Learning professional skills and attitudes

Medical students' attitudes towards communication skills and group learning

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PART II

PAPERS I - IV
The following papers are presented in Part II:


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PART I
Acknowledgements

This thesis is the result of a couple of years of work and several breaks that were both creative and reflective. These were dedicated to family experience, including sleepless nights, and gave me the opportunity to live in two countries. After having been a single exchange student in Sweden, I moved back to Germany after almost ten years, with a husband and three children. Therefore, first of all, I have to thank my family – Mark, Tim, Linnéa, Florian, and Raphael – for filling my days and nights with emotions, experiences, and urgent needs. Unexpectedly, after all, this time prepared me for finishing this thesis. Of course, my warmest thanks are dedicated to my parents, Brigitte Lumma and Bertold Lumma, and my brother Olaf, for always being there for me.

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1 INTRODUCTION AND BACKGROUND

On a backpacking tour through Vietnam, I happened to eat something that caused the worst stomach ache I have ever had, and I had to visit a doctor. The sanitary conditions in Vietnamese hospitals are hard for us to imagine, but for ten dollars I promptly met a doctor and we talked about my symptoms and probably about my trip to Asia. He diagnosed an acute enteritis, probably caused by parasites and gave me metronidazole, a type of antibiotic. I don’t remember his exact words but I do recall the quiet, unstressed atmosphere, and the feeling of trust in a totally strange place that I never would visit voluntarily. It must have been something in the doctor’s way of talking and his behavior that gave me a feeling of trust and safety. One week later, I had managed somehow to return to my hometown in Germany and was admitted to the university hospital. I was locked up in an isolation room with the same diagnosis, and treated with the same antibiotics. However, the only person I recall talking to there was the cleaning man who had to enter my room once a day. At this place, I felt much sicker than in Vietnam, and I really wanted to go home as soon as possible.

A physician’s everyday work includes talking with patients. The patients have their own life situations, their emotions, and expectations about how they want to be encountered by a doctor. One of a doctor’s many tasks in the clinical interview is to respect their “patients’ double needs”: “the need to know and understand” about their medical conditions, and “need to be recognized and understood” in their personal situations (Engel 1988). Thus, core skills that future physicians need to acquire during their studies are interest in and respect for their patients, and the readiness to share and explain medical information with them.

Skillful communication with patients is a central aspect of a physician’s professional identity. However, acquiring a communication style that recognizes the patient as a person who is embedded in a life situation, and responding to the patient’s complaints in an empathetic way, is a complex task compared to the acquisition of factual knowledge. Many students experience the training of “patient-centered” consultations as a challenge that can cause distress and, in the worst case, result in the decay of an initially humanistic
attitude. In contact with health care professionals from other specialties, communication skills also play an important role.

Teaching methods that involve group learning and demand self-directed study strategies have aimed to facilitate acquisition of communication skills. These methods have been implemented consistently in problem-based learning approaches. The learning outcomes of different teaching methods have been evaluated in many studies. However, one aspect has been neglected in research – the role of students’ attitudes towards developing their communication behavior, and towards being involved in group settings. Attitudes and personal values can be assumed to play important roles in the process that transforms a student’s identity into that of a physician.

1.1 Communication and professional identity

Professional attitudes and skills constitute the basis of a physician’s identity (Armstrong 2002). Therefore, medical education aims at teaching professional responsibilities that range from individual, over interpersonal, to political levels (Archer et al. 2008; Arnold and Stern 2006; Cruess and Cruess 2008; General Medical Council 2009; Hodges et al. 2011). In sociocultural learning theories, this socialization process has been described as a continuously increasing participation in a community of practice (Wenger 1998). In addition to its function of imparting values, the training of clinical communication skills comprises characteristics of medical technologies, e.g. biomedical diagnostics. However, the development of a communication style probably involves more complex learning processes that are based on students’ reflections and evaluations of their behavior. This process also demands students’ independent regulation of their learning strategies and lifelong learning attitudes (American Board of Internal Medicine 2010; Duffy and Holmboe 2006; Tomasello et al. 2005). The technical aspect of professional communication includes the adoption of a language that is shared with colleagues. This professional language not only comprises a certain terminology, but also the use of language in a professional purpose, for instance the posing of inquiring questions, the explanation of medical facts, and the structuring of interviews (Hydén and Lumma 2007).

The relationship between the patient and physician, including their rights and obligations in the clinical encounter, is defined in theoretical models. These models determine how a certain communicative situation such as a diagnostic interview, or the breaking of bad news, should be performed.
Theoretical models reflect communicative ideologies and values concerning the doctor-patient relationship (Hydén and Lumma 2007). These have changed substantially during recent decades from a biomedical view on disease and health up until the 1950s, towards the biopsychosocial perspective on health that is common today. This implies a shift of the clinical consultation from being a doctor- and disease-centered interrogation towards a patient-centered dialogue that is aimed at fostering a trustful relationship between the physician and patient. Communicative ideologies also apply to the collaboration among health care professionals. Here, ideally, a strict hierarchical communication should be replaced by respectful interprofessional collaboration (American Board of Internal Medicine 2010; General Medical Council 2009; Lauffs et al. 2008).

It has been suggested that the complex learning processes involving the formation of a professional identity should be made transparent for students and teachers (Armstrong 2002; Hydén 2001; Hydén and Lumma 2007; Newble 1992; Niemi 1997). This means that medical education aims at increasing students’ awareness of their personal attitudes towards patient-centered communication and towards their appreciation of their colleagues.

The training of patient-centered communication has been integrated into many medical curricula, commonly in combination with learner-centered teaching methods such as problem-based teaching approaches that aim at promoting collaborative and independent learning (McLean and Gibbs 2010). However, despite training and theoretical instruction, some students are not interested in learning communication skills, and their empathy towards patients decreases after some study experience (Hojat et al. 2004; Hojat et al. 2009; Ogur et al. 2007). Those aspects of doctor-patient communication that students perceive as difficult have been addressed in only a few studies. It can be assumed that the nature of the subject – the adoption of certain values and ideologies and the involvement of the students’ emotions – result in learning processes and problems that differ from other academic learning.

Differences are found between particular medical students’ interest in learning professional attitudes and skills. Negative attitudes towards learning communication skills are recurrently expressed by male students, and by students without work experience in the health care sector (Rees and Garrud 2001; Rees and Sheard 2003). Likewise, it is known that students’ willingness to participate in learning contexts that aim at promoting professional interaction, e.g. in group learning, varies. However, there is little knowledge available concerning relevant correlates, although an impact of contextual variable has been assumed. However cognitive abilities – like the ability to
control one’s learning behavior – may also have an impact on students’ motivation to engage in group situations (Cantwell and Andrews 2002). There are reasons to consider students’ study motivation as a more important factor for their learning success than the effect of a particular teaching method (Albanese and Mitchell 1993; Norman and Schmidt 2000; ten Cate 2001). Until now, knowledge and assessment of medical students’ professional skills and attitudes have been insufficient (Stern 2005). Students who are aware of their own and their peers’ attitudes tend to show more tolerance for their peers’ preferences (Hendry et al. 2005).

In conclusion, it can be assumed that medical students consider pedagogical methods in their application to a particular medical program, in particular those who apply to problem-based curricula. Their attitudes towards group learning contexts may be influenced by their experience with group work prior to their academic studies, e.g. in the form of work experience in the health care sector, or during secondary school education. Differences in traditions of teaching methods concerning group work are found between Sweden and Germany. While Swedish schools aim at providing equal opportunities for all children and use collaboration as an important learning source, the German school system aims at early selection with a focus on individual support and competition between students.

1.2 Aims of the thesis

From the previous short background description, the aim of the thesis and the research questions of the four included studies are formulated.

The thesis explored and identified typical difficulties that students perceive in the process of learning patient-centered communication skills. It also compared differences in students’ attitudes towards learning communication skills and towards group learning between students from Swedish and German traditional and problem-based medical faculties.

The four resulting papers focused on answering the following research questions:

1) How can medical students’ acquisition of communication skills be described as adoption of a professional technology and as transformation into
a professional identity, which difficulties do students encounter, and which coping strategies do they apply?

2) How can students’ difficulties and resources in the process of learning patient-centered communication skills be categorized?

3) Are students’ attitudes towards group learning related to demographic variables and to students’ awareness of learning strategies? Do they differ between students from traditional versus problem-based curricula, and between Swedish and German students?

4) Are students’ attitudes towards learning patient-centered communication skills related to demographic variables, awareness of learning strategies, and the appreciation of patient-oriented care? Do they differ between students from traditional versus problem-based curricula, and between Swedish and German students?

1.3 Overview of the dissertation

These research questions resulted in a twofold study design. Questions 1 and 2 were approached with qualitative analysis of video data that had been collected over a period of two academic terms. Research questions 3 and 4 demanded a survey study that combined several existing questionnaires with a newly developed instrument for assessing students’ attitude towards group learning. The following chapters provide a literature review of the theoretical fundamentals and empirical evidences over the used concepts. Chapter 2 presents educational guidelines and theoretical models of patient-centered communication skills, and educational guidelines for the teaching of teamwork skills and interprofessional competence. Chapter 3 describes traditional and problem-based learning approaches, and presents teaching methods for communication skills, as well as studies that refer to students’ difficulties with learning communication skills. Chapter 4 concerns students’ attitudes towards the training of communication skills and towards participation in group learning contexts. Empirical studies that compare students’ attitudes in traditional and problem-based are presented. Chapter 5 describes the performed studies, including the participating medical faculties, the applied questionnaires, the data collection, and qualitative and statistical analyses. In chapter 6, the study results are summarized, and chapter 7
provides the discussion and conclusions, including implications for educational practice and research.
2 COMMUNICATION SKILLS AND TEAMWORK – EDUCATIONAL GUIDELINES

Medical teaching should aim at educating socially accountable health care providers (Woollard and Boelen 2012). This includes a patient-centered orientation including communication skills and the ability to participate in teamwork. National agencies set standards for the teaching of medical skills. The following section presents their guidelines for teaching patient-centered communication and teamwork skills.

2.1 Guidelines for patient-centered communication

Patients in Western countries have the legal right to receive individually tailored information that enables them to give their informed consent to diagnostic and treatment measures (Kuehn 2009; Makoul 2008). These legal conditions imply that the relationship between physician and patient has to be based on trust and equality. National associations and medical programs have formulated guidelines concerning the doctor-patient relationship (Association of American Medical Colleges 1999; Makoul and Schofield 1999; Simpson et al. 1991; Workshop Planning Committee 1992).

Unanimously, a partnership relation is regarded as the base of the patient-doctor relationship. This includes a balanced distribution of power and control in the doctor-patient encounter (BVMD 2006; General Medical Council 2009; Institute of Medicine 2001; Makoul 2001). The patient’s autonomy and his rights, such as those that give informed consent to treatment decisions, and to receive a second opinion, have to be respected. Communication should be tailored individually and consider the patient’s “health literacy”, i.e. the degree to which the patient can obtain, process, and understand the basic biomedical information for making appropriate decisions (Makoul 2008).

As an example, the ethical guidelines formulated by the General Medical Council, as the independent regulating agency of the UK, are cited (General Medical Council 1993, 2009). In their guidelines “Good Medical Practice”, part
of the “Tomorrow’s doctors” document, they define principles of the doctor-patient relationship (http://www.gmc-uk.org/education/overview.asp). They demand that physicians recognize that patients must be able to trust doctors with their lives and health. To justify that trust you must show respect for human life and you must (...) work in partnership with patients, listen to patients and respond to their concerns and preferences, give patients the information they want or need in a way they can understand, and respect patients’ rights to reach decisions with you about their treatment and care (...). (General Medical Council 2009).

In a similar manner, the US Kalamazoo Consensus Statement (Bayer-Fetzer Conference 1999), and in Canada the Toronto Consensus statement, set standards for the physician-patient relationship (Simpson et al. 1991). In Sweden and Germany, the corresponding agencies are the Swedish Society of Medicine, with the section for medical education (Swedish Society of Medicine 2009, Swedish Association for Medical Education 2011), and the German society for medical education (Gesellschaft für Medizinische Ausbildung 2003, no official English title). In 2006, core competencies were formulated for future German physicians and a European consensus statement was published (BVMD 2006; IFMSA 2006).

For medical education, these overarching principles of the doctor-patient relationship have to be translated into theoretical models, which are presented in the next section.

2.1.2 Historical perspective on patient-centered communication models

The principles of the patient-doctor relationship have to be applied to practical situations, for instance in clinical interviews. The doctor’s predominant purpose in the clinical interview is to gather diagnostic information, to offer expert knowledge, and to make decisions in their patient’s best interest (Haas and Shaffir 1991). The patient seeks help and advice. This constellation promotes an asymmetrical relationship between the physician and the patient. Moreover, high moral expectations and hopes of the patient support a “doctor-”, and “disease-” centered consultation style, where the doctor controls the encounter (Haidet et al. 2002; Krupat 1999). The consultation style that is demanded by the ethical principles mentioned above, in contrast, presupposes the physician’s willingness to share information and communicative power with the patient and to acknowledge the patient as an equal partner. In an equal relationship, the patient can fill her/his cognitive
“need to know and understand” and the affective “need to feel known and understood” (Engel 1988).

Up until the 1950s, doctor- and disease-focused clinical interviews predominated, favored by a biomedical perspective (Armstrong 2002). Since then, societal and scientific developments, such as technical developments (Conrad 2005) and the change towards marketplace competition and consumerism have promoted the shift towards patient-oriented relationships and communication (Conrad and Leiter 2004; Mechanic 2002).

In the 1950s, Balint introduced a humanistic and psychodynamic view on general practitioners’ interaction with patients (Balint 1957). This was followed by a shift from a biomedical understanding of health and disease towards a bio-psychosocial view. This holistic perspective requires the doctor’s interest in the patient’s life context and considers the impact of the patient’s biomedical conditions on everyday functioning (Engel 1977). The first theoretical model that defined doctor-patient communication from a holistic perspective was the “patient-centered clinical method” (Levenstein et al. 1986). Several theoretical concepts followed (Lipkin, Putnam and Lazare 1995; Pendleton et al. 1984; Roter and Hall 2006). Today, the ill patient is not only viewed in terms of deficiencies of single body parts, but as a person embedded in a life-world that consists of complex relationships between physical and mental systems (Armstrong 2002). Consequently, patients have a more active role towards the health care system, organize themselves in self-help groups, and strengthen their expert position by actions like using the internet.

A patient-centered consultation style has positive effects on patients’ health and well-being (Simpson et al. 1991; Stewart 1995; Stewart et al. 2000). It is also associated with better adherence to treatment and improved health outcomes (Stewart et al. 2000), higher patient satisfaction (Krupat 1999; Haidet et al. 2001), and improved recall and understanding of information (Kurtz et al. 1999). Conversely, ineffective doctor-patient communication is associated with malpractice claims and suits (Kurtz, Silverman and Draper 2005; Levinson 1994; Levinson et al. 1997; Makoul 2008). It is assumed that the influence of doctor-patient communication on health is caused by increased trust and treatment adherence, self-care, and management of emotions (Street et al. 2009).

2.1.3 Patient-centered communication skills

Theoretical models are the basis of communication skills instruction. They result in teaching contents that are commonly expressed in a set of communication skills. In 1999, leaders and representatives from medical
education organizations formulated a set of essential elements in physician-patient communication that serve as a framework for teaching, assessment, and evaluation of educational programs (Makoul 2001). According to this framework, patient-centered interview should include these elements in the temporal agenda presented:

1. Building the doctor-patient relationship
2. Opening the discussion
3. Gathering information
4. Understanding the patient’s perspective
5. Sharing information
6. Reaching agreement on problems and plans
7. Providing closure
(Makoul 2001).

From this framework, communicative skills have been derived that are recommended for all medical specialties (Maguire and Pitceathley 2002; Stewart et al. 2003). These include:

1. Eliciting the patient’s main problems and perception of these, as well as the physical, emotional and social impact of the patient’s problems on his/her life situation
2. Tailoring information to the patient’s needs and checking his/her understanding
3. Eliciting the patient’s reactions to the information given
4. Assessing the patient’s wish to participate in decisions
5. Discussing treatment options with the patient in an understandable way
6. Maximizing the chance that the patient will comply with the decisions about treatment and advice concerning changes in lifestyle.

With some variations, courses in communication skills instruction aim at teaching precisely these skills. Vivid examples of patient-centered interviews are provided in the literature (Haidet and Paterniti 2003; Stewart 2001). When patient-centered approaches are adapted to particular clinical contexts, different aspects may be accentuated (Hudon et al. 2012). However, discrepancies between academic standards and medical practice are common. In practice, the use of patient-centered communication can be restricted by many contextual factors, such as time constraints and economic or personal resources.
Communication and interaction are not only core elements of the relationship between the physician and the patient. They also characterize the collaboration among health care professionals. The following section presents educational guidelines concerning medical students’ teamwork competencies.

2.2 Guidelines for teaching teamwork skills and interprofessional competence

Communication and collaboration between health care practitioners are essential for good medical care, particularly in the context of inpatient treatment. Therefore, teaching teamwork skills is a central aim of medical education (World Health Organisation 1988). National educational standards, in particular the UK ethical “Good Medical Practice” guidelines, emphasize the relevance of teamwork among health care professionals. They recommend for doctors that “(...) you must: (...) work with colleagues in the ways that best serve patients’ interests” (General Medical Council 2009). Under the heading “working in teams”, they state that

most doctors work in teams with colleagues from other professions. (...) Working in teams does not change your personal accountability for your professional conduct and the care you provide. When working in a team, you should act as a positive role model and try to motivate and inspire your colleagues. You must: a) respect the skills and contributions of your colleagues; b) communicate effectively with colleagues within and outside the team (...) (General Medical Council 2009).

Likewise, the ability to engage in teamwork is listed as a core competence in German and European consensus statements (BVMD 2006; IFMSA 2006). For Germany, no guidelines are available yet, but a position paper is to be published at the end of 2012. Most medical programs already include the development of teamwork skills in their educational aims.

An important aspect of teamwork is interprofessional collaboration that refers to “occasions when two or more professions learn with, from, and about each other to improve collaboration and the quality of care” (Barr et al. 2005). Interprofessional collaboration fosters patient-centered care by promoting the active participation of different disciplines and the continuous respectful communication among caregivers (Oandasan and Reeves 2005). Collaboration should be based on interprofessional competence, i.e. knowledge and understanding of one’s own and other team members’ professional roles,
comprehensions of teamwork, and of patient care (Hallin et al. 2009; Hargie et al. 2010; Lauffs et al. 2008). Preferably, the teaching of collaboration competence should include peer-supported learning as the pedagogical method, as it prepares for the transfer from academic to clinical settings, and involves multiprofessional teams (Paice and Heard 2003; Thistlethwaite and Moran 2010). The teaching of teamwork skills has not been formalized to the same extent as have consultation skills.

2.3 Summary

Principles and standards for teaching patient-centered communication and teamwork skills are defined by national medical education agencies. Theoretical models and sets of communication skills have been formulated for the teaching of patient-centered communication. Teamwork skills, in contrast, tend to be taught as implicit expertise in multi-professional learning settings.

Emphasis on patient-centered communication and teamwork entailed the introduction of particular educational methods, especially problem-based learning approaches. The characteristics of traditional and problem-based learning and their effects on patient-centered communication and teamwork skills are compared in the next section. The following chapter also presents instructional methods for communication skills instruction and illuminates findings about students’ difficulties with learning about patient-centered consultations.
3  TEACHING AND LEARNING – AIMS, METHODS, AND LEARNING PROCESSES

During recent decades, teaching methods have been implemented in many medical curricula that aim at fostering communication and group work skills. Driven by national guidelines, reforms have focused on integrating clinical skills in early study phases and using clinicians as teachers (General Medical Council 1993). The introduction of problem-based learning methods had the greatest impact on medical education (Barrows and Tamblyn 1980).

3.1 Aims of traditional and problem-based learning approaches

Traditional medical education implies outcome-based, predefined goals that are pursued with teacher-structured instructional methods, like lectures and individual textbook reading (Rees and Richards 2004). Traditional curricula divide studies into a preclinical phase that aims at teaching the scientific basics of medicine, and a clinical phase in which students start working with clinical cases, including patient contacts. Thus, during the first terms, academic education focuses on the acquisition of factual knowledge and practical skills. As in most countries, this curricular model was predominant in Sweden and Germany until the 1980s.

The exclusive focus on individual, predefined, and teacher-structured learning has several shortcomings. It complicates the students’ transition from university to working life, i.e. it induces a “practice shock” between academic formation and the first working experience (Hussey and Smith 2002). Moreover, traditional teaching methods are not adequate for adopting patient-oriented professional attitudes and skills. In order to cope with these problems, teaching approaches were developed in the 1960s that emphasize the student’s active role in the learning process, and that resulted in the design of problem-based learning approaches (Barrows and Tamblyn 1980).

The pedagogical basis of problem-based learning is student-directed, case-based experiential learning in small groups that fosters the adoption of a
humanistic approach to medical care (Archer et al. 2008; Arnold and Stern 2006; Branch et al. 2001; Cruess and Cruess 2008; Dolmans and Schmidt 1996; Dolmans et al. 2005). Small groups work on clinical cases using self-directed literature searches and group discussions. Students’ learning efforts are supported by teachers who do not serve as expert instructors, but rather as facilitators and advisors (Harden, Sowden and Dunn 1984; Ludmerer 2004; Lycke, Grøttum and Strømsø 2006). In contrast to traditional medical curricula, problem-based learning integrates study contents vertically, i.e. basic science and clinical cases are presented simultaneously. This interconnection of biomedical knowledge and clinical problems is assumed to stimulate profound learning and understanding of biomedical principles and to foster lifelong learning (Dahle et al. 2002). Problem-based learning also implies a horizontal integration of medical specialties, which means that different body systems are presented together, as they also occur in clinical practice.

Problem-based learning approaches presume that learners develop their abilities in interpersonal relationships and interactive learning (Rees 2004). They are also aimed at educate educating students as effective collaborators and to at developing their self-directed learning skills (Candy 1991; Dolmans et al. 2005; Hmelo-Silver 2004; Howe 2001; Lycke, Grottum and Strømsø 2006; Vermetten, Vermundt and Lodewijks 2002). This results in “dynamic, complex and unstable” learning processes (Barrows and Tamblyn 1980; Bleakley 2006), and stimulates experiential and reflective learning, as well as the social construction of knowledge (Gibbs, Ockers and Duncan 2007). Qualitative analyses of student interactions showed that discussions in problem-based groups actually involve the intended collaboration and self-directed learning processes (Visschers-Pleijers, Dolmans and Wolfhagen 2005; Yew and Schmidt 2009). Today, problem-based learning approaches are complemented by experiential methods that include electronic media, like video teaching and web-based learning.

### 3.3 Effects of problem-based learning on learning outcomes

Studies that compare traditional and problem-based curricula have mainly focused on differences in learning outcomes in terms of knowledge, clinical skills, or other competencies in traditional and problem-based curricula (Vernon and Blake 1993). As a disillusioning result, no general superiority of one teaching method over the other could be assessed (Albanese
and Mitchell 1993; Norman and Schmidt 2000; Schmidt, Vermeulen and van der Molen 2006; Smits et al. 2003). However, detailed studies found differences in certain subject areas. One finding was that problem-based learning promotes active and self-directed learning (Lycke, Grøttum and Strømsø 2006). In a comparative study in Norway, students enrolled in curricula with integrated teaching methods reported throughout their study time better communication skills than students in a traditional curriculum (Gude et al. 2005).

### 3.3.1 Problem-based learning and patient-centered skills

Training of communication skills at an early study phase combined with interactive and self-directed learning is regarded as an effective teaching method (Barrows and Tamblyn 1980; Candy 1991; Christianson et al. 2007; Dolmans et al. 2005; Schmidt, Vermeulen and van der Molen 2006). In particular, the possibility to learn through role-modeling, a non-threatening learning environment, and contact with patients with a variety of problems, foster a humanistic approach to care if they allow deep and critical reflection (Branch et al. 2001).

### 3.3.2 Problem-based learning and teamwork skills

Collaborative learning demands the students’ active exploration of the study material and its discussion with peer students. Such learning contexts are regarded as beneficial for the training of teamwork skills. Small group work is especially effective if it pursues common goals and combines responsibility for one’s own as well as for the group’s learning outcome (Blumenfeld et al. 1996; Johnson and Johnson 1991; Johnson and Johnson 2000; Slavin 1990). However, students are active participators in the learning process, and their conceptions of learning may moderate the impact of teaching approaches on learning outcomes. Students who entered problem-based curricula were found to be more aware of the importance of constructivist learning – e.g. cooperative learning – for their study success, compared to students in traditional curricula (Hendry et al. 2006; Loyens, Rikers and Schmidt 2009). These cognitive conceptions of learning can foster the development of long-term oriented skills, like a lifelong learning attitude.

There are more differences between students enrolled in problem-based programs and students in traditional curricula. Students from problem-based schools show higher appreciation for peer discussions as a learning resource than students from traditional schools (Lycke, Grøttum and Strømsø 2006),
and graduates from problem-based medical schools rate themselves higher on interpersonal competencies. These competencies include their teamwork ability, cognitive skills, self-directed learning, and partly their general academic competencies, like writing reports, and task-supporting competencies such as efficient planning skills (Schmidt, Vermeulen and van der Molen 2006). They are reported to possess better communication skills than students from traditional schools (Santos Gomez et al. 1990).

Students from the medical faculty at Linköping – who were instructed together with other health care students during the first ten weeks of their studies – reported more confidence in their abilities to co-operate with other health care professions (Faresjö et al. 2008), and showed a greater openness about cooperation with other health care professions (Wilhelmsson et al. 2011). Female students were more positive than male students towards teamwork.

### 3.3.3 Problem-based learning and self-regulation skills

Continuous increase in knowledge and developments in diagnostic and medical treatment demands that future doctors commit themselves to a lifelong learning attitude (Li et al. 2010), which is included as a goal of medical education in the physician charter on medical professionalism (Blank et al. 2003; Candy 1991; American Board of Internal Medicine 2010). A key competence of lifelong learning is the ability to self-regulate one’s learning activities (Blumberg 2000; Dolmans and Schmidt 1996; Li et al. 2010; Nota, Soresi and Zimmerman 2004; Zimmerman and Schunk 1989). The concept of self-regulation embraces cognitive, motivational, affective, behavioral, and contextual factors (Boekarts 1996; Heikkilä and Lonka 2006; Pintrich, Wolters and Baxter 2000; Schraw 2006; Zimmerman and Schunk 1989). These refer to a person’s ability to “set task-related, reasonable goals, take responsibility for his or her learning, and maintain motivation” (Heikkilä and Lonka 2006, p. 101).

Thus, self-regulation is the ability to plan, monitor, and evaluate one’s own learning processes. Self-regulated learning includes asking oneself questions such as: “What information is relevant and where do I find it?”, “When will I know that I understand a subject?”, or “How can I organize information?” (Graesser, Halpern and Hakel 2008). Monitoring one’s mental activities means applying a metacognitive perspective, being aware of one’s learning strategies, evaluating their efficacy, detecting mistakes, and changing to more effective strategies (Metcalf 2009). This kind of self-awareness can be improved by training (Volet 1991). In academic learning, core metacognitive
aspects of self-regulation are a person’s knowledge of cognition (e.g. about their learning strategies), and her/his regulation of cognition (i.e. the use of learning strategies) (Flavell 1979; Nelson 1996; Schraw and Dennison 1994).

Problem-based learning approaches are aimed at promoting the self-regulation of learning, as students are required to formulate personal study goals and evaluate their learning progress (Cutting and Susswein Saks 2012; Hussey and Smith 2002). In a qualitative study, beginning students in a problem-based program showed different personal styles in adopting self-directive learning strategies (Evensen, Salisbury-Glennon and Glenn 2001). Students in problem-based learning programs are more likely to use self-regulating learning strategies than students in traditional courses, and are assumed to have better self-directed learning skills (Lee, Mann and Frank 2010; Lycke, Grøttum and Strømsø 2006; Ozuah, Curtis and Stein 2001; Schmidt, Vermeulen and van der Molen 2006; Shin, Haynes and Johnston 1993; Vermetten, Vermundt and Lodewijks 2002).

However, not all medical students are interested in group learning and self-directing study. Among veterinary students, a strong preference for individual and teacher-directed learning was observed (Raidal and Volet 2009). These students perceived group work and self-directed learning as unnecessarily complicated and mentally stressful conditions of their study situation and reported little earlier positive experience with collaborative and self-directed learning. In other studies, students argued that group work and self-directed learning have no relevance in medical practice (Hendry et al. 2005; Hendry et al. 2006; Newble 1992; Woloschuk, Harasym and Temple 2004). Good self-regulatory skills were found to be related to a preference for group learning contexts (Cantwell and Andrews 2002; Lycke, Grottum and Strømsø 2006; Raidal and Volet 2009). The complexity of group situations may be perceived as a positive challenge by students with good metacognitive skills.

3.4 Teaching and learning communication skills

Until now, no international standards have existed for the instruction of patient-centered communication, but in practice, certain teaching methods are common. One characteristic is students’ experience with clinical settings and patient contact. Encounters with patients and colleagues in clinical contexts
help students to grow into the community of physicians and adds relevance to their academic studies (Wenger 1998). In the interaction with patients, clinical experience provides students with confidence and promotes their self-reflection, which helps them to acquire communication skills (Dornan et al. 2006).

Patient-centered communication goes beyond the gathering of information about the patient’s medical condition. It aims primarily at building a solid relationship between patient and physician (Platt et al. 2001). This demands certain attitudes on the part of the physician – i.e. empathy and openness towards the emotional content of the patient’s story, as well as conversational techniques, such as asking the right kind of questions and assuming a special body posture (Hydén and Lumma 2007). These multidimensional capabilities demand an “integration of knowledge, skills, and attitudes” (Merriënboer and Kirschner 2007) that has to be learned in practical training. In general, the practical training of communication skills improves communication performance (Aspegren 1999; Kurtz and Silverman 1996; Ottoson 1999), and supports students’ personal conceptions of communication skills (Loureiro et al. 2011). In particular, students who start with relatively poor communication skills – more often male than female students – benefit from training (Aspegren 1999). Male students are considered to be slower in learning communication skills than female students (Branch et al. 2001; McLean and Gibbs 2010).

3.4.1 Teaching methods

Guidelines for the acquisition of communication skills are often included in medical faculties’ study aims. However, even if conceptual frameworks exist to define desirable communication skills (Smith et al. 2000), a lack of clarity and consistency concerning contents and assessment methods has been criticized (Cegala and Lenzmeier Broz 2002), and teaching guidelines tend to have low empirical evidence (Veldhuizen et al. 2007). The teaching of communication skills is characterized by a great variety; while some courses aim at teaching general communication skills, others use checklist formats of particular skills that can be applied for teaching and assessment (Humphris 2001).

Effective communication skills training programs should last for at least one day and be learner-centered (Berkhof et al. 2011). Longitudinal training has proven more effective than massed instruction (vanDalen et al. 2002). It should also be continued during the whole period of medical studies (Ottoson 1999), as the positive effects of communication skills courses tend to erode
after the end of formal instruction (Cantwell and Ramirez 1997; Hojat et al. 2004; Spencer 2004). Courses that contain these principles have been integrated into many medical schools during recent years (Schultz et al. 2007).

Students benefit from instruction if it involves practical communication skills training, includes visits in health care contexts, and is integrated early into medical education (Koponen, Pyörälä and Isolatus 2012). Effective teaching of communication skills has to be experiential and start from defined problems (Aspegren 1999). However, even if theoretical lectures are ineffective as exclusive teaching methods, a model should be used for illustrating the relevance of patient-centered communication for clinical practice (Williams et al. 1997). The practical training can be performed in contact with real or simulated patients, or role-playing with peers. It should be commented upon by individual feedback, and reflected in small group discussions (Berkhof et al. 2011).

The practical training should include supervised discussions and personal feedback that support a deep understanding of the underlying ethical principles (Niemi 1997; Skelton 2005), and students’ self-regulation of the learning process (Cutting and Susswein Saks 2012). The involvement of peer students and clinical practitioners provides rich sources for discussion of students’ experiences and for finding coping strategies for difficult situations (Hydén and Lumma 2007; Lummna-Sellenthin 2009). Students who received training in professional development were also observed to show better communication skills compared to those of students in traditional curricula without professional skills training (Joekes et al. 2011).

### 3.4.2 Real and standardized patients

The training of clinical interviews can involve different kinds of patients – “real” patients encountered in clinical contexts or, most commonly, simulated patients. These can be laymen or professional actors, who have been thoroughly rehearsed to present a standardized medical condition or difficult interview situation; these are also called standardized patients (Cleland, Abe and Rethans 2009; Nikendel et al. 2007). Standardized patients can be trained to give consistent responses, their presentation can be matched to the students’ needs and they can be used in emotionally sensitive situations, such as for the breaking of bad news. Which kind of patient is used for instructional purposes is determined by many factors, including the purpose of teaching or assessment, the desired degree of standardization, the emotional sensitivity of the student-patient encounter, as well as costs and availability (Collins and Harden 1998).
There are also advantages with in meeting real patients. Even if these contacts cannot be standardized, students tend to appreciate the involvement in community contexts (Rolfe et al. 1999; Wilkinson, Gower and Sainsbury 2002). From a sociocultural perspective on learning, participation in work contexts can increase students’ feelings of personal accountability and involvement, and promote their motivation for academic study (Wenger 1998). However, in some cases, ethical problems can arise with real patients who may feel coerced to participate but are too polite to refuse participation in educational situations (Rees and Knight 2008).

As the adoption of communication skills is a complex process that involves practical experience, personal feedback, and reflection, many medical students struggle with developing and improving their communication behavior.

### 3.4.3 Students’ difficulties with learning communication skills

Patient-centered communication implies a psychosocial perspective on health and illness, i.e. a caring attitude towards the patient. A caring attitude is expressed as an empathic interest in the patient’s life situation, and respect for her or his emotions and cognitions regarding illness and health. Even if students appreciate patient-centered concepts, they can experience problems with being open towards the patients’ life situations (Royston 1997; Thistlethwaite and Jordan 1999). Students’ difficulties with acquiring and maintaining psychosocial elements of patient-centered communication, in particular the adoption of an empathetic attitude, have been reported (Holm 1995). After the end of formal teaching, students can even show a decreased empathy towards patients (Hojat et al. 2004; Spencer 2004), and a tendency to avoid psychosocial issues (Craig 1992; Williams et al. 1997). Unfortunately, study experience seems to impede patient-centered attitudes, i.e. students enrolled in later terms tend to show a more cynical attitude towards patients (Griffith and Wilson 2001). Communication techniques that foster the patient’s free report, i.e. the use of open, exploratory questions, can be difficult to acquire (Lumma-Selenthin 2009), and tend to diminish after the end of training (Cantwell and Ramirez 1997).

The establishment of an empathetic relationship with patients can cause ambiguous feelings (Nogueira-Martins, Nogueira-Martins and Turato 2006). In a study with fifth-year students, they described themselves as highly dependent on positive responses from their patients for their efforts to show empathy and care and worried that they would not be able to maintain a
patient-centered attitude in the future. When confronted with patients who lived under difficult personal circumstances, the students mentioned feelings of helplessness and high moral accountability. Ambiguous feelings towards their patients can be an expression of students’ ethical and emotional dilemmas. Four basic issues in student-patient interviews that can cause distress were identified: a one-sided focus on “pathology versus health”, a tension between “not knowing versus too much knowing”, the students’ own emotional “vulnerability versus denial” of the patient’s emotional suffering, and a tendency to “react versus to be inactive” towards the patient’s experiences (Rosenfield and Jones 2004). Students can solve these dilemmas by focusing on their own emotional reactions as a diagnostic and therapeutic resource. Awareness of these possible pitfalls can help student to establish a balanced and empathetic attitude towards the patient and to develop their professional identity. The importance of awareness towards ethical principles for patient communication was already discussed in the 1980s (Barnard 1986). It was recommended to combine education in communication skills and moral principles, and to consider their overlap and mutual reinforcement. Relevant issues in the contact with patients can be beneficence and non-maleficence, respect for persons, and justice.

In general, physicians who feel stressed in the encounter with patients, they worry that the exploration of the patient’s problems might take up too much time, also increase the patients’ distress. As a consequence, physicians may exhibit behavior that blocks the patients’ further emotional discloses, and give advice before the patient has brought up a central problem, or explain away the patient’s emotions by focusing on physical symptoms (Maguire and Pitceathley 2002). Thus, the training of communication skills has to reflect student’s perceived emotional distress and to explore their worries. In the educational situation, students can become aware of moral and emotional dilemmas that they have to cope with.

3.5 Summary

Problem-based learning methods are regarded as more effective in teaching patient-centered and teamwork skills than traditional, lecture-based instruction is. The pedagogical basis of problem-based learning is student-directed, experiential learning in small groups that fosters the adoption of a humanistic perspective. Involvement in clinical and community contexts, patient contact, and communication skills training are included at an early
study phase. Problem-based learning fosters collaborative learning and discussions among peers, is associated with better communication skills than traditional instruction, and promotes the use of self-directed learning strategies.

Effective communication skills instruction combines practical training with individual feedback on performance, and group discussion that is based on theoretical models, and is integrated into the curriculum over a long time period of time. The use of real or standardized patients is common, and both entail advantages and shortcomings. Students tended to perceive the focus on psychosocial topics and the adoption of an empathetic attitude as problematic. Ethical dilemmas and emotional helplessness towards the patient have been identified and reflected upon in communication skills training.

The next chapter illuminates students’ attitudes towards learning patient-centered communication that are an important motivational factor in the learning process, and summarizes research about difficulties that students may encounter in learning to talk with patients.
4 STUDENTS’ ATTITUDES TOWARDS PATIENT-CENTERED COMMUNICATION AND CARE

Learning processes can be divided into three dimensions: cognitive learning, affective (or motivational) learning, and metacognitive regulation. Student-centered curricula should consider all dimensions, but until now, curriculum designers tend to undervalue educational components that foster students’ learning motivation. Although problem-based learning methods involve student-centered learning, they are primarily aimed at promoting cognitive and metacognitive processes, like self-regulated learning. However, the cognitive dimension of learning processes may not be the most sensitive determinant of successful learning. Medical students can be generally regarded as capable learners and high achievers. They are able to adapt their learning behavior to situational demands like assessment requirements (Cook et al. 2009). Thus, their learning outcomes may not depend primarily on the teaching method but on students’ active approach towards teaching and assessment conditions, i.e. their motivation to use learning strategies (Entwistle 1991; ten Cate 2001).

If effective learning depends less on the applied pedagogical approaches and course contents than on students’ perception of, and active approach towards the learning conditions, it is important to fostering students’ intrinsic motivation. This requires support of their autonomy and emotional well-being, as well as adequate feedback (Kusurkar et al. 2012). Students’ perception and evaluation of their learning conditions and contents entails beliefs about the pleasantness and usefulness of elements like group work, and about intentions like improving their communication behavior. The sum of a person’s evaluations adds up to the psychological concept of someone’s “attitude”. Attitudes influence how we think, feel, and behave. As psychological constructs, they comprise affective evaluations, cognitive beliefs, behavioral routines, and intentions to perform a behavior. The affective attitude aspect comprises feelings of like and dislike. It is regarded as the attitude dimension that is most susceptible to external influences, i.e. new experience. Cognitive beliefs and values, on the contrary, tend to be more stable over time, but can be changed by reflection, deep insights, and critical appraisal (Fishbein and Ajzen 2010; Schüffel 1983). The strongest impulse for
the actual exertion of a behavior is the intention to perform it (Francke, Garssen and Huijer Abu-Saad 1995).

In educational processes, the role of attitudes is complex. However, in medical education, attitudes have been regarded as critical for the actual use of an expertise in clinical practice (Newble 1992). Thus, it can be assumed that a positive attitude towards group learning and patient-centered communication increase students’ motivation to apply these capabilities in the patient encounter. If medical studies aim to reform students’ attitudes towards patient-centered consultations and towards collaborative learning settings, they should be assessed and discussed at an early study stage. Congruent with this consideration, a need to assess medical students’ attitudes towards professional skills training was stated in a recent study (Anvik et al. 2007b). Assessment instruments such as questionnaires that refer to students’ patient orientation and their attitudes towards communication skills training are presented in the next section (Krupat, Hiam and Fleming 1999; Rees, Sheard and Davies 2002). These instruments were used in the survey study that was part of the thesis.

4.1 Attitudes towards learning communication skills

Patient-centered doctor-patient communication as an academic subject is aimed at teaching a particular behavior on the basis of predefined values and ideologies and, in addition, it demands a certain degree of emotional engagement. Effective teaching of communication skills presumes that students recognize that their communication skills are an important clinical competence that they should improve during their studies. Unfortunately, students’ and clinicians’ appreciation of communication skills as a full-fledged academic subject in which students can succeed or fail is still too low. This is reflected in the insufficient allocation of curriculum time, economic budget, and personal resources like tutors, and recruitment of simulated patients from minorities (Hargie et al. 2010). Negative attitudes towards learning communication skills are common (Flaherty 1985; Parle, Maguire and Heaven 1997; Rees and Sheard 2003; Smith et al. 2000). Some students were found to assert that they do not recognize communication skills training as an academic subject (Rees and Garrud 2001), or that they do not perceive a need to improve their personal communication performance (Batenburg and Smal 1997; Cleland, Foster and Moffat 2005).
4.1.1 Assessing attitudes towards communication skills learning – the “Communication Skills Attitude Scale”

An instrument for assessing medical students’ attitude towards learning communication skills that has been applied in numerous studies is the “Communication Skills Attitude Scale” (CSAS) (Rees, Sheard and Davies 2002). The questionnaire comprises two scales. The “Positive Attitude Scale” (PAS) refers to students’ appreciation of communication skills as an academic subject, as well as to their beliefs about respect for the patients’ rights and about the importance of communication with patients and colleagues. In a Norwegian study, another factor structure of the CSAS items was found that differentiates between affective and cognitive dimensions of doctor-patient communication (Anvik et al. 2007a; Anvik et al. 2007b).

Recurrent findings are that female students express more positive attitudes towards learning communication skills. Moreover, students with personal work experience in health service, and students whose parents do not work in health care, tend to be particularly positive (Batenburg and Smal 1997; Cleland, Foster and Moffat 2005; Koponen, Pyörälä and Isolatus 2012; Rees and Sheard 2002; Tsimtsiou et al. 2007). The relationship between gender and patient-oriented attitudes and behavior has been confirmed in other studies. Examples are that female students show more empathic behavior throughout medical education (Hojat et al. 2004; Lumsden et al. 2005). Female primary care physicians engage in more patient-centered communication and have longer visits than their male colleagues (Roter, Hall and Aoki 2002).

A decline in students’ attitudes towards learning communication skills was observed in several studies (Cleland, Foster and Moffat 2005; Rees and Sheard 2002). Communication skills training can be perceived as emotionally challenging, which can result in lower attitude scores on the CSAS after recent participation in communication skills courses (Anvik et al. 2007b; Rees and Sheard 2003). There seem to be “at-risk” medical students who are particularly vulnerable to losing their sense of empathy (Lumsden et al. 2005).

4.1.2 Correlates of a positive attitude towards communication skills

Some students are critical towards learning communication skills at the beginning of their studies. However, attitudes towards learning patient-centered communication generally tend to decrease after some study experience, typically during or after the third study year (Hojat et al. 2009;
Power and Lennie 2012). It has been argued that students in traditional curricula spend most of the time in their early study phase with biomedical lectures and in anatomy laboratories, which might contribute to their lower appreciation of communication skills learning during the second and third study years, as compared to the beginning of their studies (Cleland, Foster and Moffat 2005). The best remedy for a decline of patient-oriented attitudes seems to be the early training of communication skills or the integration of professional development training, and contact with clinical environments (Baerheim et al. 2007; O’Sullivan et al. 2012; Tsimtsiou et al. 2007). An influence of personal experience with clinical environments before their academic studies on students’ conception of the doctor-patient relationship was found (Hendry et al. 2006).

The use of patient-centered communication is not only determined by the physician’s intentions. Restrictions that result from explicit and implicit norms that are inherent to the organization of health care influence actual behavior. Explicit norms are, for instance, represented in the time that is allocated for the interview, or the amount of money that the physician earns with a diagnostic interview. Implicit evaluations are inherent to clinical routines and in clinical teachers’ attitudes and behaviors. The impact of the structure of the health care system on students’ interest in training their communication skills was explored in a large-scale study (Van den Brink-Muinen et al. 2003). Consultation styles in different European countries were compared. No differences in medical communication were found between countries where general practitioners have a gate-keeping role compared to countries where patients can seek to specialists on their own (Van den Brink-Muinen et al. 2003). Instead, patient characteristics such as gender, age, psychosocial problems, and familiarity between the doctor and the patient were variables that accounted for differences in doctor-patient communication. In a large-scale study, physicians from countries with hierarchically structured health care had shorter consultations than physicians from countries with flat health care organization. Hierarchical organizations may put more restrictions on physician’s behavior (Meeuwesen, van den Brink-Muinen and Hofstede 2009).

4.2 Attitude towards patient-oriented care

The “Patient-Practitioner-Orientation Scale” (PPOS) assesses students’ attitudes towards patient-centered care. The instrument comprises two scales that measure beliefs about their “caring” and a “sharing” patient orientation
(Haidet et al. 2002; Krupat, Putnam and Yeager 1996; Krupat, Hiam and Fleming 1999). A caring orientation embraces the physician’s respect and sensitivity to the patient’s emotions and experiences, and a biopsychosocial perspective on health, i.e. an interest in the patient’s life situation. A sharing orientation refers to the physician’s willingness to share medical information and control of the clinical consultation with the patient. This includes the physician’s readiness to give the patient individually tailored information about his or her medical condition, and to involve the patient in decisions concerning diagnostic and treatment alternatives, i.e. to prepare their “informed consent”. A match of the physician’s and the patient’s patient orientation entails higher patient satisfaction with the doctor-patient relationship (Krupat 1999).

Patient orientation scores correlate with demographic variables. Female medical students repeatedly showed higher scores on both patient orientation scales than male students (Haidet et al. 2001; Haidet et al. 2002; Krupat, Hiam and Fleming 1999; Tsimtsiou et al. 2007; Wahlqvist et al. 2010). In a Swedish study on just female students, work experience in health care was related to a stronger patient orientation (Wahlqvist et al. 2010). This tendency towards stronger patient-centered attitudes and behavior is known from studies that aim at similar variables. Female physicians engage more than males in partnership-building and information-giving (Roter, Lipkin and Korsgaard 1991; Roter, Hall and Aoki 2002). Persisting through the medical curriculum, female students also express higher attitudes on ethical issues (Price et al. 1998). In a recent study, female students’ patient-orientation scores increased slightly over study time (Wahlqvist et al. 2010). Female students’ patient-oriented attitude has been explained by the “person-oriented factor”, one of the strongest motivators for entering a medical career that tends to increase with students’ age and maturity (Vaglum, Wiers-Jenssen and Ekeberg 1999). Accordingly, higher age was associated with stronger caring and sharing attitudes in a recent study (Wahlqvist et al. 2010). Students with a parent working as a doctor were more positive towards sharing power with their patients (Shankar 2006).

Caring and sharing attitudes differ with regard to their susceptibility to cultural and institutional values (Lamiani et al. 2008; Lee, Mann and Frank 2008; Shankar et al. 2006). American health care professionals put more emphasis on the patient’s autonomy than do their Italian colleagues. However, physicians from both countries did not differ on the caring dimension, i.e. recognition of their patient’s illness experience and emotion management (Lamiani et al. 2008). Evidence about the relationship of patient-oriented
beliefs to patient-centered communication is contradictory (Joekes et al. 2011; Levinson and Roter 1995). While a positive relationship of physicians’ psychosocial beliefs and their communication behavior has been found in an earlier study (Levinson and Roter 1995), a recent study found no relationship (Joekes et al. 2011).

4.3 Attitudes towards group learning

Teachers in medical education should be interested in promoting students’ belief in teamwork as a useful teaching method, and they should aim at identifying negative attitudes that may jeopardize group interaction and hamper students’ learning. Teachers who are aware of students’ attitude towards small group work can facilitate the implementation of cooperative learning in classrooms (Hendry et al. 2005). However, in research, a positive evaluation of group work has not been conceptualized primarily as attitude, but as an aspect of a student’s learning style or learning preference.

4.3.1 Learning styles and preferences towards group learning

The cognitive psychological concept of learning styles reflects the assumption that students differ in their suitability for teaching approaches, for instance for participation in individual and group learning contexts. The identification of learning styles aims at matching personal aptitudes with appropriate teaching methods, in order to optimize teaching efforts (Cronbach 1957). Some learning style models include a dimension that refers to individual versus interactive learning styles (Curry 1999; Grasha 1996; Owens and Straton 1980; Vermunt 1994).

The usefulness of learning style concepts for the improvement of medical education has been questioned (Cook et al. 2009; Norman 2009). Medical students can generally be regarded as high-achieving learners who are able to adapt easily to different instructional formats. Their cognitive flexibility may supersede the influence of their personal learning styles. For the teaching of patient-centered values and skills, this implies that it is more useful to foster students’ motivation, including their positive attitudes, towards professional skills and attitudes, than to tailor teaching methods to their individual aptitudes.
The concept of learning preferences does not refer to students’ aptitudes, but to their tendency to choose one object, e.g. a teaching method, over another. Preferences for instructional formats reflect students’ perception of the learning environment, and their learning approach (Biggs 2003; Entwistle and Tait 1990; Struyven, Dochy and Janssens 2005). In contrast to learning styles, preferences can change with experience or new insights. In a three-level construct, medical students’ preference for learning through lectures and individual studies versus small groups were placed in the outer layer, i.e. the level that is most receptive for environmental influences (Curry 1991). Learning preferences are not necessarily related to learning styles (Loo 2004).

When the survey study was planned, no questionnaire was available that aimed at students’ attitude towards group learning. Thus, a questionnaire was developed that was based on a multi-dimensional attitude concept, the “theory of planned behavior”.

### 4.3.2 The theory of planned behavior

A commonly applied social-psychological attitude concept is the “theory of planned behavior” (Ajzen 1991, 2001; Ajzen and Gilbert Cote 2008). The model is based on the assumption that a person’s actions are determined by three kinds of beliefs: beliefs concerning expectations about the respective behavior’s expected outcome (“outcome belief”), about important other persons’ norms (“normative beliefs”), and about the power of facilitating and impeding factors (“control beliefs”). The combined effect of these components forms a person’s intention to engage with a particular behavior, which is a major determinant for the transfer of knowledge, skills, and attitudes into actual performance (Francke, Garsson and Huijer Abu-Saad 1995). A peculiarity of the concept is that it embraces the assessment of perceived social norms, such as what students think about the appropriateness of a study setting (Purdie, Hattie and Douglas 1996). This may include the perceived value of a task (Pintrich 1999), or the conceptions of learning (Marton, Dall’Alba and Beaty 1993; Muis and Franco 2009). A person’s actual behavior can best be predicted (up to 90%) from assessing her/his intention to perform the behavior – the implementation intentions (Gollwitzer 1993, 1996). Making people formulate specific plans about how and when to use a certain behavior activates their mental representations of the intended situation that serve as an effective stimulus for the actual performance.

A questionnaire that refers to attitudes about a behavior that is based on the “theory of planned behavior” can be designed with instructions by the author (Ajzen 2001). For the study, these instructions were used in developing
a questionnaire for assessing attitudes towards group and individual learning contexts. A schematic representation of the theory is presented in Figure 1. The development of the questionnaire that referred to “students’ attitude towards individual and group learning” and the piloting procedure are described in the method section.

Figure 1. Schematic representation of the “theory of planned behavior” (Ajzen 2006)

“Behavioral beliefs”: Beliefs about the expected outcomes of the behavior including an evaluation of its desirability, its effectiveness and usefulness and an evaluation of these that result in favorable or unfavorable attitudes towards the behavior.

“Normative beliefs”: Beliefs about the normative expectations of important others and motivation to comply with these that are expressed as subjective norms.

“Control beliefs”: Beliefs about the presence of factors that facilitate or impede the performance of the behavior and the perceived control over these that are reflected in the degree of perceived control over one’s ability to conduct the behavior.

4.4 Awareness of learning strategies

The use of self-regulatory control of one’s learning behavior is a characteristic of learning approaches that involve group learning, like
problem-based curricula. Awareness of personal learning strategies and self-regulatory control skill can be assessed with the Metacognitive Awareness Inventory (MAI) (Schraw and Dennison 1994). The original version of this self-report instrument on the “knowledge of cognition” and “regulation of cognition” scales has been widely applied and has been shown to be a valid and reliable measure of metacognitive awareness related to academic learning tasks (deCarvalho Filho 2010; Kleitman and Stankov 2007; Pintrich et al. 1993; Schraw and Dennison 1994; Sperling et al. 2004; Turan and Demirel 2010; Zhang 2010).

In a study with secondary school children, good metacognitive skills were related to the pupils’ positive feelings towards group work (Cantwell and Andrews 2002). It was argued that group interaction demands good self-regulatory skills. Thus, students who rate their self-regulatory control as good feel positively challenged by group work, while others feel a cognitive overload. It appeared useful to investigate how attitudes towards group and individual learning relate to medical students’ awareness of their learning strategies.

### 4.5 Summary

Acquisition and use of patient-centered communication skills are assumed to be determined by students’ attitudes that belong to the motivational aspect of learning. In earlier studies, students expressed negative attitudes towards a patient-centered consultation style. Their attitudes towards communication skills and group work should be assessed at an early study stage.

In earlier research, positive attitudes towards learning communication skills were related to female gender, as well as personal work experience in health care. Early training of communication skills and contact with clinical environments are regarded as preventing a decline of patient-oriented attitudes. A positive relationship was found between patient-oriented attitudes and female gender, higher age, and work experience.

As no appropriate instruments for assessing students’ attitudes towards group learning contexts existed, an instrument was developed that includes cognitive, affective, and behavioral aspects. In earlier research, positive feelings towards group learning correlated with students’ awareness and regulatory control of learning strategies. Therefore, these metacognitive skills were intended to be included in the survey study.
5 THE STUDY

Two starting points were chosen for understanding students’ perspectives on group learning and on training patient-centered communication. The first approach was qualitative, considering that communication skills are often learned in practical training where each student’s performance is discussed in peer groups. Observing, recording, and analyzing these group discussions was regarded as a useful method for getting a detailed picture of problematic issues with learning to talk with patients and of students’ coping efforts in difficult situations. These discussions were also considered interesting as they are a part of the professional socialization process, a place where students develop and adopt a common language for talking about doctor-patient encounters.

Results obtained in such case studies provide deep insight into learning processes, but they are bound to the particular situation, or to similar settings. Therefore, a second methodological starting point was to collect data that can be compared between different medical schools. Quantitative attitude data from medical students who have just started studying in curricula with problem-based and in traditional teaching approaches can provide insight into the subjective conditions at the beginning of their studying. It can also give some kind of baseline about what teachers and curriculum planners can expect. Capturing students’ views in a standardized way can be accomplished with questionnaires that assess attitudes. Attitudes are evaluations of topics or behaviors, in this case of learning to communicate with patients in a patient-centered manner, and of being involved in group learning contexts. Students who apply to problem-based medical programs may vary in these attitudes compared with students starting programs with traditional curricula. Finally, it was reasoned that the emphasis of independent learning in problem-based curricula might be reflected in students’ awareness of how to use learning strategies, which should also be assessed.
5.1 The video study

Video data were collected for exploring how the training of communication skills contributes to a student’s transformation into a professional identity, and for identifying typical difficulties that students encounter in the learning process. The study design, participants, and the methodological characteristics of the video study are described in the following sections.

5.1.1 Study design

Group discussions of supervised student groups who participate in a communication skills training were filmed during the course of two academic terms.

5.1.2 Participants

At the Medical Faculty of Health Sciences at Linköping University, that practices a problem-based approach throughout the medical curriculum (Foldevi, Sommanson and Trell 1994), a course on “patient contact, holistic perspective, and communication” is integrated in the medical curriculum from the first until the fourth study term. Students practice clinical history-taking interviews with real patients in primary health care centers and discuss their interview performance in supervised groups.

Two student groups from early study terms agreed to participate in the study. At the study’s beginning, the first group was enrolled in its first study term, and was followed until the end of the second term. The second group started at the second and moved to the third term. The first group consisted of four female and three male students, a male group therapist, and three different general practitioners over the course of the study – two male and one female. The second group comprised five female and two male students, a female group therapist, and a female general practitioner.

5.1.2.1 Aims of the communication skills course

Students are expected to practice history-taking interviews on the basis of a theoretical model that is inspired by a psychodynamic perspective, the “response model” (Nystrup and Wretmark 1978; Wretmark and Wretmark 1979; Wretmark 1984). The physician is expected to be emotionally open towards the affective content of the patient’s account. This includes the intended use of one’s own emotions and empathy, in order to create a trustful
and open consultation atmosphere. The communication skills that students should acquire in the course include the use of question techniques and active listening that encourage the patient's free narrative, and self-awareness of their personal emotional reactions towards the patient. For achieving a complete picture of the patient's complaints, the doctor has to ask detailed questions in the second interview part. Thus, students also have to learn to follow the interview's temporal agenda from the patient's open account to the detailed exploration of the medical and psychosocial history. The communication skills that are defined in the course aims, and examined after four study terms, are listed in Table 1.

Table 1. Evaluation sheet of "The strand: patient contact, medical communication, and holistic perspective" communication skills course

<table>
<thead>
<tr>
<th>Ability</th>
<th>Optimal content and performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing contact</td>
<td>Greeting, eye contact, room arrangement, inviting the patient to sit down</td>
</tr>
<tr>
<td>Opening</td>
<td>Give the floor to the patient, open invitation, encourage patient to talk</td>
</tr>
<tr>
<td>Listening</td>
<td>Active listening, using breaks, silence, ask if one does not understand</td>
</tr>
<tr>
<td>Leading</td>
<td>Being directive, encourage patient to give his view</td>
</tr>
<tr>
<td>Posing questions</td>
<td>Open questions, clear language, adequate question</td>
</tr>
<tr>
<td>Giving feedback</td>
<td>Verbal, non-verbal, confronting, supporting, body language</td>
</tr>
<tr>
<td>Summarizing</td>
<td>Prepare the patient, summarize, ensure that one has understood right, complementing questions</td>
</tr>
<tr>
<td>Time disposition</td>
<td>Optimal distribution</td>
</tr>
<tr>
<td>Holistic perspective</td>
<td>Considering the patient's formal and informal networks, social situation, health behavior,</td>
</tr>
</tbody>
</table>
5.1.2.2 Procedure of a course lesson

The course combines practical training with supervised group discussions that include the analysis of the videotaped patient-student interviews. Two supervisors (one general practitioner working at a primary health care center and one psychotherapist with expertise in group therapy) are responsible for a group of six to eight students. Classes are held every two weeks from the first to the fifth academic term at local primary health care centers. A course session starts with three interviews with real patients chosen by the general practitioner. Each patient is interviewed by a pair of students; one student talks with the patient and the other films. On average, each student conducts one interview per month, i.e. about five per study term. After meeting the students, the patient has a regular visit with the general practitioner, attended by the two students who met the patient. Afterwards, the whole student group and both supervisors meet to discuss the filmed interviews.

Each student-patient interview is discussed in detail for about 45 minutes. Using the videotaped interviews allows the supervisors to assess each individual student’s performance, and to stimulate the group’s discussions about adequate communicative behavior in particular situations. The discussions aim at fostering the students’ individual development through reflection and expert advice from the supervisors concerning communication in general and clinical practice.

5.1.3 Data collection

The supervised group discussions were filmed with a digital video camera. The researcher was present during all videotaped sessions, but was not actively involved in the discussions. As the data collection was extended over two academic terms, the author’s and the camera’s presence became a natural part of the sessions. In total, the material comprised group discussions of 23 student-patient interviews (some sessions were cancelled due to vacation or illness), entailing about 30 hours.

5.1.4 Ethical approval

A request for ethical approval of the video study was submitted to the ethical committee of Linköping University. The study was approved under the condition that all students gave their written consent to participate in the study, and to be filmed. All patients were informed that their interviews were part of a study, and all consented to having the student discussions about their interviews saved.
5.1.5  Data analysis

The videotapes were analyzed in several steps. Initially, all discussions about student-patient interviews were screened for aspects that were described as difficult by the students. From this overview, four group discussions were selected that were transcribed and analyzed in detail. Selection criteria were that the discussed difficulties should represent typical issues, and that they should involve four different students, both male and female. The four discussions, which were about 45 minutes each, were transcribed verbatim including laughter, pauses, back-channeling, overlaps, and emphases (O’Connell and Kowal 1995). Content analyses were performed that aimed at answering three questions: (1) Which aspects of communicating with patient were described as difficult? (2) How did the students feel and reflect about difficult issues? (3) Which resources were utilized by the students for coping with difficult situations? During the analysis process, parts of the transcripts were discussed with other researchers, and several teachers were involved in the course.

5.1.6  Methodological considerations

Qualitative methods provide rich and detailed data about a topic. A particular strength is the focus on processes from the actors’ perspective (Bryman 2000). The analysis of video observations, though, demands the selection of particular sequences. These should be made on the basis of research questions, but it is inevitable that the selection process reflects the researcher’s personal perspective on the data. The same applies to the interpretation of the results. In this case, the video data were collected in the presence of the researcher during the video recordings, which should also be considered in evaluating the study’s results. Personal presence can imply a certain personal involvement and a relationship with the study participants. In order to consider other perspectives, parts of the transcribed discussions were discussed with other researchers and teachers involved in the course.

Another characteristic of case studies is that the results can only partly be generalized to similar cases. As this study involved students at an early study phase, i.e. with little medical expertise, and concerned exploratory interviews with a patient-centered approach, the results are probably not applicable to experienced physicians, or to different consultation context like the breaking of bad news. However, this does not mean that the findings are irrelevant for other cases. Instead, insights gained from one case study can be guideposts for other case-based research.
The data were collected in the year 2001, which implies means that some of the discussed topics’ relevance may have changed since then. However, several course supervisors confirmed the recurrent emergence of typical themes.

## 5.2 The survey study

The survey data aimed at comparing attitudes and self-rated metacognitive skills. The following sections describe its study design, participants, and methodological features. Furthermore, it presents the applied assessment instruments.

### 5.2.1 Study design

A descriptive cross-sectional design with the independent factor “medical school” (Witten/Herdecke, Linköping, Marburg, Gothenburg) was used. Data were collected for five types of variables:

- demographic variables (age, gender, personal experience in health care prior to studies, and parents’ work in health services)
- attitudes towards individual and group learning
- awareness of learning strategies
- attitudes towards communication skills learning
- patient orientation.

### 5.2.2 Participating medical schools

Four medical programs were selected to participate in the study, two located in Sweden and two in Germany. The problem-based schools were chosen as both were national pioneers in the consistent application of PBL methods, while the programs applying mixed teaching methods were selected as representatives of medical faculties with a long teaching tradition. In their study guidelines, all participating medical faculties mention teamwork abilities and lifelong learning as central study goals. However, the schools apply different teaching methods. The Sahlgrenska Institute at the Swedish University of Gothenburg, Sweden, and the Medical Faculty at the Philipps University at Marburg, Germany mix lectures with seminars and practical training. In contrast, the Faculty of Health Sciences at Linköping, Sweden, and Medical Faculty at the University at Witten/Herdecke, Germany, apply
problem-based teaching approaches. The Swedish programs span 5.5 years of full-time studies, while German medical studies take 6 years.

5.2.2.1 Medical Faculty at the University at Witten/Herdecke
As the first medical faculty in Germany, the university at Witten/Herdecke, Germany, introduced problem-based learning in 1992 as a central, integrative concept. In the study aims, it is stated that

the physician should develop a personality that enables him/her to maintain and reconstitute health and well-being on an individual and societal level. For this purpose, in particular the ability to communicate and interact, problem-oriented and interdisciplinary thinking, and the readiness for lifelong learning have to be fostered. These aims (...) should be realized by a variety of problem-based learning and integrated study and examination forms. (Translation by the author).

During the first study phase (years 1 and 2), the central teaching and learning form is problem-based learning, completed by practical training (http://medizin.uni-wh.de/humanmedizin/studiengaenge/modellstudiengang-medizin/curriculum/). During the first two study years, small student groups work on one patient paper case per week, for which they develop hypotheses concerning causes of the medical condition and disease progress, and formulate learning goals. Problem-based group learning is applied throughout the entire study period, while written patient cases are used during the first two study years. The learning contents are taught as integrated systems, e.g. by organ systems and functional units, and contents appear repeatedly under different aspects. Thus the learning process can be described as a systematic spiral with increasing levels of complexity. The problem-based pedagogical approach implies the use of several sources for self-organized learning, i.e. books, journals, interactive models (for understanding anatomic and biochemical relationships), as well as collections of clinical cases (http://medizin.uni-wh.de/humanmedizin/studiengaenge/modellstudiengang-medizin/selbstorganisiertes-lernen/).

Clinical communication skills are taught in a longitudinal course from the first until the ninth study term, initially with simulated patients, and later with real patients. During the first two terms, theoretical basics are taught. From the third to the sixth term, the students have interviews with simulated patients, and receive feedback and discussion on their performance. Finally, from the seventh until the ninth term, interviews with real patients are conducted, and are videotaped and analyzed in supervised group sessions. These groups
consist of peer students, psychologists, and physicians. This longitudinal concept of communication skills training is unique in German medical education. Moreover, in Witten/Herdecke, the teaching of communication skills is integrated with instruction in ethical issues.
(http://www.uni-wh.de/fileadmin/media/g/pflege/g_pfl_i_iekg/Manual/IC-Manual_5S2011_small.pdf)

5.2.2.2 Faculty of Health Sciences at Linköping

The Faculty of Health Sciences at Linköping, Sweden, applies a problem-based learning approach. In Sweden, study goals are defined in the general university law (SFS 1992), and in the national study goals for medical studies that are noted in the university policy (“Högskoleförordningen”) SFS 1993:100, bilaga 2, examination form (bilaga 2)).

Beyond developing the general ability to follow the development in the scientific field (Högskolelagen, 1 kap. 9§), the study documents emphasize that students should acquire the preconditions for lifelong learning (http://www.hu.liu.se/lakarprogr/filarkiv-dokument/1.59689/Utbildningsplan20060530.pdf). The course plan for the first study years states that the students have to become able to evaluate the functioning of the learning group (base group) in order to achieve an effective working mode. Moreover, they should learn to identify and reflect upon conditions of meaningful learning, reflect upon their own learning strategies, and use different types of data sources (http://www.hu.liu.se/lakarprogr/filarkiv-kursplaner/1.55118/KursplanstadieIrev060529.pdf). During the first seven weeks, medical students participate in a course in “health, ethics, and learning”. The students work in small groups of 6-8 students in base groups on problem-based cases. These groups are mixed from all health care programmes, in order to foster interdisciplinary collaboration (Areskog 1992).

Problem-based learning includes the students’ personal responsibility for their learning process, setting of learning goals and data searching. Medical knowledge is acquired by web-based scenarios, literature, seminars, and in contact with patients. (http://kdb-5.liu.se/liu/hu/kp_detail_print_sv.las?&ID=302145). The admission process is based on secondary school grades. (Undervisning/arbetsformer i stadie 1 (http://kdb-5.liu.se/liu/hu/kp_detail_print_sv.las?&ID=302143))

As described in detail in the last section, communication skills are taught from the first until the fourth term, based on contact with real patients combined with video-based group supervisions. This implies active interviewing for
each student with about three patients per term, in addition to the supervision of the peer students’ interviews every two weeks.

5.2.2.3 Sahlgrenska Institute at the Swedish University of Gothenburg

In its study goals, the Sahlgrenska Institute at the Swedish University of Gothenburg emphasizes medical students’ ability to communicate with patients, relatives, personnel, and society in general, and their preparedness for permanent maintenance of knowledge and continuing development of professional skills. Moreover, a physician should be aware of the limitations of the physician’s working area, where other professions are responsible, and the collaboration with these (http://www.sahlgrenska.gu.se/digitalAssets/1125/1125795_lak_utbplan.pdf).

During the first study terms, mixed teaching methods are applied, including lectures, seminars, small group learning, laboratory instruction, clinical “bedside” studies, supervision with reflection, and case discussions. The pedagogical philosophy is research-based, i.e. the study contents should be critically appraised, and teaching methods are adapted to contents (http://www.sahlgrenska.gu.se/digitalAssets/1125/1125795_lak_utbplan.pdf). The primary study terms include instruction in professional training (“early professional contact”), but not the explicit training of communication skills (Hellquist et al. 2005).

5.2.2.4 Medical Faculty at the Philipps University at Marburg

The study guidelines of the Medical Faculty at the Philipps University at Marburg, Germany, state in their goals the acquisition and the readiness to collaborate with other health care professionals and the willingness to engage in permanent education (http://www.uni-marburg.de/fb20/studium/stpo/ao2004.pdf) (http://www.uni-marburg.de/fb20/studium/stpo/StO-Humanmedizin.pdf).

The curriculum is divided into a preclinical (terms 1-4) and a clinical phase. The preclinical phase consists of lectures, seminars with 20-30 students (these can also be given as problem-oriented seminars in small groups), and practical training. The major part of instruction is based on lectures, a smaller part on practical training, and the smallest part as seminars. At term 3, the proportions shift towards more seminars. However, half of the study time is given as lectures to prepare practical training and seminars and “should give an overview over the subject and hints for a meaningful focus for its elaboration.”
(translation by the author). Since 2008, practical skills – physical examination and communication skills – can be trained in a “skills lab” (http://www.uni-marburg.de/fb20/maris). These include the training of communication skills, where laymen actors serve as simulated patients and individual feedback is provided. At the time of data collection (2005), an optional course in doctor-patient communication was offered to a limited number of students. This included contact with real patients in private practices, reflected in individual written reports.

5.2.3 Data collection
A descriptive cross-sectional design with the independent factor “medical school” (Gothenburg, Linköping, Marburg, Witten/Herdecke) was used. Data were collected for three types of variables: personal background variables, attitude measures, and metacognitive awareness ratings. At all schools, the questionnaires were distributed to students at the end of the first and third study terms after a compulsory lecture, except at Linköping University, where only first-term students participated. Table 5 shows the participants’ numbers per medical school and their response rates.

5.2.4 Ethical considerations
The students were informed about the study’s general aim, and their participation was anonymous and voluntary. At the time of data collection (early in 2005), the Swedish Act Concerning the Ethical Review of Research Involving Humans (2003:460) comprised research dealing with sensitive personal data, or physical or psychological interventions (Swedish Research Council 2011). In accordance with the opinion of Linköping University’s research ethics representative, the study did not need to be submitted for ethical approval. At all participating universities, permission for the distribution of the questionnaire was obtained by the faculties’ deans.

5.2.5 Instruments
The survey study included several questionnaires, of which some had been used in previous research, and one was developed for the purpose of the thesis. All questionnaires were distributed to the students in one survey. The newly developed “attitudes towards individual and group learning scale” instrument was originally written in German and Swedish, utilizing the multiple forward- and back-translations that are required for surveys used in
comparative studies including different languages. For publishing purposes, the questionnaire was also translated into English, and is included in its entirety in the “Medical students’ attitudes towards group and self-regulated learning” paper. One questionnaire, the “Tasks of Medicine” (TOMS) was included in the survey, but not analyzed, as it was seen to be unsuitable for answering the research questions. In the appendix, the Swedish and German versions that were applied in the study are included. An overview of the instruments used is provided in Table 2.
Table 2. Questionnaires used in the survey, including scales, abbreviations, number of items, and authors

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Scales (Variables and variable categories for demographic variables)</th>
<th>Number of items</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards individual and group learning</td>
<td>Scale 1: Attitude towards individual learning</td>
<td>16</td>
<td>(Lumma-Sellenthin 2012)</td>
</tr>
<tr>
<td>scale</td>
<td>Scale 2: Attitude towards group learning</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scale 3: Social expectations towards individual learning</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scale 4: Social expectations towards group learning</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scale 5: Experience with group learning</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Metacognitive Awareness</td>
<td>Knowledge of cognition</td>
<td>10</td>
<td>(Schraw and Dennison 1994)</td>
</tr>
<tr>
<td>Inventory (MAI)</td>
<td>Regulation of cognition</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(shortened version)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Skills Attitude Scale (CSAS)</td>
<td>Positive Attitude Scale (PAS)</td>
<td>13</td>
<td>(C. Rees et al. 2002)</td>
</tr>
<tr>
<td></td>
<td>Negative Attitude Scale (NAS)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Patient-Practitioner Orientation Scale (PPOS)</td>
<td>PPOS – caring</td>
<td>9</td>
<td>(Krupat et al. 1999)</td>
</tr>
<tr>
<td></td>
<td>PPOS – sharing</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
5.2.5.1 Attitudes towards individual and group learning scale

A questionnaire was developed to assess attitudes towards individual and group learning on the basis of the “theory of planned behavior” (Ajzen 2001). The development of the pilot version and the further item reduction that was performed with a principal component analysis are described in the “Medical students’ attitudes towards group and self-regulated learning” paper. All item formulations are also included in this paper, together with their descriptive statistics and communalities (Anderson 2003). The paper also contains the rotated component matrix of the principal component analysis. The principal component analysis resulted in a five-factor solution that represented meaningful subscales. These were:

Scale 1. “Attitude towards individual learning”
Scale 2. “Attitude towards group learning”
Scale 3. “Social expectations towards individual learning”
Scale 4. “Social expectations towards group learning”
Scale 5. “Experience with group learning”.

Originally, the questionnaire was written in German by the author. In order to preserve its conceptual equivalence, multiple forward translation procedures into English and Swedish were applied to each statement, and to the questionnaire as a whole, including a professional English translator and Swedish native speakers. Back-translations from the English version into Swedish were also provided by Swedish native speakers and into German by German native speakers. The focus was on describing students’ views on their everyday learning behavior. In the study, both the Swedish and German versions were used.

5.2.5.2 Metacognitive Awareness Inventory

Students’ awareness of their personal learning strategies (“knowledge of cognition”) and of their self-regulatory control (“regulation of cognition”) were assessed with the Metacognitive Awareness Inventory (MAI) self-report instrument (Schraw and Dennison 1994). Instead of the original version with 52 items, a shortened version was used that had been applied in earlier research (Cantwell and Andrews). The validity and reliability of the questionnaire are described in detail in the “Medical students’ attitudes towards group and self-regulated learning” paper. The questionnaire was translated into German and Swedish by a professional translator.
5.2.5.3 Communication Skills Attitude Scale (CSAS)

Attitudes towards learning communication skills were measured with the "Communication Skills Attitude Scale" (CSAS) (Rees, Sheard and Davies 2002), which has been validated in several studies in the UK (Cleland, Foster and Moffat 2005; Rees and Sheard 2003), and has also been used in Norway (Anvik et al. 2007a; Anvik et al. 2007b). It aims at assessing positive and negative attitude aspects that students can experience towards participating in the training of communication skills. The description of the “Positive Attitude Scale” and “Negative Attitude Scale” subscale example items and internal consistencies are reported in the “Attitude towards communication skills learning: relation to patient orientation, self-regulation, and teaching methods” paper. With the author’s permission, the questionnaire was translated into German and Swedish.

5.2.5.4 Patient-Practitioner-Orientation Scale

The “Patient-Practitioner Orientation Scale” (PPOS) assesses students’ attitudes towards the doctor-patient relationship (Krupat, Putnam and Yeager 1996; Krupat, Hiam and Fleming 1999; Krupat et al. 2000). The psychometric qualities are included in the “Attitude towards communication skills learning: relation to patient orientation, self-regulation, and teaching methods” paper. The scale has been previously applied in Swedish and German research and was used with the permission of the author.

5.2.6 Data analysis

Descriptive statistics were calculated for students’ demographic variables. Distributions of demographic variables at each medical school were compared with Chi-square tests. For each demographic variable, differences in attitude measures were assessed with t-tests for independent groups. Multivariate statistics (MANOVA) with pairwise comparisons were performed between the four medical schools for “attitude measures” and “metacognitive awareness measures” (adjusted with the Bonferroni procedure for multiple comparisons). Finally, predictor variables for the applied attitude measures were identified with multiple linear regressions. A p-level <.005 was considered significant. Students who did not report variables were omitted from the respective analysis.
5.2.7 **Methodological considerations**

The survey study has several methodological and content-related limitations that have to be discussed.

The number of participants per university varied due to different class sizes, which were smaller in problem-based programs than in mixed programs and smaller in Sweden than in Germany. The lower number of students in problem-based programs is a structural characteristic of these curricula, and could not be avoided. On the other hand, it was not possible to select a number of students from the curricula with mixed teaching approaches in order to match the numbers per student group. As another unforeseen shortcoming, in Linköping only students enrolled in the first term could participate, while from all other schools, students from both the first and third term were included. However, the inclusion of third-term students increased the total number of participants.

The surveys were distributed after a regular lecture, which meant that only attending students could participate. This may have entailed a bias in favor of students who were interested in the study subject or had the time to fill in the questionnaire, as the survey was completed during leisure time. However, it was assumed that this bias applied to all samples and might influence the level of total scores, but did not limit the comparability of student groups. No data were available about the non-responders’ background variables. The response rates were calculated as percent of the total number of students per term. As it can be assumed that not all students attended the lectures, it is probable that the response rates estimate the real participation ratio as too low.

The study design implies certain shortcomings. The explorative and correlative study design can yield insights about the possible relevance of personal and contextual factors for students’ attitudes, but not about their causal relationships. The study design cannot discern between the impacts of problem-based and mixed teaching methods on students’ attitudes, compared to students’ active selection of particular teaching approaches.

In general, survey studies provide data that can be analyzed with regard to their structural patterns, which are considered as static and independent from the researcher (Bryman, 2000). Comparative studies of student samples can reveal statistical relationships between factors like the medical program’s teaching approach and dependent measures. They do not allow conclusions about underlying mechanisms and mediating variables between independent conditions and dependent measures. These questions can be addressed in qualitative studies, for example those including interviews with students.
The assessment of a person’s attitude, i.e. their subjective evaluation of a topic, is afflicted with particular difficulties. Attitudes – like other psychological concepts – cannot be observed or directly measured, but refer to a hypothetical construct that reflects a person’s tendency to answer in a certain manner to questions concerning a certain issue. This implies that the relationship between a person’s attitude and his/her actual behavior cannot be reliably predicted. However, given that an attitude survey has been piloted, and checked for the clarity of item formulations, attitude measures are comparable between student samples.

The use of a particular attitude concept – the theory of planned behavior – limits the comparability with studies that use other theoretical concepts, such as cognitive styles. The broad perception of students’ general attitudes towards group learning limits the questionnaire’s predictive power for particular learning situations. It must be mentioned that the assessment of attitudes does not allow conclusions about performance of the intended behavior (Joekes et al. 2011; Levinson and Roter 1995). The relationship of assessed attitudes and beliefs to the intended behavior is susceptible to many influences, such as that information available at the time of attitude assessment may not resemble the situation in which the behavior is demanded. However, the assessment of attitudes towards patient-oriented care has its legitimation, as attitudes refer to beliefs that are relatively stable over time (Wahlqvist et al. 2010).

Self-report instruments are always susceptible to social desirability biases, i.e. a tendency to answer in a manner that will be viewed favorably by others. This implies that desirable behavior will be over-reported and undesirable behavior under-reported (McBurney 1994). However, in the case of preferences towards individual and group learning, both learning settings may be socially desirable. Therefore, the “attitudes towards individual and group learning scale” questionnaire did not include statements that aimed at assessing social desirability biases (Crowne and Marlowe 1960). Instead, one scale aimed at students’ perceived social norms about learning settings.

Self-report instruments for assessing desirable skills, such as the regulation of learning strategies, entail particular problems. Self-reports reflect students’ personal perceptions of their metacognitive skills, not their actual use of these strategies nor their general ability to self-regulate their learning processes. In addition to the possible social desirability bias, the estimation of personal abilities is afflicted with calibration difficulties – i.e. the overestimation or underestimation of personal skills (Linnenbrink and
Pintrich, 2003). Some students may not be able to report their use of learning strategies at all (Winne and Jamieson-Noel 2002).

As surveys between students from different countries were compared, it is possible that small changes between the translated versions have affected their responses (Schwartz and Loten 2003).

In the survey study, Cronbach’s alpha was used for determining the reliability of the questionnaires’ subscales. Cronbach’s alpha measures the internal consistency of a scale by computing the interrelatedness of its items (Cortina 1993; Cronbach 1951; Tavakol and Dennick 2011). However, Cronbach’s alpha is susceptible to influences like the number of included items, which can have been relevant for the Metacognitive Awareness Inventory that was applied as a short version (Cortina 1993). Furthermore, in each application, Cronbach’s alpha varies with the test properties of the tested persons (Tavakol and Dennick 2011). Thus, Cronbach’s alpha assumes that all items included in a scale refer to the same latent factor, i.e. a unidimensional concept. This assumption may not be fulfilled for some scales that aim at complex concepts, such as the “attitude towards individual/group learning” scales.
6  RESULTS

6.1  Study I

“Learning to talk and talking about talk: professional identity and communicative technology” (Hydén, L.-C., & Lumma, A., 2007)

The supervised group discussions were characterized by dynamic shifts between the video playback of the student-patient interview, the students’ own and their peers’ perceptions of the occurring difficulties, and comments from the supervisors. The mentioned difficulties could be subsumed under three aspects. First, difficulties with applying particular communicative skills were common. There were typical problems with the interview’s temporal agenda, the formulation of open versus closed questions, the suppression of talkative patients, and the encouragement of reserved patients. Moreover, the intentional use of empathy and the expression of emotional reactions towards patients that are encountered for the first time, were problematized.

Secondly, students reported feelings of uncertainty with adopting the professional role of a physician. This implied the intentional use of speech actions that are usually part of everyday talk. Difficult issues were the conscious violation of interaction rules, e.g. politeness towards strangers, small talk, and humor, in order to obtain important diagnostic information.

Finally, training communication skills as a professional technology that can be applied to various situations demanded of the students a reflective perspective on their own learning processes. This task required the adoption of a common, self-reflexive language in their communication behavior. The self-reflexive perspective implied the use of metacognitive skills – planning and structuring the interview, analyzing and self-regulating performance, as well as formulating and receiving feedback. It is in particular the self-reflexive aspect of communication skills training that characterizes the transformation of the students’ private identity into a professional one, i.e. their socialization into the community of health care professionals.
6.2 Study II

“Talking with patients and peers: Medical students’ difficulties with learning communication skills” (Lumma-Sellentin, A., 2009)

Students’ difficulties were summarized in seven categories:
1. Creation of a trustful atmosphere
2. Assessment and structuring of the patient’s account
3. Addressing sensitive topics
4. Giving empathy and feedback
5. Monitoring the interview
6. The pedagogical setting
7. The group discussions as learning resource

1. Some students worried whether their patients accepted them as competent professionals. Feelings of incompetence resulted in particular from the students’ lack of biomedical knowledge. The effects of external attributes (white coats, seating arrangement) on their trustworthiness were also discussed.

2. If students were confronted with detailed accounts, they reported difficulties with structuring the information. In other cases, they complained that patients were too reserved. Strategies like interrupting talkative patients and posing directive questions could be perceived as impolite.

3. Students tended to feel intrusive or curious when they addressed the patient’s private life, or mental health problems, such as work-related stress, loneliness, depression, or difficult family relations. Many did not understand to what extent the patients’ life contexts were related to their medical conditions.

4. Students reported uncertainty about their patients’ emotional needs, in particular if they expressed suffering. Many did not know how to respond empathetically to their patients without appearing insincere.

5. Self-monitoring one’s interview performance – comparing one’s own behavior with the theoretical model – could cause cognitive overload and impede the conversational flow. The supervisors suggested facilitating strategies like standard formulations for typical situations. They helped the students to develop a professional language for typical situations and types of patients that contained metaphoric and categorizing expressions.

6. The intense evaluation of their personal performance could be perceived as emotionally stressful. This included the formulation of feedback comments. The video camera was experienced as a hinder for the spontaneity and openness, while the contact with real patients was appreciated.
7. Peer students were used for role-plays that aimed at applying particular techniques.

6.3 Study III

“Medical students’ attitudes towards group and self-regulated learning” (Lumma-Sellenthin, A., 2012)

The study related beginning students’ attitudes towards group learning and their awareness of learning strategies, to demographic variables, and to problem-based and mixed curricula.

No differences were found between female and male students’ attitudes towards individual and group learning, and their awareness of learning strategies. However, students who had worked in health care before studying medicine reported more group learning experience ($t(341) = -2.971$, $p = .003$), and better knowledge ($t(349) = -2.258$, $p = .025$), and regulation of learning strategies ($t(333) = -3.307$, $p = .001$) than students without prior practical experience. Students whose parents worked in health care also reported better knowledge of their learning strategies ($t(340) = -2.255$, $p = .025$), than students without this familiar background. They reported feeling stronger social norms towards engaging in group learning ($t(337) = -3.014$, $p = .003$).

Students from the German problem-based school at Witten/Herdecke had been most involved in group learning, while students from Marburg – the German program with traditional teaching methods – reported the least group work experience (largest mean difference Witten/Herdecke : Marburg = 1.45 on a Likert scale from 1 to 7, std. error = .181, $p = .000$). Witten/Herdecke had the greatest amount of students with personal work experience in health services (Witten/Herdecke = 90, Linköping = 48%; Marburg = 64%; Gothenburg = 51%). Between the Swedish schools, no difference in group learning experience was found. Students from Witten/Herdecke were also better at regulating their learning strategies than students from Gothenburg (mean difference .18, std. error = .084, $p = .034$).

Finally, students from Linköping perceived significantly stronger social expectations to engage in group learning than all other students (mean difference Linköping: Witten/Herdecke 1.71, std. error = .303, $p = .000$; Linköping: Gothenburg 1.81; std. error = .281, $p = .000$; Linköping: Marburg 2.24; std. error = .271, $p = .000$).

Thus, neither students’ attitudes towards individual learning and group work, nor their awareness of learning strategies were related to their gender or age.
However, personal or parents’ work experience correlated with metacognitive skills and experience with group work. Thus, students’ clinical experience that is gained before academic studies may provide basic preconditions of successful learning of professional skills.

### 6.4 Study IV

“Students’ attitudes towards learning communication skills: correlating attitudes, demographic and metacognitive variables” (Lumma-Sellenthin, A., 2012)

The study explored the relationship of students’ attitudes towards learning communication skills to demographic variables, metacognitive skills, and the appreciation of patient-oriented care, in traditional and problem-based curricula in Sweden and Germany.

Students’ positive attitudes towards learning communication skills was predicted by a caring patient orientation, good self-regulation of learning strategies, and female gender ($R^2 = .23$, $F_{(9,310)} = 9.72$, $p < .001$). On the other hand, a caring patient orientation was predicted by students’ attitudes towards learning communication skills, female gender, and higher age ($R^2 = .23$, $F_{(9,307)} = 13.48$, $p < .001$).

Students from the German traditional curriculum at Marburg were significantly less positive towards learning communication skills than students from Witten/Herdecke (Positive Attitude Scale (PAS): mean difference .49, on a 7-point Likert scale; $SE = .07$, $p < .001$), from Linköping (PAS: mean difference .46, $SE = .09$, $p < .001$), and Gothenburg (PAS mean difference .47, $SE = .06$, $p < .001$).

Students enrolled in Witten/Herdecke were significantly more positive towards sharing information and power with their patients compared to students from Linköping (PPOS sharing: mean difference .35, $SE = .13$, $p < .041$).

Thus, attitudes towards learning communication skills and their caring patient orientation are interrelated concepts. Both are appreciated more by female students. However, students who expressed positive attitudes towards training their communication skills tended to report better self-regulatory skills than students with negative attitudes. For a caring patient orientation, on the other hand, metacognitive skills were irrelevant, but higher age and work experience were positively related. For the teaching of patient-centered communication techniques, both a caring attitude, and metacognitive skills are relevant.
7 DISCUSSION AND CONCLUSIONS

The video study showed that many students were not familiar with the practice of patient-centered communication. Although most students appreciated the contact with real patients and were interested in understanding their complaints from a patient-centered perspective, they were uncomfortable with asking patients about their feelings and private lives. They experienced moral qualms if they explored the patient’s life, and reported feelings of uncertainty about expressing their empathy, in particular if the patients’ reports were emotionally loaded. However, students appreciated the interviews with real patients as a possibility to test their own behavior in live situations and to get a picture of the everyday tasks of a doctor. Evidently, involvement in clinical practice stimulated students’ intrinsic motivation to improve their professional skills, develop their personal styles of patient-centered consultation and, thus, develop a professional identity.

Early contact with clinical environments may contain even more potential for academic learning than just an increased motivation. Both the video study and the survey revealed that clinical experience is related to self-regulated learning. The process of communication skills training implies the continuous shift between practical training and reflection of one’s own and peers’ performance. This kind of learning demands metacognitive awareness, i.e. monitoring and evaluating of the interview, and commenting on the performance. As the course proceeds, students continuously develop these skills. Students develop several communicative skills; they learn to apply certain kinds of questions, paraphrasing comments, summaries, and affective responses in the interview with the patient. This language includes standard formulations for opening questions, and for the transition between the patient’s open account and the detailed exploration of symptoms. In the course of the group discussions, another language emerges that aims at evaluating the interview on the basis of the theoretical consultation model. This language is meant to be used among colleagues, and to support the self-evaluation of the students’ learning process. It includes categorizations of typical interview situations, typical communicative behavior shown by patients, and typical complaints. The formulations and metaphors of this language emerge to a great extent from the clinical teachers’ work experience.
Therefore, the group discussions foster the socialization into the profession and the development of a professional identity.

From the study, it can be concluded that practical training that is part of clinical communication skills instruction is necessary for students’ ability to benefit from the theoretical course elements. The positive effect of practice experience on metacognition is supported by a study that related teachers’ practice experience to their metacognitive skills. With the same instrument for metacognition (MAI) they observed an increase in self-regulation – but not knowledge of cognition – for teachers of different grade levels as a function of age and teaching experience (Cooper and Stewart 2006). It was argued that teaching experience fosters the development of a “sense of what works best” in their content area.

Self-regulated or self-directed learning skills are preconditions for lifelong learning, defined as the ability to actively seek new knowledge and follow scientific developments, discern relevant aspects, and integrate them into one’s personal conceptual understanding and knowledge. Such abilities have to be cultivated during academic education, and teachers should facilitate these by helping students set appropriate learning goals and plans for achieving them, and by offering training and self-assessment (Li et al. 2010). Metacognitive skills, like monitoring and self-evaluation of one’s communication performance, together with the acquisition of a professional language, are probably a central aspect in the transformative process that aims at forming a professional identity.

In accordance with many other studies, female students were more interested in learning to talk with patients and valued patient-oriented care higher than male students. As all future physicians need to adopt a patient-centered perspective, it is important that teachers and students are aware of possible prejudices and negative beliefs that male students might hold.

Attitudes towards training communication skills were strongly interrelated with a caring attitude towards patients. However, while students’ attitudes towards learning skills were more positive if their rated their self-regulation as good, metacognitive skills played no role for their patient orientation. This finding emphasizes that students are aware that the training of interview skills demands skills like self-evaluation and regulation.

Clinical experience may affect the development of self-regulatory control more than the participation in problem-based curricula. Students from Witten/Herdecke reported better self-regulatory control than students from Gothenburg. However, this difference may not be directly related to different teaching methods. Instead, it may reflect that more
students from Witten/Herdecke entered their studies with clinical experience that may have increased their appreciation of a trustful doctor-patient relationship for clinical practice, and promoted their awareness for and use of effective, goal-oriented learning strategies. Students from Witten/Herdecke also put more emphasis on sharing medical information with their patients than students from Linköping. This result might indicate that a doctor’s tasks are defined differently in German and Swedish health care. However, there was no difference between German and Swedish students enrolled in traditional curricula. In total, the comparison between curricula with traditional and problem-based approaches showed more differences between the German schools than in Sweden.

Students from Marburg were least interested in learning communication skills, which could not be explained with other assessed variables. This finding may possibly reflect that students who applied to Marburg were not prepared to change their communication behavior. Such differences were not found between Linköping and Gothenburg, although Gothenburg does not offer a course in communication training.

Concerning attitudes such as beliefs, evaluations, and behavioral intentions towards group learning, no relationships to the included demographic variables were observed. Swedish students differed in one aspect – students in Linköping felt more than all other students that they should learn in collaborative settings. Group learning is a prominent characteristic of medical studies in Linköping that has been evaluated in many studies, of which students appear to be aware. The video study was performed at Linköping University, where students are used to group work and discussions. However, they experienced the setting that included video feedback of interview behavior as stressful.

The study’s findings allow recommendations for educational practice and future research in this area.

## 7.1 Implications for educational practice

Medical studies should aim from the beginning to improve students’ self-regulatory control of their learning behavior. Increasing students’ and teachers’ awareness of the importance of self-regulation of their attitudes towards collaborative learning fosters the effects of these student-centered pedagogical formats (Lindblom-Ylänne 2004) and enhances their tolerance towards and benefit from working with others (Hendry et al. 2005).
As the study could show, early contact with clinical environments is related to good self-regulation, and is probably a necessary condition for developing these. The learning processes that inform patient-centered communication demand metacognitive skills that can go beyond the knowledge and regulation of individual learning strategies. They include the formulation of feedback and the shift between everyday and professional language. The relevance of this common language should be made explicit to students, as it is a basis for self-evaluating interviews even after the end of formal teaching. Experience in clinical and community settings and the contact with patients should therefore be integrated early in the medical curriculum.

The study affirms the suggestion to use gender-mixed groups in courses that aim at teaching patient-centered skills, in order to benefit from female students’ tendencies to be more patient-oriented (Wahlqvist et al. 2010). Teachers and facilitators should try to identify students who struggle with adopting patient-centered attitudes and skills and actively address topics that can cause moral qualms or feelings of unambiguity. Explaining the functional relationship of psychosocial factors and biomedical conditions to beginning students is an important issue. Likewise, the value of empathy for the diagnostic and treatment success needs to be made explicit and practiced. Discussions and role-play of desired responses in difficult interview situations have proven to be effective tools for changing students’ attitudes and emotions (Smith et al. 2000). However, students should be prepared for possible difficulties in the learning process – conceptual difficulties or emotional stress that they may encounter (Lumma-Sellenthin 2009). In contrast to the pedagogical method used in Linköping, it may be less stressful for students to interview patients without being videotaped. One suggestion is to base the group sessions on students’ accounts of their encounters, and use videos of students from earlier terms for illustration. In order to optimize the use of real patients but avoid having students feel that they are being intrusive, course formats where students meet patients on several occasions are desirable.

Communication skills courses should also aim at stimulating discussions and reflections about the impact of norms, practices, and cultural habits for the doctor-patient relationship and their communication. From an early phase, students should understand the necessity to be competent in communicating in all kinds of doctor-patient encounters (Makoul 2008). Curricula that emphasize patient-oriented care can prevent the erosion of students’ patient-centered orientation (Krupat et al. 2009; Ogur et al. 2007). Particularly in Germany, where consultation practices are diverse and students’ attitudes vary between traditional and problem-based teaching methods, an early
integration of communication skills instruction can be recommended. Students and teachers can be recommended to discuss the global values of health-centered care in the context of the practical possibilities and limitations of the clinical frame conditions and norms (Stewart 2001). Open discussions foster the acknowledgement of societal frame conditions that determine the realization of traditional professional values (Cruess and Cruess 2008).

### 7.2 Recommendations for future research

Effective design of communication skills instruction demands knowledge of students’ common problems. New insight could be gained if students with different medical expertise were studied. It would be helpful to explore whether students’ level of expert knowledge is related to their ability to establish trustful relationships with their patients. These questions can be answered in qualitative, observational studies with a longitudinal design. Students’ reflections about their acquisition of communication skills could be collected in interviews or focus groups. The relationship between attitudes and communication behavior needs to be explored, as there is evidence that a positive attitude towards patient-oriented care was not being reflected in better communication skills (Joekes et al. 2011).

Information on students’ knowledge and reflections about the influence of the health care system on their relationships with patients is needed. This includes the relationship of students’ willingness to share information with their patients to sociocultural factors. Studies that involve interviews with students could help illuminate how students become aware of norms about professional behaviors and which other factors affect their attitudes. The latter can include medical teachers’ personal values and the hidden curriculum (Haidet, Kelly and Shou 2005).

There is a need to learn more about the preconditions for effective group learning, e.g. how social norms and students’ perception of norms about group learning and student-directed learning approaches influence students’ learning preferences and behavior. A useful complement to the self-assessment of self-regulation skills may be instruments and qualitative approaches that assess students’ awareness of their learning strategies during interaction. An example here may be how self-monitoring during group discussions works (Hurme, Palonen and Järvelä 2006; Vauras et al. 2003).
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Appendix

Surveys in Swedish and German (plus information paper)
Lärande i läkarprogrammet

Den här enkätens handlar om din inställning till olika ämnen och undervisningsformer som har med "komunikation" att göra.

Det är inga kunskapsfrågor utan det är dina personliga ösiker och preferenser som är av intresse.

Studien är en del av ett avhandlingsprojekt där inställningar hos läkarstudenter i Sverige och Tyskland ska studeras. Inga individuella svar kommer att användas och svaren påverkas på inget sätt betygs, etc. Alla handlingar är anonyma och behandlas konfidentiellt. Deltagandet är friwilligt och kan avbrytas när som helst.


Ett par anvisningar om hur enkäten ska fyllas i (nur kryssen ska sättas)...:

1. Svara gärna på alla frågor (hjälp snabbt)
2. Eftersom enkäten kommer att läsas in med hjälp av en scanner - så är det viktigt att kryssen hörnas och rätt i rutan.

Tack så mycket för din medverkan!

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### Personliga uppgifter

Först ber jag Dig att svara på några bakgrunds frågor.

<table>
<thead>
<tr>
<th>Nr</th>
<th>Fråga</th>
<th>Alternativa svar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Kön</td>
<td>Kvinna, man</td>
</tr>
<tr>
<td>3</td>
<td>Medicinstudier i termin ...</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Jag har tidigare erfarenheter inom vårdsektorn.</td>
<td>Ja, Nej</td>
</tr>
<tr>
<td>5</td>
<td>Som en del av mina medicinstudier har jag deltagit (eller deltar fortfarande) i en kurs om läkar-patient-kommunikation.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Min medicinska fakultet använder problembaserad lärande (PBL) som undervisningsmetod.</td>
<td>Ja, Nej</td>
</tr>
<tr>
<td>7</td>
<td>Att problembaserat lärande erbjuds var ett kriterium för mitt val av studier.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Jag deltar i någon form av grupp lärande under mina studier.</td>
<td>Ja, Nej</td>
</tr>
<tr>
<td>9</td>
<td>Mina föräldrar arbetar inom vårdsektorn.</td>
<td>Ja, Nej</td>
</tr>
</tbody>
</table>

*Print & data collection using Fanaktya - fanaktyaconsulting.se Survey ID:045 Respondent ID: 958 Page: 1*
**Inlärningsstrategier**


<table>
<thead>
<tr>
<th>Nummer</th>
<th>Fråga</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Jag frågar mig regelbundet om jag uppnår mina inlärningsmål.</td>
</tr>
<tr>
<td>11</td>
<td>Jag försöker använda strategier som fungerat tidigare.</td>
</tr>
<tr>
<td>12</td>
<td>Jag känner till mina intellektuella styrkor och svagheter.</td>
</tr>
<tr>
<td>13</td>
<td>Jag tänker igenom vad jag verkligt behöver lära mig innan jag påbörjar en uppgift.</td>
</tr>
<tr>
<td>14</td>
<td>Jag sätter upp specifika mål innan jag påbörjar en uppgift.</td>
</tr>
<tr>
<td>15</td>
<td>Jag vet vilken information som är viktigast att lära sig.</td>
</tr>
<tr>
<td>16</td>
<td>Jag fokuserar medvetet på viktig information.</td>
</tr>
<tr>
<td>17</td>
<td>Jag lär mig bäst när jag vet något om ämnet.</td>
</tr>
<tr>
<td>18</td>
<td>Jag går regelbundet tillbaka i materialet för att förstå viktiga sammanhang.</td>
</tr>
<tr>
<td>19</td>
<td>Jag ställer frågor till mig själv om innehållet innan jag påbörjar en uppgift.</td>
</tr>
<tr>
<td>20</td>
<td>Jag tänker igenom olika sätt att lösa ett problem och därefter väljer det bästa.</td>
</tr>
<tr>
<td>21</td>
<td>Jag kan motivera mig själv till lärande när jag behöver.</td>
</tr>
<tr>
<td>22</td>
<td>Jag använder mina intellektuella styrkor för att kompensera för mina svagheter.</td>
</tr>
<tr>
<td>23</td>
<td>Jag fokuserar på ny informations mening och betydelse.</td>
</tr>
<tr>
<td>24</td>
<td>Jag är duktig på att avsöna hur väl jag har förstått något.</td>
</tr>
<tr>
<td>25</td>
<td>Jag frågar mig själv hur vill jag uppnått mina mål när jag är klar.</td>
</tr>
<tr>
<td>26</td>
<td>Jag frågar mig själv om jag har beaktat alla alternativ när jag löst ett problem.</td>
</tr>
<tr>
<td>27</td>
<td>Jag lär mig mer då jag är intresserad av ett ämne.</td>
</tr>
<tr>
<td>28</td>
<td>Jag frågar mig själv om hur det går när jag lär mig något nytt.</td>
</tr>
<tr>
<td>29</td>
<td>Jag frågar mig själv om jag har lärt mig så mycket som möjligt när jag är klar med en uppgift.</td>
</tr>
<tr>
<td>30</td>
<td>Jag är medveten om vilka strategier jag använder när jag studerar.</td>
</tr>
<tr>
<td>31</td>
<td>Jag stannar upp och går över ny information igen innan det känns oklart.</td>
</tr>
<tr>
<td>32</td>
<td>Jag stannar upp och läser om när jag blir förvirrad.</td>
</tr>
</tbody>
</table>
Studievanor

Följande påståenden gäller dina erfarenheter med självstudier och grupplärande. När i de följande påståenden ordet "självstudier" nämns innebär det att du studerar själv, antingen i hemmet eller på universitetet, med eller utan andra personer i samma rum. När det talas om "grupplärandet" menas smågrupper, där diskussion är möjlig mellan alla deltagare (t.ex. grupparbetes i seminarier, besegrupper i problembaserad inlärning, privata studiegrupper mm). Med "studieinnehållet" menas såväl traditionella medicinska ämnen (t.ex. anatomir) men även problemorienterade uppgifter, så länge syftet är att man som enskild student ska lära sig ett innehåll. Vad som efterfrågas här är din allmänna inställning till att studera själv och i grupper, även om du helst studerar i vissa grupper än andra. V g besvarar alla frågor spontant och upprättigt genom att kryssa för i det relevanta fältet. V g beskriver de olika valalternativet:

33 Jag avser att under min studietid huvudsakligen lära mig studieinnehållet genom självstudier.
34 Jag tycker att det är ... att lära mig fakta och detaljer utanl.
35 Att studera i en grupp är för mig ...
36 Min åsikt är att det är ... med självstudier.
37 Min åsikt är att det är ... med självstudier.
38 Min åsikt är att det är ... med självstudier.
39 Min åsikt är att det är ... med självstudier.
40 Min åsikt är att det är ... med självstudier.
41 När jag ägnar mig åt självstudier minns jag fakta och detaljer bra.
42 Mina kurskamrater tycker att det är ... med självstudier.
43 Hur bra kan du styra dina inlämningsframsteg när du lär dig i grupp?
44 När jag pratar med andra studenter hjälper det mig att förstå sammanhang.
45 Jag avser att under min studietid huvudsakligen lära mig tillsammans med andra studenter.
46 När jag studerar i en grupp får jag en förståelse på djupet för läroinnehållet.
47 För mig är det ... att förstå sammanhang.
48 Min åsikt är att grupplärande är ... 
49 Min åsikt är att grupplärande är ...
50 Min åsikt är att grupplärande är ...
51 Min åsikt är att grupplärande är ...
52 Min åsikt är att grupplärande är ...
53 Jag har erfarenhet av smågruppselement.
54 När jag studerar själv har jag bra kontroll över hur effektiv jag är.
55 När jag ägnar mig åt grupplärande är jag för det mesta motivad.
56 Jag tror att de flesta av mina kurskamrater ... studerar enskilt.
57 Min nuvarande läsare/kursledare uppmanrar att jag studerar i grupp.
58 Jag har erfarenhet av inlämningsgrupper som förberedelse för prov.
59 Att studera själv är för mig ...
60 Jag har känt att jag förväntas studera själv.
61 När jag studerar själv, får jag en djup förståelse för läroinnehåll.
62 På min institution gäller individuellt lärande som den bästa metoden.
63 Jag anser det vara ... att få en djup förståelse för läroinnehåll.
64 När jag studerar själv är jag för det mesta motivad.
65 Jag har känt att jag förväntar lärar mig i grupper.
66 Hur bra kan du styra dina inlämningsframsteg när du studerar själv?
67 När jag lär mig i grupper har jag lätt för att lärar mig fakta utan titel.
68 På min institution gäller gruppinlämnning som den bästa lärometoden.
69 Jag har erfarenhet av problembaserade inlämningsgrupper.
70 Jag förelåser sammanhang framför allt när jag studerar själv.

Det för mig optimala förhållandet mellan själv- och gruppstudier skulle vara ...

**Gruppdiskussioner**


<table>
<thead>
<tr>
<th>Nr</th>
<th>Påstående</th>
<th>Mycket svårt</th>
<th>Väldigt svårt</th>
<th>Ganska svårt</th>
<th>Vanligt svårt</th>
<th>Lätt</th>
<th>Ganska lätt</th>
<th>Väldigt lätt</th>
<th>Mycket lätt</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>Att ge andra gruppmedlemmar feedback vad gäller deras prestationer, tycker jag är...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>Att förklara något i gruppdiskussioner känna för mig...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>Att dra nytt av andra kunnande tycker jag är...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Att ta emot feedback över mina prestationer från andra är för mig...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>Att utöva inflytande över förloppet i gruppdiskussioner tycker jag är...</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>77</td>
<td>Att vara aktiv i gruppdiskussioner finner jag...</td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>78</td>
<td>Att i gruppdiskussioner göra min åsikt förstådd finner jag...</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>Att utnyttja tiden effektivt under en gruppdiskussion är för mig...</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>Att förstå hur andra känner i gruppdiskussioner tycker jag är...</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>81</td>
<td>Att överflyga andra om mitt sätt att se på saker i gruppdiskussioner är för mig...</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>Att få maximal kunskapsbehållning från gruppdiskussioner anser jag vara...</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>83</td>
<td>Att hitta kompromisser med andra i gruppdiskussioner är för mig...</td>
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</tr>
<tr>
<td>84</td>
<td>Att ha kontroll över en gruppdiskussion är för mig...</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>Att ansvara för min egen inlämningsprocess under gruppdiskussioner upplever jag som...</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>Att bidra till gruppdiskussioner med mitt eget synsätt tycker jag är...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>87</td>
<td>Att skildra gruppens mål och behov och mina egna är för mig...</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>Att känna mig motiverad inför gruppdiskussioner är för mig...</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>89</td>
<td>Att organiera gruppdiskussionen anser jag vara...</td>
<td></td>
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</tr>
</tbody>
</table>
Läkarens Uppgifter


90  Att genomföra en grundlig medicinsk undersökning

91  Att skapa en god kontakt till patienten

92  Att identifiera vilka mål patienten har med besöket

93  Att samla in data (fakta) från patienten så effektivt som möjligt

94  Att förstå patientens perspektiv på problemet

95  Att utveckla en god behandlingsplan

96  Att avgöra om fler test är nödvändiga

97  Att engagera patienten som en aktiv partner
**Patient-Läkar-Interaktion**

Nedanstående påståenden beskriver olika inställningar mot läkare och patienter. Ange för varje påstående i hur stor grad du instämmer.

<table>
<thead>
<tr>
<th>Nummer</th>
<th>Påstående</th>
<th>Instämmer inte</th>
<th>Instämmer lite</th>
<th>Instämmer descriv</th>
<th>Instämmer definit</th>
<th>Instämmer helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>Läkaren bestämmer vad man ska tala om under ett besök</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Även om häls- och sjukvård är mindre personlig nu för tiden är det ett litet pris att betala för de medicinska framsteg som gjorts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Den viktigaste delen av ett vanligt läkarbesök är den fysiska undersökningen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>Det är ofta bäst för patienten att inte få en fullständig förklaring av sin medicinska situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>Patienten bör lita på läkarens kompetens och erfarenhet och inte söka egen information om sin medicinska situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>När en läkare ställer många frågor om en patients bakgrund gör de intrång på patientens integritet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Om läkaren är mycket duktig på diagnos och behandling är detta inte någon del av vårt samtal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Många patienter fortsätter att ställa frågor trots att de inte lär sig något nytt</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>106</td>
<td>Patienten bör behandlas som om de var de patienten med läkaren, likvärdiga i mard och status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>107</td>
<td>Patienten vill generellt sett ha stöd snarare än information i frågor om hälsa</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>Om en läkarens främsta verksamhet är att vara öppen och varm kommer den inte vara särskilt framgångsrik</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>109</td>
<td>När en patient är cerit med sin läkare är det ett tecken på att läkaren inte har patientens fulla förfogande och respekt</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>110</td>
<td>En behandlingsplan kan inte lyckas om den står i konflikt till patientens livsstil eller värderingar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>Majoriteten av patienter vill komma in och ut ur läkarens kontor så snabbt som möjligt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>Patienten måste alltid vara medveten om att det är läkaren som bestämmer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>Det är inte särskilt viktigt att känna till en patients kultur och bakgrund för att behandla patientens sjukdom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>Humor är en viktig ingrediens i läkarens behandling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>När patienter söker medicinsk information på egen hand förvirrar det generellt sett mer än det hjälper</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Att lära sig Läkar-Patient-Kommunikationsfärdigheter

Följande påståenden återspeglar åsikter som man kan ha vad gäller att lära sig och träna de kommunikationsfärdigheter som man behöver som läkare. Här söker vi din personliga mening. Vänligen skissa för varje påstående i det relevanta fältet.

<table>
<thead>
<tr>
<th>Nummer</th>
<th>Fråga</th>
<th>Svaralternativen</th>
</tr>
</thead>
<tbody>
<tr>
<td>116</td>
<td>För att vara en bra läkare måste jag vara bra på att kommunicera.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>117</td>
<td>Jag kan inte se poängen med att lära sig att kommunicera.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>118</td>
<td>Ingen kommer att misslyckas med att ta sin läkarexamen för att man har dåliga kommunikationsfärdigheter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>119</td>
<td>Att vidareutveckla min kommunikativa färdighet är lika betydelsefullt som att utveckla mina medicinska kunskaper.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>120</td>
<td>Att lära sig kommunikativa färdigheter har hjälpt, eller kommer att hjälpa mig att respektera patienter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>121</td>
<td>Jag har inte tid till att lära mig kommunikativa färdigheter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>122</td>
<td>Att lära sig kommunikativa färdigheter är intressant.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>123</td>
<td>Jag har inte lust att närvara vid kommunikationsträningslektioner.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>124</td>
<td>Att lära sig kommunikativa färdigheter har hjälpt, eller kommer att hjälpa min team-work förbättra.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>125</td>
<td>Att lära sig kommunicera har förbättrat min förståelse för samtal med patienter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>126</td>
<td>Undervisningen med avseende på kommunikativa färdigheter på avtjänster för att också komplicerad blir det.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>127</td>
<td>Att lära sig kommunikativa färdigheter är kul.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>128</td>
<td>Att lära sig kommunikativa färdigheter är för enkelt för mig.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>129</td>
<td>Att lära sig kommunikativa färdigheter har hjälpt, eller kommer att hjälpa mig att respektera mina kollegor.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>130</td>
<td>Det är svårt att få till en bra kommunikativa färdighet av oss självsamt som inte är läkare.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>131</td>
<td>Att lära sig kommunikativa färdigheter har hjälpt, eller kommer att hjälpa mig att respektera patientens rättigheter med avseende på konsultativ heter och professionell avgör.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>132</td>
<td>Undervisningen på kommunikativa färdigheter skulle ha ökat min förståelse för samtal med patienter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>133</td>
<td>När jag ansökte till läkarexamen tyckte jag att det var bra idé att man fick lära sig kommunikativa färdigheter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>134</td>
<td>Jag behöver inga goda kommunikativa färdigheter för att bli läkare.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>135</td>
<td>Jag tycker att det är svårt att medge att jag har några som helst problem med mina kommunikativa färdigheter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>136</td>
<td>Jag tycker att det är mycket användbart att lära sig kommunikativa färdigheter inom ramen för en läkarexamen.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>137</td>
<td>Snart bör jag börja lära mig kommunikativa färdigheter på egen hand, även om jag tycker att det är svårt.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>138</td>
<td>Att lära sig kommunikativa färdigheter är en allvarligt beror av utbildningen.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>139</td>
<td>Jag tycker att det är svårt att få tillräckligt med kommunikativa färdigheter på egen hand.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>140</td>
<td>Att lära sig kommunikativa färdigheter är viktigt eftersom det är de som пациerens och samarbetsförmågan på egen hand.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
<tr>
<td>141</td>
<td>Att lära sig kommunikativa färdigheter är något som är viktigt för psykologister och patienter.</td>
<td>Nej, Ja, Inte säkert</td>
</tr>
</tbody>
</table>
Lernen im Medizinstudium


Die Studie ist Teil eines Dissertationssprojektes, bei dem die Einstellungen von Medizinstudenten in Deutschland und Schweden erfasst werden. Dabei werden die Daten auf Gruppenniveau verglichen, d.h. es werden keine individuellen Daten ausgewertet und die Ergebnisse haben keine Auswirkungen auf Bonität, etc. Alle Angaben sind anonym und werden vertraulich behandelt. Die Teilnahme ist freiwillig und kann jederzeit ohne Angabe von Gründen abgebrochen werden.

Ich hoffe jedoch sehr auf reges Interesse, bedanke mich im Voraus für Ihre Mitarbeit und stehe für Fragen jederzeit zur Verfügung. Bei Interesse sende ich Ihnen gerne die Ergebnisse der Untersuchung zu.

Nun noch einige Hinweise zum Ausfüllen des Fragebogens:

1. Bitte beantworten Sie alle Fragen (gerne zügig)!

2. Da die Bögen eingescannt werden, ist es wichtig, dass Sie die Kästchen mittig ankreuzen:

Vielen Dank für Ihre Mitarbeit!

Antje Lumma
Diplom-Psychologin
Ph.D. Candidate
Department of Communication Studies (Tema K)
Linköping University
S-581 83 Linköping
Tel.: 0046-13-282336
E-mail: antjl@tema.liu.se
## Angaben zur Person

Zuerst möchte ich Sie bitten, einige Fragen zu Ihrer Person zu beantworten.

1. **Alter**

2. **Geschlecht**

3. Ich studiere Medizin im ... ten Semester.

4. Ich habe früher bereits Erfahrungen im Pflegebereich gemacht.

5. Ich habe im Rahmen meines Medizinstudiums an einem Kurs in Arzt-Patient-Kommunikation teilgenommen (nehme noch daran teil).

6. An meiner medizinischen Fakultät wird problemorientiertes Lernen (POL) als Unterrichtsmethode angewendet.

7. Das Angebot von problemorientiertem Lernen war ein Kriterium bei meiner Studienentscheidung.

8. Ich nehme an anderen Formen von Gruppenlernen im Rahmen meines Studiums teil.


<table>
<thead>
<tr>
<th>Alter</th>
<th>20</th>
<th>21-25</th>
<th>26-30</th>
<th>31-35</th>
<th>36-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
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</table>

<table>
<thead>
<tr>
<th>Geschlecht</th>
<th>weiblich</th>
<th>männlich</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>Teilnahme</th>
<th>Ja</th>
<th>Nein</th>
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<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gruppen- lernen mit Piktogramm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja, mehr Mal pro Woche</td>
</tr>
<tr>
<td>Ja, aber nur in seltenen Kursen</td>
</tr>
<tr>
<td>Nein, wenig als ein Mal pro Woche</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gruppen- lernen mit Piktogramm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja, mehr mal pro Woche</td>
</tr>
<tr>
<td>Nein, nicht mehr als ein Mal pro Woche</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gruppen- lernen mit Piktogramm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja, mehr mal pro Woche</td>
</tr>
<tr>
<td>Nein, nicht mehr als ein Mal pro Woche</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gruppen- lernen mit Piktogramm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ja, mehr mal pro Woche</td>
</tr>
<tr>
<td>Nein, nicht mehr als ein Mal pro Woche</td>
</tr>
</tbody>
</table>
**Wissen über Lernstrategien**


| 10  | Ich frage mich regelmäßig, ob ich meine Lernziele erreiche. |
| 11  | Ich versuche Strategien zu verwenden, die in der Vergangenheit funktioniert haben. |
| 12  | Ich kenne meine intellektuellen Stärken und Schwächen. |
| 13  | Ich überlege, was ich wirklich lernen muss, bevor ich mit einer Aufgabe beginne. |
| 14  | Ich setze mir spezielle Ziele, bevor ich mit einer Aufgabe beginne. |
| 15  | Ich weiß, welche Art von Information am wichtigsten zu lernen ist. |
| 16  | Ich richte meine Aufmerksamkeit bewusst auf wichtige Information. |
| 17  | Ich lasse am besten, wenn ich etwas über das Thema weiß. |
| 18  | Ich lerne regelmäßig von neuem, um wichtige Zusammenhänge zu verstehen. |
| 19  | Ich stelle mir selber Fragen zu dem Lerninhalt, bevor ich anfange. |
| 20  | Ich überlege mir unterschiedliche Wege, ein Problem zu lösen und entscheide mich für den besten. |
| 21  | Ich kann mich zum Lernen motivieren, wenn ich es muß. |
| 22  | Ich benutze meine intellektuellen Stärken, um meine Schwächen auszugleichen. |
| 23  | Ich konzentriere mich auf die Bedeutung und den Stellenwert neuer Information. |
| 24  | Ich kann gut beurteilen, wie gut ich etwas verstanden habe. |
| 26  | Nachdem ich ein Problem gelöst habe, frage ich mich, ob ich alle Möglichkeiten berücksichtigt habe. |
| 27  | Ich lerne mehr, wenn ich mich für ein Thema interessiere. |
| 28  | Ich stelle mir selber Fragen dazu, wie gut ich vorankomme, während ich etwas Neues lerne. |
| 29  | Wenn ich mit einer Aufgabe fertig bin, überlege ich mir, ob ich so viel gelernt habe wie ich konnte. |
| 30  | Ich bin mir bewusst, welche Strategien ich einsetze, wenn ich lerne. |
| 31  | Ich mache eine Pause und gehe neue Informationen noch einmal durch, wenn etwas unklar ist. |
| 32  | Ich stoppe und teste von neuem, wenn ich mich verwirrt fühle. |
Lerngewohnheiten

In den folgenden Aussagen geht es um Ihre Erfahrungen beim Lernen. Vor allem interessiert uns, was Sie damit verbinden, zusammen mit anderen Studenten oder alleine zu lernen. Wenn im Folgenden von Gruppen die Rede ist, sind damit Kleingruppen gemeint, in denen Diskussionen zwischen allen Teilnehmern möglich sind (z.B. Basgruppen beim problemorientierten Lernen, Seminargruppen, private Lerngruppen oder Ähnliches). Mit Lernen und Lerninhalten sind sowohl traditionelle medizinische Fächer (z.B. Anatomie) gemeint als auch problemorientierte Aufgaben. Gefragt ist hier Ihre generelle Einstellung zum Lernen alleine und in Gruppen, auch wenn Sie in manchen Gruppen lieber lernen als in anderen. Bitte beantworten Sie jede Frage zügig und ehrlich, indem Sie das entsprechende Feld ankreuzen. Bitte beachten Sie die unterschiedlichen Antwortalternativen!

33 Ich habe vor, während meines Studiums hauptsächlich alleine zu lernen.

34 Ich finde es ... Fakten und Details auswendig zu lernen.

35 Gemeinsam mit anderen Studenten zu lernen, ist für mich ...

36 Meiner Ansicht nach ist es ..., alleine zu lernen.

37 Meiner Ansicht nach ist es ..., alleine zu lernen.

38 Meiner Ansicht nach ist es ..., alleine zu lernen.

39 Meiner Ansicht nach ist es ..., alleine zu lernen.

40 Meiner Ansicht nach ist es ..., alleine zu lernen.

41 Wenn ich alleine lese, merke ich mir Fakten und Details gut.

42 Meine Kommilitonen finden es ... alleine zu lernen.

43 Wie gut kannst Du Deinen Lernfortschritt steuern, wenn Du zusammen mit anderen lernst?

44 Im Gespräch mit anderen Studenten werden mir Zusammenhänge besonders gut klar.

45 Ich habe vor, während meines Studiums hauptsächlich gemeinsam mit anderen Studenten zu lernen.

46 Wenn ich gemeinsam mit anderen lese, bekomme ich ein tiefes Verständnis für den Lerninhalt.

47 Für mich ist es ..., Zusammenhänge zu begreifen.

48 Meiner Ansicht nach ist es ..., in Gruppen zu lernen.

49 Meiner Ansicht nach ist es ..., in Gruppen zu lernen.

50 Meiner Ansicht nach ist es ..., in Gruppen zu lernen.
51 Meiner Ansicht nach ist es ..., in Gruppen zu lernen.

52 Meiner Ansicht nach ist es ..., in Gruppen zu lernen.

53 Ich habe Erfahrung mit Kleingruppenarbeit.

54 Wenn ich alleine lerne, kann ich gut steuern, wie effektiv ich bin.

55 Wenn ich gemeinsam mit anderen lerne, bin ich meistens motiviert.

56 Ich glaube, die meisten meiner Kommilitonen lernen ... alleine.

57 Mein derzeitiger Lehrer / Kursleiter / Schlägt vor, ich sollte gemeinsam mit anderen Studenten lernen.

58 Ich habe Erfahrung mit Lerngruppen zur Prüfungsvorbereitung.

59 Alleine zu lernen, fällt mir ...

60 Ich habe das Gefühl, dass von mir erwartet wird, alleine zu lernen.

61 Wenn ich alleine lerne, bekomme ich ein tiefes Verständnis für den Lerninhalt.

62 An meinem Institut gilt individuelles Lernen als die beste Lernmethode.

63 Ich finde es ..., ein tiefes Verständnis für Lerninhalte zu bekommen.

64 Wenn ich alleine lerne, bin ich meistens motiviert.

65 Ich habe das Gefühl, dass von mir erwartet wird, in Gruppen zu lernen.

66 Wie gut kannst Du Deinen Lernfortschritt steuern, wenn Du alleine lernst?

67 Wenn ich zusammen mit anderen lerne, fällt es mir leicht, Fakten auswendig lernen.

68 An meinem Institut gilt Gruppenlernen als die beste Lernmethode.

69 Ich habe Erfahrung mit problembasierten Lerngruppen.

70 Ich verstehe Zusammenhänge vor allem, wenn ich alleine lerne.

71 Für mich wäre das optimale Verhältnis zwischen individueller und Gruppenlernen ....
Gruppendiskussionen


<table>
<thead>
<tr>
<th>Nummer</th>
<th>Aussage</th>
<th>Leicht</th>
<th>Normal</th>
<th>Schwierig</th>
<th>Leicht</th>
<th>Normal</th>
<th>Schwierig</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>Anderen Gruppenmitgliedern Feedback bezüglich deren Leistung geben, finde ich...</td>
<td></td>
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<tr>
<td>73</td>
<td>Anderen etwas zu erklären, fällt mir...</td>
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<tr>
<td>74</td>
<td>Vom Wissen anderer Gruppenmitglieder zu profitieren ist für mich...</td>
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<tr>
<td>75</td>
<td>Feedback über meine Leistung von anderen entgegenzunehmen, fällt mir...</td>
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</tr>
<tr>
<td>76</td>
<td>In Gruppen aktiv zu sein, finde ich generell...</td>
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<tr>
<td>77</td>
<td>Einfluss auf den Verlauf von Gruppendiskussionen auszuüben, finde ich...</td>
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</tr>
<tr>
<td>78</td>
<td>Die Zeit während einer Gruppendiskussion effektiv zu nutzen, ist für mich...</td>
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<tr>
<td>79</td>
<td>Meine Sicht in Gruppendiskussionen verständlich zu machen, fällt mir...</td>
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<tr>
<td>80</td>
<td>Verstehen, wie sich andere in einer Diskussion fühlen, ist für mich...</td>
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</tr>
<tr>
<td>81</td>
<td>Andere von meiner Sichtweise zu überzeugen, finde ich...</td>
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</tr>
<tr>
<td>82</td>
<td>Maximalen Wissensgewinn aus Gruppendiskussionen zu ziehen, finde ich...</td>
<td></td>
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<tr>
<td>83</td>
<td>Kompromisse mit anderen in Diskussionen zu finden, fällt mir...</td>
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</tr>
<tr>
<td>84</td>
<td>Kontrolle über eine Gruppendiskussion zu haben, ist für mich...</td>
<td></td>
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<tr>
<td>85</td>
<td>Während Gruppendiskussionen für meinen eigenen Lernprozess Verantwortung zu übernehmen, finde ich...</td>
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<tr>
<td>86</td>
<td>Meine eigene Sichtweise zu einer Gruppendiskussion beizusteuern, fällt mir...</td>
<td></td>
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</tr>
<tr>
<td>87</td>
<td>Zwischen den Zielen und Bedürfnissen der Gruppe und meinen eigener zu unterscheiden, ist für mich...</td>
<td></td>
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</tr>
<tr>
<td>88</td>
<td>mich für Gruppendiskussionen zu motivieren, fällt mir...</td>
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</tr>
<tr>
<td>89</td>
<td>Gruppendiskussionen zu organisieren, fällt mir...</td>
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</tbody>
</table>

Aufgaben der Medizin

Unterstehend finden Sie eine Liste mit Aufgaben oder Zielen, die Ärzte oft haben, wenn sie Patienten behandeln. Ihre Aufgabe ist es, einzustufen, wie wichtig diese für Sie sind. Der Wert jeder Aufgabe mag von Patient zu Patient variieren, und Ihnen fällt es eventuell schwer, einige wichtiger als andere einzustufen. Dennoch möchte ich Sie bitten, die Liste durchzulesen und Sie sich selber vorzustellen als Arzt während eines typischen akuten Hausarztbesuchs. Dann versuchen Sie bitte, so gut es geht, jede Aufgabe bezüglich der Wichtigkeit einzuordnen, die Sie ihr zuschreiben würden. Bitte schreiben Sie eine 1 vor die Aussage, die Sie als am wichtigsten empfinden, eine 2 vor die Zweitwichtigste, und so weiter, bis Sie alle acht durchgegangen sind. Obwohl Sie vielleicht finden, dass zwei Aussagen von gleicher Wichtigkeit sind, verwenden Sie bitte keine gleichen Zahlen.

90   Eine gewissenhafte körperliche Untersuchung durchführen

91   Eine menschliche Verbindung zum Patienten herstellen

92   Die Ziele des Patienten für diesen Besuch herausfinden

93   So effektiv wie möglich Daten vom Patienten sammeln

94   Verstehen, wie der Patient sein Problem auffasst

95   Einensoliden Behandlungsplan aufstellen

96   Feststellen, ob weitere Tests notwendig sind

97   Den Patienten als aktiven Partner einbeziehen
Arzt-Patient-Orientierung

Die untenstehenden Aussagen beziehen sich auf Einstellungen, welche Leute gegenüber Ärzten und Ärztinnen, gegenüber Patienten und Patientinnen haben. Bitte lesen Sie jede Aussage durch und kreuzen Sie an, wie sehr Sie damit einverstanden sind.

96 Der Arzt/die Ärztin ist diejenige Person, welche entscheiden soll, worüber während des Arztbesuchs gesprochen wird.

99 Obwohl das Gesundheitswesen heutzutage weniger persönlich ist, ist dies ein kleiner Preis, den wir für den medizinischen Fortschritt bezahlen.

100 Der wichtigste Teil beim Routine-Arztbesuch ist die körperliche Untersuchung.

101 Für Patienten/Patientinnen ist es meist am besten, wenn sie keine umfassende Aufklärung über ihre Erkrankung erhalten.

102 Patienten und Patientinnen sollten sich auf das Wissen ihres Arztes/der Ärztin verlassen und nicht selber versuchen, etwas über ihre Erkrankung herauszufinden.

103 Wenn Arzte/Arztinnen viele Fragen zum Hintergrund des Patienten/der Patientin stellen, möchte ich das sehr in den persönlichen Angelegenheiten ein.

104 Wenn Ärzte/Arztinnen wirklich kompetent in der Diagnose und im Behandeln sind, ist es nicht so wichtig, wie gut ihre Beziehung zum Patienten/zu der Patientin ist.

105 Viele Patienten/Patientinnen fühlen sich, Fragen zu stellen, auch wenn sie nichts Neues mehr erfahren.

106 Patienten/Patientinnen sollten partnerschaftlich behandelt werden, gleichzeitig in Macht und Status.

107 Patienten/Patientinnen sollen lieber eine Bestätigung ihrer Gesundheitszustände als Information über ihre Gesundheit.

108 Wenn ein Arzt/Ärztin vorwiegend Offenheit und Wärme zeigt, dann wird dieser Arzt/ diese Ärztin nicht viel Erfolg haben.

109 Wenn Patienten/Patientinnen anderer Meinung sind als ihr Arzt/ihre Ärztin, ist das ein Zeichen dafür, dass der Arzt/die Ärztin den Respekt und das Vertrauen des Patienten/der Patientin nicht hat.

110 Ein Behandlungsplan kann nicht erfolgreich sein, wenn er im Widerspruch zum Lebensstil oder den Werten des Patienten/der Patientin steht.

111 Die meisten Patienten/Patientinnen wollen so rasch wie möglich wieder aus der Arztpraxis heraus.

112 Der Patient/ die Patientin muss sich immer bewusst sein, dass der Arzt/ die Ärztin die Entscheidungen trifft.

113 Es ist nicht so wichtig, die Kultur und den Hintergrund eines Patienten/ einer Patientin zu kennen, um seine/ ihre Krankheit zu behandeln.

114 Humor ist ein wichtiger Bestandteil in der ärztlichen Behandlung.

115 Wenn Patienten/Patientinnen selber medizinische Informationen nachschlagen, verwirrt sie das in der Regel nur, als dass es ihnen hilft.
Erlernen von Arzt-Patient-Kommunikation

Die folgenden Aussagen geben Meinungen wider, die man zum Erlernen und Trainieren von ärztlichen Kommunikationsfähigkeiten (Fertigkeiten) haben kann. Hier ist Ihre persönliche Ansicht gefragt. Bitte kreuzen Sie hinter jeder Aussage das für Sie zutreffende Feld an.

116 Um ein guter Arzt zu sein, muss ich gute Kommunikationsfähigkeiten besitzen.
117 Ich sehe keinen Sinn darin, Kommunikationsfähigkeiten zu lernen.
118 Niemand fällt bei einer medizinischen Abschlussprüfung wegen schlechter Kommunikationsfähigkeiten durch.
119 Es ist genauso wichtig, meine Kommunikationsfähigkeiten weiterzuentwickeln wie mein medizinisches Wissen zu erweitern.
120 Dass ich Kommunikationsfähigkeiten lerne, hat meinen Patienten geholfen (wird ihnen in Zukunft helfen).
121 Ich habe keine Zeit, Kommunikationsfähigkeiten zu lernen.
122 Es ist interessant, Kommunikationsfähigkeiten zu lernen.
123 Ich habe keine Lust, zu den Kommunikationstrainingsstunden zu erscheinen.
124 Das Erlernen von Kommunikationsfähigkeiten hat mir geholfen (wird mir helfen), meine Teamwork-Fähigkeiten zu verbessern.
125 Das Erlernen von Kommunikationsfähigkeiten hat meine Fähigkeit, mit Patienten zu reden, verbessert.
126 Der Unterricht von Kommunikationsfähigkeiten erklärt erst das Offensichtliche und verkompliziert es dann.
127 Kommunikationsfähigkeiten lernen macht Spaß.
128 Kommunikationsfähigkeiten zu lernen ist mir zu einfach.
129 Das Erlernen von Kommunikationsfähigkeiten hat mir geholfen (wird mir auch in Zukunft helfen), meine Kollegen zu respektieren.
130 Ich finde es schwierig, Aussagen zu Kommunikationsfähigkeiten zu trauen, die mir von nicht-ärztlichen Lehrern gegeben werden.
131 Das Erlernen von Kommunikationsfähigkeiten hat mir geholfen (wird mir helfen), die Rechte der Patienten bezüglich Schweigepflicht und Einverständniserklärung zu wahren.
132 Der Unterricht von Kommunikationsfähigkeiten hätte ein besseres Image, wenn er mehr wie eine wissenschaftliche Disziplin klingen würde.
133 Als ich mich für das Medizinstudium beworben habe, fand ich es eine gute Idee, Kommunikationsfähigkeiten zu lernen.
134 Ich brauche keine guten Kommunikationsfähigkeiten, um ein guter Arzt zu sein.
135 Ich finde es schwierig, zuzugeben, dass ich Probleme mit meinen Kommunikationsfähigkeiten habe.
136 Ich glaube, es ist wirklich sinnvoll, Kommunikationsfähigkeiten im Medizinstudium zu lernen.
137 Mich wird eher meine Fähigkeit, Patienten zu beruhigen, durch das Medizinstudium bringen, als meine Fähigkeit zu Kommunikieren.
138 Das Lernen von Kommunikationsfähigkeiten passt gut ins Medizinstudium.
139 Ich finde es schwierig, das Lernen von Kommunikationsfähigkeiten ernst zu nehmen.
140 Es ist wichtig, Kommunikationsfähigkeiten zu lernen, denn die Fähigkeit zu Kommunizieren braucht man das ganze Leben.
141 Das Lernen von Kommunikationsfähigkeiten sollte Psychologiestudenten überlassen werden - nicht Medizinstudenten.