

## **A professional approach:**

**a pedagogical model for the assessment of authentic cases in  
teacher education, social work education and dentistry**

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## **Abstract**

The aim of the project is to use assessment in developing students' professional competence during their courses of studies for qualification as social workers, teachers and dentists in a culturally heterogeneous society. The difficulty of uniting theory and practice into a cohesive whole is worked upon by the use of simulated authentic situations. The students describe professional scenarios. These are used in self-assessment, seminars and interactive assessment. The situations are at times characterized strongly by specific theoretical knowledge but at other times only indirectly so. The students describe situations that occur in professional practice, analyse these and enact them, compare their own handling of the situation with others', and articulate their need to further develop their competence. Everything is documented in the learning management system Xpand and is easily searched through.

## **Key words**

Assessment, authentic professional scenarios, citizenship education, professional education, simulation, socio-cultural heterogeneity.

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## **Introduction**

The project has developed models to support students in the development of their professional competence during their courses of studies for qualification as healthcare and social workers, teachers and dentists. This is done using continual assessment in simulated authentic situations and has its basis in:

- a) the difficulty of integrating theory and practice during the courses of study,
- b) the need to develop models for authentic professional situations which are integrated into the courses of study
- c) the difficulty of forming a process of assessment that is relevant in relationship to the desired competence, and that does not only assess theoretical knowledge and technical skill
- d) the need to integrate assessment into the learning process
- e) the students' need to develop the ability to assess their own competence on a continual basis.

In our experience, assessment of subject knowledge and assessment of professional competence is often carried out separately. Besides this, it is often carried out in completely different ways. Subjects are often assessed using written examinations with strict time limits, while assessment of professional competence is assessed by a much longer process. Usually, different people carry the responsibility for assessment of the theoretical knowledge and its practical application. The type of criteria used differs for the two assessments. Generally, students have too little influence over the sets of criteria used, both in terms of single examinations and the longer assessment processes that are used. Assessment utilizes too seldom the various forms of self-assessment and peer assessment. Further, assessment often does not adequately cover the ability to participate in and acquire knowledge together with others in a group. Models enabling the students themselves to assess their group's achievements – and their own – have been developed through this project.

In determining assessment criteria for the scenarios that were to be used by a large group, it is of great importance that they are communicable, clear and completely transparent. When assessing fellow students, it is important not to create a situation where the student has difficulty in keeping objective assessment and collegial loyalties separate. The final result must always be determined by the teacher responsible for the course.

### **Gender and ethnic perspectives**

Professionals working in care, education and health must in their daily working lives be able to handle situations in a variety of cultural, ethnic and gender contexts. The simulated examples of professional situations that the project has developed have contributed a number of possibilities in this area. The three courses in focus are attended by many women, many students from families without an academic background, and relatively many students from a variety of ethnic backgrounds. The professions concerned are socially embedded.

## The pedagogical concept

Vocational education leading to professions within health, education and care constitute many of the courses offered by the university. Professional competence is more than knowledge and skill. A professional uses knowledge in order to solve problems that are typical for that profession. Teachers, social workers and dentists have to make quick decisions every day that can have serious consequences for the lives of others. Such decisions should be well-founded on knowledge, but theoretical knowledge and technical skill do not seem to be enough. Efficient action demands the ability to differentiate important and relevant factors from unimportant factors and to choose adequate solutions (Yeh, 2004). Researchers such as Molander (1993) maintain that knowledge is to be found in action and that professionals cannot articulate their knowledge. It has been said of teachers that the profession does not have a theoretical basis and that those active in the profession act on intuition (Gärdenfors, 2004). Social work is spoken of in the same terms. Payne (1997) says that social work is the result of eclectic choice – that is to say, the social worker combines ideas that have different theoretical and disciplinary origins. This sort of competence that the courses of study are to develop is therefore not accessible to the student, for whom knowledge must be articulated. Others (Schön, 1987) maintain that professionalism is characterized by continuous learning. The professional recognizes what is unique in every situation and yet is able to apply general theories. The continual development of one's own "theory of practice" is thus a part of one's professional competence (Svingby, 1978). In addition to a thorough grounding in the subjects appropriate to the profession, vocational education in the three areas of concern should also develop:

- didactic consciousness
- competence in cooperating with colleagues
- competence in establishing a supportive relationship and a professional reception of people in vulnerable situations
- competence in recognizing one's own failings and skills and in identifying one's own need of increased knowledge
- competence in seeing the person in a holistic perspective
- competence in making independent judgements in the interaction with school pupils, clients at social agencies and patients in dental surgeries
- competence in developing and evaluating professional activities
- competence in making the best use of and in systematizing one's own experience, the experience of others and relevant research findings in further developing one's professional activities.

Josefson (1991) says that education needs to highlight good examples of action in professional practice and to make sure that students have a good understanding of these. Students need to use their theoretical knowledge in "real life situations". If education is expected to produce professionals capable of reflection, students need to have the opportunity to practise this skill (Yeh, 2004).

In the perspectives adopted by Malmö University for its activities, citizenship education is highlighted with a view to creating an educational environment that encourages the development of active, reflective and responsible professionals. Reflection and critical thought is based on the students' opportunities to see the connection between their own enquiries and experiences and those of others, thus demanding the skill of being able to take into account outside perspectives. Ross (2007) emphasises that presentations of problems are often contro-

versial and lack simple solutions. The aim of citizenship education is to integrate knowledge, skills and understanding, values and action.

By simulating authentic examples, information technology offers an alternative to “real practice”. The simulations offer challenging situations that include a number of important dimensions such as the ethical or legal, the simple or complex. Working up the simulations is to both promote the learning process and to make it explicit. The examples that are used can “be frozen”, repeated and changed; used in their entirety or in part – none of which is possible in reality. The simulations offer challenging situations that give the participants the chance to discuss the advantages and disadvantages of various alternatives.

Concurring research shows that assessment is an active means of developing education and of influencing the learning processes of students (Chan & van Aalst, 2003). This refers to – amongst other things - the authenticity of the assessment, the meaning of the tasks involved, the aim of the assessment, the clarity of the goals, the opportunity to be given feedback, and the possibility of student influence in assessment. Assessment should be an integrated part of the teaching and learning process. Our starting point is that assessment is a continual process in education that both students and teachers plan, take responsibility for and participate in, and that assessment concerns both individual development and the process of building a common knowledge-base.

Pintrich (2000) maintains that the skill of self assessment can be said to form the nucleus of professional competence. One of the more critical aspects of “professionalism” is the skill of leading professional activities based on lifelong learning. Lifelong learning is a perspective that is integrated into everyday practice. With daily activities as a starting point, a professional is expected to be able to judge his own competence as well as his limitations, identify educative needs and plan his future learning. This is fundamentally an active and constructive process where the participants themselves set goals and have control over their learning and development of knowledge. Students who have the opportunity of self-assessment take greater responsibility for their learning, for increased understanding of problem-solving and devote more time to reflection. In addition, the skill of self-assessment itself improves with practice and with feedback (Sluijsman et al, 1999).

Sundström (2006) distinguishes four aspects of self-knowledge: the individual’s perception of his own achievements in connection with future tasks, how the individual evaluates his competence in various areas, how self-knowledge has been formed through experience and the interpretation of the surroundings, and how one judges one’s own ability to carry out specific tasks. Criteria for supervision, the response of friends, the response from groups and the response of supervisors are all shown to be effective ways of educating reflective professionals.

Earlier development work at the School of Dentistry in Malmö was a starting point for the planning of the project. A model for interactive assessment, containing simulated situations derived from the profession, had been developed and successfully applied. A longitudinal research evaluation has shown how one through self-assessment can gain valuable insights into patterns of professional action (Attström et al, 2006).

Metcalf (1996) showed that student teachers who studied simulated school situations had significantly better results than student teachers who had ordinary practice placements. The students improved their ability to put pedagogical decisions into practice, became better at reflecting over events in the classroom and could explain their actions. In one study by Yeh

(2004), students working with simulated situations developed better self-knowledge than the control group.

Albion and Gibson (1998) showed too that student teachers improved with the help of simulated situations. In Malmö, students assessed their own examinations in groups. The criteria for doing so were arrived at through discussion between teachers and students. Recorded discussions show that in an authentic situation, the students had difficulty in deepening the discussion, based on these criteria (Hartsmar, 2005).

The criteria for the progression between the foundation and advanced levels have been tried in the project, but need to be clarified further. A tool for computer-based simulation of professional activities, Xpand, has been developed.

## ***Aim***

The aim of the project is to develop material and sustainable models to be used in the continual assessment of the professional approach in authentic situations. The overall goals are to reveal and promote the development of professional competence during their courses of studies for qualification as social workers, teachers and dentists. The students' contributions have been of vital importance with regard to the production and development of the material and how it is used as a pedagogical tool and instrument of assessment.

## **Specific goals**

- to unite theory and practice into a whole during the learning process
- to bring forward a process of assessment that is relevant in relationship to the desired competence and that does not only assess theoretical knowledge and technical skill
- that assessment forms an integrated part of the learning process
- that the students develop the skill of continually assessing their own competence
- to integrate subject assessment and the assessment of professional competence
- to develop communicable, clear criteria to be used in the learning process
- to give the students a participatory role in assessment, both in agreeing on the criteria to be used and in the assessment itself. The students' skill of reflection is to be strengthened through the use of various forms of self-assessment and peer assessment.
- to promote opportunities for the building of a common knowledge-base in a group

## ***Method***

Two aspects of "method" are discussed in this section. Firstly, a report is presented on the work carried out in constructing a model of assessment for the development of a professional approach. After that, the application of the model in the three areas of education is described.

## **The task of constructing a pedagogical model**

In order to bring forward a model that aims at developing professional competence in students of education, social work and dentistry, we worked in the ways described below.

Within each area, four interested students were chosen; two who had just started their course of study, and two who were in their last stages. The teachers from each of the areas met “their” four students to inform them about the aim and contents of the project and the way it would be carried out. The students were given the task of thinking of events critical to their profession that had occurred during their practice placements or in other practical training. In cases where the students did not have direct experience of professional work within their chosen profession, they were asked to present what are usually described as naïve notions about the profession in question (Olsson, 1998). The students met together several times and brought forward a number of authentic cases which described situations that the students themselves considered to be difficult and/or typical situations for their profession.

All twelve students (four from each area of study) met twice to discuss the similarities/differences between the professions they were training for. The project leaders also participated in these meetings.

The project leaders devoted several meetings to the drafting of a common matrix using the cases presented by the students as a starting-point (attachment 1). The matrix categorizes the various dimensions of professional concerns or actions. Examples of these categories are: the situation requires a long term/short term solution; common situation or not; the situation includes legal aspects; a simple or complex problem. The matrix was helpful in determining if the variations in the different professions were obvious from the cases presented by the students. The students themselves discussed the cases and together filled in the matrix.

The project leaders together wrote a script, using a couple of the cases. Using this format, each project leader then separately produced a film script for each of the professions. Short films were produced using the scripts. In some of the films produced at the School of Education, teachers and pupils participated in various roles. It was, however, unethical to use real patients or clients in the case of social work and dentistry. All the film sequences contain dilemmas that can arise in each respective profession and that concern situations where various parties are involved. The situations portrayed were characterized by the absence of an obvious solution and by the conflicts of interest between those involved.

The three different professions are quite separate but have aspects in common. One of these is the problem of when to maintain a professional distance versus more personal involvement when the teacher, social worker or dentist meets people they work with outside the work environment. One of the films that was recorded by the students of social work presented a theme that could be discussed and analysed by all the students in the three areas of study.

The professional experiences of practicing teachers, social workers and dentists was used in the development of a model for learning through continual assessment in the following way. Two teachers, two social workers and one dentist were asked to view all the films with the problems presented in their respective profession. In the same way as the students (see the next section of the chapter on method), the experienced professionals watched the films, described the problem, analysed it and suggested a course of action. This was to enable the stu-

dents, once they had themselves made an analysis of the films, to reflect on and compare their solutions with how a trained professional with some years of practical experience dealt with the same situation.

## **How the pedagogical tool is used as an assessment task and as the basis of discussion**

The model that has been developed and described above can be used in different ways. Small modifications have been made in order to adapt the model to the structure of the various courses. The Xpand platform is used for two reasons: it prevents the students from changing their own texts, and Xpand organises the various documents and film clips in an easy way. The same can be said of the platform Webzone which was used by the students of dentistry.

In a course contained within Xpand there are 10 different links, each of which contains three files: a film clip of 30 – 90 seconds' duration, a document transcribing the dialogue from the film and a document where the descriptions, analyses and suggestions for courses of action from the experienced professionals were collected.

Before the student started the task, the following instructions were given:

Watch the films. Students of teacher education are to choose three films from the age-groups they are training for. Students of social work have a free choice of three films. Students of dentistry have two particular cases. For each film, complete the following tasks:

**Observation:** Describe the situation in a factual way, without any value judgements.

**Analysis:** Analyse your observation. How are the various parts connected and how can the situation be interpreted?

**Action:** Weigh up various courses of action and give concrete proposals for what should be done.

When you have sent in your solutions in separate documents you will receive back the observations, analysis and course of action presented by an experienced professional. Using this information, complete the last task for each film, namely:

**Self-reflection:** Compare your own answer with the answer given by the experienced professional and analyse similarities and differences.

**Need for learning:** Describe what you need to learn in order to develop a better professional approach.

To assist them, the students have the assessment format that their examiners use when assessing their submitted answers. One example of the criteria used for the analyses is as follows:

Figure 1 Criteria for analysis

ASSESSMENT CONCERNING	PASS	GOOD
<b>Analysis</b>	You identify one or more problems	You identify <i>and</i> explain <i>why</i> you see this as a problem
<i>Analyse your observation. How are the various parts connected and how can the situation be interpreted?</i>	Your analysis reveals possible explanations for the way the people are behaving	Your analysis reveals possible explanations for the way the people are behaving <i>and</i> you explain this using theories/principles/models
	Your analysis reveals possible consequences	Your analysis reveals possible consequences <i>and</i> you explain these from other people's perspectives.
	Where appropriate, you make use of ethical rules, laws, regulations and policy in your analysis	Where appropriate, you make use of <i>and</i> problemize ethical rules, laws, regulations and policy in your analysis

After the students have worked with the films (approximately one hour per film) and submitted their answers, the teacher can download their responses. In assessing these, the teacher makes use of a blank criteria table with the same headings and structure as the example above. The completed table is returned to the student who in this way is given feedback on how well the task has been completed.

Before the assessment, the students in each of the courses were given somewhat differing information. While the students of social work only had a short run-through of the task ahead, the students of education and dentistry were prepared more thoroughly, with a lecture on each of the various stages of the process and an overview of the criteria.

While all the students of social work completed their assessments at the university, about half the education students chose to complete theirs at home using Xpand. For technical reasons, all the students of dentistry used the platform Webzone at home.

For the students of dentistry, the project was concluded with a video-taped seminar where the students were given the results of their assessment and discussed particularly difficult standpoints. After the seminar, the students were given the opportunity to give their feedback, both with regard to the format of the task itself and with regard to the learning results of the various components of the task.

## Preliminary results

A summary of the preliminary results from each area of education is to be found below.

### Teacher education

Interactive assessment has taken place as an integrated part of the course *Becoming a Teacher*, which comprises 15 points of tertiary education and is also the first subject that students of teacher education take. Part of the aim is that students learn about human development and other matters relevant to the task of being a teacher. Students who have geography, environment and learning, mathematics and learning and science and learning carried out the interactive assessment. There are 98 students taking these subjects.

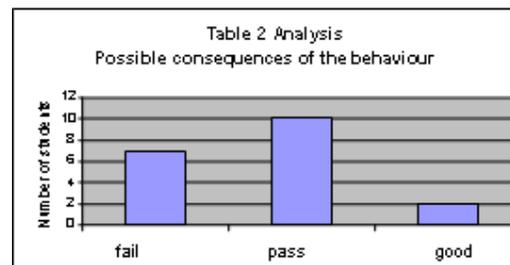
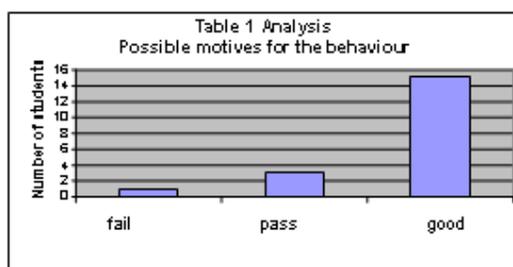
Interactive assessment has been carried out at the end of the subject, which means that the students have been taking it for 10 weeks. During this time, they have spent one week on a practice placement in a school. It is particularly in connection with the practice placement that questions touching on concrete teaching situations have been worked on through literature, lectures, seminars and group work.

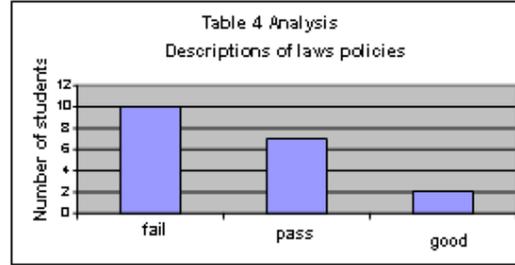
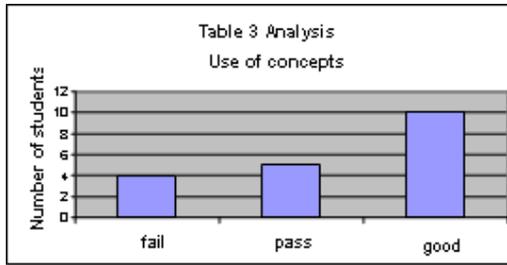
In the report that follows, we have chosen an assessment film sequence with focus on the early school years as an example. 19 of a total of 98 students chose this sequence.

The film sequence shows a class working with experiments during a mathematics lesson. The pupils are experimenting with various materials; they are in discussion with each other and asking questions. They move freely around the classroom. It is a lively scene and quite noisy. No-one hears that someone is knocking on the door. The door is opened and one of the children's mothers comes in saying what a dreadful noise everyone is making. "You can't be learning anything in this racket!" The teacher answers somewhat timidly that one learns better if one is allowed to discuss things, which the parent dismisses with the comment that it certainly wasn't like that when she went to school. In those days you kept quiet and everybody worked by themselves. As a parting shot she notes that that didn't do her mathematics any harm. The teacher listens silently.

Our report shows the students' analysis of this sequence and their suggestions for action.

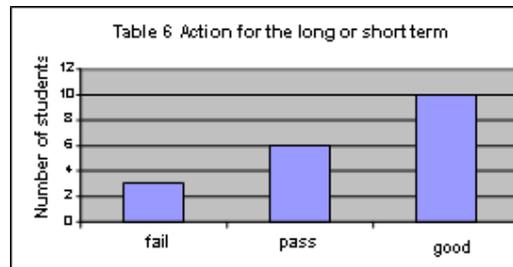
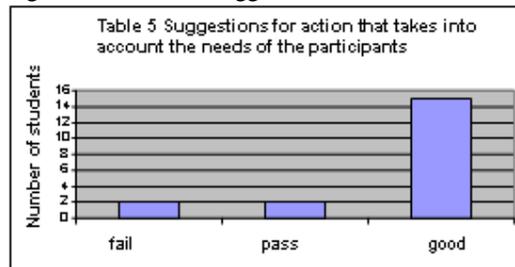
Figures 2-5 Results of the students' analysis





The tables in figures 2-5 show that the students have good competence in analysing the motives behind the behaviour they observe, but to a large degree lack the ability to assess the consequences that behaviour might have. The students are beginners in the profession and lack the necessary experience that can help them to visualise the effects that various actions have. The results in table 3 indicate that the students lack adequate preparation for interpretation and working with the conflict-charged situation depicted in the film sequence. It is also shown that to a large extent the students have not become accustomed to using laws and policies as tools in their profession.

Figures 6-7 Results: suggestions for action



The students' competence in making suggestions for how a professional acts is shown in tables 5 and 6. Table 6 shows that only 10 students are able to suggest a course of action that goes beyond the current situation.

## Social work education

For these students, the project was carried out in the Department of Social Work. The ambition was to be able to compare results between students who had completed various stages of the course. Students of social work specializing in Social Pedagogics (Semester 4 of 7) did the test as a compulsory task in the subject *Social Pedagogics and Social Work: 7.5 ICTS*. 30 students participated.

For administrative reasons it was impossible to make the test compulsory for the two remaining groups that were intended to participate, namely students from Semester 1 and Semester 7. Seventeen students in Semester 1 (of 7) from across all the specializations within social work did the test as a voluntary task.

Five students in Semester 7 (of 7) from across all the specializations did the test as a voluntary task.

The reactions were very positive from all those who participated. The students in the middle of their studies (Semester 4) expressed their appreciation with the comments like “Finally something that shows us our future jobs”, or “We want more of this”. Similar comments were given by the other groups but often paired with comments about how much time it had taken. It took most students about two and a half hours to complete the task.

### **Observations, social work education**

The texts that the students produced varied between the groups. It is possible to trace a development in the material with regard to the way of describing, analysing, explaining courses of action and how one as a student comprehends the complexities of the cases. In general, the breadth and standard of the texts increased from those submitted by students in the first semester to those submitted by students in the fourth, but even within the groups themselves it was possible to distinguish both quantitative and qualitative variations in the submissions. One hypothesis concerning the differences in submissions within the groups is that the variation in the oral introduction given to the different groups about the assessment criteria has a substantial effect on the texts that were submitted. Another hypothesis is that the differences within the groups are a consequence of factual differences in knowledge and experience.

Example: in one film a girl recounts for a social worker that she lit a fire at her school. She manages to elicit a promise from the social worker not to tell anyone. In a suggestion for action in this case, one student in the first semester writes about the need for further information about the policies of confidentiality, while all the students in later semesters correct the social worker’s behaviour in their suggestions.

Example: in another film, a parent with an addiction problem confesses to physical abuse of their child. The social worker decides not to investigate the abuse. A first-semester student suggests that the social worker should concentrate primarily on how the client is feeling so that he or she might be forthcoming with more information. A seventh-semester student makes almost the same suggestion, but with the important addition that an investigation into the abuse has to take place.

### **Dentistry**

Dentistry students in the Faculty of Odontology in Malmö begin treating patients as early as in their second semester. In order to evaluate the significance of professional experience, the students in courses 4 and 8 (56 of 57 students in course 4 and 32 of 36 students in course 8) completed the interactive assessment. The assessment was carried out as a voluntary component at the conclusion of each course.

The case is illustrated through the visit of a 16-year old girl to the dentist. Examination reveals dental erosion damage. The girl asks if she can talk about her problem in confidence without her mother being informed. The dentist agrees to this. However, at the girl’s next visit, her mother is also present and asks to see the girl’s journal. The problem presented is how the dentist should react to the mother’s request.

The students displayed a good deal of enthusiasm in participating in the project and expressed on a number of occasions their opinion that there is a great need to develop assessment models for the professional approach. The students spent on average 5.3 hours (2 – 8 hours) of work time in collecting information and in reflecting in preparation for giving their evaluation

of the two film sequences (the time spent in actually submitting their responses in textual form is not included). The reported time spent on the project and the comments from the evaluation after the final seminar indicate that the students do not feel prepared by their usual lessons to deal with the problems posed by the case. The students expressed their strong appreciation of the learning processes given them through the opportunities for reflection on their own suggestions for action and the strategies proposed by the professionals. In these ways, for both students and teachers, the project has highlighted the significance of and need for the structuring of working methods and the development of evaluation models for a professional approach in education in dentistry.

### **Strategies decided on by students of dentistry**

The students' suggested solutions for dealing with the problematic situation outlined above – which demands a professional approach - can in a first stage of appraisal be divided into various groups of strategies. Three lines of approach based on the first standpoint suggested by the students were identified as strategies for a course of action. One can further identify subsequent decisions that the students discuss with regard to further action and these then create a basic decision structure (attachment 2).

Three strategies for a professional approach can be identified from the main question posed in this case – concerning whether the mother should be allowed to read the journal:

1. A small group (6%) express their identification with the mother and choose a strategy in accordance with how one would like to be treated oneself; the mother should be permitted to read the journal
2. The majority of the students (80%) suggest a more long-term strategy where discussions with both the mother and the daughter are preferred
3. A small group (14%) choose – with reference to the law - not to allow the mother to read the journal. Priority is given to the integrity of the patient.

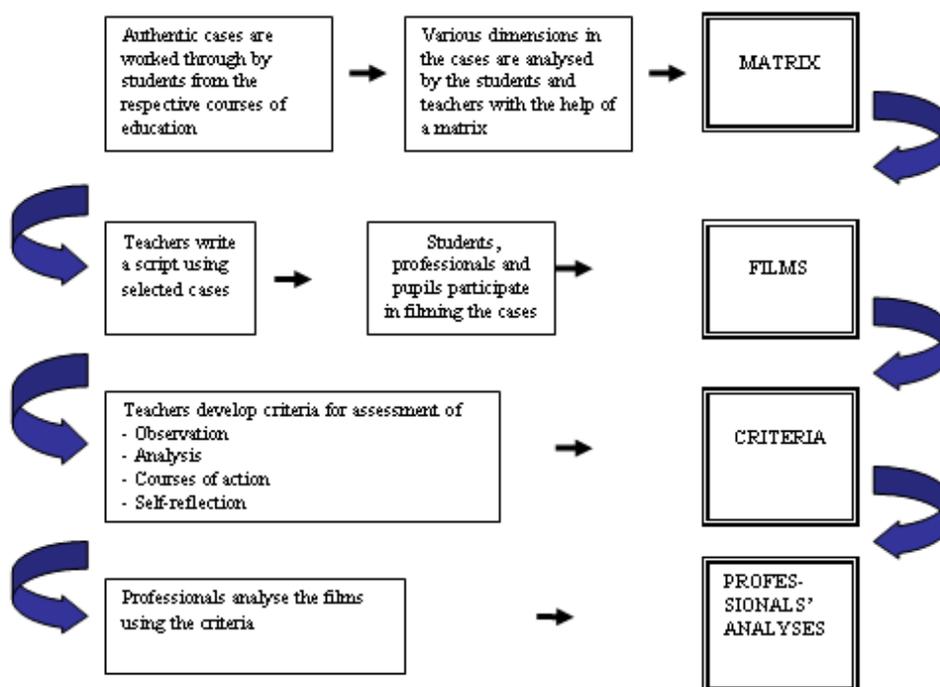
Even though these three strategies are described by the students, there are small variations between the students with regard to their descriptions of their observations and their identification of the problem presented by the case. Further, it is interesting that regardless of which strategy is decided upon, the same sources are referred to, for example the law concerning patient journals and secrecy laws.

## ***Discussion and conclusions***

In this final chapter, we intend to summarize our progression through the working process and how the model is used. The most important experiences of working with this project are reported. The aim of this pedagogical project was to develop material and sustainable models for use in continual assessment of a professional approach in authentic situations. The general goal was to highlight and promote the development of professional competence in vocational courses in education, social work and dentistry. The students' influence is of great significance in developing the material and how it is used as a pedagogical tool and instrument of assessment. Figure 8 below shows the progression for how the model for the assessment of a professional approach has been brought forward.

Figure 8

MATERIAL AND MODEL FOR THE ASSESSMENT OF THE PROFESSIONAL APPROACH



The students' collaboration has brought with it many positive effects; the material has been developed using as a starting point their various interpretations of the problems posed by the cases which are both relevant professionally and often controversial. The students and project leaders have in an interactive process worked up scripts which have served as the basis for a number of films. The matrix (attachment 1) which captures dimensions of a professional approach comprises an instrument for the identification of what may be dimensions specific to each profession, and differences in the weight given to these by project leaders and students.

Students and also project teachers who have actively participated in the working up of case, scripts and the productions of films have in a very realistic way been posed questions about the similarities and differences between the professions concerned. On a superficial level, there are large differences between the three professions. However, discussions between the students from the different courses and the intensive cooperation between the project teachers revealed similarities in the ethical dilemma and difficulty in drawing the line between the private and professional spheres.

Our working method - identifying problem situations for each profession, describing these in texts and finally dramatizing them in film sequences in cooperation with the project teachers – is a process-oriented procedure well-suited in demonstrating to students various strategies towards a professional approach.

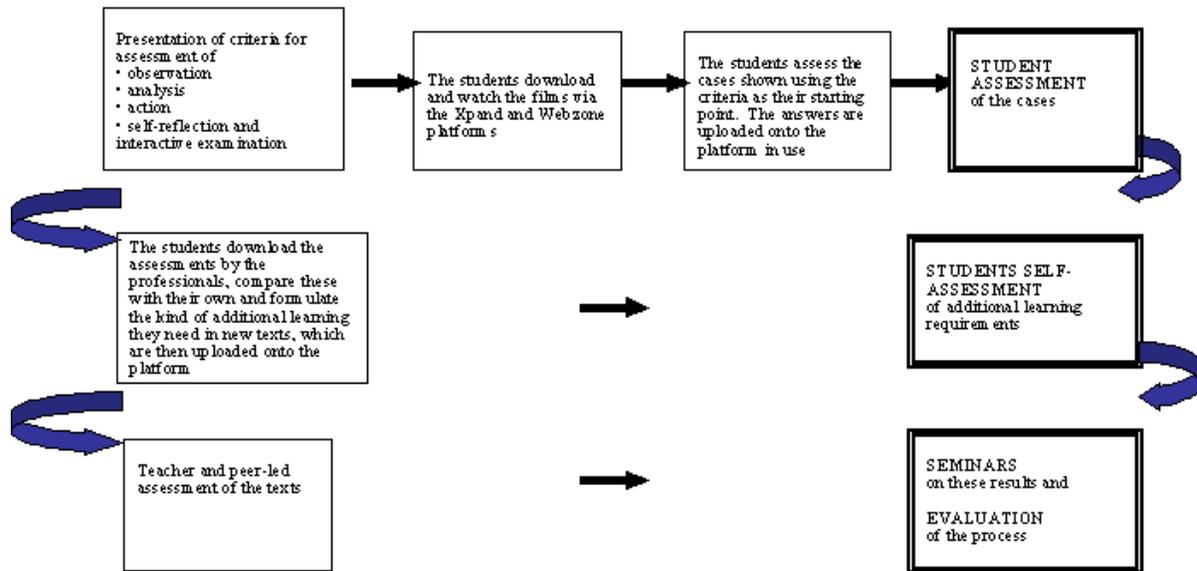
The criteria have been fundamental in their function as a mechanism for learning, in that the ways in which their achievements will be assessed are made clear. At the same time, the crite-

ria give each student the opportunity to reflect on and internalize the components that make up a professional approach.

The analysis of and reflection over one's own judgements in relation to the courses of action suggested by the professionals have a strong impact on the student's learning, while at the same time the components of the professional approach are made clear for that student – under the condition that feedback is given both individually and in groups.

Figure 9

**MODEL FOR THE ASSESSMENT PROCESS FOR A PROFESSIONAL APPROACH**



**Our experiences in developing material, and models for the assessment of professional competence in three vocational courses**

The material which has been brought forward in cooperation with the students and project teachers in the respective vocational courses has been used as the foundation for assessment in a variety of ways in the respective programmes. The amount of time the students have had at their disposal, the form of the introduction of the project and what importance the results have had for the overall grading of each course has varied between the three respective programmes. In teacher education, the working method has also resulted in a successful trial of peer assessment.

The quality of the professional analyses of the films varied greatly, which was shown clearly in the students' reflections. That this is the case reveals the rich variation of analysis and interpretation that is represented today within each profession and its practitioners. In order to develop the method further, one can consider how in a programme of studies various professional strategies can be structured so that students – and teachers - can be shown which strategies are specific to the individual practitioner and which more generally represent the professional approach. In the current material in this development project, analysis of how the individual strategy varies for the students at the beginning and at the end of their studies is possi-

ble. Further, the project demonstrates that each practitioner's value-system is an important component in the professional approach. An interesting question that deserves further research is if and how vocational courses – as a stage in citizenship education – can bring greater consciousness to the individual's value-system and provide greater possibilities to develop these in the professional approach.

It is important to keep in mind that the student texts which were analysed and which concern teacher education were produced after ten weeks' studies in the course. Professional competence is difficult to capture, but through repeated interactive examinations, it can be possible for both the individual student, for the teacher or for the researcher to follow patterns in professional development.

An observation that was made in social work education is that when the students analysed the films and made suggestions for courses of action, concepts and theories were used only sparingly. In order to stimulate the students to make connections with theory, strategies such as the following can be used:

- Careful choice of films with “obvious” connections to theory
- An extensive list of concepts for the students to choose from
- A small number of concepts that must be used.

Common for the three courses is the importance of developing thought processes that need to be trained in order to be conscious of one's professionalism. The students have worked through situations which have been discussed with the project teachers. It is important to discuss the relevance of the professional situations and dilemmas that are used in the assessment of the students' ability in connecting theory and practice. If non-relevant professional situations are used, their validity becomes questionable. However, we consider that the situations that have been used are valid in the sense that they show relevant themes in the respective professions.

The development of a professional approach can be studied if the students at various stages of a course of studies are given the task of analysing and reflecting over both film sequences and the professional strategies for action. Preliminary work with the students' reflections from all three courses reveals the differences in complexity and depth in their achievements as they progress through the various stages of their respective courses. Qualitative analysis should be carried out in order to identify possible patterns in the formation of the professional approach in the respective vocational courses.

Potentially, the film sequences have a wide field of application. The material that has been developed so far can be put to immediate use in the foundation stages of each course. Education in dentistry is problem-based and plans are in place to use the film sequences both as work material and as a basis in various assessment situations. Further, parts of the material have been included in clinical supervisor training, with the aim of highlighting the complexity and variation in the professional approach, and how the supervisor can inspire the staging of interesting, relevant and authentic cases.

Figure 10 Double-loop action-learning (Schön 1987)

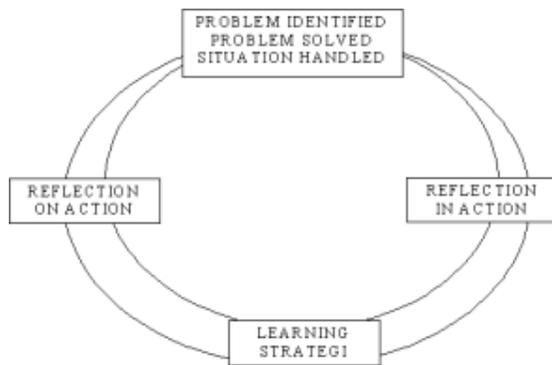


Figure 10 shows a model, developed by Schön, that illustrates the importance of reflection both in direct connection to the individual event and in general around the event, in order for both individual and organisational learning to take place. The organisation here is represented by the profession.

To conclude, it can be added that colleagues at the various faculties of education who have been informed of the project have been very positive about the idea. This inclines us to believe that the project as a whole has a high degree of sustainability and that it will spread effectively. The model for assessment of the professional approach works well in studies of the complexity of professional situations and how professional practitioners are able to analyse and deal with these.

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Attachment 1		Social Work Cases										School Cases										Odontology													
Codes		A	B	D	E	F	G	H	J	K	L	A	B	D	E	F	G	J	K	L	M	O	A	B	D	E	F	G	J	K	L	M			
Nr	Dimension	Mahmoud and female social worker	Anna and refusing abuser	Anna meets client at ICA	ashood	Socialworker and client about month-	social worker committing miscon-	dual	Growing Frustration	Child abuse	Vera	Pia, the happy mother?	The transferred pupil	The angelic pupil	Parents criticizing teacher	Cap or no cap	Peeping teacher	Old teacher setting the rules	Homosexuality and religion	False allegation	No more questions	Pupil challenging the teacher	The silent girl	Trust the needle	Trust the dentist	Two teachers - two opinions?	A bitter supervisor	Towards a holistic treatment plan	A dangerous secret	Jonas doesn't want braces	An embarrassing communication	The husband decides...	To have or not to have		
1	Not central for the profession (a) – Central~(b)																																		
2	Simple (a) – Complex (b)																																		
3	Urgent (a) – Long term(b)																																		
4	Ethical aspect(a) - no ethical aspect(b)																																		
5	Action based on intuition (a) – Science-based action (b)																																		
6	Individual action (a) – Collective action (b)																																		
7	Individual decision-making (a) – collective ~ (b)																																		
8	Contains legal aspects (a) – no legal aspect (b)																																		
9	No discretion (a) – Professional discretion (b)																																		
10	Gender aspect (a) – no clear gender aspect (b)																																		
11	Class aspect (a) – no clear class aspect (b)																																		
12	Ethnicity aspect – no clear ethnicity aspect (b)																																		
13	Subject specific didactics(a)- no subject didactics(b)																																		
Central dimension/s of the case																																			
<b>Usability</b>																																			
I	Text (a) – Film (b)																																		
II	No loop (a) – loop(b)																																		
III	One discipline (a) – Two / more disciplines (b)																																		
<b>Modes of assessment</b>																																			
I	Self assessment																																		
II	Peer assessment																																		
III	Seminar assessment																																		
IV	Computer mediated assessment																																		

**Attachment 2.** Decision-tree on student strategies - dentistry

