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DESENVOLVIMENTO INTERCULTURAL DOS ESTUDANTES ATRAVÉS DA COLLABORATIVE ONLINE INTERNATIONAL LEARNING: UM ESTUDO QUALITATIVO EXPLORATÓRIO

STUDENTS' INTERCULTURAL DEVELOPMENT THROUGH COLLABORATIVE ONLINE INTERNATIONAL LEARNING: AN EXPLORATORY QUALITATIVE STUDY

DESARROLLO INTERCULTURAL DE LOS ESTUDIANTES A TRAVÉS DEL COLLABORATIVE ONLINE INTERNATIONAL LEARNING: ESTUDIO CUALITATIVO EXPLORATORIO

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RESUMO

Introdução: É necessário implementar estratégias de internacionalização no domicílio (IaH) para aumentar as perspectivas interculturais dos futuros enfermeiros e a colaboração entre países de baixo/médio rendimento (LMIC) e países de elevado rendimento (HIC).

Objetivo: Explorar as perspectivas dos estudantes de enfermagem e dos professores sobre os principais contributos culturais adquiridos pelos estudantes que participam no Collaborative Online International Learning (COIL) entre um país de baixo/médio rendimento e um país de elevado rendimento.

Métodos: Estudo qualitativo de carácter exploratório. A análise de conteúdo seguiu o modelo proposto por Bardin: pré-análise, exploração, tratamento, inferência e interpretação dos resultados.

Resultados: Foram identificados os dois temas principais "contributos culturais ao nível das competências sociais" e "conhecimentos específicos sobre a enfermagem praticada em dois países económica e socialmente díspares", e seis subtemas. As metodologias COIL nos modelos IaH são viáveis para melhorar a consciência intercultural dos estudantes de enfermagem.

Conclusão: Para otimizar o processo pedagógico, os grupos de estudantes internacionais precisam de ser facilitados pelos professores. A aprendizagem virtual através das redes sociais pode melhorar as competências interculturais dos estudantes de enfermagem.

Palavras-chave: educação a distância; intercâmbio educacional internacional; educação continuada em enfermagem; competência cultural

ABSTRACT

Introduction: There is a need to implement internationalisation at home (IaH) strategies to increase future nurses' cross cultural perspectives and collaboration between low-/middle-income countries (LMICs) and high-income countries (HICs).

Objective: To explore nursing students' and teachers' perspectives on the main cultural contributions gained by students participating in Collaborative Online International Learning (COIL) between an HIC and an LMIC.

Methods: This is an exploratory qualitative study. Content analysis followed the model proposed by Bardin: pre-analysis, exploration, processing, inference and interpretation of the results.

Results: The two main themes "cultural contributions at the level of social competences" and "specific knowledge about nursing practised in two economically and socially disparate countries", and six sub-themes were identified. COIL methodologies in IaH models are viable to improve nursing students' intercultural awareness.

Conclusion: To optimise the pedagogical process, international student groups need facilitation by teachers. Virtual learning via social media can improve nursing students' intercultural competencies.

Keywords: education, distance; international educational exchange; education, nursing; intercultural competencies

RESUMEN

Introducción: Es necesario aplicar estrategias de internacionalización en casa (IaH) para aumentar las perspectivas interculturales de los futuros enfermeros y la colaboración entre los países de ingresos bajos y medios (LMIC) y los países de ingresos altos (HIC).

Objetivo: Explorar las perspectivas de los estudiantes y profesores de enfermería sobre las principales contribuciones culturales obtenidas por los estudiantes que participan en el Collaborative Online International Learning (COIL) entre un país de renta alta y un país de renta baja.

Métodos: Se trata de un estudio cualitativo exploratorio. El análisis de contenido siguió el modelo propuesto por Bardin: preanálisis, exploración, procesamiento, inferencia e interpretación de los resultados.

Resultados: Se identificaron dos temas principales «aportaciones culturales a nivel de competencias sociales» y «conocimientos específicos sobre la enfermería practicada en dos países económica y socialmente dispares», y seis subtemas. Las metodologías COIL en los modelos IaH son viables para mejorar la conciencia intercultural de los estudiantes de enfermería.

Conclusión: Para optimizar el proceso pedagógico, los grupos de estudiantes internacionales necesitan la facilitación de los profesores. El aprendizaje virtual a través de los medios sociales puede mejorar las competencias interculturales de los estudiantes de enfermería.

Palabras Clave: educación a distancia; intercambio educacional internacional; educación continua en enfermería; competencia cultural

INTRODUCTION

There is a need to educate and foster respectful, caring and responsible global professionals (Wimpenny et al., 2020). . The global community is facing problems like climate change, injustices, socio-economic inequalities and human rights abuses, which require future professionals to possess innovative thinking, resilience and resourcefulness. Therefore, pioneering educators try out imaginative and creative learning technologies in education (Chu et al., 2017).

In today's globalized healthcare environment, Butler et al. (2016) specified that cultural competence gives individuals the capacity to take responsible actions toward collective well-being and that cross-cultural approaches in healthcare are essential to reduce the disparities in culturally sensitive environments. Inclusion of culturally relevant topics, cultural responsiveness, trust, care navigation and coordination are identified as valuable attributes in healthcare in ethnically diverse communities (Harrison et al., 2024). When cultural differences between healthcare practitioners and users are disregarded, substantial distrust, misconception, dissatisfaction, and disempowerment inevitably mount (Jongen et al., 2018).

Healthcare students can learn to become culturally competent. Researchers have conceptualized the elements of cultural competence in three major areas: knowledge, awareness, and skills/behaviors (Watt et al., 2016). According to the Organisation for Economic Co-operation and Development (2018), knowledge about different countries leads students to develop a capacity to understand different perspectives and world views. Cultural awareness involves understanding your own cultural values, preferences and biases, while also promoting a desire to learn about different cultural practices as well as to appreciate the similarities and differences among cultures (Fong et al., 2016). Moreover, the ability to engage effectively in work settings and demonstrate empathy with people from different cultures represents the behavioral skills of cultural competence (Nair et al., 2019).

The possible strategies to increase cultural competence include ongoing education and training, where reflective practices contribute to deepening the understanding and empathy towards different cultures (Green, Betancourt & Carrillo, 2022). Traditional face-to-face communication through study abroad programs is considered as the most effective method for developing cross-cultural skills, cultural awareness, and collaboration. However, only about 12% of university students globally can participate in such programs. This is due to financial and logistical constraints, which were exacerbated by the COVID-19 pandemic (OECD, 2018; Jordan, 2023). This limitation underlines the need for 'Internationalisation at Home' (IaH) approaches. IaH aims to identify appropriate pedagogical approaches that do not require physical travel (Nagarajan & McAllister, 2015). For medical education, IaH is shown as a low-cost alternative for improving cultural competence and preparing students for health work globally (Wu et al., 2021).

In the rapid evolution of technologies, which has shifted from face-to-face to online learning, the Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (Diku, 2019, 2021) encourages educational institutions to implement IaH-models, use the available digital tools and stimulate students' development of digital competence. IaH is considered an important innovative strategy to let students in higher education acquire international awareness and intercultural competencies (Rubin et al., 2015), and higher education can find solutions to stimulate worldwide dialogue (Wihlborg et al., 2018). The impact of globalization pushed low-/middle-income countries (LMICs) to further their use of messaging apps like Messenger, Facebook, and WhatsApp for IaH-learning purposes during the COVID-19 pandemic (Jordan, 2023). The interactive nature of social platforms, with close to real-time discussion, can support collaborative learning in nurse education (O'Connor et al., 2017), and virtual mobility enables students to look at national contexts and professional themes from a global perspective (Chan et al., 2015).

Collaborative Online International Learning (COIL) is among the most efficient IaH methods used to assist educational systems' needs to provide global learning opportunities for students. COIL lets students and teachers from many countries collaborate on projects through online materials and tools (De Castro et al., 2019). The application of this approach assists in the strengthening and refining of intercultural learning, digital citizenship, and discernment while emphasizing collaboration (Wimpenny et al., 2021).

In spring 2020, a COIL project was implemented between the Western Norway University of Applied Sciences (HVL) and Université Adventiste Zurcher (UAZ), Madagascar (Breistig et al., 2021). The collaboration between staff members was started in 2019 by staff from HVL visiting UAZ. Regular contact by email and virtual meetings led each institution to use its knowledge and capacities to find innovative solutions when COIL was presented as an option for student collaboration. Seventy second-year nursing students, as well as four teachers from HVL and 17 nursing students and four teachers from UAZ, collaborated synchronously and asynchronously a minimum of two times a week throughout the eight-week COIL project period. The students were divided into 14 Facebook groups with a balanced distribution of students from each country. The use of Facebook allowed near synchronous communication. The students were asked to work on the tasks "global child health," "global health and aging," "global burden of diseases," "access to health services," "disabled persons," and "global health workers" combined with "cultural similarities and differences." The student groups worked on common tasks, focusing on the responsibilities of nurses and comparing the cultural components of the two countries. The teachers performed the role of facilitators.

There is a large amount of research related to the major advantages of digital online learning, such as the development of digital competencies (UNESCO, 2022; Membrillo-Hernández et al., 2021) and the creation of collaborative environments (Fan et al., 2023). There is also research about the stimulation of worldview knowledge (Garcia et al., 2023), considerations about how social knowledge construction and socio-emotional interactions between students affect students' learning (Tao et al., 2021), and the need for pedagogical support of students' metacognitive awareness and attitudes towards online collaboration (Yilmaz and Yilmaz, 2020).

However, there is a lack of research pointing towards the impact of nursing students' COILs on the interaction between high-income countries (HIC) and LMICs. Moreover, previous studies on COIL have not adequately addressed the perceptions of participants from different economic backgrounds. These gaps are significant, and research on cultural learning and exchange between students from highly diverse cultures can contribute to an understanding of how nurses can respond to the needs of a global healthcare workforce (Ličen & Prosen, 2023; Guth & Helm, 2010). There is a need for research on the effects of nursing students' intercultural experiences in COIL in order to develop educational programs that capitalize on the potential of such learning experiences (Olufadewa et al., 2021). This study aims to bridge some of the research gaps by analyzing nursing students' and teachers' perceptions after participating in a COIL program between the HIC Norway and the LMIC Madagascar.

This study investigates how online international collaboration can contribute to the development of cultural competencies among nursing students from diverse economic contexts, offering insights for the improvement of global teaching practices.

2. METHODS

2.1 Study design

This study used an exploratory qualitative design in line with the guidelines for qualitative research, proposing a pre-analysis, an exploration, processing of results, an inference, and an interpretation of the results (Bardin, 2011). A combination of focus groups and individual interviews were used to collect data. Since interactions between informants' viewpoints were seen as meaningful in data collection, focus group interviews were conducted. For those informants who could not attend focus groups, we also used single interviews with the same guide as for the focus groups.

A focus group is an interview method where several informants from a homogeneous group elaborate on a topic and provide in-depth information. An interviewer asks open-ended questions and assists discussions lightly (Malterud, 2017). The discussion groups provided an opportunity for interaction and debate between the students, while the semi-structured interviews allowed for validation of the results and confirmation of data saturation. The data were examined according to content analysis. A categorical analysis combined with an evaluative analysis was carried out. Based on the categories and subcategories resulting from the interviews, the intensity of the opinions and possible meanings that the interviewees made about the COIL experience was assessed. The study design and data analysis followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

2.2 Sample

Nursing students and teachers from Norway and Madagascar who participated in a 2020 COIL program were the target population, wherein Facebook and Messenger were used for international communication and collaboration between the nursing students and nursing teachers (Breistig et al., 2021). All the participants in COIL 2020 knew that we wanted to conduct qualitative interviews and that the researchers would ask for participants until the saturation of data. Eight students from Madagascar and five from Norway, in addition to four teachers from Madagascar and four from Norway, were interviewed (table 1).

Table 1- Characteristics of all participants

Participants	Age range (years)	Gender	Informant identification in focus group	Informant identification in single interview
Malagasy students	21 - 27	8 females	MS 1-3	MS 4-8
Norwegian students	21 - 30	2 male, 3 female	NS 1-4	NS 5
Malagasy nursing teachers	29 - 45	3 female, 1 male	MNT 1-3	MNT 4
Norwegian nursing teachers	45 - 59	4 Female	NNT 1-3	NNT 4

The inclusion criteria were 1) linguistic competence at a minimum low-intermediate level based on the Common European Framework of Reference for Language (CEFR) 2) the students had at least two clinical experience rotations, and the teachers had an experience of at least one participation in COIL.

Eighty-seven students and eight facilitators participated in the COIL project. Thirteen of the students and eight facilitators participated in the study (figure 1).
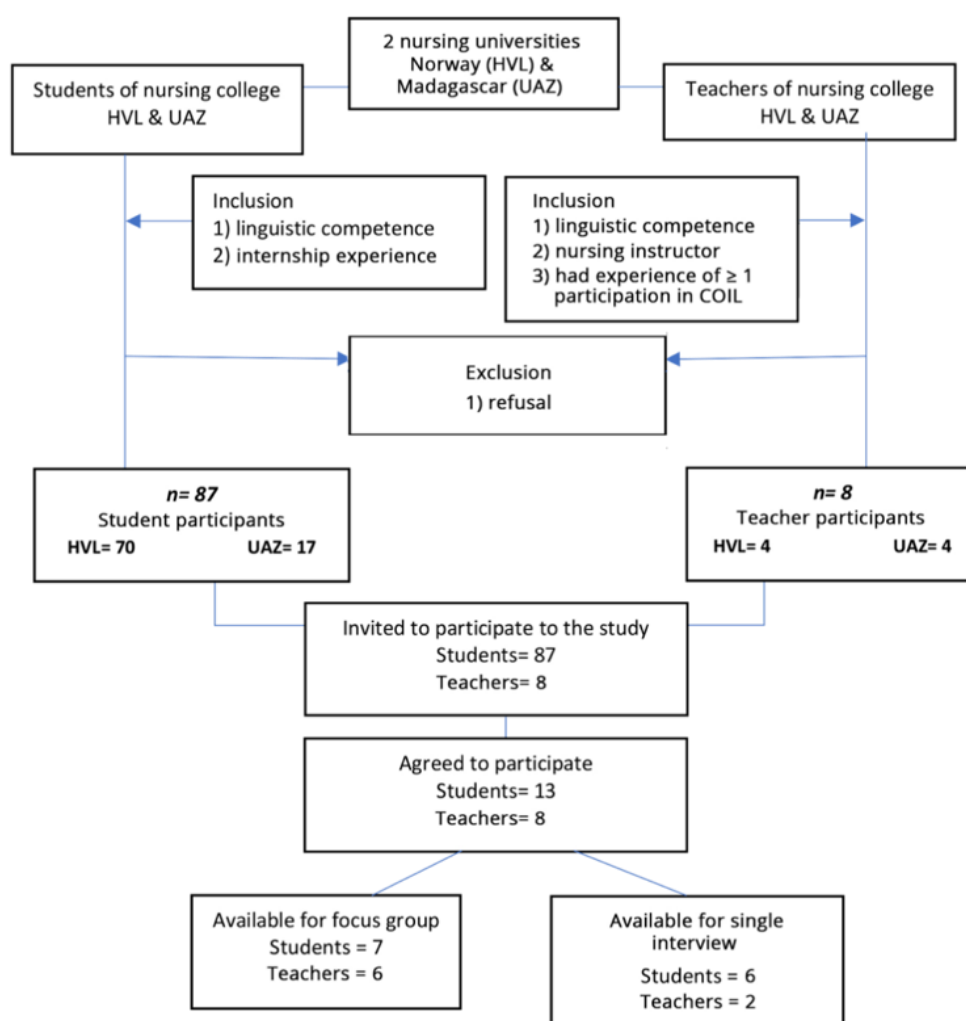
Figure 1 - Flow diagram of the participants

2.3 Data collection instruments

Norwegian and Madagascan researchers conducted semi-structured focus groups and individual interviews with students and teachers. The researchers prepared an interview guide with a pre-defined set of questions. The main topics in the interview guide were general opinions on the health system in your own and other countries, the socialization process through online platforms, and cultural similarities and diversities. During the interviews, the interviewees were also given space to explore issues not covered by the pre-defined questions. The semi-structured questions guide is presented in Table 2.

Table 2 - Semi-structured questions guide

	Area of studies	Open-ended questions	Probe questions
Focused on students	Multicultural learning experience	How did you learn together with the students from a different cultural background in COIL?	• Listen to each other's point of view? • Values in the other culture?
		How did you experience the role of the facilitator in COIL?	• Interaction synchronous/asynchronous? • Sufficiently / too much / too little present?
	Multicultural learning opportunity	What did you learn from the other students in COIL?	• Knowledge gained about the other culture? • Specify the program?
		What did you learn about working with nursing students from another country?	• Specify the program?
	Multicultural learning assimilation	What impressions did you get of cultural similarity and dissimilarity in the topic you discussed?	• Awareness of the differences without being physically present in the country? • Skills learned through synchronous and asynchronous communication?
		What did you learn about the need for students from different countries to meet and discuss health-related issues across different cultures?	• Advantages and disadvantages of one's country? • What to apply in own present situation?
Focused on teachers	Multicultural learning experience	How did you experience the teaching method COIL and facilitating international groups?	• Virtual vs. traditional teaching method?
		How easy was it to facilitate/ advise a student group consisting of students from different countries and cultures?	• Interaction synchronous/ asynchronous? • Teacher intervention/ provide support?
	Multicultural learning opportunity	What did you, the teachers, learn from, about and with the students and the other teachers - in COIL?	• Knowledge and skill gained about the other culture?
	Multicultural learning assimilation	To what extent can the teaching method give students cultural competence?	• Students learned from, about, and with the other students across cultures? • Students listened carefully to each other's points of view? • Values that the students learned? • Factors enable students to develop cultural competence?

The interviews and focus groups were conducted physically in two different locations (at the UAZ and HVL facilities) by two of the researchers (SJ and BK). Individual interviews were conducted with five students and one teacher from Madagascar, as well as one student and one teacher from Norway. The duration of the interviews varied between 30 and 50 minutes. One focus group with three students and one with three teachers were conducted in UAZ, and one focus group with four students and one with three teachers were conducted in HVL. The interviewers allowed them to express their experiences and opinions, and they asked follow-up questions to gain further insight in line with Krueger (2014). The focus groups lasted between 40 and 60 minutes. The interviews were recorded. At the end of the interviews, the interviewer presented an oral summary to ensure that the Norwegian and Madagascan informants' interpretations were correctly understood.

2.4 Statistical analysis
Data were coded and categorized using the computer software ATLAS.ti (v.9.1) without a priori defined categories, following an inductive method: the interviews were transcribed verbatim. The authors read the transcripts several times. The data analysis adopted a thematic approach, in which the initial research questions served as the basis for the abductive creation of themes. Initial primary codes were developed in line with Mays & Pope (1995), and they were then developed and linked to other related themes to form comprehensive secondary codes that were developed into the two main themes. This means that the relevant data were identified and grouped into initial themes and subthemes and that the data codes and subcodes were compared to identify the similarities and differences. To ensure consistency in coding and coherence in themes, a single researcher was responsible for the data coding. This allowed for deep reflection into the dataset and minimized variability in code application. Data collection and analysis continued until saturation in line with Coffey & Atkinson (1996). A descriptive summary of the content in the categories was made. Finally, an overall analysis of the summaries and transcribed quotes was conducted.
Ethical approval was obtained by the Norwegian Centre for Research Data under the number 838551. All the participants signed a consent form, which ensured that their participation was voluntary and that they had the right to withdraw without consequences. The audio files were password-protected and deleted after the data processing.

3. RESULTS

The interview results, from all the informants, were analysed together. Two main themes and six sub-themes were identified (figure 2).
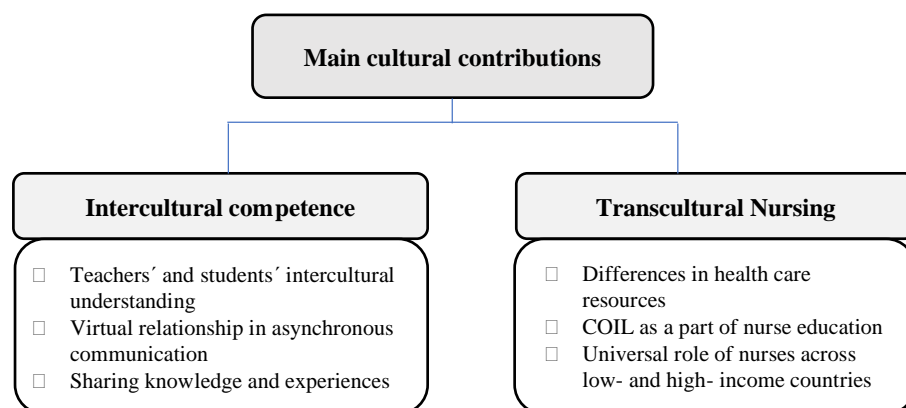
Figure 2 - Themes and sub-themes resulting from focus groups and individual interviews with students and teachers

The two main themes pointed out the cultural contributions at the level of social competencies and specific knowledge about nursing practiced in two economically and socially disparate countries. The data analysis regarding the students' and teachers' perspectives is presented in full (Supplemental Digital Content).

Intercultural Competence
The participants expressed that the interactions between Norwegian and Madagascan students in the COIL program promoted the development of intercultural competencies. Teachers' and students' intercultural understanding developed through virtual relationships in asynchronous communication and the sharing of knowledge and experiences.

Teachers' and students' intercultural understanding
Students' perception of the reality experienced by peers in the partner country was reported as a learning opportunity that had not been offered so far. The informants identified the differences in the availability of resources between the two countries, and these differences were experienced as different cultural patterns.
- MNT2: "It seems that everything is available and accessible for the other part, but they need to learn how to use it, how to take care of these things (…) So, these are the adventures in culture".
- NS1: "I feel like I have learned quite a bit. I knew that Madagascar is a poor country and that there are big differences (…). They quit their jobs and all that to take care of their parents or grandparents (…). And you cannot read much about things like this online. I would not have learned this without the COIL group".

Virtual relationships in asynchronous communication
The implementation of COIL, based on a virtual and distance model, allowed the promotion of intercultural skills and the establishment of interpersonal relationships even after the end of the program. Asynchronous communication enabled the students to reduce the impact of time zone differences, while the pedagogical process allowed them to have more time to prepare and respond to proposed activities.
- MNT1: "The students are very open-minded, and this experience has helped them to be more receptive to another culture. They became friends and shared a lot of cultural aspects of life".
- NS5: "When they asked me questions in the Facebook group, and I did not have quick answers, I had time to search on the internet to find information."
- MNT4: "In having different times available to be connected, the limited connection from the student in Madagascar is also a factor in this way of communication."

Sharing knowledge and experiences
The opportunity for interaction between students facilitated a movement towards a common identity. The student's participation in the program helped them, in a simple and joyful way, to get to know new cultures, languages, new working methods, and new technologies.
- MS4: "They correct, not only in the area of nursing but also in language skills."
- MS8: "It is fun to share our own experiences and get to know about their places even if we do not see it directly."

- NS3: "We learned a lot, and it was very exciting."
- NNT2: "So, if they integrate this into their personalities as nurses, it will be a very good thing that they brought with them."

Transcultural Nursing
The realities and contexts in Norway and Madagascar were reported to be quite different. The discussion of the differences helped the students to understand the implications for education, health promotion, and professional opportunities in the countries.

Differences in healthcare resources
The differences in healthcare resources were unequivocally mentioned. The existing resources, or lack of them, were associated with each country's characteristic diseases. This reality enabled the students to reflect on the relationship between the environment and quality of health. In Madagascar, diseases resulting from inadequate resources were identified. In Norway, the prevalence of suicide among young people was reported, which is a reality that is not identified by Madagascan students.

- MS1: "For us, Madagascans, we have some diseases because we do not have the materials. But for them, there are diseases such as diabetes, due to their situation".
- NS5: "They posted pictures like how some men in Madagascar transported vaccines that were stored in a cooling bag; they carried this box on a wagon."
- NS2: "So, suicide was not a big focus there. But I do not know if this has something to do with religion".

COIL as a part of nurse education
Through sharing experiences and knowledge, COIL was recognized as a part of nurse education. The presence of facilitators led students to understand the universality of the discipline.

- MS6: "The most practical and applicable thing I learned from our group is about hygiene."
- NS3: "I know very little about nursing, nursing students, and nurse education in other countries, and so having it so easily accessible on the phone was pretty good."
- NNT1: "I think this is crucial to be able to give all the students an international experience, and I think it is wrong that only students who travel abroad get international experience. So, I think that what we did this time, to say it was mandatory to do COIL, is okay".

Universal role of nurses across low- and high-income countries
Despite different resources, cultures, and education, students mentioned that nurses' roles follow universal lines related to care and the need to assist others at the level of health promotion and disease treatment.

- MS3: "They have special nurses for these categories of people, and elderly persons can stay in a beautiful home (...) We should do something like that in Madagascar so that elderly people do not become a heavy burden for their families".
- NNT1: "There was a focus on raising awareness regarding nursing as an international phenomenon. It is not necessarily about having a higher standard in Norway, but different cultures with different preconditions".

4. DISCUSSION

The contributions of the students who participated in COIL between a high-income country and a low-income country in 2020 can be divided into two main points: contributions inherent to intercultural competencies and contributions that strengthen transcultural nursing.

Despite the positive experiences with international knowledge sharing, the implementation of virtual international learning in health education programs has been a relatively slow process (Nagarajan et al., 2015). During the COVID-19 pandemic, this situation changed, and educational institutions for health personnel increased their use of IaH strategies. An example of this is international peer collaboration and networking, resulting in an increase in medical students' cultural competencies (Xu et al., 2021). In the facilitation of virtual collaborative learning, the interactions between students' social knowledge construction and socio-emotional interactions should be taken into account (Tao et al., 2021), and an effective learning environment should include pedagogical approaches to stimulate students' task- and group awareness (Yilmaz et al., 2020). In LMICs, there has been an increase in the use of messaging apps, such as WhatsApp, Facebook, and Messenger, to support students' learning and to enable peers to collaborate and tutor each other (Jordan, 2023). Facebook and Messenger were used to mediate the contact between the students in our study. Through pedagogical support by Norwegian and Malagasy teachers in COIL, nursing students developed intercultural competencies. Indigenous cultures often include social and ecological factors in explaining physical health, and Engebretsen et al. (2022) stress the necessity of knowledge translation across cultural contexts in healthcare systems,, and thereby eventually reduce the existing disparities. It is beneficial for nurses' global health learning to use others' competence combined with engagement and cultural awareness (Morley et al., 2021). In this COIL, nursing students learned about the situation in their international peers' countries, which otherwise was not accessible. This occurrence contributes to a clearer understanding of Nagarajan et al. (2015), who conveyed that students learn about their own and others' cultural selves through international virtual dialogue.

Transcultural nursing skills are essential, and according to Anton-Solanas et al. (2021), students should be asked about which knowledge, skills, and attitudes they need to develop in cultural learning. Students' group work in this study allowed not only the required tasks but also the sharing of enriching pedagogical and cultural experiences. The informants recognized a unique educational experience, which enabled them to see the cultural differences rooted in their countries as they performed the group tasks. The

teachers who facilitated the working groups reported that COIL promoted the internationalization of education and gave students multinational training. It made them realize that they are going into a worldwide profession with multiple preconditions and opportunities. This experience can prove to be a useful tool to facilitate their task when, as nurses, they have to deal with the health problems of different patients from different geographical, ethnic, and cultural backgrounds.

According to Carlson et al. (2017), nursing can be understood as a universal phenomenon, with the need to care for a diverse population taking into account the different multicultural contexts to which any nurse is confronted. In an increasingly global world, the implementation of exchange programs between geographically distant countries can be a way of learning to accept and bridge the differences, which is crucial in nursing practice since individuals' perceptions and information interpretations are influenced by cultural values (Yates et al., 2016). The globalization process has triggered a need for cultural competence because the number of patients from different cultural backgrounds has escalated in all countries, and nurses are expected to deal with multicultural aspects in clinical practice. Our findings show the importance of incorporating COIL as a part of nurse education to offer all students the opportunity to learn about the universal role of nurses.

The disparities in the world today require global education programs to prepare future professionals to become respectful, caring, and responsible (Wimpenny et al., 2020). One of the major health issues worldwide is malnutrition, and LMICs are especially vulnerable (Xu et al., 2021). Another major health problem in LMICs is the slow development of mental health services (Rathod et al., 2017). Communication and collaboration in a broader community and interprofessional perspectives could highlight opportunities regarding problems with limited resources in the development of LMICs' mental health training programs. Health issues like these were eagerly discussed in the COIL groups. The students came into virtual contact with different realities, allowing them to reflect on the role of nursing in different parts of the world.

Global and cross-cultural competencies are necessary to provide sustainable involvement in tomorrow's society (Chu et al., 2017). Cross-cultural diversities such as language, beliefs, and geographical differences can, however, generate conflicts in virtual collaboration (Cagiltay et al., 2015). Therefore, socially just dialogue, inclusivity, internationalization, and global citizenship should be fostered through self-reflexivity (Wimpenny et al., 2021), and creativity and technology-assisted collaboration are necessary learning objectives (Koul et al., 2021). The students in COIL 2020 had the opportunity to discuss the differences between a HIC and an LMIC in their international groups, to highlight the particularities and the reasons for these, and to open a space to discuss responsibility and opportunity in what will be their future clinical practice. However, even if students met and learned from each other in this COIL, they did not get to know each other on a deeper level. Inclusivity and openness to others were fostered, but we suggest that further self-reflection and discussions with peers and teachers are needed for students to reflect on the characteristics of socially just dialogues and what global citizenship means. It is crucial to be aware of the pedagogical approaches in COIL to ensure that students' contributions are appropriate and that their cultural and social learning outcomes will be beneficial for their professional roles in the future. The pedagogical methodologies must allow flexibility so that the students can discover unexpected issues.

Although a detailed description of the study setting, participant characteristics, data collection, and analysis were presented in the methods, the transferability of the results should take some caution since the sample is limited to only two countries. Another limitation is that the results obtained relate to just one course, and more evaluations of similar experiences would make these results more reliable. Further studies are needed to allow a wider representation. We used two different typologies as data collection instruments, and although we conducted the interviews in the same direction, it is not possible to guarantee possible discrepancies. Another limitation is that there were not four informants in all focus groups due to the constraints related to the start of the COVID-19 pandemic.

CONCLUSION

Virtual learning and messaging apps like Facebook and Messenger were tools that students and teachers assume as viable to improve nursing students' intercultural competencies. Our findings raised awareness of the value of COIL methodologies that can be adopted in future collaboration between international students. Group facilitation by teachers has been shown to optimise the pedagogical process and the flexibility used in this process can offer students helpful tools for self-learning. However, there should be more research on how, and to which degree, virtual learning and the use of messaging apps can affect the long-term learning of nursing students' cultural competences. It would also be important to evaluate the long-term impact of COIL-type programs in nursing, comparing different educational approaches and new communication technologies in promoting these skills. By placing a greater focus on creating spaces for reflection on global citizenship and inclusion, universities can ensure deeper experiences for students. We believe that students' experiences with COIL can contribute to the acquisition of skills that can be applied to professional practice in an increasingly globalized and multicultural world.

AUTHORS' CONTRIBUTION

Conceptualization, M.M., B.K. and S.J.; data curation, M.M.; formal analysis, M.M., B.K. and S.J.; investigation, M.M., B.K. and S.J.; methodology, M.M., B.K. and S.J.; project administration, B.K.; resources, M.M., B.K. and S.J.; software, M.M.; supervision, M.M., B.K. and S.J.; validation, M.M., L.A., C.A.C., C.C., T.K., E.S., P.S., B.K. and S.J.; visualization, M.M., L.A., C.A.C., C.C., T.K., E.S., P.S., B.K. and S.J.; writing-original draft, M.M., L.A., C.A.C., C.C., T.K., E.S., P.S., B.K. and S.J.; writing-review and editing, M.M., L.A., C.A.C., C.C., T.K., E.S., P.S., B.K. and S.J.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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