

RESEARCH ARTICLE

Implementation of interprofessional learning in hospital practice

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Email: bente.kvilhaugsvik@hvl.no**Abstract****Aim:** Some universities of applied science struggle with implementing interprofessional learning due to a lack of diversity in professions. The aim of this study was to investigate whether an interprofessional learning model with an informational letter describing interprofessional learning opportunities can provide nursing students in rural areas with sufficient interprofessional learning during internships.**Design:** This qualitative study utilized a hermeneutical approach.**Methods:** A total of 17 individuals participated in focus groups, group interviews and written responses. The data collection: January 2019.**Results:** Four categories were observed: (a) *assumptions about* interprofessional learning, (b) *available* interprofessional learning *opportunities*, (c) *hindrances to* interprofessional learning and (d) *stimulation of* interprofessional learning. The conclusion was that interprofessional learning can be implemented to some extent in areas where different professions work, even when only one student is present. A focus on interprofessional collaboration, patient safety and patient flow are valuable interprofessional learning objectives. An informational letter with suggestions for interprofessional learning, such as shadowing, was considered valuable by the participants.**KEYWORDS**

caring relations, interprofessional learning, IPL informational letter, shadowing

1 | INTRODUCTION

Professionals possess interprofessional collaborative competence (IPCC) and deliver high-quality care. Professions, patients, families and others should participate in collaboration on common goals (WHO, 2010, 2013). Through interprofessional education (IPE), students can become practice-ready for an increasingly complex health system. IPE is defined as 'occasions when two or more professions learn from and about each other in order to improve collaboration and the quality of care' (CAIPE, 2002). IPE aims to improve students'

interprofessional collaborative competence (IPEC, 2011), which entails knowledge about roles, responsibilities, teamwork, ethics, values and interprofessional communication (IPEC, 2011; IPEC, 2011). According to Barr et al. (2005), interprofessional learning (IPL) provides students with an opportunity to become familiar with and develop respect for other professionals and their jurisdictions, thereby reducing prejudice and stereotyping.

National and international guidelines state that IPL should be a part of all health curricula, but educational institutions may facilitate IPL in different ways (Almås, 2014). The Department of Education in Norway

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states that students in health professions should learn to collaborate across disciplines, professionals, sectors, institutions and levels (Regulation, 2017). Opportunities to experience collaboration across professions are therefore necessary (Barr et al., 2005). Theoretical knowledge about IPCC can be facilitated through interprofessional discussions on campus (Almås, 2014) or in virtual meetings (McLoughlin et al., 2018; Regulation, 2017). Students must learn about complex health issues and participate in practical problem-solving [White Paper 13, 2011–2012]. IPL is an important consideration for both educational institutions and internships, requiring interprofessional collaboration on an administrative level in order to agree on IPL facilitation.

This study was conducted in a rural area of Norway with few opportunities for interprofessional student collaboration in practice. An informational letter about IPL opportunities was co-created interprofessionally by those specializing in IPL and IPE at educational institutions, managers of interprofessional teams at two hospitals and departmental heads of Bachelor's programmes in nursing. The letter describes observation/shadowing practices and how students can participate in interprofessional collaboration (IPC) in meetings and when working in wards. When students from different professions are working in the wards, they should collaborate interprofessionally with regard to patients. The information letter was distributed to students, teachers at educational institutions, supervisors and ward managers.

The purpose was to investigate whether an IPL model with an informational letter describing possibilities for IPL can provide nursing students in rural areas with IPL during internships. We wanted to determine which assumptions and dependencies underlie an IPL model.

2 | THEORETICAL BACKGROUND

An IPL model in which students meet in interprofessional groups contributes to a safe environment for students to explore professional roles and competencies, which in turn can strengthen their professional identity (Haugland et al., 2019). In rural areas, it can be challenging to find physical meeting places for student collaboration (Kvilhaugsvik & Rehnsfeldt, 2019). In an interprofessionally organized emergency ward without personnel specializing in IPE, students learn from each other and about other professions through observation or shadowing (Hägg-Martinell et al., 2019). It is not easy for students to grasp IPL situations on their own.

Wei et al. (2019) found that a culture of caring is critical to achieving IPCC. They recommend fostering human connections through caring relationships, an ownership mentality, constructive feedback, recognition of team member strengths and shared responsibility for quality health care. Interprofessional teams can improve the quality of services and lower costs (Aase & Hansen, 2015). Manser (2009) found evidence of a connection between IPC and patient security.

Personality differences play an important role in the readiness of nursing students for IPL. Personal qualities such as openness to experiences, agreeableness and conscientiousness have been

associated with readiness for IPL (Axelsson et al., 2019). Students from different professions can learn together or can learn by being included in existing interprofessional teams (Haugland et al., 2019).

Students from different professions who participated in IPL by shadowing professionals in a rehabilitation ward gained insight into the differences and similarities in responsibilities for various professions (Almås et al., 2017). Students shadowing healthcare professionals in homecare can acquire knowledge of professional jurisdictions (Vasset & Almås, 2015). Learning activities, such as shadowing staff members from other professions, followed by facilitated reflection, are valuable to IPL (Kent et al., 2020). Through shadowing, students can acquire an understanding of complementary approaches across a variety of professions (Almås, 2011). Shadowing during patient consultations provides students with knowledge of profession-specific practices, information on how professions meet patient needs and solidifies the need for collaboration (Kent et al., 2020). Student motivation for interprofessional interactions seems to be reinforced by IPE in shadowing practices (Almås, 2011; Fougner & Hortvedt, 2011; Lindqvist et al., 2005).

Interprofessional education implies learning and learning requires reflection. Reflection on concrete situations is a basic methodological approach to developing practical professional knowledge (Clark, 2009; Hiim, 2010; Tveiten, 2019). Through reflection and participation in work communities, students are socialized into professional roles (Tveiten, 2019).

Some internships may not have sufficient teamwork opportunities or awareness that students need IPL (Kvilhaugsvik & Rehnsfeldt, 2019). One reason for this may be that most health personnel are still educated in siloed curricula (WHO, 2013).

Our aim was to determine whether an IPL model with an informational letter describing possibilities for IPL might be a pragmatic and appropriate way to facilitate IPL outcomes for nursing students in rural areas. What assumptions and dependencies underlie an IPL model in hospital internships?

3 | DESIGN

A qualitative study with a hermeneutical approach was conducted to investigate whether an IPL model was suitable for students in rural areas.

4 | METHOD

This research was conducted on the western coast of Norway at two university of applied science campuses dedicated solely to nursing education. An interprofessional development project across two university campuses and two rural hospitals had been carried out beforehand. An informational letter with suggested IPL arrangement was co-created interprofessionally in order to stimulate IPL. As mentioned before, the letter encouraged students to gain insight into other professions and their responsibilities by shadowing and

collaborating with professionals and students. The letter was based on the affiliated organizations' views on the need for IPCC, IPL and IPE and was distributed to the partners involved.

In some wards, the work was interprofessionally organized. Nurses, care workers and medical doctors were in the wards daily, while physical and occupational therapists were occasionally present. Students reflected on IPL situations with teachers from the educational institution and fellow students.

4.1 | Data collection

As interaction among informants and an exchange of viewpoints were considered an effective way to express opinions, focus group interviews in line with Malterud (2017) were planned. A researcher conducted the interview with students by asking open-ended questions (see Table 1) and facilitating the discussion when needed. A secretary took notes on the interactions among participants. Dynamic interaction and reflection occurred in the focus group and provided in-depth information. Due to tight schedules, not everyone was able to participate in focus group interviews. Three group interviews without a secretary and four written answers to the interview questions were included in the data material. An interview guide (see Table 1) was designed with questions on the necessary assumptions to facilitate IPL and possible models for IPL during internships for nursing students.

4.2 | Participants

The IPL informational letter was given to all nursing students at two university of applied science campuses before the start of the hospital internships. It was mandatory for 75 students to use the information letter. All students were invited to be informants and ten accepted the invitation. Seven of these participated in a focus group and three provided written answers to the interview guide. Two supervisors participated in a group interview. Five teachers agreed to be informants and four of them participated in group interviews, two in each group. One teacher provided written answers to the interview guide. A total of 17 informants (see Table 2) participated and all discussed the same questions.

The study followed the ethical guidelines for research as outlined in the Helsinki Declaration. All participants received written information about the topic of the research and the procedures

for the focus groups and group interviews. They received information verbally at the start of the 30–60-min interviews, which took place in meeting rooms at the participants' respective institutions. The participants knew that the interview would be audio-recorded, that the data would be handled confidentially and that they could withdraw from the study without consequence. The audio-recorded interviews were subsequently transcribed into text, after which the recorded audio was deleted. The written material from the interviews and text responses from the individual participants were analysed in a secure part of the university of applied science's data storage device. The study was approved by the Norwegian Centre for Research Data under project number 60156.

4.3 | Data analysis

The written material was analysed using Lindseth and Norberg's hermeneutical analysis method (2004). This method is consistent with our assumption that the actions of human beings are based on internalized norms, values and attitudes. Individuals may or may not be aware of these internalized factors. During the analysis process, researchers study lived experiences associated with the research topic. Nuance and diversity in how people think and feel about the theme can emerge. The analysis method follows a strict procedure in which participant responses are considered raw data, which is then condensed during the analysis. After the raw data were transcribed into text, the researchers read the written material several times. Through careful reflection and discussion among the authors, the content was categorized into main tendencies and meanings. The next step was to condense the meaning units into main themes and subthemes by highlighting the significant content. The themes were subsequently compared with the raw data to validate whether they were aligned. To ensure that participant responses were rendered correctly, the researchers read through the raw data once again (see Table 3). The first author performed and transcribed the interviews. The authors analysed the data material together.

5 | RESULTS

Four main themes emerged:

- Assumptions due to IPL
- Available IPL scenarios

TABLE 1 Examples of interview questions

1. What has changed in the facilitation of IPL in practice after the information letter was introduced?
2. How has the information letter influenced the facilitation of IPL associated with collaboration between professionals, patients, families and others?
3. What has been the useful value for students/supervisors/teachers at educational institutions in using the information letter?
4. What IPL situations have been improved and what new IPL situations have been used after introducing the IPL letter?

TABLE 2 Overview of participants

Participants	Focus group interview	Group interview	Written answers to interview questions
Students (s1-7)	7 participants		
Teachers from the educational institution (t1, t2)		2 participants	
Teachers from the educational institution (t3, t4)		2 participants	
Supervisors during internships (n1, n2) Students (s8-10) Teacher from the educational institution (t5)		2 participants	3 participants 1 participant

TABLE 3 Examples of data analysis

Meaning unit	Subthemes	Themes
When a physiotherapist went into a patient's room, I felt that the nurses avoided the room while the physiotherapist was there	Different contexts for IPL in hospital wards	Assumptions due to interprofessional learning
Students receive more training in collaboration with other professionals	Initiated anchoring of IPL in hospital wards	Available interprofessional learning situations
I do not feel like I've had the opportunity to be with other professions because there was so much to do	Time squeeze and poor organization in some wards	Hindrances for interprofessional learning
Shadowing other professions would be helpful. The students could choose a professional and shadow him or her	Teacher from educational institutions identifies appropriate IPL situations	Stimulation of interprofessional learning

- Hindrances to IPL
- Stimulating IPL

The data showed that, in some wards, students learned from professionals in natural contexts. In other wards, IPC did not function well. The informational letter, in addition to the awareness of the teachers from the educational institution of IPL and their guidance to students and supervisors seemed to be important for improving student IPCC in rural areas.

5.1 | Assumptions due to IPL

Most students pointed out that a lack of IPC could result in fragmented care for patients. Teachers from educational institutions and supervisors noted that there was a need to improve IPCC and increase IPL. The questions that they discussed concerned habits and assumptions among colleagues and work structures.

5.1.1 | Different contexts for IPL in hospital wards

There was variation in IPL opportunities among internships. One teacher from an educational institution (t3) stated, 'There is a difference between the stroke and rehabilitation units and other wards, because, in rehabilitation, IPC was a natural part of the daily work and students were included'. Some students did not know the others' schedules and stated that it was challenging to plan meetings with certain professionals. Referring to an internship in a surgical ward, one student commented (s5), 'When a physiotherapist went into a patient's

room, I felt that the nurses avoided that room'. Nursing students expressed that IPL opportunities were dependent on the aims and organization of wards and the views of supervisors on possible IPL scenarios.

5.1.2 | Interprofessional learning with professionals

All nursing students had supervisors during their internships. In paediatric, rehabilitation and stroke wards, students were trained in the team responsibilities of nurses. One supervisor expressed (n1), 'Students see how information from different professions is shared and how the teams figure out what to do together'. In an outpatient ward, students had opportunities to shadow other professions. In discussing appropriate IPL scenarios, teachers from educational institutions emphasized that the work performed by students with patients while being exposed to different professions seemed to be valuable. Half of the students observed different professionals examining patients, planning treatment or during acute situations in an emergency ward. Students discussed how various professions observed patient situations from complementary perspectives. Not all students experienced inclusion in IPC. For example, one student (s2) expressed that it was difficult to know who the other professionals were: 'Some doctors did not wear their badges, so it was hard to know'.

5.1.3 | Supervisors and teachers from educational institutions may have different roles in and views of IPL

In some rural wards, nurses were assigned to specific interprofessional teams. In other wards, nurses had more administrative

responsibilities. Teachers from educational institutions, supervisors and student participants argued that there was often a connection between the nurses' roles and their opinions on IPL. Nurses in surgical wards were perceived as detractors to student initiatives to engage in IPL. One student (s4) stated, 'Some argued that IPL was something extra. Students have to learn a lot of things and, if we focus on other professions, there may be too little time left to learn about nursing responsibilities'. Regardless of how nurses worked in practice, a teacher from an educational institution stated that the supervisor's role was to facilitate student learning. The role of the teachers from the educational institutions included supervising and evaluating students. One teacher from an educational institution (t5) expressed the point of view that students' IPL opportunities were too random: 'Collaboration must be experienced and learned and awareness is needed that this is a central part of being a member of health staff today'.

5.1.4 | Students need to engage to learn IPC

Teachers from the educational institutions and supervisors were clear that students must actively engage in and be aware of possible IPL scenarios, which may be scheduled events or natural occurrences. It was necessary for students to seize IPL opportunities when possible. One teacher from an educational institution (t3) stated, 'When different professions schedule appointments in the wards, students need to make sure to be there'. Several students emphasized that IPL should be mandatory. Teachers from educational institutions and supervisors indicated that students who engaged in IPL learned considerably more about IPC (t4): 'There is a huge difference between students who have discovered the value in other professions' responsibilities and want to learn more about that and students who find a physiotherapist to learn from because the teacher requires it'.

5.2 | Available IPL situations

The results showed that it was essential that leaders support, encourage and facilitate IPC and IPL. Without this foundation, engaging students in IPL can be labour-intensive for staff and teachers alike.

5.2.1 | Initiated foundation of IPL in hospital wards through co-creation of an IPL letter

Through discussions, participants arrived at a consensus about IPL as a vital part of future health services and that IPCC/IPL must be nurtured over time. One teacher from an educational institution emphasized that facilitating IPL has gradually become easier (t2): 'Students receive more training in interprofessional collaboration. We demand it to a greater extent'. Teachers from educational

institutions and students stated that the informational letter must include a follow-up. Students must be given opportunities to perform specific IPL activities. A teacher from an educational institution (t1) mentioned leaders as crucial to laying the foundation for IPL: 'Leaders must be a driving force in stimulating IPC/IPL at all levels'.

5.2.2 | Lack of variety in professions

Teachers from educational institutions discussed whether IPL should be an activity among students from different professions. The supervisors emphasized that other student programmes must focus on IPCC (n2): 'It is normal for us to see nursing students involved in teamwork in the ward, but I have not yet seen students from other professions do so'. If there were students from several professions in the wards simultaneously, some teachers from educational institutions would prefer to have students collaborate (t1), stating, 'Two students could work independently, such as today we'll meet this patient and together determine the patient's needs'. Other teachers from educational institutions expressed that IPL with graduated professionals was better than IPL with students. The students expressed that it would be interesting to meet other student-professions but prefer to learn from professionals.

5.2.3 | Experiences with planned interprofessional meetings

Interprofessional meetings were scheduled in all wards. Rehabilitation and stroke units had numerous meetings. One student (s7) mentioned, '... I could ask different professionals what they were going to do that day and if I could join them'. Some medical and surgical wards were less interprofessionally organized and some students experienced that, even if interprofessional meetings were scheduled, they were readily postponed or cancelled. The supervisors discussed the consequences of different professions failing to attend interprofessional meetings (n1): 'If the physiotherapist is not at the meetings, the result can be a longer hospital stay for patients'.

5.3 | Hindrances to IPL

Despite increasing awareness of the need for coordinating patient services, participants noted conditions that were a hindrance to facilitating IPCC and IPL.

5.3.1 | Time squeeze and poor organization

Students experienced stress levels in some wards that occurred at the expense of IPCC and IPL (s6): 'I don't feel like I had the

opportunity to be with other professions because there was so much to do'. Teachers from educational institutions expressed that this could be due to poor organization. There were few formal meetings between themselves and the heads of the medical and surgical wards and there was not enough time to discuss strategies for student learning follow-up. Some participants experienced a hierarchical distance among the professions. Students argued that some professionals did not contact nurses when they entered wards (s3): 'The different professions did not talk much together. Physiotherapists sometimes visited patients without telling the nurses about their contribution to the patient's treatment'. Informants expressed that these nurses had a considerable amount of information about patients, but that their viewpoints may still be disregarded.

5.3.2 | Knowledge of complementary competences

Teachers from educational institutions discussed that IPC does not occur spontaneously and stated that nurses must be aware of professionals with complementary knowledge (t3): 'They cannot conduct full patient reviews without considering the contributions of other professions and need to be aware of how a doctor or speech therapist thinks about an issue'. One student (s5) exemplified the lack of awareness of complementary collaborative competences by stating, 'When the physiotherapist was there, I learned which exercises the patient should do. The patient had already been in the ward for a week, so I felt that this information came too late'. Students expressed that, if professionals do not have enough knowledge of other professional competencies and responsibilities, they can easily misunderstand each other.

5.3.3 | Responsibility for supervisors and teachers from educational institutions

Some teachers from educational institutions and supervisors communicated directly with each other but, in some wards, a designated supervisor who was responsible for students mediated between supervisors and teachers from the educational institution. Supervisors and teachers from educational institutions commented that having a designated supervisor saved time, but any misunderstandings about learning activities became more difficult to resolve. With regard to the direct contact between teachers from educational institutions and supervisors, one teacher from educational institution (t4) stated, 'If the supervisor has a different view, I can tell her what is important for the student to focus on. When students discuss IPL matters during tutorials, I can ask about this during the next meeting with the supervisor'. One supervisor (n2) emphasized the responsibilities of the teachers from the educational institutions: 'It is important that the teacher from the educational institution follow up on student learning activities because we have a great deal to focus on in the wards'.

5.4 | Stimulating IPL

Interprofessional learning was on the agenda because IPCC was a learning outcome for students. To acquire this competence, students said it was necessary to learn the responsibilities of each profession.

5.4.1 | Informational letter about IPCC legitimized IPL

The informants argued that, if all students had to acquire IPCCs, there must be the clear expectation that teachers from educational institutions and supervisors facilitate this. One teacher from an educational institution (t3) noted, 'In the past, students might ask to follow another profession, but now they are expected to take such initiative'. All informant groups argued that implementing IPL is a process in which the first step is to become aware of possible learning scenarios. Students can then gradually develop IPCCs. One student (s7) said that 'IPL was a theme that was discussed in the ward, so I feel that this new informational letter about IPL was understood'.

5.4.2 | Interprofessional learning outcomes

Students in collaborative wards reflected on the aspects of IPC that they experienced (s10): 'I liked that we could follow other professionals to see for ourselves why collaboration is important. I learn a lot by seeing and sensing how professionals work together'. Students reflected on IPL and the need for IPC. Some teachers from educational institutions and students mentioned that such requirements should exist in order to ensure IPL outcomes. Another point of view was that an invitation to IPC might be more effective due to its impact on student motivation. One teacher from an educational institution emphasized that wards were different, so it would not be expedient to give the same task to all students (t4): 'It is a good request to students, teachers, and contact nurses to facilitate IPL situations instead of a requirement'.

5.4.3 | Teachers from educational institutions identify appropriate IPL scenarios

Not all students and supervisors sought out IPL scenarios. Teachers from educational institutions stated that there were missed opportunities in which students could have gained insight into IPC. Students had varied experiences with IPL supervision by teachers from educational institutions (s7): 'My teacher from the educational institution was clear that I had to attend the interprofessional meetings'. There was a consensus among the participants that teachers from educational institutions must be the driving force behind IPL because they were not encumbered by daily routines (n2): 'If the teacher from the educational

institution had been in the ward, she might have been able to identify appropriate IPL scenarios for the students to participate in'.

5.4.4 | The importance of student attention to patient safety and care continuity

The participants considered patient flow and patient safety. Through IPC, professions ensure that the necessary treatment is initiated and that patients have the necessary support after discharge (t5): 'The complexity of today's health services requires interprofessional competence and system-level interaction'. One teacher from an educational institution referred to a situation in which a student reflected on a meeting with a patient who had a difficult conversation with her doctor. Nurses do not typically attend such consultations and know little about what happens in doctors' offices (t4): 'My student had a moment of realization. She saw how important it was for the patient that she was in the room at the same time as the doctor'. One student described a situation in which the nurses advised a patient to keep his arm still, while the physiotherapist wanted the patient to do exercises with the arm (s5): 'The patient was confused. This shows how important it is for professionals to collaborate and give patients corresponding advice'.

6 | DISCUSSION

This study shows that it is possible to stimulate IPL during internships in rural areas, even with only one profession represented. The students learned from shadowing professionals in natural contexts and the supervisors and teachers from educational institutions were aware of the importance of IPC and IPL. Hindrances to IPL were organization and assumptions about IPC. Both patient safety and IPL must be fostered. An IPL informational letter with suggestions about IPL situations appears to improve awareness of IPL possibilities.

6.1 | Assumptions about IPL

Health personnel must be able to collaborate interprofessionally (WHO, 2010, 2013). Even when guidelines emphasize that IPL should be facilitated, educational programmes may take different approaches to its implementation (Almås, 2014). Given that supervisors and teachers from educational institutions can have different assumptions about IPC and IPL, IPL opportunities vary. The point of view of teachers from educational institutions was that the students' IPL opportunities were too random. When health personnel are not dedicated to IPE, it may be difficult for students to grasp IPL situations (Hägg-Martinell et al., 2019). According to the definition of IPE by the Centre for Advancement of Interprofessional Education (CAIPE, 2021), both professionals and students can be involved. However, some theories indicate that IPL should entail collaboration among students from different professions (Haugland et al., 2019).

The participating teachers from the educational institutions were concerned about whether IPC and IPL had been established as part of future health services and education and believed that both must be nurtured. Implementing IPC and IPL is not a matter of course. When supervisors perceived IPL as a responsibility for which they did not have time, the effect of IPL was diminished. Professionals can be blinded by their perceptions of their own professional roles and routines (Hall, 2005), as some professionals are educated in siloed educational programmes. Professional cultures also influence professional perceptions of others' jurisdictions (Thistlethwaite et al., 2014) and IPE can reduce stereotypes (Barr et al., 2005). This study showed that enabling students to experience how different professionals worked with patients provided insights into the responsibilities of different professions, which is one of the required core competencies for IPCC (IPEC, 2011).

6.2 | Available IPL scenarios

Variation in IPL opportunities in rural areas may be due to wards having achieved different stages of IPL implementation. At some wards, IPL was facilitated by including students in existing teams. Our findings are similar to those of other studies that show that IPL together with graduated professionals is a safe way for students to learn IPC because team members are familiar with the work routine and responsibilities of professionals (Kvilhaugsvik & Rehnsfeldt, 2019; Vasset & Almås, 2015). Through shadowing practices, students gained insight into the areas of expertise of other professionals (Kent et al., 2020; Vasset & Almås, 2015), which they indicated as being complementary knowledge for collaboration. Discussions with teachers from educational institutions and fellow students helped integrate interprofessional experiences into knowledge. Reflection on concrete situations is a basic methodological approach for students in developing professional competences (Clark, 2009; Hiim, 2010). Through reflective processes, students can build confidence in their professional roles and feel safe in IPC (Tveiten, 2019). These results showed that students had become aware of expected IPL outcomes through the informational letter and that IPC was important. Shadowing was used to achieve IPL outcomes. This corresponds to research showing that student motivation for future interprofessional interactions can be increased through shadowing experiences (Almås, 2011; Fougner & Hortvedt, 2011; Lindqvist et al., 2005).

6.3 | Hindrances to IPL and IPC

In rural areas, it can be challenging to find physical meeting places for student collaboration (Kvilhaugsvik & Rehnsfeldt, 2019). Participants pointed out that the organization of wards and supervisor perceptions of IPC affected IPL. These results indicated that leaders on all levels must be a driving force in stimulating IPC/IPL. Internships are important for socializing students in professional life (Tveiten, 2019), and students tend to socialize according

to how supervisors perform their work (Hall, 2005). IPCC must be a vital part of the knowledge acquired by students (McLoughlin et al., 2018; Regulation, 2017). The participants stated that IPC/IPL was given low priority in some wards, and students reported that scheduled meetings were often cancelled. Hierarchical distance, time restrictions and poor interprofessional organization were obstacles to IPC/IPL, which aligns with the results of Barr et al. (2005). The consequences of low awareness of IPC/IPL included less holistic care for patients and fewer opportunities for nursing students to acquire knowledge of complementary competencies. Furthermore, misunderstandings can arise between professionals with little knowledge of each other's responsibilities.

Another issue was that, in some wards, there were few formal meetings between teachers from educational institutions and departmental heads. This may result in insufficient time for discussing follow-up strategies with students. Although this saved time, the resulting misunderstandings were more difficult to resolve. Nursing students doing internships in rehabilitation or stroke wards did not report encountering these obstacles to IPL. This observation was similar to the findings of other studies (Almås et al., 2017; Kvilhaugsvik & Rehnsfeldt, 2019).

6.4 | Stimulation of IPL outcomes

The teachers from the educational institutions stated that the complexity of health services requires IPC and the ability to engage in system-level interaction. IPL may involve studying elements of patient pathways. IPC can improve the quality of services (Aase & Hansen, 2015; Manser, 2009; White Paper 13 (2011-2012)) and reduce costs (Aase & Hansen, 2015). Several participants had not considered IPL among students prior to this study and the teachers from the educational institutions involved had different opinions on the subject. Supervisors emphasized that learning from other types of professionals increases patient safety. A caring environment with an ownership mentality, constructive feedback, recognition of team member strengths and shared responsibility for quality in healthcare is recommended (Wei et al., 2019).

One teacher from an educational institution commented that it became gradually easier to stimulate IPL, even though our results indicate that supervisors are often preoccupied with their duties in their respective wards. It is necessary for teachers from educational institutions, who are not hindered by daily routines, to facilitate and require IPL. Theoretical knowledge about IPC can be provided on campus in preparing for IPL (Thistlethwaite et al., 2014). To develop IPCC, students should be included in practical problem-solving (Regulation, 2017). An IPL informational letter that includes recommendations for IPL emphasizes the necessity of IPC and prioritizes holistic approaches to treatment chains for patients may be an appropriate way to accomplish this. The participants indicated that the informational letter legitimized IPL.

There were differing opinions among the participants regarding whether IPL should be made a requirement or optional.

Student personalities also affect their readiness for IPL (Axelsson et al., 2019), which may explain some of the variation in IPL outcomes. A caring culture among team members was shown to be critical to achieving IPC. Such a culture includes fostering human connections through caring relationships (Wei et al., 2019).

7 | CONCLUSION

There are many aspects of IPL and the responsibility for organizing IPC/IPL must be properly addressed. Co-creation of an informational letter with recommendations for IPL scenarios by IPCC/IPL stakeholders seems to be valuable. In hospital internships in rural areas, in which only one student profession is represented, IPL can be implemented through shadowing. While IPL must be nurtured over time and students must be actively engaged, teachers from educational institutions must be the driving force behind IPL.

7.1 | Ethics in publishing

The study was approved by the Norwegian Centre for Research Data (NSD) under project number 60156.

7.2 | Limitations

This was a qualitative study with a limited number of participants. To investigate the IPL learning outcomes of the students in which only one student profession was represented, we suggest research using scales such as PINCOM (32).

CONFLICTS OF INTEREST

This project received no funding, and there are no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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REFERENCES

- Aase, I., & Hansen, B. S. (2015). Trening av tverrprofesjonelt samarbeid i helseutdanninger. (Training of interprofessional collaboration in health educations). In K. Aase (Ed.), *Pasientsikkerhet – teori og praksis (Patient security- theory and practice)* (pp. 205-219). Universitetsforlaget.
- Almås, S. H. (2011). Bioingeniør- og sykepleierstudenter i tverrprofesjonell skygge praksis. Erfaringer fra et pilotprosjekt. (Biomedical laboratory scientist- and nursing students in interprofessional shadowing practice). *Bioingeniøren*, 9, 14-19.

- Almås, S. H. (2014). Bourdieus theory on the educational system. In E. Willumsen & A. Ødegård (Eds.), *Interprofessional collaboration – A social mission*. The University Press.
- Almås, S. H., Nilsen, H. K., Spjutøy, R., & Vasset, F. (2017). Interprofessional learning through shadowing in rehabilitations department: A qualitative study of the students' placement in hospital setting. *European Scientific Journal*, 13(28). <https://doi.org/10.19044/esj.v13n28p1>
- Axelsson, M., Jakobsson, J., & Carlson, E. (2019). Which nursing students are more ready for interprofessional learning? A cross-sectional study. *Nurse Education Today*, 79(8), 117–123.
- Barr, H., Koppel, I., Reeves, S., Hammick, M., & Freeth, D. (2005). *Effective interprofessional education. Argument, assumption and evidence*. Blackwell CAIPE (Centre for the Advancement of Interprofessional Learning).
- CAIPE. (2002). *Interprofessional education, today, yesterday and tomorrow*. The Centre for Advancement of Interprofessional Education file:///C:/Users/bkv/Downloads/CAIPE-2002-Interprofessional-Education-Today-Yesterday-and-Tomorrow-Barr-H.pdf.
- CAIPE. (2021). The centre for advancement of interprofessional education. <https://www.caipe.org>.
- Clark, P. G. (2009). Reflecting on reflection in interprofessional education: Implication for theory and practice. *Journal of Interprofessional Care*, 23(3), 213–223.
- Fougner, M., & Hortvedt, T. (2011). Students' reflection on shadowing interprofessional teamwork: A Norwegian case study. *Journal of Interprofessional Care*, 25(1), 213–223.
- Hägg-Martinell, A., Hult, H., Henriksso, P., & Kiessling, A. (2019). Possibilities for interprofessional learning at a Swedish acute healthcare ward not dedicated to interprofessional education: An ethnographic study. *BMJ Open*, 9(7), e027590. <https://doi.org/10.1136/bmjopen-2018-027590>
- Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, 19(Suppl. 1), 188–196.
- Haugland, M., Brenna, S. J., & Aanes, M. M. (2019). Interprofessional education as a contributor to professional and interprofessional identities. *Journal of Interprofessional Care*, 1–7 ISSN: 1356-1820 (Print) 1469-9567.
- Hiim, H. (2010). *Praktisk aksjonsforskning (Practical action research)*. Gyldendal Akademiske.
- IPEC. (2011). *Core competencies for interprofessional collaborative practice*. <https://hsc.unm.edu/ipe/resources/ipcc-2016-core-competencies.pdf>
- Kent, F., Glass, S., Courtney, J., Thorpe, J., & Nisbet, G. (2020). Sustainable interprofessional learning on clinical placements: The value of observing others at work. *Journal of Interprofessional Care*, 34(6), 812–818. <https://doi.org/10.1080/13561820.2019.1702932>
- Kvilhaugsvik, B., & Rehnsfeldt, A. W. (2019). Interprofessional learning for nursing students in practice periods: Problems to overcome and possibilities for uniprofessional campuses. *Scandinavian Journal of Caring Sciences*, 33(2), 478–486. <https://doi.org/10.1111/scs.12648>
- Lindqvist, S., Duncan, A., Shepstone, L., Watts, F., & Pearse, S. (2005). Case-based learning in cross-professional groups – The development of a pre-registration interprofessional learning program. *Journal of Interprofessional Care*, 19(5), 509–520.
- Lindseth, A., & Norberg, A. (2004). A phenomenological hermeneutical method for researching lived experience. *Nordic College of Caring Sciences. Scandinavian Journal of Caring Sciences*, 18(2), 145–153.
- Malterud, K. (2017). *Qualitative research methods for medicine and health subjects* (4th ed.). Universitetsforlaget (The University Press).
- Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: A review of the literature. *Acta Anaesthesiologica Scandinavica*, 53(2), 144–151. <https://doi.org/10.1111/j.1399-6576.2008.01717>
- McLoughlin, C., Patel, K. D., O'Callaghan, T., & Reeves, S. (2018). The use of virtual communities of practice to improve interprofessional collaboration and education: Findings from an integrated review. *Journal of Interprofessional Care*, 32(2), 136–142.
- Regulation. (2017). *Forskrift om felles rammeplan for helse- og sosialfagutdanninger. (Regulation with common curricula for health and social care educations)*. Ministry of Education and Research. <https://lovdata.no/dokument/SF/forskrift/2017-09-06-1353>
- Thistletwaite, J. E., Forman, D., Matthews, L. R., Rogers, G. D., Stekettee, C., & Yassine, T. (2014). Competencies and frameworks in interprofessional education: A comparative analysis. *Academic Medicine*, 89(6), 869–875.
- Tveiten, S. (2019). *Veiledning – mer enn ord. (Guidance – more than words)* (5th ed.). Fagbokforlaget.
- Vasset, F., & Almås, S. H. (2015). Shadowing. Interprofessional learning. *Journal of Interprofessional Practice and Education*, 5(2). [doi:10.22230/jripe.2015v5n2a196](https://doi.org/10.22230/jripe.2015v5n2a196)
- Wei, H., Corbett, R. W., Ray, J., & Wei, T. L. (2019). A culture of caring: The essence of healthcare interprofessional collaboration. *Journal of Interprofessional Care*, 34(3), 324–331. <https://doi.org/10.1080/13561820.2019.1641476>
- White Paper 13. (2011–2012). *Utdanning for velferd. Samspill i praksis. (Education for welfare. Collaboration in practice)*. Oslo: The Government of Norway: The Royal Ministry of Knowledge. <https://www.regjeringen.no/no/dokumenter/meld-st-13-20112012/id672836>
- WHO. (2010). *Framework for action on interprofessional education and collaborative practice. Health professions networks nursing & midwifery human resources for health*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HPN_10.3_eng.pdf;jsessionid=1
- WHO. (2013). *Transforming and scaling up health professional's education and training*. World Health Organization Guidelines. https://apps.who.int/iris/bitstream/handle/10665/93635/9789241506502_eng.pdf?sequence=1

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