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"Balancing two worlds": a constructivist grounded theory exploring distributed/decentralised nursing education in rural and remote areas in Canada and Norway

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ABSTRACT

A challenge confronting northern nursing is delivery of equitable and culturally competent nursing education. Advances in technology support distributed approaches for decentralised learning and enhance the feasibility of nursing education in rural and remote regions. However, there is limited scholarship on distributed/decentralised technologies in nursing education, particularly in northern and circumpolar regions. The purpose of this constructivist grounded theory research was to develop an enhanced understanding of the unique experiences of students, faculty and administrators who use distributed/decentralised methods and technology. Open-ended interviews were completed in 2015–17 with nursing students ($n = 8$), faculty and administrators ($n = 6$) at two universities using distributed/decentralised educational strategies in northern and circumpolar regions. Interviews, journal entries, field notes and memos, were analysed using grounded theory procedures. Findings indicated that distributed/decentralised programs offered rural and remote students educational possibilities that "fit" which would not have otherwise existed. However, Balancing Two Worlds created a collision of roles resulting in the potential loss of balance. Students rectified the Fear of "Falling Off" of their program through four subprocesses: Being Disciplined, Having Realistic Expectations, Planning Ahead and Staying Motivated which provided structure and predictability. Findings support the development of empirical knowledge regarding distributed/decentralised technologies in nursing education and a foundation for future research.

The health and lifespan of Canada's rural and northern populations are generally poorer than the southerly metropolitan populations [1]. This is due to poorer determinants of health including a lack of education, lower socioeconomic status, lack of housing, food insecurity and decreased access to services compared with the southern Canadian population [1,2]. The northern territories of Canada rely on the system of community health centres, and these areas have lower rates of educating, recruiting and retaining nurses [3]. Similarly, rural communities in Northern Norway are less densely populated and the number of ageing people is increasing. Similar to Canada, Norway faces challenges when recruiting healthcare professionals in rural and remote communities [4]. A prominent solution to this issue involves decentralised nursing education (DNE) programs, which enable students to attain a nursing degree using technology and digital learning without leaving their rural or remote community.

Decentralised, distributed, or blended learning is defined as a combination of face-to-face instruction with technology-mediated instruction, where many of the participants in the learning process are separated by distance [5]. There are several benefits of related teaching and learning including the negation of problems of geographical distance between instruction sites and focuses on learner-to-learner and instructor-to-learner interactions [5]. Additionally, the flexible learning methods help students gain knowledge and promote stability in small healthcare environments in outlying regions [6]. According to Eriksen and Huemer [6], with decentralised Bachelor of Nursing degree programs in Norway, the locally recruited nurses are expected to have a heightened understanding of northern health issues along with knowledge of their local culture and language. It is necessary that nurses who are to be recruited in rural and remote areas, be well prepared in practicing nursing and should be able to engage with

the community to adequately provide for their needs. Notwithstanding, there are also challenges associated with decentralised, distributed, or blended learning. Eriksen and Huemer [6] discussed the challenges associated with the location of study sites which may still limit where the recruited students come from. Also, previous studies indicated excessive turnover of staff, long-term vacancies and lack of collaboration between local government administration, local health authorities, politicians and the related university on the basis of established legislative regulations and plans [5,6].

UiT The Arctic University of Norway (UiT) established their DNE program in 1990 with the main campus located in Tromsø, and nine additional campuses now established in a variety of rural and remote areas [4]. The program's first objective was to offer higher education to students living in rural and remote areas. The second aim was to strengthen the nursing workforce [4]. The Bachelor Program in Nursing in Norway is a three-year full-time programme, but the rural DNE program extends the program to 4 years. Students attend four of six compulsory clinical placements in their rural region; however, the medical and surgical placements are completed at the University Hospital of North Norway (UNN), and each placement takes place over 8 weeks. The theory and the simulation training are predominantly delivered at the rural study centres with local nurse lecturers in combination with online learning from the main campus in Tromsø [4]. Similarly, based on the distributed learning method, the College of Nursing in the University of Saskatchewan (USask) introduced the "Learn Where You Live" program to provide accessible and high-quality undergraduate nursing education to northern, rural and remote communities including La Ronge, Île-à-la-Crosse and Yorkton [7]. The program began in 2011 and uses technology to allow students and instructors to access courses and programs in the College of Nursing remotely. Specifically, teaching and learning takes place through a blended-delivery model which includes theory classes that are taken face-to-face and by video conferencing, web conferencing and Blackboard/Canvas online. Additionally, the nursing students engage in their clinical placements with local nursing instructors/preceptors in a variety of settings (e.g. local or nearby schools, health centres and acute care hospitals) and at times are placed in larger hospitals in the central part of the province, for up to 4 weeks. The program has provided a high-quality, dynamic and engaging learning environment maintaining high standards of academic quality and service, as in any classroom setting [7].

With the advancement of technology, nursing education has become feasible through decentralised learning methods in rural and remote regions. Additionally, given the growing popularity of these learning methods, gaining a more comprehensive understanding of students' and faculty members' experiences with this type of learning is timely. However, there is little research assessing the experiences of instructors and nursing students within DNE programs. Thus, the primary purpose of the study was to gain insight into the unique experiences of students who learn using decentralised/distributed methods and technology. The specific objectives were to learn about the challenges faculty members faced as they taught students through this method where they are not physically present with students; explore the meanings and processes of students, faculty and administrators engaged in decentralised/distributed learning; and develop an emerging substantive theory that may guide future development and revision of DNE. The guiding questions for this research included the following:

(1) What does decentralised/distributed learning mean to instructors, administrators and students?
(2) What are the experiences of the instructors, administrators and students who participate in DNE?
(3) What are the social processes of engaging in DNE for students, faculty and administrators?
(4) How does DNE influence the teaching, learning, recruitment and retention of local nurses?

Notably, the findings of this study will help understand the challenges faced by those involved in decentralised nursing programs and will support effective pedagogy that can be used in preparing nursing students for nursing practice in rural and remote northern areas of Canada.

Methods

Design

Charmaz's [8] constructivist grounded theory approach was used to explore the experiences of students, faculty and administrators who engage with DNE. Open-ended interviews were conducted by the first and second authors with nursing students, faculty and administrators at two universities who had implemented distributed/decentralised educational strategies in northern and circumpolar regions. The data collection, data analysis and theory development were in reciprocal relationships with each other, following an iterative process of constant comparison within and among data, theory and the researchers' field notes and memos [8].

Specifically, a qualitative, constructivist grounded theory approach is a collective process involving both researchers and the participants; this allows for the possibility of multiple perspectives of reality [9]. According to Charmaz [10], "grounded theory methods consist of systematic yet flexible guidelines for collecting and analyzing qualitative data to construct theories grounded in the data" (p. 2). The researchers can engage with multiple interpretations of the phenomenon of interest. Charmaz's [8] approach to grounded theory identifies personal and professional experiences of the participants, enhancing the knowledge of the extant literature to challenge established viewpoints and aid in a new understanding of a phenomenon under study [9]. The grounded theory method in this study helped the researchers to develop a substantive theory based on the experiences of students and instructors involved in DNE in two universities in Norway and Canada. Distributed/decentralised Nursing Education acted as a sensitising concept as was derived from participants' perspectives and helped in understanding the data that eventually became integral to the theory generating analysis.

Sample

Participants included nursing faculty, current nursing students and past nursing students who had experience with decentralised/distributed nursing teaching and learning. Because decentralised/distributed teaching and learning involves both rural and urban endeavours, participants from urban, and rural and remote settings were identified. Specifically, the inclusion criteria for the study were as follows: a) those who were freely able to provide informed consent, b) nursing faculty, administrators and students who were 18 years of age and older, c) any gender and d) those who had experience with decentralised/distributive education at the USask or the UiT. Participants were excluded if they were not able to provide free and informed consent, as determined by the experienced and qualified registered nurse researchers.

Initially, participants were purposively sampled based on their familiarity with, interest in, and willingness to reflect on and discuss their teaching and learning experiences using decentralised/distributive nursing education. As the study progressed and the main concern and basic social process emerged, theoretical sampling was used to select participants given the questions that arose from the data already obtained. According to Charmaz [8], theoretical sampling helps to elaborate and refine emerging categories and is conducted "to develop the properties of your category(ies)

until no new properties emerge" (p. 97). These sampling strategies helped to accurately reflect the participants' experiences and provided a tool for understanding those experiences.

Ethical considerations

The appropriate ethical procedures and approvals were obtained and operational approval was obtained from the related College Review Committees (Beh 15–125). Each participant was informed about the purpose and processes related to the research and then invited to participate. If the participant agreed to participate, they were provided with additional information about the study, and informed, signed consent was completed. Participants were informed about their voluntary participation, that they could stop their interviews at any time, refuse to answer any questions and withdraw from the study at any time with no questions asked. They were also told that their identity would be held in confidence, and that the findings of the study would be presented in peer-reviewed outlets such as academic conferences and publications, in aggregate form. None of the research team were engaged in teaching any of the students involved in the research at the time the study was conducted.

Data collection

Email invitations were sent out to the student body and faculty at each campus by a student advisor and research assistant in the fall of 2015 through spring 2017. Students and faculty were asked to respond to the invitation if interested in additional details about the study from a member of the research team. Once a participant was enrolled in the study, data collection was initiated following informed consent. The first two authors conducted all data collection activities to ensure consistency. Both authors were registered nurses with experience in collecting qualitative data. To begin, a demographic form was completed to capture data regarding basic participant information used to describe the sample. Subsequently, two audio-taped interviews were conducted with the participants. Specifically, following the completion of the demographic form, the first face-to-face open-ended audio-taped interview was held with each participant in a secure and comfortable room on the university campus in which the participant was comfortable and which was private and quiet. The interview guide provided a framework for the initial face-to-face interview with each participant and included questions such as "can you tell me about your experience with decentralized/distributive nursing education?"; "tell me about some

key features of decentralized/distributive learning" and "describe situations (examples) that affect your teaching or learning positively". The second interviews were completed two to three weeks following the first interview as a more in-depth examination of participant experiences, and to explore the related processes and concepts that changed over time. Although all participants were invited to engage in a second interview, 11 of the participants either declined due to scheduling conflicts, busy schedules or did not respond to our communication. Last, a third interview was conducted with three participants which allowed for additional clarification and confirmation of the emerging grounded theory.

Journal writing complemented the data collected during face-to-face interviews. Five participants agreed to keep a journal for approximately two weeks between the first and second interviews. A hard copy of a journal was supplied for each participant along with flexible guidelines to follow for the journaling activity. For example, each participant was asked to use the journal for approximately 10–15 minutes each day to record their thoughts and experiences related to distance/distributed teaching and learning to capture their ongoing experiences and changes in those experiences over time. Once completed, the journal was returned to the first and second authors and included as part of the data set.

As suggested by Charmaz [8], field notes were utilised throughout the research process to provide a description of the participant's environment, processes occurring in their environment, and non-verbal actions and behaviours. Field notes were created during and following each interview to aid in gathering rich data, and were transcribed and analysed throughout the research process. In addition, analytical memos were frequently written to capture the researcher's emerging ideas about what was going on in the data. After each interview, the first and second authors engaged in discussions about the data, analysis and developing grounded theory.

Data analysis

Charmaz's [8] constructivist grounded theory approach maintains the iterative data collection and analysis processes first developed by Glaser and Strass [11]. However, unlike the original grounded theory approach, Charmaz's constructivist approach supports the establishment of a close connection with participants which impacts the data collection and analysis and, thus, helps in developing the emerging theory, making grounded theory development a co-constructed endeavour [8]. With this approach, the researchers used a coding process where codes are "the building blocks" that help to make sense of field data [8]. Eventually, categories, subcategories and interrelationships are raised to higher-level abstraction and are described and explained in a comprehensive and figurative theory and model.

Thus, in the present study, the first phase of analysis took place after the first interview was conducted. The first two authors read the transcripts to develop a general understanding of the data. Then, initial coding was performed using a line-by-line process. The authors were open to explore whatever ideas came from the data, looking at all the possibilities as ideas emerged. The initial codes were provisional, comparative and grounded in the data [10]. The data from each participant were then compared internally and with data from the interviews and journals with every other participant. The data were coded as actions to avoid early theoretical leaps [10]. The initial analytical memos elevated codes to tentative categories.

Focused coding was the next phase of the analysis. In this phase, the authors used the most significant or frequent codes, which helped to sift through a large amount of data and make decisions about which initial codes made the most analytic sense. The data were entirely categorised in this phase [12], and were reviewed multiple times for words, phrases and concepts missed in the initial reading. The focused coding phase was active as the researchers analysed the data, allowing concepts to emerge.

In the third phase, theoretical coding, memo writing, theoretical sampling and data saturation helped to generate a theory grounded in the data to explain the phenomenon. According to [13], theoretical coding adds precision and clarity and aids in making the analysis coherent and comprehensible. Constant comparison was used to gain theoretical sensitivity, facilitate theoretical sampling, refine the categories and raise them to an increasingly higher level of abstraction. Memo-writing kept the authors involved in the analysis and helped in increasing the level of abstraction of the ideas, whereas theoretical sampling was used to elaborate and refine the categories which helped in constituting the theory (Charmaz, 2006). Theoretical saturation was determined by the authors when gathering more data about a theoretical category revealed no new properties nor yielded additional theoretical insights about the emerging grounded theory and a good understanding of the topic was achieved (Charmaz, 2006). Overall, constructivist grounded theory informed the emerging analysis and allowed the authors to make fresh theoretical connections.

Rigour of the study

Rigour was established in this study by building systematic checks into both data collection and analysis (Charmaz, 2006). Specifically, to achieve credibility, the first two authors debriefed about the information after the participants finished their individual interviews to clarify meanings and understanding. The authors developed field notes, memos and categories during the analytical process. Discussions between the authors and colleagues regarding assumptions and possible alternative ways of looking at the data helped refine the categories and establish greater credibility. Originality can be achieved if the research offers a fresh or deeper understanding of the studied phenomenon and makes an original contribution (Charmaz, 2006).

In this study, new conceptual categories were made, which offered new insights into the data. "Balancing Two Worlds" provided new conceptual rendering by the participants who try to balance their personal and professional life with DNE program. The social significance of this study lies in its contribution to improving DNE in rural and remote areas in the northern context. In addition to this, the theory may be used to support students to overcome the challenges they face during the program. A strong combination of credibility and originality increases resonance, and in this study, the researchers applied data gathering strategies to illuminate participants experiences (Charmaz, 2006). The resonance in this study was demonstrated by revising the questions between their interview times and by the first two authors taking time after interviews to debrief together and to gain deeper understanding of the participants' thoughts about their programs. The students wrote in journals where they shared each day's experience which ultimately helped in constructing various concepts. The analysis done by theoretical coding, memo-writing and theoretical sampling added more profound insights into the background of students and instructors about their lives and worlds. In terms of usefulness, the findings may support nursing faculties in better understanding how to recruit and retain nurses by fitting educational programs to rural and remote areas. This may not only enhance registered nurse recruitment and retention but also contribute to employing nurses with local knowledge including cultural safety. The analysis offers interpretations that can be used in the future and may spark future research in other substantive areas of nursing education.

Findings

The sample was comprised of 14 participants including students ($n = 8$), faculty ($n = 4$) and administrators ($n = 2$) from the USask in Canada and the UiT in Norway. The participants ranged in age from 26 to 58 years, were either of European ($n = 13$) or mixed ($n = 1$) decent and lived in an urban ($n = 3$) or rural setting ($n = 11$). There were 10 participants who were recruited in Norway and four from Canada. All participants were engaged in decentralised/distributive nursing education ($n = 14$) (see Table 1).

The context

The findings of this study are situated within the participants' experiences of engaging in DNE in rural and remote areas in universities in Norway or Canada. The participants expressed their ongoing and persistent struggle associated with managing their professional and personal worlds with their academic world. The role of nursing faculty and administration who help maintain this balance was also an important aspect of

Table 1. Demographic characteristics of the sample.

Sample Characteristics n = 14	n
Position/Role	
Manager/Coordinator of Program	1
Headmaster of Nursing Program	1
Student	6
Faculty	4
Graduated Student	2
Location	
Urban	3
Rural/Remote	11
Canada	4
Norway	10
Length of Time for Travel	
0-20 minutes	12
20-50 minutes	1
Over one hour	1
Religious Preference	
Christian	7
None stated	7
Gender	
Male	2
Female	12
Age of Participant:	
20-29 years	4
30-39	2
40+ years	8
Years of Education	
In Bachelor of Nursing Program	6
Bachelors Degree/Post Graduate	8
Marital Status	
Married/Common Law	12
Divorced/Separated/Widowed/Single	2
Ethnicity	
European	13
Mixed	1

the context within which the students engaged in learning. The analysis of the data revealed the challenges faculty and administrators faced in assisting students to achieve their goals without being physically present in the classrooms/institutions in which students learned. Teachers in this study observed that when the students work full time, they find it challenging to manage their studies and, ultimately, experienced limited ability to achieve an academic standing to the level they wished. Students also had family responsibilities that often required their constant attention. Due to its accessibility, decentralised learning seemed to attract students who had significant life responsibilities, as mentioned, and this particular demographic of students also had consistent family responsibilities (e.g. partners, spouses, children, ageing parents) [6]. Last, the context included the course plan which was given to students to help them plan the entirety of their study schedule ahead of time and synchronise it with their work schedules and family life accordingly.

The main concern: fear of "falling off"

Within the context described above, the students in this study ultimately wanted to complete the nursing program and be able to practice as registered nurses. The students wanted to excel in life endeavours, while simultaneously upholding a successful career. However, the balance was challenging as the average age of the students in this study was 30 years and as such, most students had multiple responsibilities including their partner, children and providing critical financial support for day-to-day living, along with the typical pressures of post-secondary education. As such, the students felt this collision of roles placed them at high risk for falling off and as a result, feared the related consequences including leaving their living place, resigning from their current positions or both due to financial concerns and family responsibilities. One student stated: "I feel sort of stuck between two worlds that are studying and working" (P008S). Another student voiced his concern that living in remote areas trying to balance two worlds often caused a fear of "falling off" (P007S) or in other words, having to "drop out" of their program or fail at balancing their studies and life responsibilities.

Thus, the Fear of "Falling Off" was the main concern among the participants in this study because they were seeking success in all aspects of life for which they were responsible. As one student (P003S) stated:

> I had a job or had a job that I like, and I wanted to continue that job. But I also wanted to get another education. So, my job was in the military and then

I didn't want to stay there for the rest of my life. But I would like to stay there for some more years. So, I wanted to, yeah, I wanted to continue working and then get the nursing education at the same time. And, I can't do that if I went to school full time.

To be successful meant to achieve their dreams, as one participant explained, "And then for them, this is a very good opportunity to follow their dreams" (P002S). Another student who was working on helicopters aspired to work in a medical helicopter and stated that to be successful, he needed to upgrade his career. With the DNE program, he was about to accomplish his dream to be in a medical helicopter. He stated, "You have to be either a nurse or a full licensed ambulance driver or a doctor. So, those three groups" (P007S). One of the students applied to the program to stay with family as she completed her studies. She (P0012S) said:

> I already have a background in the medical field because of my college diploma so I knew that it was something that I wanted to do and when my husband found a job in this new town that was being able to come here and do the program was one of the reasons I - I agreed to move back to [the new town] with my husband.

An instructor also pointed out what success in achieving her goal meant for her. She (P0014I) stated "I want students to be able to think critically. I want them to be able to understand what their role is". To succeed, she felt that she needed to make sure the students achieved the desired goals of the program and be a successful registered nurse in their community.

Most of the students wanted to explore different careers due to the monotony of their previous professions and their desire to practice nursing as a means to upgrade their career options. Still, at the same time, they were concerned about "Falling Off", given their life responsibilities and current jobs. However, Balancing Two Worlds enabled them to succeed, and ultimately, achieve their goals while dealing with other responsibilities at the same time, and staying in their own communities with their partners and children.

Basic social process: balancing two worlds

The basic social process generates a theory around a core category [14]. According to Charmaz (2006), the basic social process is fundamental to the grounded theory method and helps to gain a more complete picture of the entire theory in each study. Balancing Two Worlds was the basic social process central to all the data in this study, and for the students, this involved managing their personal and professional

lives with their current academic life so as to remedy their main concern, the Fear of "Falling Off".

Thus, the students chose decentralised education to try to successfully balance their two worlds, and ultimately, succeed in achieving their goals. On the other hand, faculty members and administrators shared their experience of teaching and managing the students, and the challenges in preparing a student-centred curriculum to help them achieve their goals as they balance their professional and personal worlds with their academic world. Overall, as the students managed these two worlds, they needed to demonstrate perseverance and dedication throughout the entire program.

The subprocesses of balancing two worlds

Four subprocesses described the way in which the participants were able to Balance their Two Worlds including Being Disciplined, Planning Ahead, Establishing Realistic Expectations and Staying Motivated.

Being disciplined

As a subprocess of Balancing Two Worlds, students and instructors both felt that Being Disciplined was necessary throughout the course. As one student (P007S) explained:

> In order to be successful in this kind of program, it helps if you are a disciplined student. You have to be … disciplined … you have to do it. You can't just leave it. You have to read at … on your own. It's not an option not to.

As the students did much of their studying at their own pace, they must stay regimented which was reported to be challenging, given all that each student was balancing. For example, another student (P002I) shared her perspective on being disciplined by stating:

> But some students think it's best to watch them (recorded lectures) on their own. So, that's a really good thing about it. And I have to say that it's a lot of self studying in this decentralized program. We don't have as much time face-to-face with the teachers at their full-time program here at Tromsø University. So, you have to be a little bit disciplined to do this.

Similarly, according to faculty and administrators, to be successful in a decentralised program students required dedication and discipline. One faculty member highlighted the importance of being disciplined by stating the critical nature of daily readings and keeping up with the strict regimen. She stated: "You know, in terms of the readings and making sure that they're moving a long through the course content. They can easily just get lost

in that" (P014I). Being disciplined was an important sub-process as students were able to stay focused on succeeding in achieving their goals. It helped students to stay in control of their personal, professional and academic goals, and was necessary in order to finish their course on time.

Planning ahead

The second essential subprocess was Planning Ahead. Planning Ahead was necessary in order to maintain the balance between their professional and personal worlds and their academic worlds for both students and faculty, particularly with regard to learning and teaching perspectives. The course plan, given at the beginning of the program, helped students formulate their 4 years of study and predict their professional and personal lives. One student (P007S) stated that:

> You know what's coming and you can work ahead a little bit. It's best to make yourself a plan for, okay, I'm going to read this today and that tomorrow. And if you don't read it today you have to do double tomorrow, right.

The students who opted for this program often found themselves struggling with numerous responsibilities. It was crucial for them to manage their time for their studies and prepare ahead to stay on top of the course plan. Therefore, planning ahead allowed the students to "predict" their life path moving forward. Predictability helped these students to be successful in meeting their significant academic pursuits and life challenges. Unlike other programs, given this is a distance course, the faculty kept moving forward with the course plan and related syllabi, and if the students failed to keep up, there were chances that they would "fall off" (P007S), as one student put it. In addition, the faculty and administrators found effective planning was vital to support students in achieving the learning outcomes. One of the faculty shared the advantages of planning ahead by stating: "And, they can make plans, they can plan holidays, they can travel, and they can see how their lives will … is this … if they can do the program" (P004I). By mapping out the course of action in advance, students avoided or reduced unnecessary stress, and the program produced more productive and effective learning experience for the students.

Establishing realistic expectations

In order to Balance Both Worlds students needed to be realistic about the program expectations and the stress when managing all that they had to do. Some students described themselves as mature students and had varied non-medical backgrounds. For these students, the program was more challenging. A student expressed

her concern by sharing her fears related to maintaining the balance between studies and stated: "I sort of think that barriers like this [advanced age and different professional backgrounds] can be a reason for a few to quit or drop out" (P002S).

Realistic expectations allow the student to create a coping plan. As the students dealt with various issues of life, beside studies, adjusting the expectations helped to plan for challenges and look for other options. Faculty members and administrators helped them find those options, with the aim to achieve the goal. One of the faculty members stated that she asked students "What do you want me to do?" (P013I), allowing them to voice their concerns and together look for solutions. The faculty had to be flexible and put more effort into helping students establish realistic expectations for themselves within the program in which they were enrolled. The instructors helped students in many ways such as by actively listening to students and building a close and supportive relationship with them. Therefore, it was necessary for students to establish realistic expectations which ultimately helped them to make significant learning gains. Similarly, it was important for faculty and administrators to design courses keeping in mind students' achievement level and what was within their grasp.

Staying motivated

Motivation also played an important part in each students' life. By staying motivated, students were encouraged to continue dealing with their struggles of balancing their professional and personal lives with performing well throughout their nursing program. As the students were not always in direct contact with instructors, at times, they were not enthusiastic and felt like they lacked the motivation to achieve the course outcomes. However, recognising the importance of staying motivated, students discovered the motivation in different sources including family, instructors, employers and peers. One of the students stated that "we are not always motivated" (P003S). For some students, their family and friends helped them stay motivated, encouraging them to achieve good grades and excel in their studies. One of the students shared the importance of family by stating, "You have the support from your family. In Tromsø I was very alone and so when it's tough you are alone, several times of travelling to come home to parents or sister and brother. And so my family gave me support" (P009S).

The faculty members also felt that they had to keep students engaged and motivated as they worked through their courses. One of the faculty members (P012I) voiced her concern by saying:

That's one of my main issues when I'm a teacher. I think if I can, as close as possible, with the students, influence them with my experience, ethically and as a skilled instructor. I like that very much. I find that this is a very inspiring role, an important role. Because these students, they are, they have - all our learning and teaching activities are meant to be as high quality as possible… Because these are the nurses we're going to meet at the - in our municipalities and in our hospitals in the coming two, three or four years.

As faculty kept students motivated, they supported students in producing higher-quality effort, to learn more deeply, and perform better in the program. Family also helped to motivate students and played a crucial part in their journey.

Description of the grounded theory model: balancing two worlds

The students in the two DNE programs in Canada and Norway described the challenges they faced while studying throughout the course of their BSN degree within the context of distributed/decentralised teaching and learning in rural and remote settings. In the model, the beam represents the basic social process, Balancing two Worlds (Academic Life, and Professional and Personal Life). If a student who was enrolled in a DNE program does not maintain balance, they may Fall Off, meaning they may have to drop out of their academic program or face failure in other areas of their personal and professional lives. The main concern is represented by thought bubbles on either side of the beam. To manage their main concern of Falling Off, students must engage in the related subprocesses including Being Disciplined, Planning Ahead, Establishing Realistic Expectations and Staying Motivated. The four subprocesses are represented by opposing arrows at either end of the balance beam which exert pressure on the beam and can tilt the balance either way (see Figure 1).

Discussion

The developing, substantive grounded theory of Balancing Two Worlds is contextually situated in DNE programs offered in rural and remote settings. It is based on the experiences of students, instructors and administrators who are part of DNE. The main concern of the students was the Fear of "Falling Off" which meant succeeding in achieving their goals of becoming registered nurses in their own communities. They faced the challenges related to the Fear of "Falling Off" through Balancing Two Worlds, including their academic studies and other life responsibilities which for all students meant significant social relationships,
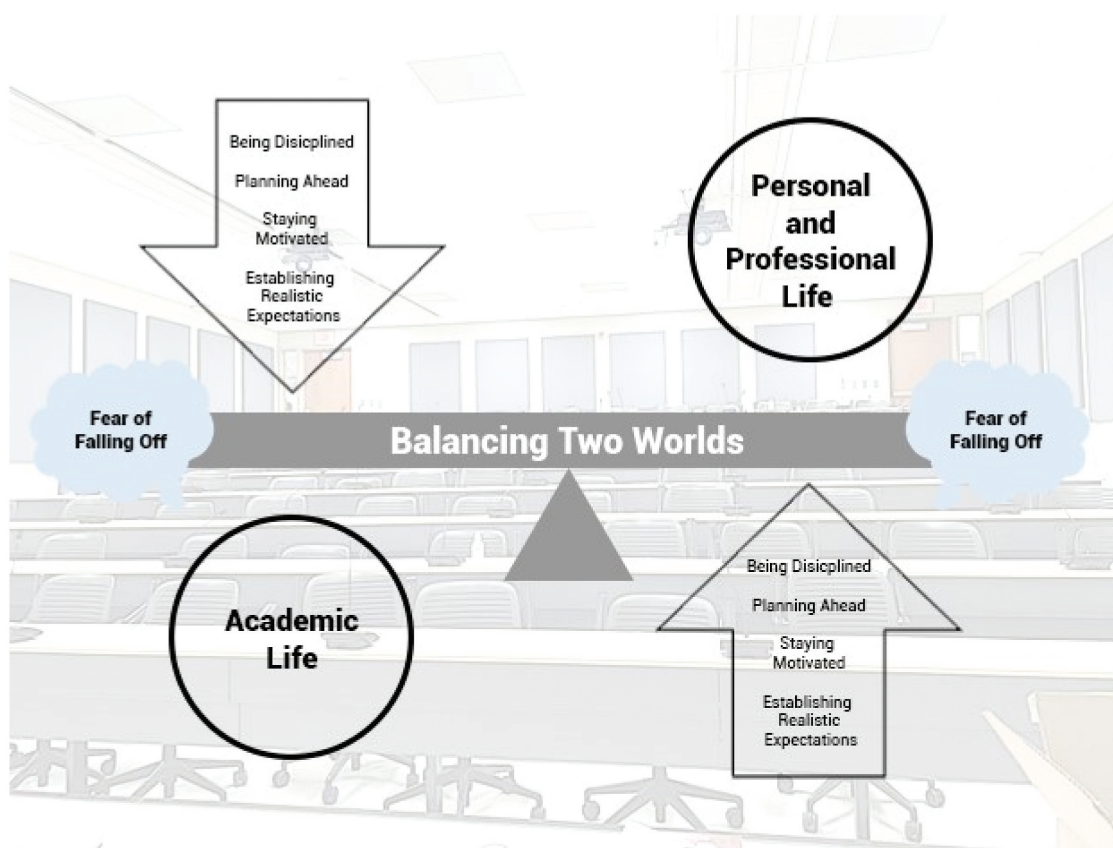
Figure 1. "Balancing two Worlds": a constructivist grounded theory of distributed/decentralised nursing education in rural and remote areas in Canada and Norway.

and professional roles and responsibilities. To achieve this goal, it was necessary for them to engage in four subprocesses: Being Disciplined, Having Realistic Expectations, Planning Ahead and Staying Motivated. These subprocesses play a crucial role in students' life and help them to reach their goals of completing their degrees and, ultimately, becoming RNs.

The distance learning context is well documented in other studies [4–7]. However, the findings from this study are unique in that they highlight the challenges the students and instructors face as they become part of DNE programs. The concerns, strategies and processes experienced by participants engaged in DNE are distinctively presented by the substantive grounded theory, adding to the existing literature. For example, the students voiced their concerns about infrastructure, predictability, work and family responsibilities within the study context. The students also reported finding it challenging to balance their family and work life with study life. Balancing Two Worlds and the related stress of successfully navigating through their programs was often tricky for students.

The main concern of the student participants was the Fear of "Falling off" which would prevent or limit

their ability to succeed and achieve their goal of becoming a registered nurse. It was noted that most of the students who opted for decentralised learning were either married/common-law at a younger age or/ and had children, were single parents and were employed. This was generally quite different than the student cohorts in urban centres, where students are less likely to carry such a significant life load. Flexible methods of distributing nursing programs, and DNE in particular, have gained popularity in recent years and have provided these students with an opportunity to upgrade and broaden their knowledge and skills. Karaduman and Mencet [15] described the benefits of distance education and suggested that this method is better than traditional modes of teaching. According to these authors, distance learning helps to bring together students, instructors and study materials in different locations with the help of communication technology. Also, it eliminates time and venue factors in education. Similarly, Maboe [16] conducted a quantitative study with aim to determine effective methods to increase interactions of students during distance learning. The study involved 87 students and found that as the decentralised nursing program is highly flexible and

accessible, it helps give students control over their education time, place and pace.

In the current study, instructors played a crucial role in decentralised learning for the students. The students voiced their concern about the lack of engagement and support from instructors due to not being physically present with them. Yancey [17] suggested the importance of instructors focusing on the student rather than on curriculum or teaching content. The study advised instructors to look beyond the scope, classroom and technology, and rather see the student and support them throughout the program [17]. The emerging substantive theory of "Balancing Two Worlds" echoes these findings but provides strategies to help overcome these challenges. Specifically, the four subprocesses described above including Being Disciplined, Having Realistic Expectations, Planning Ahead and Staying Motivated provide new ways in which students in DNE programs can strategize in order to support students' success. These processes allowed the students to Balance Two Worlds and succeed in their courses in order to, ultimately, become registered nurses.

A study of university students undertaking online classes in China described experiences with DNE similar to the subprocess of "Being Disciplined" described in our study [18]. Structural equation modelling was used to assess survey data obtained from 457 students. The results demonstrated that being disciplined positively affects satisfaction and learning outcomes in those learning with distance education [18]. Furthermore, similar to the findings of the present study regarding 'Staying Motivated', [19] stated that motivation acts as a catalyst and initiates and sustains behaviour and is a significant component of learning in any environment. Fryer and Bover [20] also described the importance of motivation that students received from the peers and instructors.

The second subprocess, having Realistic Expectations, was also important for students. Similar to our findings, Nicholson et al. [21] found that when the students have unrealistic expectations, it is more likely that they will withdraw from the program. By students being real with the expectations they have from the program and instructors in the beginning, they are more likely to achieve success in the program. The subprocess of Planning Ahead meant that students were able to predict their academic schedule and facilitated planning of their professional and personal life world. The findings suggested that students had to plan their schedule by looking at the course outline they received at the beginning of their program. This helped them design their learning plan and prepare their schedule accordingly to manage their personal and professional responsibilities. This subprocess is unique and has not been previously described in the literature.

The emerging grounded theory of Balancing Two Worlds is conceptually different from previous studies. This study highlights a) the importance of, and challenges related to personal and professional life for students who opt for DNE programs, b) strategies used to manage the Fear of "Falling Off" and c) strategies students implement to succeed in achieving their dream to be registered nurses. One study described some of the challenges that students faced such as managing personal and study requirements and how they accommodated with patterns of learning process with a combination of overview lectures and self studies but did not discuss solutions that may be implemented to manage them [4]. The findings in this current study suggest solutions to help students and instructors involved in DNE. For example, the course outline given to students helps in making the course predictable and can help them manage their time and schedule inside and out of their studies, thus, avoiding significant stress.

Factors influencing the study

There are several factors that may have influenced the findings of this research. First, the data were collected during pre-pandemic times and, therefore, reflect experiences of the participants before the many impacts of the pandemic. However, the use of distributed technologies in nursing education has become more common and as such, the findings are useful and may be applicable beyond nursing education settings in northern rural and remote areas. Additionally, the participants in this study were those who were interested in discussing decentralised/distributive nursing education and, therefore, may have been biased in sharing their experiences. As such, the findings may represent those who especially enjoyed or disliked decentralised/distributive nursing education. The sample was also largely comprised of those from European backgrounds, so there is a need for additional research with participants from a variety of backgrounds. However, the sample was otherwise heterogeneous with a mix of genders, ages and roles, for example, lending to transferability of the findings. Due to the busy schedules of many of the participants, there were few who participated in second interviews and the journaling activity which may have limited the depth of the findings. However, given the two methods of data collection and integration of theoretical sampling as analysis progressed, a fulsome understanding of the topic was reached. A major strength of the research is the developing, substantive grounded theory about distributed/decentralised teaching and learning

which may provide direction for nursing education and a foundation for additional research for the expansion of distance education in higher education, particularly in a post-pandemic era.

Implications for education and future research

DNE is a unique program which provides opportunity for people to obtain education close to where they live [6]. Due to a prolonged nursing shortage in rural and remote areas, the program was introduced in Canada in 2012 [7]. Decentralised nursing programs are necessary to combat the shortages of nurses in rural and remote areas by providing people residing in these areas the opportunity to engage in nursing education closer to their homes. The study identified the challenges the students face while they are in their DNE program. Students and instructors have shared their perspectives to overcome these challenges including Being Disciplined, Having Realistic Expectations, Planning Ahead and Staying Motivated.

Future decentralised programs should be aware of these challenges, and steps should be taken to increase this awareness among those involved in the program. For instance, there is a lack of infrastructure to support the use of technology in remote areas, and research is needed to determine what can be done to render support to those living in rural and remote areas with minimal technical support. Also, the findings include four subprocesses as solutions to the problem faced by students as they balance their life with education. Instructors play an important role in encouraging students to implement the strategies described by these subprocesses. The instructors should periodically ask students if they feel discouraged and need motivation. If the students feel that they are behind in their course plan, instructors can help them in planning their time and should follow up with them at regular intervals. Instructors must try to communicate more with students and help them build realistic expectations for themselves. Additional research is required to understand the importance of the four subprocesses and the impact they have on students and instructors' learning in this program. Importantly, future research is needed to understand the importance of Planning Ahead when students must balance their Professional and Personal Life World with their Academic World. Specifically, exploration of methods that can be used to support predictability, and ultimately, facilitate student success. More broadly, the substantive grounded theory presented herein is emerging and can be tested and/or adapted in other DNE programs to assess and potentially enhance greater transferability in other samples and countries [22].

Conclusion

The findings of this study address the gap in the literature by broadening understanding about the experiences of students and instructors involved in DNE programs. The students highlighted how they Balanced Two Worlds including academic-related stresses along with carrying personal and professional responsibilities all at once. The participants' concerns highlighted the critical need to address the significant challenges they encounter when enrolled in DNE programs. These challenges may serve as a focus for improving this mode of education in rural and remote areas. The tentative emerging theory of "Balancing Two Worlds" enhances understanding about the challenges for students, instructors and administrators, and highlights specific strategies that may be explored and developed through additional research including Being Disciplined, Having Realistic Expectations, Planning Ahead and Staying Motivated. The findings may also provide a helpful approach in the development of interventions to diminish the stress experienced by teachers and students.

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