a group and a society. Individually, the actors have been formed in different arenas of activities that have varied as to their significance during different life situations. The activity-theoretical perspective, interestingly, unites the different arenas into a whole, which constitutes the actor's identity. The different forms of interaction and the workplace-related studies gave the student, the teacher and the contact person possibilities to deepen their knowledge on the levels of the individual, the group, the organization and society. Other driving forces for the mutual learning were the common development needs, motives and goals of the group. From an activity-theoretical

perspective the concepts presuppose and affect each other, as activities are processes that constantly change. Through the integration of theory and practice, the actors' different interests, motives and driving forces met. The student's and the teacher's goals were determined by the steering document at programme- and course level. If the established goals harmonize with the interests and needs of the individual, the individual's motivation is strengthened. The contact persons' goals can be related to individual needs, but also to the goals and requirements of competence development of the organization (cf. Knutagård, 2003).

The learning can also be related to the concept of sustainable development, that is, to protect and use given resources in a durable way. The sustainable learning departs from a learning process built on the actor internalizing knowledge. To create sustainable learning, the aim was to use different pedagogic methods in the different forms of interaction and the workplace-related studies. This position gains support by Watson (2002), who means that the choice of pedagogic method is decisive to the attainment of the learning outcomes.

Recurrent meetings between student and practitioner, as well as regular visits to the sponsor organisations, open lectures, seminars and common research projects have meant that a mutual learning has begun to take form.

Pedagogic competence

The pedagogic competence has its departure point in a qualitative approach where learning takes place through an active approach to the group and the surrounding world. Here the actor seeks connections and aims at finding new solutions and looks at problems in a different way (cf. Merton et al., 1993; Säljö, 1979).

Our study showed that the teachers' pedagogic competence was a condition for building up the integration of theory and practice within the study programme. In our capacity as programme coordinators, our pedagogic task was to develop a collective competence and lead learning based on the approach that the actor actively searches for knowledge, is creative, engaged and questioning. In the workplace-related studies the aim was to create a structure for the interaction and dialogue that were carried out between the programme actors at the same time as it was important to be supportive, inspiring and have a sensitive ear.

The concepts that are used to put words on the learning in higher education are also of great importance to the teacher's approach (cf. Burnett et al., 2003; Chin & Brown, 2000). A study carried out by Burnett et. al. showed that there is a relation between pedagogic approaches and the concepts included in the learning process. The students who applied a deeper approach at the learning, that is, who were looking for meaning and reflected over problem areas, also developed a more positive attitude to learning, which indirectly meant that they saw learning as something experimental, involving social interaction and personal development (Burnett et al, 2003).

The general skills and learning outcomes that are indicated in the programme syllabus inspired the students and the contact persons to ask questions, define problems, reflect and analyze. The next step in the learning process included abstraction, generalization and assessment of the chosen problem area with the basis in the questions "what conclusions may be drawn?" and "what have I learnt?". The teachers' task was to problematize and question to promote the student's capacity for reflection and new thinking. The added theoretical perspectives then became useful tools for the understanding and explanation of processes and contributed valuable insights about how experiences may be made use of to create new understanding, which, over time, will result in new alternatives of action.

Delimited problem area

The sustainable learning is also based on the delimited problem areas that were illustrated in the different workplace-related studies of the programme. Here one finds a similarity with that which is called case studies. Haigh (2008) means that case studies are found to an increasing extent within different study programmes, but that it is not an unambiguous concept. A characteristic trait is that it concerns learning from reality-related cases. Haigh argues that learning is strengthened through conscious work with case studies.

The learning outcomes in the courses of the programme directed the content of the study assignments. In some courses the teacher and the students identified the problem areas that were to be studied while in other courses this task would be the responsibility of the student. The learning process could be viewed as a pendulum motion between theoretical and practical knowledge in which the aim was to achieve a deeper understanding. When theory and practice were joined together new knowledge was created (cf. Layton, 1993).

The delimited problem areas had to have qualities so as to make them appear as interesting and engaging for the involved actors. Furthermore they would, in a natural way, form part of the researching and investigating work method that was applied within the programme. The point of departure for the studies was that the student herself/himself directed her/his learning, reflected over the problem areas and independently searched for knowledge, taking responsibility for the learning process.

Reflections and conclusions

The research project that has been described in this article aims at from an interactive research approach describe and analyze a learning process where both practicable and theoretically anchored knowledge are in the foreground. Together with students, teachers and contact persons we have, in the fourteen public managements/organisations that constitute our interaction partners, created a model for common knowledge exchange and knowledge development.

The study demonstrates the suitability of the interactive research approach when the academy in a meaningful way interacts with practitioners in the surrounding society with the purpose of creating a common knowledge formation where both practicable and theoretically anchored knowledge stand in the foreground. To do research with the participants results in a particular closeness to the empirical material and requires a conscious approach to the dilemma of closeness and distance in the research situation. To us this meant that we had the overall responsibility for the content of the programme at the same time as we had a closeness to, and were permanent members of, the empirical material on which research would be conducted. Our own ideas and ways of thinking and acting constituted part of the reality that was studied.

Our experience is that the programme idea already during an early phase in the development process was met with positive response from students, teachers and interaction partners. There was an interest in new interaction forms between the higher education and the surrounding society. After five years, our fourteen sponsor organisations still remain as interaction partners. For most of the organizations, the co-operation is a part of the mission of the organization activities and the exchange of practicable and theoretically anchored knowledge is experienced as valuable. However, it has been a challenge to create a whole and a common framework for the workplace-related studies where continuity has been weighed against just the right number of contacts with the sponsor organisations.

Another challenge is to find interesting problem areas, where theory and practice are integrated and that stimulate curiosity. In both the student- and the teacher groups, there was a varying interest in the workplace-related studies. At our meetings this was and is a constantly on-going discussion and an important part of the development process. Among the students there was on the one hand a group who felt that the contact with the sponsor organisation worked well and that it added invaluable knowledge and on the other hand there were those who considered that the contacts took up a lot of time and that it sometimes was difficult to get answers to the questions that were asked. The teachers' position can be described as a continuum from very enthusiastic teachers to those who believed that it was difficult to turn theory into practitioner-relevant questions.

One of the most important conclusions of the study is that the interaction with the surrounding society has to be encompassed by a conscious strategy for sustainable learning. Learning as a practical and theoretical integrated whole takes place in a dialectical process between the individual, the group, and society. In this study, sustainable learning is illustrated by a model where the hub is the learning process for the integration of theory and practice. The fundamental conditions for this integration to be realized are common learning, pedagogic competence and delimited problem areas. Common learning arises in the learning group, that is, in the meeting between student, teacher/researcher and contact person. In this meeting, the basis for the integration of practicable and theoretically anchored knowledge is made up by dialogue, reflexivity and the capacity for learning from one another. To create forms for mutual learning is a challenge with a great development potential. Pedagogic competence must, then, be turned into practical reality. This presupposes a view upon society where there is a dialectical relation between the individual and structure, a humanistic outlook on people and a view of learning as an active, creative process that leads to action. Pedagogic competence also comprises the role as facilitator and of working as a driving force for individual, collective and organizational learning. An open climate is furthermore required where the learning group feels the wish to share knowledge and experiences. A delimited problem area means that the workplace-related studies and the different interaction forms are recurrent elements in the courses of the programme and that the learning outcomes direct the content. Students on the same course undertake studies in a common problem area, ask questions, search for knowledge and deepen the collective learning and the common reflection.

The interactive research approach has often been met by criticism commenting on the difficulty of generalizing more than to the specific case. The formalization of a knowledge exchange and common knowledge development is difficult to generalize. The model for sustainable learning which this study has resulted in is rather an example of how a learning process can be described by means of concepts that are anchored theoretically in the activity theory.

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Figure 1: Learning process for the integration of theory and practice.

Figure 2: Sustainable learning through integration of theory and practice.