

## Interprofessional Workplace Learning in Primary Care: Students from Different Health Professions Work in Teams in Real-Life Settings

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Interprofessional education may be defined as an occasion when two or more professions learn with, from, and about each other in order to improve collaboration and quality of care. We studied the self-reported experiences from Norwegian health care students participating in interprofessional workplace learning in primary care. We discuss the results particularly in light of self-determination theory. During 2012, 24 students from eight different health educations at the University of Bergen and Bergen University College participated in interprofessional learning in primary care organized by the Center for Inter-professional Workplace Learning in Primary Care, Bergen. The students had their training in nursing homes and public health clinics, and they wrote reflective notes describing their learning experiences. The material was analyzed by systematic text condensation. The qualitative data analyses revealed five major areas of learning experiences from workplace practice: learning in an interprofessional setting, teamwork, relationships among the teamwork members, consequences for the patient, and consequences for the future. The results indicate that there is a high degree of learning potential in interprofessional workplace activity in primary care. This kind of learning strategy is an important supplement to traditional training within all health professions.

As a large degree of the health services is team-based, health care students should be trained in interprofessional teamwork. Interprofessional education may be defined as occasions when two or more professions learn with, from, and about each other to improve collaboration and the quality of care (Barr, 2002). As part of a World Health Organization initiative, six major learning outcomes for interprofessional education have been defined: (a) teamwork, (b) roles and responsibilities, (c) communication, (d) learning and reflection, (e) patient related factors, and (f) ethics and attitudes (Thistlethwaite & Moran, 2010).

Experiences from the UK over a number of years show how interprofessional education motivates and prepares future health professionals for team working (Anderson & Lennox, 2009). Studies indicate that an interprofessional learning environment will strengthen the students own professional roles, in addition to developing positive attitudes between the professions for the benefit of the patients (Jacobsen, Fink, Marcussen, Larsen, & Hansen, 2009; Jacobsen & Lindqvist, 2009). Pollard, Miers, and Rickaby (2012) found that interprofessional learning prepared students to work effectively as qualified professionals with colleagues from other disciplines, which had a positive impact on service delivery. There is, however, a broad range of structural barriers to establishment of interprofessional learning at the universities and university colleges (Gilbert, 2005). As a result, interprofessional learning is still

underdeveloped in many health education schools (Aase, Aase, & Dieckmann, 2013; Greer, Clay, Blue, Evans, & Garr, 2014).

One may view the competency within interprofessionalism as the ability of health workers to work together within the health service system. The students will, in the context of the workplace, learn interprofessional teambuilding skills and co-working by involvement (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011). Collaborative practice may lead to development of responsibility, accountability, and autonomy.

When students become active legitimate participants in practice, their motivation and orientation towards self-determination for learning becomes essential. In self-determination theory (SDT), Ryan and Deci (2000) distinguish between intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to "doing something because it is inherently interesting or enjoyable," whereas extrinsic motivation refers to "doing something because it leads to a separable outcome" (Ryan & Deci, 2000, p. 55). Such a distinction is quite common in the literature and has previously been made by a number of scholars. As pointed out by Ryan and Deci, external motivation has been characterized as a rather pale and impoverished form of motivation. They go on to propose that there are varied types of external motivation.

This is elaborated further in a sub theory to SDT referred to as organismic integration theory (OIT). According to OIT, external motivation may vary from external regulation, which is the least autonomous form of

external motivation, via introjection and identification to integration. Integration is a form of external motivation in which the individual has assimilated the reasons for action and integrated it into his/her own self. It is, nevertheless, a case of external motivation as a particular behavior is done for its “presumed instrumental value with respect to some outcome that is separate from the behaviour, even though it is volitional and valued by the self” (Ryan & Deci, 2000, p. 62).

SDT posits that autonomy (the feeling of being in control of one’s own behavior), competence (feeling effective and that one is able to perform particular tasks), and relatedness (feeling understood by and cared for by others) are important in order for students to stay internally motivated. As shown by Miquelon, Vallerand, Grouzet and Cardinal (2005), controlling feedback, which involves the perception that one has to meet someone else’s expectations, leads to reduced levels of intrinsic motivation. Ng et al. (2012) show that an autonomous supportive environment enhances intrinsic motivation. According to Kyndt, Dochy, Struyven, and Cascallar (2011), autonomous motivation is positively related to a deep approach to learning.

Liu, Wang, Tan, Koh, and Ee (2009) show that students described as high self-determined and low controlled were more adaptive, with better perceived skills, within a project-based learning scheme. Ciani, Sheldon, Hilpert, and Easter (2010) found, in accordance with SDT, that teacher autonomy support provides a buffer against a decline in students’ mastery approach, whereas Thompson and Gaudreau (2008) found, in a sample of 299 undergraduate students, that task-oriented coping was associated with an increase in self-determined motivation. Trigwell, Ellis, and Han (2012) show that there is a relationship between the way students emotionally experience their course and their learning approach: students who experience positive emotions (e.g. hope and pride) adopt a deep approach to learning, whereas students who experience negative emotions (e.g. anger, boredom) adopt a surface approach. Skøien, Vågstøl, and Raaheim (2009) describe how students emphasize the importance of fellow students when describing learning situations in practice: “The presence of fellow students allows the students to express their feelings about clinical experiences, help each other, share responsibility, and have someone to call upon when uncertain” (p. 276).

Patrick and Williams (2009) discuss the applicability of SDT to medical training, and they claim that medical learners who have had their psychological needs supported may be more likely to facilitate their patients’ psychological needs satisfactorily. The same authors go on to describe how autonomy supportive and competence supportive behaviors from medical practitioners’ may have positive effects on patients’ health behaviors (Patrick & Williams, 2012). As shown

by Williams and Deci (1996), medical practitioners’ autonomous and competence supportive behavior and interest in interviewing comes from training and is best fostered by instructors who demonstrate high need support. Lambert et al. (2013) discuss the importance of belongingness (relatedness), and they show that priming belongingness in a group of subjects increases meaningfulness.

Over the last years, there has been a change of teaching practice from the traditional “transfer of knowledge” to a perspective where teaching is understood and performed as “participation action,” corresponding to the “participation metaphor” in research (Sfard, 1998). Learning situations improve when students experience autonomy, competence, and relatedness (Ryan & Deci, 2000), as well as when assessment aligns with teaching – so-called constructive alignment (Biggs, 1999). There has been an increasing awareness that students learn better when they receive appropriate feedback (Hattie & Timperly, 2007) and when training takes place within communities of practice (Kaufman & Mann, 2012; Wenger, 1998).

Since 2012, the University of Bergen and Bergen University College in Norway have collaborated in interprofessional training for health care students during their workplace learning in primary care. This is coordinated by the Center for Interprofessional Workplace Learning in Primary Care. The students represent a variety of health professions, including nutrition, music therapy, pharmacy, midwifery, dental hygiene, odontology, psychology, occupational therapy, medicine, public health nursing and physiotherapy.

The learning areas for this interprofessional training have mainly been nursing homes but also antenatal care clinics, youth health clinics, and physiotherapy treatment centers. Initially, the group of students meet for an introduction and to plan a specific patient contact. At the nursing homes, the student groups interview the patients and examine them, and afterwards, they cooperate in writing an individual treatment plan. As the student teams are interprofessional, these plans include a broad spectrum of approaches, thus ensuring the quality of care for the patients. Finally, the patient plans are discussed with the teachers and staff at the institution, thus creating a learning environment for everybody involved.

The aim of this study is to describe and discuss the self-reported experience from Norwegian health care students participating in interprofessional workplace learning in primary care. In accordance with SDT, we assume that students from different professional backgrounds working together in autonomy and in competent supportive teams with patients in real life settings will report higher autonomous self-regulation as well as a sense of belonging.

## Methods

Twenty-four students from health educations at the University of Bergen and Bergen University College participated in interprofessional learning in primary care organized by the Center for Interprofessional Workplace Learning in Primary Care during 2012. The students from medicine (7), pharmacy (6), midwifery (3), odontology (2), dental hygiene (2), physiotherapy (2), public health nursing (1), and nutrition (1) were offered the possibility to participate in the project and volunteered. Groups of four to five students from different educations had their training experiences in nursing homes or public health clinics (health services for teenagers or maternity services). The students were aged 22 to 41 years; six were male and 18 were female. All students were instructed to write individual reflective notes (400-500 words) on three questions:

- What did I learn about learning (in general) from participating in this project and working in this way?
- What did I learn about my own learning, which can be useful for me in the future?
- What did I learn about learning in a team from participating in this project and working in this way?

Individual reflective notes from the students were written once, and completed within one week after the training sessions. Thereafter, the notes were sent by e-mail to the authors, who did the analysis by systematic text condensation (Malterud, 2012) in the following four steps:

1. Getting an overall impression by reading through the reflective notes, identifying themes
2. Identifying meaning units, grouping and coding them
3. Condensation from code to meaning, abstracting the individual meaning units to meaningful wholes
4. Synthesizing – from condensation to descriptions of the participants' views

Three of the authors analyzed parts of the material independently and discussed for consensus during the analysis. The resulting data were finally merged, forming the results presented. The reflective notes were written in Norwegian, and the translation into English took place between steps three and four.

## Results

The qualitative analysis revealed several experiences among the health care students

participating in interprofessional workplace learning in primary care. Five themes emerged during the analysis: (a) learning in an interprofessional setting, (b) teamwork, (c) relation between team members, (d) consequences for the patient, (e) and consequences for the future. The students emphasised the usefulness of learning in an interprofessional setting and appreciated the advantages of working in a team. Several students described the relation between team members representing different professional backgrounds. They also acknowledged the positive consequences of this kind of learning, both for the patients and for their own professional future. These findings with corresponding quotations are elaborated below.

### Learning in an Interprofessional Setting

Many students expressed that it was very useful to see the patient from different perspectives and to see the patient as a whole. Working alone they had found it easy to get narrow-minded in their view of the patient, but in the interprofessional group, they experienced how other students thought and worked, what they looked for when examining the patient, and how they concluded. This gave them a broader perspective. A dental hygiene student stated:

I learnt to see the whole patient and not just the mouth. It is easy to focus on the mouth only and on what I can do about it as a dental hygienist. During this collaborative work, I understood that patients in a nursing home have a long history and many other challenges and that they sometimes need to explain things to me before I can decide what is best to do.

Simultaneously, the students had a feeling of security—if they missed something, another person in the group might see it and follow up on it for the best interest of the patient. Some students found it useful to read the notes in advance to understand the background, but also considered it essential to form their own opinion about the patient during the examination. One of them expressed it in this way: “All of us have something to offer, and we need to make as good use of everyone’s knowledge as possible.”

Some students found that both their own and other professions’ roles in the health care system became more clear. They became more conscious about their own contribution, and more open to other interpretations of the cases that were presented. One advantage was that the students found out whom to refer patients to in the future and who to ask for advice. They realized that there was some overlap between the different professions. For instance, both medical and pharmacist students were concerned about medicines

but with different foci. One of them wrote: “To participate in other students’ examination of the patient and reflections afterwards gave definite learning in each case, but it also gave insight in other methods and foci than your own.”

Some students also stated that they had a unique knowledge and found out how to use it. Prior to the interprofessional workplace practice, some students had been concerned about whether they would be taken seriously. However, they all noticed that they had an important role in the group and that everyone respected the competences of each other. The students became more secure in their roles and wanted to show the competences of their profession in the best way, while learning as much as possible from the others. A common thought was that being challenged gave a better learning outcome than the ordinary teaching and practice. “Being challenged in a new situation working with other health professionals resulted in an increased learning experience,” said one individual.

Some students felt more alert because the other students observed their examination of the patient and listened to their explanation of what they did and why they did it. Many found that a practical approach was better for learning and that it was harder to forget things they did than things they were told. In addition, some experienced that they found out more about how they collaborated with other health care professionals and with patients. One student mentioned that working this way meant you had to value curiosity – both your own and others. Some of the students reported very specific learning experiences related to medicine use, side effects, interactions, and contraindications—in addition to the clinical value of various diagnostic methods and measurements. One of them commented, “I have learned a lot by observing and discussing with pharmacy students how different drugs may affect patients...this knowledge and experience will be useful in my future work.”

### **Teamwork**

Data revealed that several students experienced that making a work plan was important, as was the need to clearly define each member’s work role so that everyone came well prepared. This led the team to be more efficient and prevented the patient from getting bored. A participant said, “When working in a team, it is very important to have a good structure in the consultation, otherwise the patient will be bored.” As explained by one of the students, everyone had their natural place in the meeting with the patient, and she wanted to make an effort and contribute to the team. She had learned that working in a team meant that everything could not be exactly the way she wanted. She needed to be solution-oriented and willing to

cooperate, and she admitted, “Learning in teams is practicing organization and resource benefits, as well as finding each individual’s strengths.”

Several students underlined two purposes related to the teamwork: mutual reports and cooperation with a patient. Teamwork also involved discussions aimed at reaching a mutual solution. One participant described his experience like this: “We are getting better at benefiting from others and cooperating with others to be able to reach a common solution.” Several students reported that working towards a common goal was both meaningful and fun.

### **Relationships Among Team Members**

Several students experienced that the other team members were interested in their contributions and that they were included in the group. One noted, “The other students were very open and easy to talk to. You felt very included and seen in the group.” As team members, they carried expectations both to themselves and to others in terms of being open to seeing problems from new perspectives and not to compete but to cooperate to get things done. One student expressed these mixed expectations like this, “It was both exiting and challenging working in a team.” Quite a few students pointed out that it was interesting to be presented to different academic foci and that this affected how they worked themselves. Several students mentioned that they met on equal terms during the work in teams, which is different from more formal settings where roles are more explicit. “We also broke some barriers by meeting on equal terms in a student situation, rather than a more formal setting with defined professional roles,” said a student.

Many students felt that their contribution was appreciated by other team members as well as by employees at the institution. They also expressed that they learned a lot from each other and that they needed to hold back to let others in the group contribute. They experienced the importance of listening to others, viewing them as constructive contributors, and being attentive and patient—knowing when to talk and when to listen. One student commented, “In addition, I felt that I was able to show the knowledge I inhabit and that the others in the team appreciated my contribution.” Some said it was important for everyone in the team to share a common language. This meant that they had to adapt the language to the people involved. It was useful to be able to explain what they thought and the terminology they used. A student explained, “It’s important to learn how to adjust the language to the colleagues around you, and this is something you become aware of when working in interprofessional groups.”

### Consequences for the Patient

A number of students described how professional background could influence the communication, both with the patient and among the students in the interdisciplinary learning setting. Some students described the large variations regarding themes they wanted to ask the patient about. They also expressed how responses from the patient were interpreted differently in the student group. As one student explained, “When discussing the patients after the consultations, it was interesting to note how differently we had understood the information from the patients.” The students regarded these variations as a benefit for the patient, as an interprofessional approach would cover different perspectives and increase the possibility for the patient to understand and to be understood. One student noted this kind of team-cooperation serves to improve patient safety. Another student stated, “Your patient might get even better help from a colleague with another perspective than yourself.” Some of the students expressed that an interdisciplinary setting facilitated a more holistic approach in the patient consultations. “Everyone in the group wanted to contribute with their own knowledge, and learn from the others, in order to obtain a holistic approach for the patient when writing the individual treatment plan,” stated another participant. The students became more conscious, not only about focusing on health issues and diseases but also on other important factors related to patients wellbeing. Asking other health care providers for advice and cooperating in an interprofessional team was, by several students, pointed out as important factors for improved quality of patient care. One of the students explained her experience like this: “I learned a lot about how different health professions may contribute with helping the patients.”

### Consequences for the Future

Several students expressed that undergraduate interprofessional training was inspiring and important to building good relations, as one of them stated, “I will remember all the good ideas from the other group members.” They thought that this kind of training might reduce barriers for future cooperation between different health care providers. “In my future work as public health nurse, I will really try to cooperate with other health professions,” said a student. Others stated that a focus on interdisciplinary teamwork early on at the student level was very relevant and enabled a better understanding of different perspectives related to health care. The students felt they had become motivated to cooperate with other health professionals in a future work setting. One student expressed the motivation like this, “Cooperation and joint problem

solving in this project was a source of inspiration for my future work.”

Some of the students emphasized how interdisciplinary training gave useful knowledge about the competences of other health care providers. They had become more conscious regarding the professional expertise of others and the importance of team cooperation to ensure the best use of resources. “In addition, we learned about the strengths of the different professional fields, making it easier to cooperate in the future,” noted a participant. One student noted how other professionals could help her to do a better job within her own field. Another student described how this kind of training could improve his skills in communicating with other health professionals in the future.

### Discussion

The qualitative data analyses of the reflective notes from the 24 participating health care students revealed five areas of learning experiences from workplace practice: (a) learning in an interprofessional setting, (b) teamwork, (c) relationships among the team members, (d) consequences for the patient, and (e) consequences for the future. According to SDT, an individual needs to perceive that she or he is efficacious in carrying out particular behaviours in order to achieve particular outcomes—that she or he has the necessary competence. Support for competence and autonomy facilitate internalization and are pre-requisites for self-determination. Autonomy, relatedness, and perceived competence are, in other words, important for a regulation to stay integrated rather than just introjected (focused on approval from others). The same feelings of autonomy, relatedness, and competence are important for actions, which initially were internally motivated to carry on having the same value.

We did not include any scales measuring students’ motivation or coping style. However, our analyses of the reflective notes show that working in interprofessional teams does indeed have a positive effect on self-regulation and perceived competence. The students reported that they became more conscious of their own role and more open to other interpretations of a particular case. They felt respected by their team members, and this had a positive effect on their feeling of competence. Not only did they feel more confident as individuals in performing their part of the job, they also felt that they were respected as members of their profession, as medical doctors, as nurses, dentists, physiotherapist, and so on. Such an observation is interesting in so far as it normally takes some time from graduation until one’s image of oneself as a professional is shaped. This may be taken to indicate that the individual team members experienced

relatedness within the team and also relatedness to their own specific profession.

Working in teams, the students had to listen to and take into consideration suggestions made by other team members, much the same way they need to do after graduation. The way the students naturally co-operated in treating the patients, avoiding the kind of competition often found in classrooms, was proof that they did in fact respect one another as professionals. The students reported interest in other team members' contributions, which shows a willingness to learn from each other. The fact that one had to work with representatives from other health professions added to one's own understanding and created a positive learning environment. They did not experience one another as competitors but as colleagues who participated on equal terms to the benefit of the patients. Working in a competence supportive team had a positive effect on the students' perceived competence and self-worth, creating good conditions for what Seifert (2004) describes as mastery pattern.

The collaboration between the University of Bergen and Bergen University College has introduced new aspects of workplace learning in primary care, emphasizing the importance of interprofessional training for health care students. This is in accordance with the background for The Coordination Reform of 2012, which was implemented by the Norwegian Ministry of Health and Care Services in order to encourage a stronger degree of cooperation across health care providers, and thereby to give proper treatment at the right place and right time (Norwegian Ministry of Health and Care Services, 2008).

As a substantial part of the workload in today's health services is team-based, the strategy of an interprofessional approach in treatment of patients should be introduced already at the student level. The Center for Interprofessional Workplace Learning in Primary Care in Bergen aims to implement interprofessional training as a permanent part of the curriculums of several health care educations. This might be an important step to meet the requirements of The Coordination Reform.

The clinical workplaces may be regarded as training laboratories. The learning process is in accordance with Morris and Blaney's (2010) concepts regarding workplace learning. It takes place as social practices of competent individuals where students are legitimate partners within the context of the workplace as they cooperate with patients and staff. The learning is dependent on the use of language. In this way, the interprofessional workplace may be regarded as a student-centered approach to teaching (Sadler, 2012).

A student-centered concept of teaching encourages students to adopt a deep approach to learning (Trigwell, Prosser, & Waterhouse, 1999). This workplace learning

model combines active teaching, peer assessment, and formative assessment within teams of interprofessional students. It may have positive impact on a variety of learning skills, such as teamwork competence, communicative competence, and the ability to assess and develop one's own professionalism. Also, the students gain hands-on experience from clinical teamwork in real life situations and may share knowledge with professionals to the benefit of the patients.

There are, however, logistical challenges with this kind of training. Students from the participating health care areas need to have their practice workplace training at the same time and in the same geographical area. Further, clinical instructors from the different disciplines in primary care need to be motivated regarding the importance of interprofessional collaboration in the learning setting. Over the last years, there seems to be an increased interest in the teaching institutions for including this kind of training for health care students. As the initial experiences have been promising, there might be a willingness to provide the needed resources for a further strengthening of interprofessional training in primary health care.

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