ABSTRACT

This article reports on a research project investigating the perspective of nursing students regarding the long-term impact of participation in an international online collaboration called Globally Networked Learning (GNL). At the end of GNL, the students responded that they achieved a broader understanding of how culture influenced nursing and healthcare in Canada and Denmark. The aim of this study was to find out whether GNL had a long-term impact on the Danish students’ learning process towards earning a Bachelor of Science in Nursing. A phenomenological-hermeneutic approach to the study was found to be useful in creating knowledge about the students’ perceived long-term impact of participation in GNL. Eight Danish students participated in this follow-up project. Data were generated through narrative interviews and the interpretation was inspired by Paul Ricoeur’s interpretation theory. Analysis and interpretation led to the four themes: Significance for the encounter with the individual, significance for the educational programme, improved English skills, and studying abroad after GNL. The conclusion was that from the perspective of nursing students, GNL had had a long-term impact on the Danish students’ educational programme and their nursing practice. The study is relevant to nursing education, as it contributes with knowledge about the long-term impact of an international online collaboration in the nursing programme and about studying abroad after an international online collaboration.

Key Words: Intercultural nursing, Intercultural competence, Education, Nursing, Baccalaureate, Internationalization at home, Qualitative research study

1. INTRODUCTION

This article reports on a research project examining students’ perceived long-term impact of participation in Globally Networked Learning (GNL). GNL was an online collaboration between Canadian and Danish nursing students. It took place in the 3rd semester of the baccalaureate nursing programmes in both countries. The GNL facilitated students in gaining insight into cultural similarities and differences in nursing and healthcare of Canada and Denmark. They completed four tasks, in which they investigated similarities and differences between Canada and Denmark with regard to living with a chronic disease, providing nursing care to a specific current patient, nursing needs and health services offered to specific patient groups. The students had to find and evaluate four research articles and select one that could contribute to the quality of nursing in both countries. Finally, the students wrote their individual reflections on the learning process and the learning outcome. The Danish students collected their reflections in a learning portfolio, from which, at the end of the semester, they selected the best for presentation in a portfolio. At the end of the 3rd semester, the students responded that they had achieved a broader understanding of how culture...
influenced nursing and healthcare in the two countries. However, the original study provided no knowledge about the long-term impact of the collaboration – knowledge that could inform the future implementation of such collaborations in the nursing curriculum as a supplement to studying abroad.

**Background**

Increased mobility for students as part of globalization and collaboration on educational programming in the EU requires that nurse students acquire good language skills to communicate with patients and nurses from other countries. Nursing programmes should also facilitate students’ insight into the importance of culture for nursing and healthcare, both in Denmark and beyond. Such insight should provide a basis for adapting care to individual patients and citizens from various cultural backgrounds, in Denmark and abroad. In Denmark, there are opportunities for students to study nursing abroad via the EU programmes SOCRATES I & II, Lifelong Learning and ERASMUS+. However, according to Ergin and Morche, because of the limited budgets and other personal commitments, only a minority of students can take advantage of these programmes to study abroad. Therefore, nursing educators and researchers have collaborated internationally to create online opportunities for students to strengthen their language skills and acquire intercultural insight while remaining in their home country. These opportunities collectively come under the name Internationalization at Home (IaH). Such opportunities facilitate creating a knowledge base for the implementation of international online collaboration embedded in the study programme and, thus, support curriculum development efforts. The studies mentioned above indicated that students acquired knowledge about the importance of their own and others’ cultures for nursing and healthcare through an online collaboration with students in other countries. Upon completion, students were often asked about their experience of the collaboration. However, there is a lack of knowledge about whether participants’ perceived development has an impact on their long-term nursing practice.

The aim of this follow-up project was therefore to investigate whether the collaboration with Canadian students had a long-term impact on the Danish students’ learning process towards becoming a Bachelor of Science in Nursing.

2. **Methods**

Inspired by the French philosopher Paul Ricoeur, a phenomenological-hermeneutic approach to the study was found to be useful in creating knowledge about the significance students attributed to participation in GNL two years later. Eight of the nine Danish students who were involved in the original GNL research project in their 3rd semester participated in the follow-up project. Four narrative interviews were conducted with the students, in pairs. The interviews were conducted in Danish in order to facilitate the best conditions for the students to express themselves. Narrative language conveys knowledge of not only what happened, but also the values and the meaning that the narrator attaches to what happened (Ricoeur, 1979). The initial question was: Please, tell me about whether participation in GNL in the 3rd semester was of significance in the long term? The interviews took place online because of the COVID-19 pandemic. They were recorded and transcribed verbatim. The transcribed interviews were interpreted on three levels, according to Ricoeur’s theory of interpretation, involving: naive reading, structural analysis and critical interpretation and discussion. The texts were read and re-read in order to get a holistic impression of the message in the texts, prior to the more in-depth structural analysis. In the structural analysis, the texts were examined for meaningful quotations. They were structured into categories that led to the emergence of four themes. After a two-week interval, the interpretation of the findings was re-read in order to discover any discrepancy. The themes were subsequently discussed and interpreted in relation to other research results.

**Ethics**

In the original project, written consent had been obtained from the students to participate. The same students expressed by email their agreement to participate in the follow-up project after receiving information by email about the project and its aim. The students were all women, and they were anonymized with the following names: Anna and Bera, Conny and Dorte, Ena and Fiona, Gunda and Hanne. There was no requirement for notification to the National Committee on Health Research Ethics. The project was carried out in accordance with the Ethical Guidelines for Nursing Research in the Nordic Countries and the Danish Code of Conduct for Research Integrity.

3. **Findings**

The overall impression of the naive reading of the texts was that participation in GNL had made the students aware of their own individual values and nursing values. They had gained insight into the similarities and differences between Canadian and Danish cultures, nursing and healthcare. They had strengthened their English language skills and developed a desire to study abroad. Four of the eight students had subsequently undertaken a study placement abroad. For those four students, the experiences on their foreign placements made a stronger impression on them than had the online collaboration with the Canadian students. Still, these four students
benefited by GNL, because they gained confidence that their English skills were sufficient to study nursing abroad.

The structural analysis found evidence for the following themes: Significance for the encounter with the individual, significance for the educational programme, improved English skills, and studying abroad after GNL. The quotations in the following have been meaning-condensed in order to bring out the meaning more clearly.[17]

3.1 Significance for the encounter with the individual

This theme stemmed from the fact that all students reported that GNL continued to have an impact on their approach to other people and their understanding of nursing. In the following, a statement from each student is selected: Anna said: “You think about different religions and how to go about things”.

GNL focused on patients’ diverse religious affiliations and nurses’ various approaches to patients and nursing. These considerations seemed to have become part of their reflections prior to meeting a patient or citizen. Dorte said: “You gain insight into many things that can be different where they come from. You have to explain more about what you do because, where they come from, it can be viewed completely differently”. The collaboration focused on differences between the countries and clarified the need to explain more to people from other countries, because they have a different horizon of understanding. Conny, Dorte and their fellow Canadian students had chosen to focus on people with Alzheimer’s dementia. As expected, intercultural learning made students more aware of cultural differences. But it seemed that there was an added benefit of learning about one’s own values. As Conny said: “The way you understand and are used to handling things – you cannot expect those to be the same, regardless of whether you are from a different part of Denmark or the world. For example, a Danish patient Carl and his wife, Carl’s experience of the care was very different to that of his wife. It’s about helping the whole family. You have to be ready to change your first impression when you really meet the patients, with everything they bring”. GNL had clarified the importance of nurses meeting patients with the expectation that they are not all the same, and experience things and act in different ways, whether they are related, or come from the same or a different country. It seems to be a recognition that each individual, regardless of their cultural similarities, can have very different perceptions, values, and needs. Nursing care has to be provided for the whole family, and the nurse should be curious in the meeting and expect his/her first impression to change. Dorte said: “Carl had Alzheimer’s and had a feeling that when he and his wife met people, they talked to his wife instead of him. This was despite the fact that he was a former director who was very able. I have become very aware of talking to the patient, so that I don’t go over their heads. There is just such a great risk that you become your diagnosis instead of a person with a diagnosis – so [GNL] has also given me that”. The Danish patient’s story made such a big impression that Conny and Dorte said it had an impact on their approach to patients, citizens and their relatives in the future. Ena and Fiona experienced it in a similar way: “We have been given a different way of meeting other people – and that has an impact on nursing”. Ena and Fiona agreed that they had adopted a new way of meeting other people. They described it as a process that began with GNL and developed further through studying abroad. The first task in GNL was to get acquainted with what it was like to live with a chronic illness in both countries. This provided insight into the similarities and differences regarding values and cultures in nursing. The Danish students became aware of the significance of this when the Canadian students talked about their approach to nursing.

Hanne: I have drawn upon my experiences, when I am nursing. For example, that Canadian nurses will not know what the patient has done in the past. We are interested in their [the patients’] entire life situation, where they look more at treatment and preferably do not know too much beyond that. It has made me decide that I want to be a nurse who can see the whole person and what they have in their backpack. It is important to be able to plan care and understand the needs of the individual and understand why they do as they do and why they say what they say. It often stems from what they have been through.

Gunda added: “After GNL, when my clinical placement was a trauma clinic, I met people from other ethnic backgrounds. It has helped me to understand that the world is different, health systems are different; you could clearly hear that in the refugees. The GNL has helped to make us aware that there are different ways to go about things”. The online collaboration had sharpened the two students’ awareness that people’s living conditions and countries’ healthcare systems are different around the world. This understanding was a help in the encounter with refugees, and Gunda gained further depth in that encounter. The collaboration with the Canadian nursing students suggests that, at that point in their nursing programme – the second year – the approach to the patient in the two countries was different. However, the perceived difference had confirmed in the Danish students the value of seeing the whole person and their life situation, to understand
the patient and plan care for the individual person. When students could remember what particularly made an impression after two years, it must mean that GNL had contributed to the formation of opinions about what constitutes good nursing and thus also contributed to their nursing professional identity.

3.2 Significance for the educational programme

GNL also had an impact on later stages of the educational programme. Bera said: “GNL provides a really, really great opportunity to see our entire country and healthcare system from a broader perspective, and the social science angle as well. It provides an opportunity to see how things are going in other countries. What is unique about our country, and what is not as unique as we thought it was”. Comparing the Canadian and Danish healthcare systems clarified values and development potential in both countries. It led Conny to reflect: “Why have we created a system that means that our patients have to work around things to receive care and treatment, instead of helping them by putting it together. In Canada’s health centres, several health services are gathered in one place, so that patients have a more coherent care pathway.” This gave rise to a critical view of the organization of the Danish healthcare system and its working methods, which is focussed on during the 3rd semester. Dorte said: “The big assignment [the learning and presentation/test portfolio in GNL] helped us later, in the 5th and 7th semesters. We have taken on such a big task. You had helped us with a structure to know when we should have achieved the different elements. That experience was helpful, because we structured the bachelor project as well and got finished in good time”. Conny added: “I still remember that feeling when we finished the task, we were so proud of it. You carry that feeling with you when you have to do the next big assignment, because you know very well that this is hard, but in a little while you will have something that you are really proud to show”. The GNL assignment was considered to be comprehensive because the students collaborated with Canadian students throughout most of the semester and because they wrote in English. The learning the students took with them from GNL was the ability to structure and plan their assignments in the 5th and 7th semesters. The course had contributed to their ability to handle the work pressure involved in larger assignments in such a way that they were proud of and satisfied with the result.

3.3 Improved English skills

The students all experienced that their English skills had improved after GNL. Hanne first had an experience of: “The collaboration with someone who completely masters the English language was really challenging”. Gunda said: “It has made me braver – we were forced to speak English with the Canadians, even if we did not know exactly what the word was that we had to use. It has boosted my language skills”. Conny told: “We have worked in depth with the English language in health professional terms, so we have a broader base, we have more words”. Speaking English with Canadian students meant that the playing field was unequal. However, Canadian students were understanding and helpful, and the experience of taking up the challenge gave the Danish students greater vocabulary and confidence to dare to venture into communicating in English. Bera added: “Having to commit to another language. It is very instructive. You become good at explaining theory, or how to do something, to others, and then you suddenly become better at understanding it. It is evidence-based that the way you learn best is by teaching others”. Getting to grips with something so that it can be explained in English involves an in-depth elaboration of the matter. GNL was also significant in its impact on the students’ written English skills. Dorte said: “It was the first time I had to write an entire assignment in English. There was a lot of learning in that, when you have to formulate in English, it gives a better understanding when searching and reading articles in English”. Hanne also used this experience to write in English in literature searches and for reading articles: “You have a better understanding of the words that are written, because there are often some words you worked with in the GNL assignment”. Despite concerns about the unequal language proficiency preconditions, the students experienced that they had improved both their oral and written English skills, and that it became easier to search and read English-language articles after GNL.

3.4 Studying abroad after GNL

Following their participation in GNL, students Anna and Bera undertook a six weeks’ clinical placement in an African country. Ena and Fiona studied nursing for two weeks in a European country and six weeks in an African country. Anna said: “Learning about Canada made us decide to go to a country that was very different from Denmark”. Bera continued: “It led to feeling that you wanted to experience a different culture, and it was a great advantage for us that we had spoken so much English – especially the technical terms in English. That way there was something we could do, because we had taken part in GNL”. Fiona said: “GNL has helped to give us an appetite and a desire to look at culture and look at what nursing programmes are like elsewhere in the world; it gave us the push”. These four students thus experienced that GNL made them want to look at how nurses provide nursing in different cultures and see how the country’s culture, including the view of the individual, impacted nursing care. Anna pointed out: “Having to get acquainted
with other people’s cultures, and that things are done differently, you have to look from the outside and say, ‘we do this’ – without it becoming: ‘You do it wrong, I do it right’. You learn to share your experiences with others’. Bera: “You get a more holistic view of what you do, because you have to constantly think about the culture – it is not just a task that has to be solved”. Although GNL started the process, gave them the desire – and perhaps also the courage – to study nursing and culture in foreign countries, the students’ stories suggested that studying in a foreign country had a major impact on them. Anna said: “The whole experience, just going to a different culture, living with a host family, seeing the hospital and seeing how they work when they don’t have the resources we have”. Bera added: “There was no internet in our room – you are forced into a situation where you might have pulled out before, if you could – contacted someone at home or done something to have a sense of security, but you couldn’t. You had to cross some boundaries that you would not have crossed if you had not been to another country”. It is not surprising that studying abroad provides more acute sensory impressions and emotions than an online collaboration, because of the physical involvement. In the African country, students experienced that there was a shortage of clean water, and the population had harsh living conditions. Conversely, students were also impressed that wound care could still succeed despite very limited resources. Anna said: “You have to work with what you have, that’s how you have to think. What do I have, then that’s what I use”. The experience apparently contributed to a more innovative thinking about wound care. Another perceived difference in both countries’ hospitals was that the relatives took care of the patients’ basic human needs. Despite interest by all eight informants in going to study in another country, only four students were actually able to do so. Although not all the students went abroad to study, GNL provided insight into another country’s culture and healthcare system. As Ena said: “The experiences you have had are experiences for life, regardless of whether it is a Canada project where you sit in Skype meetings, or you sit in [another country]. It has been formative for me for the last 3.5 years, and has made me grow in various different ways. It has made my nursing programme something very special for me”. Thus, even if studying abroad made a major impression on the students, the quotations above indicate that GNL had a long-term impact on the education of all the Danish students.

4. DISCUSSION

Findings from the current research project contribute to the IaH knowledge base, by disclosing insights into the long-term impact of an online international course. The collaboration with the Canadian students made clear to the Danish students how different cultures impacted nursing and healthcare in the two countries. Afterwards, it made Danish students consider how patients from foreign countries are influenced by their culture. Two years later, they all evaluated that GNL had resulted in them having a new approach to the encounter with the individual in their nursing practice. As Carlson et al.[7] and Chan et al.[11] stated, there is still a lack of knowledge about whether students’ perceived development due to the international online collaboration has an impact on their long-term nursing practice. They undertook a study of a collaboration between students from Sweden and Hong Kong and concluded that, immediately after the collaboration, students were able to incorporate some of their intercultural knowledge into their nursing practice.[7, 11] The conclusion came on the basis of an investigation of the learning process in a collaboration on a fictional patient care pathway. The Danish students spoke on the basis of their experiences in nursing practice from the 4th and 6th semesters. Thus, they had practical experience on which to base their statements. Therefore, the findings from this study may represent a step towards being able to state that there is a long-term impact of an online international teaching course. Of course, more research in the field is required.

Likewise, two years later, the students still were conscious that GNL had given them a broader perspective on Danish culture, nursing and the Danish healthcare system. Thereby, they were made conscious of values and development potential of nursing and the healthcare system. Similar findings are found in research articles on collaboration between nursing students from Sweden and Hong Kong,[7, 11] Finland and Hong Kong[9] and Sweden and the USA. The students in those studies also recounted how, through dialogue and collaboration with their counterparts from the other country, they became aware of their own preconceptions around nursing and the healthcare organization in their own countries. Like the Danish students, they also experienced that hearing about another country’s culture, nursing and healthcare values, and how healthcare was organized, helped prepare them to care for patients and citizens from other countries.

As an unexpected finding, the study also contributed with knowledge about the strength of impact that IaH has on the students and their course of education, compared to studying abroad. Even if studying abroad makes a stronger impression on the students, IaH is still worth implementing in nursing curriculum. Firstly, for some students, IaH is a necessary step to gain courage and to improve their skills to speak English before embarking on studying abroad. Secondly, for other students, it is their chance to achieve intercultural knowledge and competencies, as they have small children or need to
have a job to support their studies. Thirdly, as Ergin and Moche[5] stated, the intra-European mobility programmes, such as ERASMUS+ is able to provide only a minor group of the European students with the chance of studying in another country. So, the majority of students might be excluded, if there were no alternative, such as IaH. Lastly, the Covid-19 pandemic has meant that international mobility has been rather limited. Therefore, even if the restrictions will be lifted, it makes sense to focus on online international collaboration between nursing students in different countries.

The insecurity Danish students experienced by having to speak English with Canadian students who were native English speakers is mirrored in a study focusing on virtual collaboration and patient safety.[6] Parallel to the current study, the students were also at first worried about the language barrier, but just as for the Danish students, it became an enriching experience. The students appreciated having gained a broader perspective on patient safety and were surprised that they had so much to talk about in terms of patient safety and working as future nurses in Sweden and the USA. Technical challenges arose, so students had to be flexible and have a plan B.[6] The Danish students in the current study did not mention technical challenges but experienced a challenge in relation to the time difference of six hours. However, the learning achieved far outweighed this challenge, which they solved by planning ahead.

Limitations of this study are that data were derived solely from the students’ own assessments that the learning achieved from participation in GNL was implemented in their nursing practice. However, they were interviewed at the end of the 7th and final semester, so their assessments were based on insights into nursing acquired throughout 3.5 years of education. A field study focusing on visible signs of whether students changed their approach to patients and citizens in practice could further substantiate the findings. So, further research is needed. However, it appears from the discussion that the findings of the current study harmonize with similar findings in other research articles.

5. CONCLUSION
From the perspective of the Danish nursing students, the collaboration with Canadian students was significant to their nursing practice in the long term. Participation in GNL made clear to the students the value of nurses expecting patients to have diverse religious affiliations and cultural backgrounds that can mean that they experience and act differently – whether they are related, or come from the same or another country. In addition, GNL highlighted the need to provide nursing care for the whole family. The nurse must be investigative in the encounter with the patient, and expect that first impressions can change as the relationship between patient and nurse develops. The students became aware of basic nursing values, such as having a holistic view of the whole person and her/his life situation in order to understand and plan care for the individual patient. They understood the value of talking directly to the patient, rather than talking over her/his head. GNL initiated a process that contributed to the formation of opinions on what constitutes good nursing, which were further developed by studying at home and abroad. The process thus contributed to the students’ professional nursing identity.

Learning achieved from GNL also became significant in the students’ subsequent learning process, as the comparison between the Canadian and Danish healthcare systems clarified values and development potential in both countries. It thus provided the basis for critical reflection on nursing and healthcare. The GNL collaboration concluded with an extensive and far-reaching written assignment. The students thereby learned to structure and plan subsequent assignments and to handle work pressure, so that they were proud of and satisfied with the work they had produced. The students assessed that they had improved both their oral and written English skills, and that it had become easier to search and read English-language articles. All eight students wanted to study nursing abroad. Four got the chance and had an even fuller experience from which they grew in maturity.

Implications for nursing education and nursing practice
The study is relevant for nursing education and nursing practice, because it contributes to the knowledge base about the long-term impact of an international online collaboration in nursing curriculum. It provides a method to develop English language skills and intercultural competences in students and future nurses by facilitating reflection on the significance of the culture on individuals, nursing and health care systems. The reflections and the opinion formation that GNL initiated are relevant for the encounter with the patient and citizen from foreign countries. As well as for achieving competencies to clinical decision-making and clinical leadership in patient-centred nursing practice. Intercultural competencies are relevant in light of the increasing diversity in the population in general, and thus among patients and citizens.

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CONFLICTS OF INTEREST DISCLOSURE
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