**Article title:** Students’ Reflections on Shadowing Interprofessional Teamwork: a Norwegian case study

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Abstract
This paper reports health students’ reflections on interprofessional teamwork during brief exposures to real life experiences in hospitals or home based rehabilitation service. Each of ten interprofessional groups, comprising three students, followed a rehabilitation team for a day. The composition of each student group correlated with the rehabilitation team. Data were collected from interviews with the student groups and subjected to a thematic analysis. Four main themes were identified which for the students seemed to affect collaboration: sharing knowledge; team setting and position within the organisation; patient centred focus; and challenges in crossing professional borders when performing tasks. Each of these themes is presented and discussed in relation to the educational literature. In conclusion, the data suggest that a well organized, one day observation-based learning experience helped to motivate students and helped to enable them to relate theory and practice.

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Introduction

This article investigates students’ reflections on interprofessional collaboration. The study is based on their workplace observations, here named “shadowing”. The article first explains “shadowing” as a learning method. The method is then presented, including the samples of students and workplaces. Following up there is a presentation of the analysis of the interviews based on a systematic text analysis inspired by Malterud (2003). The results which illuminate the students’ reflection are discussed and illustrated by quotations from the students.

Reflection during field studies helps to learn about interprofessional collaboration and to discover user needs (Tiller, 1999 & 2004). It is more than description (Eraut, 2004); it takes into account context, actors, their roles and perspectives (Stew, 2005; Craddock, O’Halloran, Borthwick & McPherson, 2006; Hammick, Freeth, Koppel, Reeves & Barr 2007; Morison & Jenkins, 2007). It enhances understanding of theory and its application in the collaborative context (Guile & Young, 2002).

Students perceive interaction in real life situations as positive learning (Lidskog Lofmark & Ahlstrom, 2008; Nisbet, Hendry, Rolls & Field, 2008; Selle, Salamon, Boarman & Sauer, 2008). Positive attitudes towards fellow students from other professions were confirmed (Lidskog et al., 2008) as they learnt to respect each other and develop insight into their perspectives. They did, however, become less certain regarding their own roles, competence and identity although Nisbet et al. (2008) found that such understanding was enhanced. Selle et al. (2008) noted that students who observed staff meetings before observing practice found this helped to gain understanding of models of cooperation and became aware of the importance of different perspectives on the needs of the patients where all the pieces of the
jigsaw puzzle had to be in place. Shared terminology, active listening and the ability to compromise seemed to be vital for the students.

Observation, as a learning method, comprises three steps: preparation before events; active observation; and debriefing and reflecting afterwards (Boud, Walker & Keogh, 1985). It is more than being ‘flies on the wall’.

Our growing familiarity with this literature was an incentive to try a reflected and observational model in everyday working life where students would ’shadow’ teams throughout the working day.

**Shadowing as a learning method**

During shadowing students can observe, first hand, the work environment, employment and occupational skills\(^1\), gain an understanding of the job role of the people in the team whom are shadowing; and deepen their understanding of their own and other organizations within the workplace.\(^2\) Students’ understanding of the application of concepts and motivation for interprofessional collaboration seems to be enhanced (Lindqvist, 2005).

Competence for collaboration must be developed through interaction with others in settings where it is required. As an observer, the student is able to evaluate the quality of practice as well as to describe concrete actions and personal reactions to various situations. Wright and Lindqvist (2008) found that even half a day shadowing practice was perceived as positive by the students, reinforced by discussion with practitioners to further students’ reflections and

\(^1\) http://uvu.edu/professional/students/Job%20Shadowing.html
\(^2\) http://www.bbk.ac.uk/sd/services/workshadowing
understanding with reference to their learning goals (Greeno, Collins & Resnick, 1996; Bleakley, 2006)

The learning situation has to be organised to enable students to elaborate experiences from their observation studies avoiding ‘practice romanticism’, i.e. one-sided subjectivity (Aadland, 1997). Without purposeful planning students easily become overwhelmed by their impressions (Krajic Kachur, 2003; Smith, 1997).

**Background**

The rehabilitation units in hospitals and home based care services were chosen according to their reputation for high level competence and their professional composition, i.e. nurses, occupational therapists and physiotherapists typical in Norway. All the units were accustomed to supervising students. The project aroused their interest as an opportunity to reflect on their own practice.

Patients were selected by the team leaders based on their complexity and capacity to cope with observers. They were informed about the purpose of the project and asked and whether they were willing to be observed. All accepted. Findings have been presented in a form which does not contain any traceable links back to patients, practitioners or students. Ethical considerations did not therefore arise.

The students shadowed interprofessional teamwork with and without patients present as treatment took place as well as during staff meetings. They discussed their observations with each other as well as with the team.
Methods

The participants

All second year physiotherapy, occupational therapy and nursing students during 2007-2008 at University College Oslo were given the opportunity to participate in the project. Each year five students from each programme who responded first to this offer were accepted. They were divided further into five groups with one participant from each programme. In total 30 students in ten interprofessional groups from two cohorts participated in the project.

The data collection

The students were encouraged beforehand to be ready to identify instances of functional teamwork, describe characteristics of the interaction which for them were signs of professional behaviour and identify situations which illustrated how a patient centred focus can work. They were advised that they would be interviewed after the observation. One of the authors interviewed each of the ten groups three weeks after the students had finished their observation days. All together ten group interviews were conducted each lasting from 40-50 minutes. The students were all asked the same opening question about what they found most impressive in their observations. The answers they gave influenced the rest of the conversations. Interviews were recorded and transcribed before analysis.

The informants have given a voluntary informed consent to let the data collected be used for publishing. The article will contain only non-identifiable person-specific information. The representative on privacy protection at OUC has approved the study, assuring that an ethics committee approval was not needed.

The data analysis
A qualitative study based on group interviews with the students was conducted. All group interviews were tape recorded and transcribed into a word processing program. The analysis of the data was performed by one of the authors (MF) following Malterud’s systematic text condensation method (Malterud, 2003). Since MF was the project leader the analysis has been validated by the other author (TH) who was not at that time involved in the project.

Analysis proceeded through the following stages. First, the transcripts were initially read in order to gain a contextualized impression of the students’ discussions, bracketing preconceptions and preliminary themes were chosen. Second, parts that were relevant to the characteristics of interprofessional teamwork were identified as meaning units, expressing the students’ own meaning of the experience. Finally, the meaning in each coded group was then summarized to help generate generalized descriptions of the data.

Findings and Discussion

We categorised students’ reflections into four main themes: sharing knowledge; the team within the organisation; the patient centred focus in interprofessional care; and crossing professional borders. These themes seemed contradictory. On the one hand, they emphasised the importance of sharing knowledge in teams and the seemingly strong position of the teams in their organisations which made it possible to maintain the focus on user participation. On the other hand, they were uneasy with the thought of others taking over tasks they defined as belonging to their own professional area. Each of the themes is presented and discussed in turn.

Sharing knowledge

The students readily identified with each of the professions observed and were enthusiastic about functional interaction between them (Daley, 2001; Karseth, 2006; Robson & Kitchen,
2007). For example, students on placement in a hospital referred to a situation in the Department of Rheumatism in which the team was engaged in adjusting a hand orthosis for a patient. The occupational therapist regulated the orthosis; the nurse took care of the operation wound; and the physiotherapist trained the mobility of the fingers as they displayed mutual trust in each other’s skills and shared responsibility towards a satisfactory outcome. As the following extracts indicated:

We observed how they used each other, talked to each other, how they sought advice from each other. They often looked for a second opinion in order to find the best solution. It seems as if these professionals worked in harmony with each other; that they strove for the same aim to meet the needs of the patient. (Collated from group interviews)

The students’ description resonates with Schön’s metaphor of the dexterous ability of improvisation exhibited by jazz musicians (Schön, 1987), combining predictability with freedom of creativity and improvisation within an established repertoire of knowledge. They also conveyed a holistic view embedding individual occurrences, objectives and co-action (Greeno et al., 1996). As the extracts below illustrates:

Physiotherapists could for instance answer questions raised by patients that did not strictly concern their professional field. The knowledge of other professional fields facilitates interprofessional collaboration. They knew perfectly well what they were best at; nevertheless physiotherapists were able to perform tasks normally performed by occupational therapists and vice versa. Thus clearly defined roles were disappearing and borders were blurred. (Collated from physiotherapy student data)
Locating the entire team on the same floor allowed more contact and interaction within the team as well as with patients (Robson & Kitchen, 2007). As reflected in the following data extract:

*There is communication and chatting going on between the various units and professions due to the fact that they share the same offices. You simply cannot disclaim all responsibility for what you are doing, claiming that you actually belong to another unit. You are totally responsible for the patient during the whole process.*

(Collated from group interviews)

In spite of the seemingly blurred boundaries between professions, students appreciated the insight into other professions during interprofessional collaboration. They observed how profession learn from each other and gained a more rounded impression of the patients’ needs and circumstances:

*It is not the number of meetings that glues it all together, but the sheer talking and chatting during the process. It is difficult to put one’s finger on one specific thing, as this is not clearly defined, but rather part of their semi-conscious everyday routine.*

(Collated from group interviews)

The quotations may reflect elements typical for the concepts of non-formal learning and tacit knowledge. “Talking and chatting during the process” can give associations to what Eraut (2000) define as “near-spontaneous and unplanned learning” (115). The semi-conscious
everyday-routine may reflect the phenomenon of tacit and implicit aspects of professional practise.

What the students were trying to express in this quotation is probably a description of the teams’ ability to internalize significant knowledge transformed from each team member. Their proficiency is conceived as the team’s intuitive grasp of the principles for effective teamwork. Interprofessionalism for students seemed apparently to be a type of ‘tacit knowledge’ rather than a clearly defined concept.

The team within the organisation
Students’ impressions of collaboration in hospitals reflected a culture in which the viewpoint of the user was essential. The students drew attention to a method of collaboration which was well-designed and which promoted motivation and inspiration:

*When talking about their work they referred to the team as a unit, not to themselves as individuals. They constantly referred to each other and checked on each other with regard to functional practice. In my opinion the three of them made up an excellent team. They might as well have been three close friends working together. If, on the contrary, their chemistry had not been right and they had not trusted each other, the patients would have noticed immediately.* (Collated from group interviews)

Students interpreted the team’s intention to allocate tasks according to professional, personal and practical considerations based on a complete image of the individual patient.
Professionalism has been defined as the ability to explore all possibilities and include pieces of evidence from different fields of competence to form the basis of a constructive workshop (Jensen & Lahn, 2005). The students reported that common experiences of the team enable the co-workers to have faith in each others’ ability to judge and to recognize each others’ strengths and weaknesses:

_Talking to these co-workers we came to understand that working interprofessionally is very challenging and consequently cannot be done by everybody. A great amount of communication and openness is required, and you have to be totally present at all times._ (Collated from group interviews)

For the students, flexibility was essential and characteristic of professional cooperation and the integrity of the performers. According to Rønnestad (2008), these are qualities that convey the most advanced level of therapy development.

The students were struck by the strong sense of unity within the teams, both in hospitals and home based service units. They came to appreciate the importance of focusing upon slight improvements, relating this to studies on professionals which reveal that it is vital to have a positive outlook, not only in relation to patients, but also in relation to themselves (Skovholt, 2001). A sense of “internal” motivation that enables the co-workers was vital in order to define situations, identify problems and make the right decisions leading to appropriate measures (Jensen & Lahn, 2005). Being present in professional working contexts in which emotional as well as cognitive factors played a role was significant (Skovholt, 2001).
Students emphasised the climate of openness and security within teams and in relation to patients, reflected as non-competitive profiling of their professions. Departments paid attention to the teams which made decisions within common planning and efficient distribution of work assignments:

*Due to their expertise and proficiency they (team members) were able to rely on their own ability to judge. They were not afraid of expressing their opinion. This is required to make interprofessionalism effective.* (Collated from group interviews)

The students were fascinated by the thought that they in the future could be part a group with such considerable power and influence.

*The patient centred focus in interprofessional care*

The students who were working in rehabilitation units in hospitals looked upon patients and team as a unity in which the patient was the key person. However, it came as a surprise for the students to observe how the patients became the centre of the interaction regarding their needs and abilities. Social interaction was more directly and personally expressed in circumstances in which the team was able to concentrate entirely on one particular patient. Trustworthiness with regard to promises, appointments and meetings with patients characterised the work ethic of the teams:

*Each individual patient was unique. Patients were assessed and compared according to their own capacities. Social status was of no consequence, but was only taken into consideration as a means to interpret and comprehend the other person’s perspective and emotion.* (Collected from group interviews)
The concept of ‘patient centeredness’ became ‘potent’ for the students as they, related theory and practice. The students also emphasised the teams’ shared intention to support the individual patient according to his or her needs, resources and motivation. The patients’ current situation determined the organisation of their future. It seemed as though students were becoming conscious of the fact that communication did not follow a fixed model:

*The team members must reset their expectations according to each individual patient’s situation, his/her approach to his own condition etc... What does this particular patient actually enjoy doing?* (Collated from one group interviews)

Students who had followed rehabilitation teams in the home based care services had been challenged in a working environment where they were guests in other people’s homes. Being in an environment which belonged to the patients and in which he or she had his/hers network implied that family and friends were part of the team.

The students also noted that they experienced situations where there were ethical dilemmas. They discussed ethical dilemmas concerning practical self-sufficiency, social affiliation and sharing of responsibility. Their assessments of situations were based on sense as well as sensibility. Inexperienced students often identified themselves with patients and their needs according to their own life experience (Rønnestad & Skovholt, 2003) shared with each other and with the team providing opportunities to introduce theoretical concepts such as empathy, norms and values.
The ability to distinguish between personal and subjective knowledge and the common knowledge that evolves within the team was a good basis for new knowledge (Guile & Young, 2002; Eraut, 2004). The students were beginning to realise the different challenges that health workers had to face coming across different value systems. The students said that it was hard to understand that the team was able to empathize with people who, in their opinion, were hardly able to interact in a positive way. The patients, in the students’ opinion, had reduced capacity and lacked personal network. The students came to appreciate the need for cultural competence; the ability to view “culture” at a distance and to reflect upon their own cultural affiliation. The significance of different values may be related to the concept “cognitive match” (Jennings et al., 2003). This concept relates to interactive situations in which patients and therapists are in concord. Thus the outcome of the treatment is determined by concordance of expectations and attitudes regarding the process of collaboration as far as patients and therapists are concerned.

The ability to understand the patient’s cultural background and his or her capacity to influence a rehabilitation programme is vital regarding the establishment of contact and alliance. Insight into individual differences concerning values, objectives and priorities is a necessary condition for professional work (Baltes & Smith, 1990). What is really essential is the therapists’ ability to interpret the situation in order to proceed appropriately (Jennings, Goh, Skovholt, Hanson & Banerjee-Stevens, 2003; Erault, 2004). In such settings the students might get an idea of the challenges they will encounter in their future professions regarding who “owns” the relevant knowledge:

*There must be a particular challenge dealing with patients suffering from chronic diseases who are experts on their own illness and possible solutions. The occupational*
therapist in the team wanted to get rid of impractical carpets etc., but she was not able to anything without the patient approving it. The patient had totally different desires and needs. In such a situation it is essential that the team does not offer ready solutions. (Collated from group interviews)

Both the patient and the team possess knowledge that may cause conflict and create professional and ethical dilemmas. The students appreciated the challenge of distinguishing between important (relevant) and unimportant (irrelevant) aspects regarding the planning and organisation of measures that might contribute to a meaningful life. They realized that such competence had to develop gradually and was the outcome of continuous reflection and empirical knowledge rather than preconceived notions and procedures. A good sense of judgement depended on wisdom that had evolved through life-long experience based upon context, open-mindedness and common sense (Jennings et al., 2003; Eraut, 2004).

Challenges in crossing professional borders

Even though the students seemed to appreciate what they observed about interprofessionalism, the interviews also revealed doubts whether they themselves would be able to work in interprofessional teams. Several situations brought about a feeling of insecurity regarding the students’ consciousness of professional identity. This became obvious in situations where “division of knowledge” was related to the implementation of tasks traditionally belonging to the responsibility of others.

The students reflected on the ethical validity of professions taking on tasks for which they had not been trained. Their expectations regarding more clearly defined boundaries between professions were more pronounced in the home based care service, where only one member of
the team was usually present at a time in the home of the patient although the whole team discussed the patient afterwards.

One situation described by the students was ‘morning care’ which reflected different priorities in the team. Morning care was normally associated with washing and dressing the patient. This day it was the physiotherapist who had that responsibility. She and the occupational therapist saw it as an occasion to survey the situation and train the patient’s physical as well as cognitive functions, but the physiotherapy student said that she would not have performed hygienic tasks, and questioned whether such assignments should be part of the everyday tasks of a physiotherapist. The nurse student, for her part, found the situation difficult, referring to professional criteria regarding hygiene and care:

*I cannot claim that her way of dealing with patients was incorrect. I do believe, however, that in a similar situation, a nurse would have had a somewhat different approach, focusing more on principles of hygiene.* (Nurse student)

According to the students in this team, there was nobody appointed to define the criteria for accomplishing these tasks. At the same time, they considered the contents of the “nurse role” to be less clearly defined than the roles of physiotherapists and occupational therapist:

*In a way physiotherapists and occupational therapist are dominant, because the role of nurses is not clearly defined within a rehabilitation team. They are more concerned with the active participation of users, whereas nurses are more prone to interfere and consider patients to be more helpless than they actually are.* (Collated from group interviews)
According to the nurse in one of the teams, the patients expected her to perform the morning care in a more traditional way than she did as part of the patient’s individual training:

*Due to the fact that the patients involved did not look upon her as part of the team, but as part of the municipal home care services, the nurse felt slightly ill at ease. The patients expected more help from her.* (Collated from group interviews)

Thus the students realised that ambiguous expectations from both colleagues and patients regarding the role of a nurse made it difficult for them to find their proper place within a rehabilitation team.

As described above, various professional tasks were not necessarily carried out by those who traditionally perform such duties. There were situations in which it seemed more convenient to cross the established borderlines of professions, but the students found this frustrating:

*It must indeed be hard to establish one’s identity as a nurse within a rehabilitation team in relation to other departments with traditional nursing procedures.* (Nurse student)

The students concluded that being able to model the ‘team professional identity’ required a high level of maturity. That would take time. They were doubtful whether they would be ready to become members of such teams when they had finished their education.

**Conclusion**

The students’ observations in health institutions using shadowing seemed to be a good starting point for reflection on practice. It enabled them to identify and discuss problems and
to actualise essential concepts related to interaction and work culture. The students experienced how interprofessionalism called for more comprehensive knowledge than the traditional Bachelor courses without practice learning could offer.

Using shadowing as learning method at an early stage provided students with examples of good role models, opportunities to observe the real world of practice as they learned about their respective professions and their interprofessional relations. The students discovered that professional activities were not just one particular way of organising and surveying tasks. They entailed empathetic and communicative action that demanded a high level of emotional and moral consciousness.

The study reported had limited impact on understanding and behaviour, given that the duration of students’ observation was restricted to one day. Students idealized reality where the professionals observed were proud to present their practice. Transferability of learning was limited for lack of opportunity for students to apply it in action. Despite these shortcomings, the evaluation suggests students developed clear motivation for future interprofessional teamwork.

The next step in this process will be related to a forthcoming collaboration project between a regional hospital and Oslo University College where the intention is to develop programmes that incorporate shadowing as a preparation for interprofessional teamwork. This approach to interprofessional team work will be evaluated by students and staff in both institutions.
References


student attitudes to communication and team working depend on shared learning opportunities on clinical placement as well as in the classroom. Medical Teacher. 2007, 29: 450-456.


