

A Decentralized Nursing Education

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Abstract

Education, recruitment, and retention of registered nurses (RNs) have been a concern in rural and remote regions in Norway, and particularly in Northern Norway. This challenge has been addressed since 1990 through the establishment, at UiT The Arctic University of Norway, of decentralized nursing education (DNE), which has developed a geographical distribution of health professionals throughout Northern Norway. The DNE program is organized as a part-time study covering four years. Students in the program are allocated into study groups according to their geographical affiliation. One nurse lecturer at each of the study centres holds the main responsibility of teaching and supervising students in the off-campus learning activities that constitute the core of the teaching and learning process. One week per semester, the students attend teaching and learning sessions on the main UiT campus in Tromsø. All clinical placements, except medical and surgical nursing at hospitals, are conducted in the municipalities where the students live. As of 2015, 430 students had graduated from DNE, and 87.5% had their first employment in rural municipalities. In 2012, 85% still worked in the rural community. More than twenty years of delivering decentralized nursing education has proven to be a success regarding the aim of contributing to a sustainable nursing workforce in rural and remote areas in Northern Norway. The DNE program has a secondary success factor in providing women in rural and remote areas with access to higher education and working opportunities in their community. It has also become a model for similar professional study programs in Norway. This report is part of a special collection from members of the University of the Arctic Thematic Network on Northern Nursing Education. The collection explores models of decentralized and distributed university-level nursing education across the Circumpolar North.

Keywords: recruitment and retention, nurse education, community health, blended learning, rural communities

Background

Equitable access to health care services requires an adequate health workforce in rural and remote areas. Education, recruitment, and retention of registered nurses (RNs) have been a concern in rural and remote regions in Norway, and particularly in Northern Norway. This challenge has been addressed since 1990 through the establishment of decentralized nursing education (DNE) to develop a geographical distribution of health professionals throughout Northern Norway. Prior to the first intake of students, UiT the Arctic University of Norway (UiT) initiated an extensive collaboration with political, health service, and public administration stakeholders in rural and remote municipalities. In the beginning, the DNE was funded by the Norwegian government as a special measure, but it is now part of the university's regular education portfolio. The DNE program is organized as a part-time study covering four years, as opposed to the three years it takes for the full-time BA nursing program.

Preceding Measures

Recruiting health professionals to rural and remote areas has been a challenge in Northern Norway as well as globally (Alexandersen, Jørgensen, Østerås, & Hasvold, 2004; Buykx, Humphreys, Wakeman, & Pashen, 2010; Eley, Synnott, Baker, & Chater, 2012; Nilsen, Huemer, & Eriksen, 2012; WHO, 2009). To address this shortage in Northern Norway, one assumed that a reasonable measure would be to educate students living in the communities that they were likely to work in upon graduation. In Northern Norway, youth living in rural and remote areas complete university education to a lesser extent than those living in urban areas (Statistics Norway, 2014). The numbers of people attending higher education is increasing, but the differences in rural and urban municipalities still remain (ibid).

This discrepancy in education made it obvious that appropriate measures had to be taken in order to recruit students from rural areas, make higher education possible for people living outside urban areas, and secure them as part of the health workforce in rural communities. This was done through collaboration with stakeholders in a selected number of communities in order to facilitate future students qualifying for higher education; to establish local study premises; and to establish clinical placements and support services for students in need of practical arrangements throughout the program. This collaboration was essential in establishing the DNE and was a precursor for establishing the existing study centres in the county (Figure 1). Educational activities and

extensive collaboration with health professionals in the communities have contributed to professional growth in small and rural communities that previously lacked qualified staff.

Summary of Experiences with Decentralized Nursing Education

- DNE exam results are comparable to those in the full-time program
- The DNE program has initiated and evaluated blended learning approaches and the real decentralization of education with sites off campus
- Registered nurses who graduate from DNE start, and continue to work, in rural communities
- Of candidates who completed nursing education through DNE, 97% completed in the prescribed study time (Norbye & Skaalvik, 2013)
- Primary expectations in providing rural communities with a stable health care workforce are reached
- A large number of DNE graduates have enrolled in, and completed, continuing education
- The education model is developed in close collaboration with students and with professionals within education, health care services, and local public stakeholders (Norbye & Skaalvik, 2013).

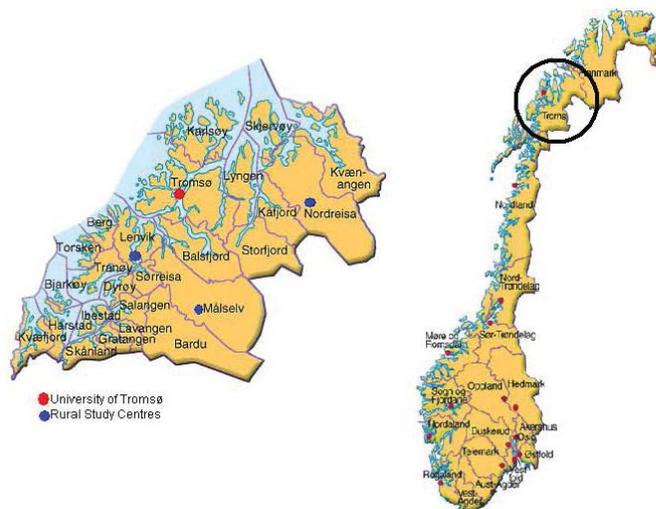


Figure 1. Norway and the county of Troms, with its rural study centres

The establishment of the DNE program was justified by a particular need for nurses, and the realization of the program was based on a constructive dialogue and in co-operation with local government and regional policy stakeholders. This dialogue and co-operation has been an important, but little-noticed, dimension in offering decentralized higher education. Through this dialogue, the communities have taken ownership in the education that one rarely finds for other educational programs. This has triggered local involvement that has been valuable in the process of enhancing the best possible conditions for DNE. For example, leaders of health services are active in recruiting candidates suitable for nursing education; and municipalities are making teachers' offices, library services, and study rooms available. The fact that mayors from some of the sites found time to participate in the twenty-fifth anniversary celebration of DNE proves the local involvement and engagement.

DNE in the county of Troms has prioritized local affiliation. Initially, two university lecturers had their workplace in rural communities. This is an important factor in the DNE program, and at present there are five university lecturers at geographically distributed study centres to accommodate the increased number of students. Some of the university lecturers combine nursing practice with their teaching position. This combination is a valued contribution for their teaching, even though it is difficult at times for the lecturers to combine the different work demands due to shift work and colliding activities. The extensive presence in the community has created close connections with local policy-makers and health care services, and thus become important and useful partners in developing the rural region in general. The increased attention on community health care services, as well as other challenges in the region, has become a more conscious focus for the program. The educational content has thus undoubtedly developed a new and important dimension compared with the full-time program.

Implementation

The DNE program was the first of its kind in Norway. The argument to establish the DNE referred to a national Norwegian government White Paper. nr. 41 (87/88), which stated: "It is important to further develop part-time education and decentralized nursing education in order to make it possible to combine family responsibilities with paid work." Even while the preliminary work was in progress, the plan received large and mainly positive attention. From originally being an emergency measure, the DNE has since been continued and further developed, and it is currently a regular as well as sought-after part of the education portfolio of UiT.

Model

The DNE delivers a bachelors program in nursing to students from and living in rural areas in the county of Troms. Normally, nursing education in Norway is a three-year full-time program. The DNE is organized as a part-time program, lasting for four years and qualifying for general registered nursing competence according to the Norwegian National Framework for Nursing Education (Ministry of Education and Research, 2008).

Structure and Localization

Students in the DNE are allocated into study groups according to their geographical affiliation. Initially these groups were located according to the number of applicants and where they lived. Over the last fifteen years, the student groups are allocated to permanently established local study centres. These rural study centres are important as they provide classroom facilities and space for students' individual self study, group sessions, and lectures and sessions with the nursing lecturer. The study centres also serve as sites for the students to sit exams carried out by the university (Figure 2).

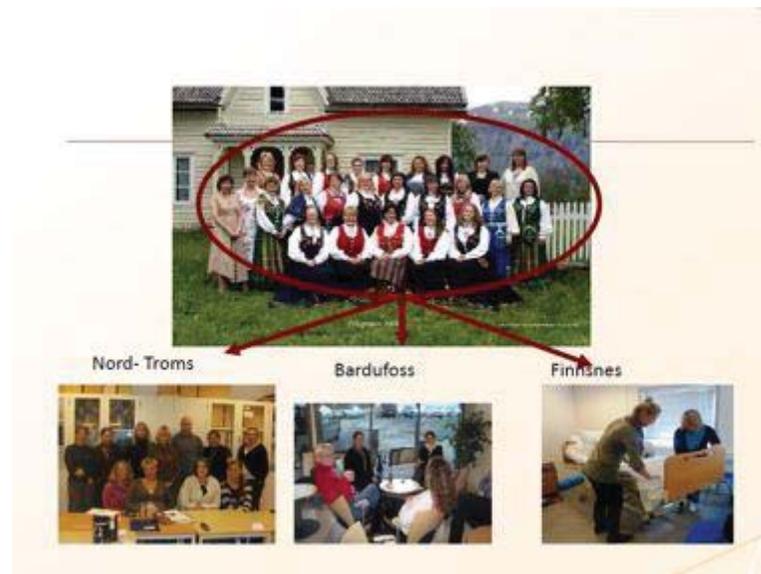


Figure 2. Distribution of students to off-campus sites outside Tromsø

The majority of the students have other competing responsibilities as part-time work and/or family commitments in addition to their nursing study. The teaching and learning activities for each student group are scheduled for two days a week at each group's study centre, in periods with theory and skills training. This helps to maintain a continuous study activity as well as helping the students to fulfill their study requirements. These weekly sessions for the student groups are the core element in the program. The students take part in pre-planned learning activities, including theory based classes and skills training. This builds on socio-cultural teaching and learning principles as described by Vygotsky (1978). The teaching and learning processes as a whole include a variety of learning activities that involve students using the online platform for preparatory learning; lectures in a week-long session on campus; or a webcast or video-streamed lecture, local session(s) on theory and/or skills training, and clinical placements (Figure 3). To strengthen students and learning in connection with streamed online lectures, they can request extra lectures on special topics that they find difficult to study on their own.

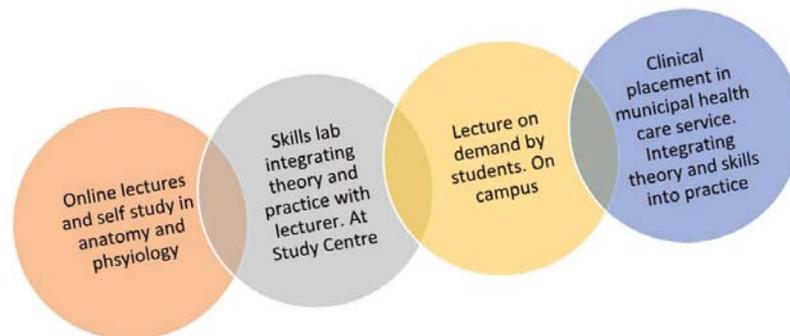


Figure 3: Example of an integrated module in general nursing theory and practice, as a blended learning approach.

Faculty

Nurses working and living in the region were recruited as lecturers for the different geographical study groups. In order to recruit local teachers it has been important to interact with local authorities and health administrators in rural municipalities to ensure recruitment of good candidates. They have been supported in qualifying for the teaching positions due to formal requirements as lecturers. The lecturers now hold the same qualifications as those teaching and supervising on-campus students.

One nurse lecturer at each of the study centres holds the main responsibility of teaching and supervising students in the off-campus learning activities that constitute the core of the teaching and learning process. The lecturers had worked as nurses in the respective regions and so had first-hand knowledge of the health care services. This knowledge was used to conclude agreements about clinical placements and to introduce the nursing curriculum to community health services that were not familiar with facilitating for nursing students' clinical placements.

The lecturers' responsibilities are multifaceted and include being the university's first point of contact for nursing students. Further, the lecturers are responsible for carrying out teaching and supervision according to nursing theory, skills training, and integration of theory and practice in preparation for clinical placements. The lecturer is also responsible for clinical supervision and assessment during clinical placements. The closeness between students and lecturers has contributed to the students' learning process through flexible and continuous supervision and support for both professional and practical issues. The rural anchoring, with regard to local lecturers delivering the university program, has been the cornerstone of this program.

From the very beginning of the DNE, one was aware of the importance of the DNE teaching team being part of the university community despite geographical distances. Personal challenges, such as professional loneliness, have been avoided through regular participation in university meetings by using the Internet and video-conferencing in order to facilitate contact and reduce the need for time-consuming travel. Staff meetings and seminars are also organized at off-campus sites with participation of on-campus staff. To some degree, the work requirements are different for lecturers off-campus. They face demands and challenges in developing educational approaches adapted to flexible teaching and the students' learning process. This requires being able to work independently and to find suitable solutions for the students at their specific location with its distinctive characteristics.

Campus Activities

One week per semester, the students attend teaching and learning sessions on the main UiT campus in Tromsø. During this week, the students are introduced to new subjects in lectures conducted by numerous nursing lecturers by on-campus faculty. Skills training requiring advanced equipment and simulation are also part of these residential sessions. During the week, the students meet the student groups from other rural communities and benefit from participating in a wider learning environment. They also have social gatherings outside scheduled lectures, which is important for study motivation.

Clinical Placements

All clinical placements, except medical and surgical nursing at hospitals, are conducted in the municipalities – in nursing homes; in home-based care for people with long-term and complex conditions; in psychiatric home-based care; in public health care stations; and in regional district medical centres, both in psychiatric and somatic care. Nurses in these workplaces function as clinical supervisors on a daily basis and are offered courses in supervision at UiT. Other health professionals such as physicians, physiotherapists, and stakeholders in health services have also been involved in giving lectures to the students, and they have highlighted the challenges in community health care services for the students. Through this, key personnel and experienced clinicians become more familiar with, and have an influence on, nursing education that provides the students with perspectives on how general knowledge must be adapted to local conditions in order to meet specific needs and challenges.

Teaching and Learning Strategies

The teaching and learning philosophy of the DNE can be described as a *blended learning* approach (Holmes & Gardner, 2006) including traditional and online learning activities, and with local study groups as the core. The learning activities for students are based on a combination of students' individual self-studies, group work with and without supervision by their lecturer, and participation in online or live-streamed lectures. This is all structured in the timetable on the web-based learning management system (LMS) that is available for the students throughout the study. Video streamed lectures in, for example, anatomy and physiology, are available as a learning resource for the students throughout the whole program and allow repeated study work when necessary. Real-time, face-to-face

video-conferencing is used to facilitate lectures on subjects that need to be updated frequently according to professional development standards. This may include lectures given by faculty on campus

Recruitment and Retention

The aim for the DNE program was to strengthen the nursing workforce in rural and remote communities in Northern Norway. The applications have, from the first group, been very good, with an average rate of twice the applicants for the number of study places (NSD Statistics, 1994–2012). The applicants must meet the same eligibility requirements as any student entering higher education in Norway.

The number of places for each centre has increased over the years. Initially, in the 1990s, the intake was thirty students divided among selected rural communities. The DNE study model has, since 2005, included one study group with an on-campus location for students near Tromsø with responsibilities outside work and in need of part-time study. Since 2011, seventy students have been accepted every two years. The applicants themselves must decide their affiliation to a study group. UiT the Arctic University of Norway advertises the educational program in regional newspapers, and the health services in municipalities reach out to potential applicants. Information meetings are arranged locally. As of 2015, 430 students had graduated from the DNE, and 87.5 % had their first employment in rural municipalities. In 2012, 85% still worked in the rural community (Norbye & Skaalvik, 2013). Fifty-six percent have completed continuing education courses (Ibid.).

In studies of the DNE it has been found that 97.3% of the 315 students who had graduated between 1990 and 2011 completed the education program within the stipulated time (Norbye & Skaalvik, 2013). Similar to nursing education in Norway, in general, the majority of the students in DNE are women (Statistics Norway, 2009). The average age has varied between 29 and 31 years. The students report family responsibilities, the possibility to combine paid work with studies, and the ability to live in their home community as the main reasons for choosing the DNE. Furthermore, 56% of graduates from the DNE, being accustomed to this specific study model, seek continuing education offered in clinical specializations such as mental health care and care for the elderly (Skaalvik, Gaski, & Norbye, 2014). The educational model with local study groups as the core, and local teachers, is experienced as pivotal for the students' progression and lack of drop-out from the study.

Lessons Learned

More than twenty years of delivering decentralized nursing education has proven to be a success regarding the aim of contributing to a sustainable nursing workforce in rural and remote areas in Northern Norway. The DNE also has a secondary success factor in providing women in rural and remote areas with access to higher education and working opportunities in their community. It has also become a model for similar professional study programs in Norway. Over the years, the model has been developed and adjusted in accordance with national guidelines, teaching and learning philosophies, and activities now possible through digital technologies. It is said that “necessity is the mother of invention.” This truth has been part of the development of the DNE in an effort to meet the demand for flexibility in decentralized education without compromising high quality in the teaching and learning process. It has been interesting to observe that the teaching and learning strategies developed as part of the DNE model have, in their initial need for flexible solutions, become part of on-campus teaching and learning activities as student active pedagogy that meets all students’ need for flexible learning.

The study model, with a large proportion of local study activities, represents high costs for the university, including expenses for local lecturers travelling to the university in Troms to attend meetings. Travelling within the county during the winter can be a challenge due to snow, blizzards, and the rough climate. Renting teaching spaces and offices for the local teachers also represent costs for the university.

Lectures delivered through video-conferencing have proven unstable and in need of IT support that is not necessarily available all the time. The IT problems that sometimes disrupt learning activities must be addressed in order for the program to be sustainable and dependable enough for students to attend. However, the conclusion is that these challenges are minor and are outnumbered by the advantages of the study model for students, the municipalities, and the university. The DNE has been innovative in using flexible and student-active teaching and learning. This can be illustrated by reflective learning processes enhanced by using an online discussion forum that allows students to participate in discussions in their own time (Norbye & Tøllefsen, 2012).

In Norway, health care systems have experienced extensive change since the 1990s, reflecting shifts in economic, cultural, and political contexts, including staffing crises and demographic changes. A main feature of the implementation of the recent health care reform (Coordination

Reform, 2009) is the devolution of health care services to municipalities. Consequently, municipalities must develop new ways of delivering and organizing health care services to ensure equal health services delivered to rural as well as urban municipalities.

Internationally, the literature states that professional education has not kept pace with the challenges in health services, largely because of fragmented, static, and outdated curricula (The Lancet Commission, 2010). The problems are systemic and involve a mismatch of competencies to patient and population needs, poor teamwork, and narrow technical focus without broader contextual understanding. Benner et al. (2010) claim that there is a considerable gap between the content of nursing education today and required work demands. There are multiple reasons for universities to develop and continue a close co-operation with rural health care services in order to deliver nursing education to rural areas that meets the challenges in the delivery of equal health services. For many years, municipalities in Northern Norway have recruited registered nurses from urban areas and other countries through financial incentives. This was not a sustainable solution in regards to continuity in and quality of the health care services. Decentralized nursing education has proven to be a measure for the future.

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