

Capacity Building for a Stronger Workforce in the Public Healthcare Sector

Grete NETTELAND^{a,1}, Cecilie Slokvik HANSEN^b and Barbara WASSON^b

^aWestern Norway University of Applied Sciences, Norway

^bUniversity of Bergen, Norway

Abstract. In a more and more demanding sector, healthcare leaders are in need of relevant and up-to-date competencies. The paper describes the iComPass-project that aimed to increase the quality of a Master's programme for healthcare leaders, making sure that the competencies students are taught and should develop during their studies are aligned with what is relevant for their current and future practices. A method for identifying needed competencies in the field of practice was developed and used. This led to an understanding of the need for increased collaboration between the Master's programme, the field of practice, and working life.

Keywords. Healthcare leaders, working life, competence, higher education quality, lifelong learning

1. Introduction

In today's ever changing society, Norwegian healthcare and welfare services experience a strong need for new and renewed competencies, such as holistic treatment processes, interaction and collaboration across services at various administrative levels (municipal healthcare and hospitals), innovations and implementations of seamless digital services, advanced homebased healthcare services and a strong involvement of users (patients). This requires that the healthcare sector changes work methods, has the right skills and is able to share and reuse public data and perform more tasks digitally [1]. Simultaneously is the sector in urge of nurses and healthcare leaders that have relevant competencies to meet the many new and shifting needs, e.g. how to deal with the challenge of integrating health information systems in such a way that the quality of the work is improved, or to handle technical innovation simultaneously with organizational transformation [2]. A related challenge is further that the academic staff in nurse and healthcare leader education is in need of an increased expertise and more up-to-date knowledge about the practice within the vocational fields for which it is educating the students. To meet this challenge, the Parliament therefore agreed to strengthen the quality and relevance of study programmes in higher education related to health, care and welfare. Improved collaboration with working life and increased work relevance were further underlined in the white paper *Quality Culture in Higher Education* (2017) [3].

This paper refers to the competence project iComPass [4], which raised from the needs of two professional educational situations to improve their education, the Master's programme in Organization and Management (Health and Welfare line) at The

¹ Corresponding author: Grete Nettelund, Professor, Dr. Polit. HVL; E-mail: grete.nettelund@hvl.no.

University College in Sogn and Fjordane, while the second is the education of firefighters organized by Sotra Brannvern IKS. The focus in this paper is on the first case, a 4-year part-time leader programme for students who combine their studies with family and practical healthcare work in hospitals and municipal healthcare. To ensure that the taught competencies in the Master's programme were relevant for the students' future professional practice and reduce the gap between the curriculum and the actual everyday working situation for healthcare leaders in municipals and hospitals, the project followed the Parliament's advice to inquire the vocational fields of practice for which the students were going to be educated.

To increase the quality of the Master's programme and make sure that the competencies students develop during their studies were aligned with what was relevant for their current and future practice, a method was required to identify the most demanding competencies in the practice field.

With this as a background the main research question of the study was: *How can the Master's programme in Organization and Management (Health and welfare line) be improved by clarifying the competence needs among Norwegian healthcare leaders and by identifying a model for capacity building?*

The ambition of this article is to describe the research process applied to identify constituent skills, knowledges and attitudes of the most in-demand leader competencies of today's public healthcare sector and examine how the 4C/ID-model [5] can be used and refined to serve as a model for capacity building of new and changed competencies in this sector. An important goal was also to identify methods and technologies to support the organizations and help them to get an overview of the internal competence needs.

2. Methods

The Health and Welfare line of the Master's programme qualifies for leadership positions in municipal healthcare, welfare services and hospitals. To clarify and examine the competence needs among today's healthcare leaders in the public sector, one group (group 1) was selected from the largest domain (municipal healthcare), the other one (group 2) from the second large domain (hospitals). The groups had 3 and 4 persons, respectively, all of them female between 45- 58 years and previous students at the Master's programme. To identify and analyze the most demanding professional competence needs, we draw on Van Merriënboer & Kirschner's definition of competence: "...a combination of complex cognitive and higher order skills, highly integrated knowledge structures, interpersonal and social skills, and attitudes and values" (:247) [Ibid]. To support the design and development of training and education for complex skills, the mentioned authors have developed the *Four Component Instructional Design Model* (4C/ID-model), a model which focuses on the training of complex real-life competencies and tasks (Ibid). Such training is the final goal, but before we could work on training, we needed to identify what competencies to teach in the master's programme. Because the aim of *our* study was to identify the required competencies among healthcare leaders in municipal healthcare and hospitals we had to gather this information at first.

Based on interviews and descriptions from healthcare leaders we found that *leading interdisciplinary collaboration* and *change* were the two most demanding competencies. To identify the constituent skills of these competencies and connect them to supportive tools, technologies, performance goals and recurrency, we developed skills hierarchies

related to the leaders' real-life tasks and competence needs, in line with the 4C/ID-model. These hierarchies would give us a systematic overview to improve the education and teach according to needed competencies. The healthcare leaders were then invited to describe the skills of the identified competencies and related 1) conditions, 2) equipment (e.g. technologies), 3) standards 4) recurrency and 5) performance goals. The whole process is described through the 6 steps in Table 1. The method was named the *Practice Inquiry Method*.

Table 1. Descriptions of steps in the Practice Inquiry Method

Steps	Activities
Step 1	Practitioners' descriptions of practice situations related to the two most in-demand competencies
Step 2	Identification of skills in textual descriptions of practices and in transcribed group interviews
Step 3	Development of preliminary competence map, mapping identified skills (based on 4C / ID)
Step 4	Workshop on the development of a preliminary competence map, focusing on skills, knowledge and attitudes
Step 5	Development of a preliminary competence map, mapping the identified skills, knowledge and attitudes (based on 4C / ID)
Step 6	Workshop to describe and identify: Skill and related supportive information: performance goals, tools, standards, and recurrency (based on 4C / ID)
Step A	Development of learning tasks
Step B	Workshop with presentation and discussion of learning tasks based on developed competence map.

To be able to reach our goal, we had to develop relevant learning tasks described as step A and B in Table 1. The identified skills were further used to develop learning tasks. The learning tasks are context-relevant and tied to practices.

3. Results

An important goal of the iComPass project was to improve the Master's programme by using the 4C/ ID-model to learn what competencies were needed in the healthcare sector and how these competencies could be trained. By combining competence mapping based on authentic situations described by the healthcare leaders and competence models based on data from different data sources, we wanted to define potential "new" competencies that could be integrated in the programme. Two competencies were identified as the most demanding in both groups, to *lead change* and to *lead interdisciplinary collaboration*. Another goal was to train the students in how they, as future leaders in the healthcare sector, could plan and monitor the professional competence in their own staff. Such an ambition would make the study programme more up-to-date and relevant. A desired result was also to develop real-life training tasks for instruction and training of future healthcare leaders. The many training tasks that were developed during the project by authentic healthcare leaders, have turned out to be a valuable resource for student training of specific leader skills, e.g. "communicate aims", "think holistic" and "implement change", all of them important skills of the competence *to lead change*.

In order to identify needed competencies, we developed *The Practice Inquiry Method*. The development of the method itself, as it is described in Table 1, is an

important result so far. The method has also been applied in other contexts [4]. As mentioned in Table 1, the first workshop with group 1 and 2 took place at their respective workplaces. This gave us the opportunity to study each group in isolation and identify to what extent their understanding of knowledge, attitudes and skills in the examined competencies *to lead change* and *to lead interdisciplinary collaboration* varied. In the two last workshops we used video conferencing which made it possible to discuss, present, and exchange experiences at a distance, across the two groups. While the skill hierarchies and the names/concepts of the single skills that had been developed during the first workshop were rather different, the situation changed in workshop 2. In this workshop, where the groups were expected to exchange their pre-written descriptions of the single skills in the two skill hierarchies they had developed, the descriptions became more similar, independent of geography, management levels and organizational size. The use of video conferencing resulted further in participants being more curious about each other and their respective work contexts. This reaction may have many reasons, but we cannot ignore that this may be due to the use of video conferencing and/or to the discussion of different skill hierarchies.

4. Discussion

The driving focus of this project was the need to promote and address the quality aspect of the Master's programme and to identify relevant and required competencies in a demanding public sector. In line with the study plan, graduate Master's candidates should have acquired competencies that make them relevant for 1) a management position in the field they specialize, 2) administrative positions within the health and care sector, and 3) independent positions with management responsibilities. To ensure that the programme meets the needs of these positions, the programme combines formal learning and workplace experiences. Through the part-time study, the students will follow lectures, use their professional background in various subjects and write a Master's thesis that will show that they have acquired academic working methods and skills. With this as a background, the choice of research question was made on the basis of previous measurements from NOKUT's Study Barometer 2013 [7]. According to this, the Master's programme initially needed to:

- Evaluate and further develop existing curriculum to include:
 - Competencies relevant for the students' future professional practice (especially domain-specific leadership competencies).
 - Competencies to critically reflect on existing and future practices in the domain as well as on the ability to improve it.
- Maintain an overview of individual students' competence development.

By developing a method building on parts of the 4C/ID-model, we were able to develop a skill hierarchy on *to lead change* for healthcare leaders. This was done by collaboration between two workplaces: the hospital and municipal healthcare services. By using the steps in the method and in collaboration with the workplaces, we were able to identify relevant competencies such as *to lead change* within the healthcare sector.

In addition, a common experience in both groups was healthcare leaders perceiving leader competencies as abstract and generic. This made it rather difficult for the participants to formulate explicit criteria, standards and performance goals, which is an important part of the Ten-steps model. Similarly, many leaders also found it demanding

to name a term and give a more precise description of an identified skill. More experienced workshop leaders will probably be an advantage when both skills and work task are abstract and hard to put into words or define. The visualization of the competencies in a skill hierarchy, gave them, however, new insight into their own complex work tasks, skills, attitudes and knowledge. In fact, according to the participants this visualization helped them to develop a new language to talk about their work tasks.

5. Conclusions

iComPASS illustrated in an excellent way the need to bring together research, working life and education, as underlined in the white paper Meld. St. 16 (2016–2017) *Quality Culture in Higher Education* (2017) [3]. This triggered new forms of collaboration, between user actors within the same field of practices (the healthcare sector), though from different domains in the field (municipal healthcare and hospital). During the last years, however, we have also observed an increased collaboration between the Master's programme and external actors, for instance by inviting healthcare leaders to give lectures. Whether this is a result of the project or of a heavy focus at national level on collaboration with working life, must be unsaid. Another effect has been the great need for continuing / further education of former students, for example in the form of leadership networks, alumni networks and the establishment of new arenas for the dissemination of knowledge. The project indicated a need for more "practical expert knowledge" in the Master's programme, hence also perceived as relevant in a "lifelong learning perspective", e.g. to use PCIS-data for improving healthcare services. Increased collaboration between the Master's programme and other management programs nationally and internationally, in order to obtain information on how these collaborate and learn together with managers in working life, can be a solution. Enabling project participants to use the method in their own practice may be a next step to investigate.

References

- [1] Ministry of Local Government and Modernisation. *One digital public sector. Digital strategy for the public sector 2019-2025*. Oslo; 2019. 58p.
- [2] Berg M. *Health Information Management. Integrating information technology in health care work*. Oxon: Routledge; 2004. 234p.
- [3] Kunnskapsdepartementet. *Meld. St. 16 (2016-2017) Kultur for kvalitet i høyere utdanning*. Oslo; 2017.
- [4] Hansen CJS, Netteland G, Wasson B, Wake J. *Inquire Competence for better Practice and Assessment (iComPASS): Sluttrapport. SLATE Research Report 2019-2*, Bergen, Norway: Centre for the Science of Learning & Technology (SLATE). 2019. Bergen; 2019. 89 p.
- [5] Van Merriënboer JJ, Kirschner PA. *Ten steps to complex learning. A systematic approach to four-component instructional design (2ed)*. 2013. New York: Routledge; 2013. 332 p.
- [6] Hansen C, Netteland G, Wasson B. *Learning analytics and open learning modelling for professional competence development of firefighters and future healthcare leaders. CEUR Workshop Proceedings 2016; Volume 1601*. 2016. p. 87-90.
- [7] NOKUT. *Studiebarometeret 2013*. Oslo; 2014. Retrieved at www.studiebarometeret.no.