

Notes from the Field: 'Nurses International' Uses OER to Support Nurse Educators

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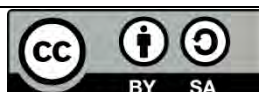
Abstract: Educating nurses in developing countries is challenging due to limited resources. Nurses International advances nursing education through the use of Open Educational Resources, which provide a unique model to teach and mentor nurse educators globally. Using current resources and materials that are free online and teacher-facing, an innovative program has been established that can be employed to support development of and scale education for the healthcare workforce, through teaching the teachers and enhancing the education of nurses.

Keywords: Open Educational Resources, educator development, nurse education.

Introduction

These field notes describe an initiative of Nurses International (NI), a US-based non-governmental organization with a mission to create affordable, technology-enabled nursing curricula for developing countries, and to empower nurses to change their worlds. The purpose of this paper is to introduce *Journal* readers to an innovative, volunteer-led application of Open Educational Resources (OER) aimed at tackling a critical factor in achieving the United Nations' Sustainable Development Goals (SDG), namely, training of front-line nurses (United Nations, 2015). Preliminary evaluation of the process and outcomes of the initiative has been initiated, data collection is underway concurrently with program development, mostly user demographics. Unfortunately, due to limited resources for this volunteer-led initiative, evaluation has not progressed far. In addition to describing the open access curriculum and supports, we hope to engage collaborators with more general open education expertise to assist with implementing the initiative and assessing results.

Nurses are a vital component of health care systems, making up over half of the healthcare workforce (World Health Organization [WHO], 2020a), yet there are significant shortages of these professionals in most countries. In many Low Middle Income Countries (LMIC), nurse shortages are compounded by a lack of capable nurse educators and of appropriate teaching materials. This bottleneck constrains production and supply of new nurses and limits their ability to perform in high-performance health-care systems. Distance learning technologies could mitigate the problem but teacher-facing open-access resources are often unavailable and implementation may be challenging for novice educators.



Global Context and Purpose of this Initiative

This initiative's short-term aim is to support novice nurse educators with free online, teacher-facing, and up-to-date teaching materials, including guidance for usage and remote mentoring. This directly relates to SDG 4.C, "By 2030, substantially increase the supply of qualified teachers" (United Nations, 2015). The initiative's longer-term goal is to support achievement of SDGs related to higher education (SDG 4.3), employment in decent jobs (SDG 4.4) and accessibility (SDG 4.5). NI's OER can positively change lives by preparing young men and women for well-paying jobs that advance population health through the contribution of skilled nurses. Moreover, a curriculum that incorporates technological change in health care as well as nursing's traditional caring values will positively impact lives of both the nurses and the communities they serve, thus addressing SDG 3 (improving good health and well-being). Finally, this initiative is relevant for SDG 5 regarding gender equality. Since females make up 70% of the healthcare workforce, promoting meaningful and well-respected work for women enhances gender equality especially in generating livable wages for greater economic freedom (Boniol et al, 2019).

The wider development context has been described in recent reports that document the critical need for health care workers, with a global shortfall of 5.9 million nurses (WHO, 2020a). This is not merely a problem of numbers: "Educational institutions need to increase capacity and reform recruitment, teaching methods and curricula in order to improve the quality and the social accountability of graduates. The international community has an important role to play by partnering to support country-led efforts" (WHO, 2011, p. 3).

The Character of the Innovation in Learning

Our implementation method in this initiative can best be described as comprehensive support based on both high-tech and high-touch approaches. It is comprehensive and high-tech because the initiative involves creating and curating as an OER all clinical course content required for an English language, 4-year Bachelor of Science in Nursing program. Although we have applied student-centred design principles, the Nurses International Open Education Resource (NI-OER) is intended for nurse educators. Accordingly, the NI-OER is linked to National League for Nursing (USA) and WHO nurse educator competencies. We have described in nursing journals how the NI-OER serves as a resource to assist educators to develop those competencies deemed globally relevant by expert panels of nursing scholars (Berland et al, 2020; Keating et al, 2020).

As each course component is produced by NI volunteers, it is posted on a Web platform hosted by NI; following a simple registration process, users are provided a link so they can access the materials. The OER for each course includes classroom lectures (PowerPoint slide decks), teacher references and student learning resources, evaluation tools such as assignments and exams, checklists for clinical practice, and administrative policies. By agreeing to the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0), educators can download the OER without cost and adapt it to local regulator's requirements, clinical practice standards and cultural context.

The OER for most clinical courses have already been completed – fundamentals of nursing practice, health assessment, medical surgical nursing, community health nursing, and nursing management and leadership. In all these, we have made a special effort to tackle modern nursing practice through

development of “soft-skills” such as reflective practice, ethical responsibilities, critical thinking, working in teams, and leadership (GlobeScan, 2018).

The courses in maternity nursing, pediatric nursing, mental health nursing, nursing research, informatics, and professional development are in various stages of progress. To our knowledge, based on many years of Internet searching, the NI-OER is unique. As of early 2020, NI-OER components have been downloaded by hundreds of users in one hundred and twenty-four countries.

The original curriculum was developed and tested at an English-medium private university in Bangladesh (Berland et al, 2010). Due to an absence of qualified local faculty, most teaching in the early years was delivered by itinerant, mostly North American, volunteers, many of whom were bedside nurses, not professional educators. These on-site volunteers were guided by the founding faculty, based in Canada and Bangladesh, who were unable to locate a single source of resources and support for these novices and so provided early versions of the OER. The course materials were based on textbook outlines and Canadian BScN syllabi, with some reference to high-level guidance from WHO.

We learned from this experience that it is important to “lower the barriers and flatten the path” (Heimans & Timms 2018) because the Internet is abundant with curriculum resources but these are often isolated fragments of inconsistent quality. For junior educators, whether local employees or visiting volunteers, this can be overwhelming, especially because few have been trained in critical appraisal of Web content.

This early experience with digital knowledge transfer also helped us understand the importance of adapting to the local context. Although the NI-OER is based on “international standard” content it must also be adapted to LMIC settings (Commonwealth of Learning, 2015). Following these international standards helps users apply evidence-based practice to population health issues but they must also apply their own local knowledge to integrate differences in social structure, attitudes to learning, and professional values. For example, in Bangladesh it was important to apply a “foundation and reiteration” or “spiral learning” approach to support capable students who were handicapped by weak English language skills, or poor secondary education. Building on this approach, we plan to enhance NI’s support to educators with another innovation, using curriculum tracking software to link related concepts across courses.

The supportive, high-touch aspect of the initiative derives from additional resources offered by NI to educators through a support system using the international community of nurse educators and clinicians associated with NI. Users who download the OER materials are advised that they can access one-on-one advice or mentoring from an experienced NI volunteer faculty member. Recently, NI has also responded to requests for mentors from educators working as administrators in colleges or in multi-site education-systems. NI’s support has included both development of specific OER material as well as application or implementation support. NI has also completed the first draft of an *Educator’s Guide* that provides simple guidance in student and course management for the novice educator as well as specific instructions for using the NI-OER. The *Educator’s Guide* specifically addresses teaching and learning theory, curriculum and course development strategies, best practices for engaging students, faculty and professional development, and an introduction to technology for learning. This resource aims to help strengthen novice educators in teaching pedagogy, utilization of the NI-OER or

other OER, and development of nursing faculty, and may be used as a stand-alone resource or to augment personal mentoring received from an NI volunteer faculty mentor, thus increasing the sustainability of the NI-OER.

Another reason why we characterize this initiative as high-touch is our plan to develop communities of practice related to each topic area. This sub-project would involve engaging, organizing and steering collaborative groups of educators to develop, adapt and share OER related to their topic. The communities of practice would also be tasked with managing the dynamic knowledge environment and updating each course to ensure it is based on current best practice. We believe that long-term sustainability could be feasible if a group of “connected connectors” who benefit from the OER also participate in maintaining it (Heimans & Timms 2018). We also expect that these groups would naturally engage in dialogue about their experiences and challenges, thus creating mutual support around common issues (BC Campus, 2020). For instance, even experienced educators in well-resourced systems may find it difficult to promote development of professional practice in areas such as values formation, professional identity, and ethical orientation. The communities of practice will offer a safe space to share teaching strategies related to professional practice such as case studies, use of mainstream media, and “teachable moments” in clinical practice. Additionally, over time, we would work with communities of practice to translate NI-OER components for language and cultural appropriateness.

Impact on Development

We are still assessing the impact of NI-OER on development. Each person who downloads the NI-OER is asked to complete a simple user survey so that we can begin to assemble and stratify by basic demographic data and glean contact information for future research. Preliminary statistics of the data captured from the survey reveal reviewers from 124 countries with a total of 1,427 downloads of NI-OER content by educators and students (255 downloads from educators and 1,172 from students).

For now, we hypothesize very generally: Because the population we work with directly is nurse educators, they, in turn, will each help thousands of students to build professional careers, which will support their families, and impact innumerable individual patients and communities during each nurse's working career. Increasing the capacity of nurses at all levels is a strategic directive for the WHO (2020b).

There are many specific beneficiaries of this initiative including novice nurse educators, specialist educators, and nursing education administrators. Novice nurse educators will have support as they master the skills necessary to become effective educators. From professional work in various countries, we have observed that a lot of new nursing instructors start their teaching careers with limited formal training in education, heavy workloads and not enough supervisory support. Standardized content has been recommended as a partial solution to this issue (GlobeScan, 2018).

Specialist educators will have access to a larger pool of peers. Through on-going partnership work among our volunteer experts and OER users, this initiative will help focus teams of specialist educators working collaboratively to adapt, update and supplement curriculum at both basic and post-graduate levels. Instead of working in isolation, this network and community of practice will have the precious opportunity to be able to be more informed and effectively react to rapid changes in healthcare. The network will also be able to support colleagues through the sometimes-stressful

experience of quality assurance and accreditation activities, as there will be a foundation of mutual trust based on shared resource development.

Nursing education administrators will be able to make any desired changes to the NI-OER to meet the needs of their own institutions. Using Creative Commons licensing arrangements, local adaptation will ensure the OER meet national regulatory standards and practice requirements, and aligns with cultural contexts for users.

Government officials responsible for higher education and health human resource planning will benefit from the focus on south-south collaboration in curriculum development. This will support national and local curriculum development within a framework of basic international standards.

Issues and Challenges

Financial barriers have slowed NI's progress in developing the NI-OER. Considering the potential impact, this is not a costly initiative. The work timeline has been scaled to available resources, but volunteer efforts are most effective when supported by dedicated coordination and technical expertise. We need to attract resources (personnel and funds) in order to evaluate implementation issues such as effectiveness, professional acceptability and political commitment.

Human resource barriers are always a concern in any knowledge-based field. So far, we have had no problem recruiting North American volunteers. In health care, however, there is intense competition for experienced staff, especially in many LMIC. Therefore, as we expand program offerings, it will be important for NI to identify, induct, and retain a strong team of educators, information specialists, and technical staff particularly from the global South.

Technical challenges are numerous because until recently, even in North America, nursing has not been at the forefront of technology-enabled learning (Schneider & Good, 2018). Knowledge management generally is a huge task, comprising the organization of diverse resources with appropriate search and linkage functions; tackling intellectual property, privacy and copyright issues; and addressing varied student skill levels with distinct OER components. Repository management presents challenges such as user access, file management and version control procedures.

Most fundamental to our purpose, yet a major challenge, is finding varied, context-specific ways to support capacity development for both institutions and individual users. This includes skills in information and communications technology in the variable connectivity environment that is common in many parts of the world. In addition, although we have provided some advice within the *Educator's Guide*, we are aware that hands-on support would be ideal to help users develop skills for use and adaptation of the NI-OER.

Plans for Future Work

Recognizing that this is an ambitious initiative, our plans for future work involve several phases. Phase 1 is presently underway using volunteer resources. It focuses on the development of the NI-OER material, including forming and orienting teams of course developers; developing tools and templates to guide developers in creating a consistent product; linking each course's objectives to nursing graduate competencies; updating the courses for all clinical practice subjects, and refining access to the NI-OER on the online platform. In addition, marketing to users and volunteers and preliminary data-gathering are part of all phases of the work.

In late 2020 we hope to begin Phase 2, which focuses on classroom teaching resources and program resources: developing classroom teaching resources (e.g., teacher notes, case studies and exercises, assessment materials); developing program resources (e.g., background documentation for the entire BSN program, including sample philosophy, goals and policies, clinical assessment tools); enhancing the NI-OER with recorded lectures, demonstration videos and interactive materials; developing technical resources to support website management, and posting the classroom teaching and program resources on the NI website with registration to facilitate network development.

In Phase 3, we will consolidate progress and establish sustainability processes. This includes developing an evaluation plan to assess use of the NI-OER in various settings; developing a formal process for ongoing NI-OER updates and developing new material for evolving care delivery issues; developing a voluntary approach among participating Higher Education Institutes for quality management and accreditation of the NI-OER delivery process, and developing a formal research program.

Based on formative evaluation techniques, we have already refined our approach to promote sustainability as well as impact. For example, in collaboration with another OER provider, NextGenU.org, we quickly developed training materials for frontline staff working with COVID-19 responses. Based on user feedback, we have expedited our production of the *Educator's Guide* to amplify the effects of the NI-OER, especially for teaching critical thinking.

Most significantly, we have confronted the challenge of the complexity in managing distinct nursing topics, some of which are hospital-based, like medical surgical nursing, while others are community-based, like public health nursing, and yet others, such as nursing research and professional issues, are more academically oriented. Each focused area requires significant subject expertise with the goal of assisting students to integrate the content into their learning. In North America, nursing pedagogy has emphasized unifying “models” and concept-based approaches. Our experience in Bangladesh and other LMICs suggest this may be challenging for some students (Lund et al, 2013). Therefore, the previously noted curriculum-tracking software may be a mechanism to link culturally-appropriate case studies across disparate topics.

Paradoxically, our volunteer-led model is the most important element of our sustainability. Paradoxical because the OER is being developed by something money cannot buy, namely volunteer faculty who are implementers who are committed to social justice. With great effort and care they bring a “do-it-yourself” mindset and widely varied experience. The NI infrastructure and technology platforms, by contrast, are basic and require only modest financial inputs to provide academic direction and quality assurance processes.

NI shares the belief expressed by Sir John Daniel, “Good education for all is the key to enabling people to chart their own futures. Ensuring equal access to education is the principal means for reducing inequality generally” (Daniel, 2020, p. 14). However, OER is a relatively new concept in the teaching of nurses. Our team has extensive experience in nursing and education of nurses but in OER development, we are “learning by doing”. Therefore, we hope that this introductory description of our work will help us to engage with *JLAD* readers, especially those with more general experience in using technological and interpersonal solutions to support novice educators. We welcome

collaborators who share the NI vision, “Improving the health of the world, one person, one nurse, one community at a time.”

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