


Open education resources to support the WHO nurse educator core competencies

A. Berland¹ MSc, RN (ret.) , **K. Capone² MS, RN, CNE**, **L. Etcher³ PHD, APRN, CPG**, **H. Ewing⁴ DHSc, RN**, **S. Keating⁵ PHD, RN** & **M. Chickering⁶ BScN, RN**

1 President, A.Berland Inc., Slocan Park, British Columbia, Canada, **2** Adjunct Lecturer, Nursing, Utica College New York, New York, New York, **3** Associate Professor, School of Health Professions, Spring Arbor University, Spring Arbor, Michigan, **4** Associate Professor, Coordinator of Doctor of Health Sciences Program, Massachusetts College of Pharmacy and Health Sciences, Boston, Massachusetts, **5** Clinical Assistant Professor, New York University College of Nursing, New York, New York, **6** CEO, Nurses International, Minneapolis, Minnesota, USA

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Aim: This paper describes an innovative approach to tackling the shortage of qualified nurse educators, which is a major constraining factor or ‘bottle-neck’ to improve the global supply of nurses, especially in low- and middle-income countries.

Background: The World Health Organization commissioned experts to develop Nurse Educator Core Competencies that describe expectations for this cadre of workers. In their deliberations, the WHO experts cited the challenges affecting the adoption of these competencies, particularly the lack of resources available for implementation. To address this specific challenge, a USA-based non-government organization, Nurses International, has developed Open Education Resources (NI-OER) to support nurse educators with freely accessible curriculum materials and remote mentoring support.

Methods: This paper applies item analysis to consider how the NI-OER could assist higher education institutes and individual faculty members in meeting each of the WHO Nurse Educator Core Competencies.

Findings: The NI-OER is a good fit with six of the Nurse Educator Core Competencies and a partial fit with the other two.

Discussion: Congruence with the WHO Nurse Educator Core Competencies is an important validity check for the NI-OER. The ultimate goal of the NI-OER is to promote sustainable development through intermediate goals related to supporting faculty as they prepare nurses for current and future service needs. Technological solutions like the NI-OER cannot solve all aspects of a complex problem like the global nursing shortage but are an important tool.

Implications for Nursing and Health policy: This resource has significant implications for nursing and health policy because it tackles several constraints to the global goal of increasing production and capacity of nurses. Combined with the organization’s remote mentoring and communities of practice, the NI-OER appears to have the potential to support novice nurse educators with accessible, adaptable resources.

Keywords: Competencies, Global Development, Nursing Education, Technology-Enabled Learning, Under-Resourced Settings

Even in well-resourced countries, there exists a significant problem with the supply of nurse educators (American Association of Colleges of Nursing [AACN], 2019). This

dearth of educators is a major constraining factor to improving the global supply of nurses, especially in low- and middle-income countries (LMIC). The problem is

Correspondence address: Alex Berland, A.Berland Inc., Box 27 Slocan Park, BC, Canada; Tel: 1.250.226.7100; E-mail: aberland@protonmail.com

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compounded by the rapidly changing expectations of nursing practice due to scientific, technological and socio-demographic developments impacting the profession, not to mention the increasingly complex health needs of diverse populations (Institute of Medicine 2011; Keating & Deboor 2018). Additionally, nurse educators now need to prepare graduates for varied clinical work outside the traditional hospital setting, in part due to shortages of other healthcare professionals (Martínez-González et al. 2014). All these challenges are more severe in LMIC due to loss of the most capable clinicians and educators through emigration (Thompson et al. 2014).

In 2017, the World Health Organization enlisted an international panel of experts to develop a set of Nurse Educator Core Competencies (NECC). The purpose was ‘to enable educators to effectively contribute to the attainment of high-quality education, and the production of effective, efficient and skilled nurses who are able to respond to the health needs of the populations they serve’ (p.5 WHO, 2016). The rationale for focusing on nursing educators can be found in numerous resolutions of the World Health Assembly that focus on the urgent need for action to tackle the global shortage of nurses. The concept document also notes that one of the challenges affecting the adoption of these NECC is a lack of resources available for implementation.

This paper describes an innovative approach to support higher education institutes (HEI) and individual faculty members in meeting the NECC through a project using open education resources (OERs) – freely accessible, peer-reviewed curricular materials and educational support. The largely volunteer sponsor is the USA-based agency, Nurses International (NI). Nurses International Open Education Resources (NI-OER) is both high-tech and high-touch, supporting nurse educators with technology-based OERs combined with remote mentoring. Through free online access via the NI-OER platform, users can download the core curriculum for a four-year Bachelor of Science in Nursing (BSN) programme provided in English. The major topics included in the curriculum are medical-surgical, community health, maternal child, mental health, research, professional development, administration and informatics (healthcare technologies and computer literacy). The NI-OER provides an integrated foundation with a curriculum that includes lectures, reference material and student resources, plus tools for implementation, evaluation and administration of courses. Remote mentoring to support the NECCs is provided through an on-demand linkage between LMIC educators and NI volunteers who are clinical specialists and educators.

Core Competency 1: Nurse educators possess a sound understanding of contemporary educational theories, principles and models underlying the design of curricula and the value of adult learning

The audience or primary user group for this OER is novice nurse educators in LMIC who lack organizational and financial supports for capacity building. The NI-OER provides an educationally sound prototype or model that has been developed by Canadian nurse educators and field-tested for over a decade through use in a low-resource setting (Berland et al. 2010). Although the originators of the NI-OER aimed to develop ‘international standard content’, this is a high-level construct, with no operational definition. Focusing on the educational and healthcare settings of LMIC means addressing different opportunities and constraints than in better-resourced countries with different social structures, attitudes to learning, available resources and professional values.

The NI-OER is only one part of the solution to meeting the NECCs. Nonetheless, it may be helpful for instance, where the HEI leadership does not promote best practices such as frequent assessments, individualized student learning, meaningful faculty collaboration and a robust curriculum (Saphier 2018). In addition to applying contemporary educational ‘better practice’, including modern adult education principles, the NI-OER embeds basic computer literacy in its explicit and implicit use of digital technology. The NI-OER Teachers Guide provides advice on how to assess online content and effectively use digital classroom tools. It is important to note, however, that not all teaching–learning problems can be resolved with remote support. Developing certain graduate competencies is challenging even in ‘face-to-face situations’, particularly professional comportment and critical thinking skills. The NI Teacher’s Guide is a substantive living document available to provide nurse educators with guidance for competency attainment. In addition, NI mentors can assist mentees individually.

Core Competency 2: Nurse educators demonstrate the skills and abilities to design, implement, monitor and manage curricula based on sound, contemporary educational models, principles and best evidence.

The NI-OER matches curricular requirements of nursing regulators in Bangladesh and India. The aim is not to be an ‘off-the-shelf’ solution, but rather to support junior educators with a coherent package of expert-developed content. Some

contemporary educational models are especially relevant for LMIC due to deficiencies in secondary school education, especially the emphasis on memorization. Thus, the NI-OER emphasizes concepts to help learners critically analyse their clinical experiences and facilitate active learning in the classroom. In notes aimed at the educators, the NI-OER uses a spiral learning or stepped approach to introduce and then reinforce specific concepts (Baron 2017). Similarly, the NI-OER's 'curriculum threads' help educators link material they are currently teaching to other courses their students have taken or will take in the future.

As reflected in the NECC, however, because context is as important as content and, as stated above, the NI-OER is not intended to be an off-the-shelf solution, each course will require adaptation for local practice. Moulding the content increases applicability in addressing community-level epidemiologic and socio-economic factors and local scope of practice for nurses. Users will also need to conform to requirements of their HEI and the professional regulatory bodies. As noted previously, a Teacher's Guide has been prepared to guide the novice educators in this use and adaptation process with additional opportunities for professional development. In many LMIC, HEIs are under-resourced with limited supervisory support. In these situations, educators can request help from the NI network to adapt and update their curriculum to be more appropriate for local practice.

Core Competency 3: Nurse educators maintain current knowledge and skills in theory and practice, based on the best available evidence

This competency reflects a universal problem for educators at all skill levels in all disciplines within and outside nursing. An ongoing challenge is how to keep up to date with a rapidly changing knowledge base in both pedagogy and the discipline itself. The Internet is an abundant source but crowded with 'esoteric bits and pieces' (Glassick 2002). For novice educators, this can be overwhelming, especially because few have been trained in critical analysis of the literature. The NI-OER supports educators with another innovation, using curriculum tracking software to link concepts across courses and to expected learning outcomes. This is particularly important in HEIs that lack the human resource capacity and/or processes to integrate the curriculum across and between courses.

Because HEI administrators may be further removed from practice than the junior faculty they supervise, they may be unable to effectively support the process of dynamic knowledge creation to ensure that each course is based on current

best practice. A particular educational concern for nursing is role development, encompassing 'high-touch' or compassionate care, values formation, accountability, professional identity and ethics, as well as critical thinking skills. The NI-OER materials are developed, reviewed and updated by NI content experts and LMIC users who are members of NI's topic-based 'communities of practice', all who are all well-versed in role development issues in nursing and strategies to support and promote critical thinking (Andrew et al. 2009; Commonwealth of Learning 2011).

Core Competency 4: Nurse educators develop their critical inquiry and the ability to conduct research and utilize findings to identify and solve educational and practice-based problems

Based on the authors' experiences, this NECC is one of the most difficult to support. In order to promote scholarship and evidence-based practice among users of the OER, NI applies Boyer's model of scholarship that conceptualizes four aspects of inquiry including the scholarship of discovery, which refers to knowledge development through traditional research and the scholarship of teaching and learning. This refers not only to pedagogy but also sharing knowledge with the broader public (Glassick 2002). This is extremely important because in many LMIC practice settings, medical culture dominates (Edwards et al. 2009). Many novice educators have developed their own practice skills in an environment where critical inquiry, decision-making and the application of clinical evidence by nurses are not valued. Similarly, many LMIC nursing colleges are segregated and operate outside a general university, again under the control of powerful medical colleges. The NI communities of practice will provide support for nurse educators to explore approaches to scholarship with supportive colleagues from around the world. Collaborations and pairings of novice educators with more seasoned global nursing educators and researchers offer the ability to elevate the level of scholarship of educators in LMIC.

The NI-OER offers a partial solution by providing critical thinking exercises for classroom practice and student assignments and tests. In addition, the teacher notes that accompany each lecture identify informal critical inquiry activities that can be introduced in 'teachable moments'. There is also a nursing research course within the NI-OER that prepares users to conduct their own small-scale research projects. It is assumed that some novice educators will develop their own competencies in the process of using these components of the NI-OER. It is expected that the nursing research course will, at the very least, promote an appreciation for research and

enable teachers and learners to understand and critically analyse published research studies.

Core Competency 5: Nurse educators demonstrate effective communication skills that promote collaborative teamwork and enhance partnership among health profession educational and clinical practice

To support the educators in achieving this competency, the NI-OER provides guidance in linking classroom learning with students' clinical practice. Each clinical subject has a classroom component and associated practice course, with articulated learning objectives and expected learning outcomes. Sometimes, however, students' practice experience is not supervised by their classroom teacher but by a clinical preceptor or even a changing roster of ward nurses. An even greater problem arises when a student's clinical practice is not aligned with theoretical studies and current learning objectives and instead serves the operational requirements of the practice site. The Teacher's Guide and NI communities of practice can support educators through offering strategies for communicating with preceptors, clarifying expectations of students and problem-solving within the HEI.

Looking more broadly at inter-professional collaboration, this NECC compares with the second category of Boyer's model, the scholarship of integration, which refers to applying evidence-based practice and approaches from different disciplines to tackle problems in innovative ways (Glassick 2002). A recent OECD study recommended that care providers develop cross-cutting or 'transversal' skills, so they can function across professional boundaries with diverse types of patients and non-team members (OECD, 2018a). Throughout the NI-OER, many collaborative practice skills, such as teamwork, communication and sociocultural sensitivity, are presented with increasing depth as students progress and mature in their professional orientation. For example, in specific courses such as 'Medical-Surgical Nursing', the NI-OER emphasizes foundational clinical skills such as holistic patient assessment, care coordination, system navigation and counselling for adaptation to chronic illness. NI-OER content stresses collaborative skill attainment through the student's engagement in hands-on learning activities with peers. Students assignments include group work collaboration and debriefing with peers and faculty. In addition, nurse educator communication and collaboration is encouraged by having educators share and discuss their work with members of the larger nursing educator community via conference and webinar participation.

Core Competency 6: Nurse educators demonstrate professionalism including legal, ethical and professional values as a basis for developing nursing education policies, procedures and decision-making

Topics such as ethical or legal principles, professionalism, management, leadership and advocacy are addressed in the NI-OER by two specific courses (Professional Issues, Management and Leadership). These topics are also covered informally in clinical courses through case studies, problem-based learning and critical thinking exercises. These 'soft skill' areas are challenging to universalize due to social diversity and cultural diversity in the global audience for the NI-OER. (To date, the NI-OER has been downloaded in over eighty countries.)

Nonetheless, from a care quality perspective, it is essential to assist educators to develop appropriate learning experiences relevant to typical practice situations. Some clinical practice settings are especially challenging; Pachkowski (2018), for example, emphasizes the importance of ethical practice in mental health nursing due to the complexity of modern nursing care. In one of the earliest courses in the NI-OER, 'Nursing Fundamentals', students are introduced to ethical dilemmas related to death and dying with hypothetical situations involving organ donation and complications of pregnancy.

As a competency for educators themselves, professionalism also varies with local custom and expectations. The NI-OER is based on a fully integrated package of nursing education policies, procedures and curricular materials. This integrated approach is important because it reinforces the professional attributes referred to in this NECC. It also makes the NI-OER unique and potentially more impactful from the myriad of online teaching resources available on the Internet: many of these are excellent resources, but most cannot provide a supportive context that reinforces professionalism. The NI-OER package is shaped by the professional values of the mostly Canadian volunteers who originally developed the content. Therefore, to reinforce the important point, while much of the content is transferrable, the NI-OER must be adapted for local use. For example, in some countries, academic institutions are susceptible to corrupt practices such as plagiarism and cheating on examinations. Countering this problem, the NI-OER provides policies that can be used as a template for adaptation to address such local issues. Further, through the NI-OER curriculum and interaction with mentors, nurse educators are encouraged to model professionalism, advocacy, and legal, ethical behaviour in their interactions with colleagues, students, clients and others.

Core Competency 7: Nurse educators utilize a variety of strategies to monitor and evaluate nursing programmes, the curricula and mastery of student learning

Boyer's third category is the scholarship of application or engagement (Glassick 2002). This involves not only engaging in quality assurance activities within the educator's own HEI; it extends to external peer review, such as accreditation. This aspect reflects the NI process of developing the NI-OER, where small working groups develop curricular materials which are reviewed by clinical experts and educators before dissemination to other educators and academic communities. Evaluating individual student mastery at the HEI or in cohort or batch level needs to be performed locally. In the future, NI will develop guidance within the NI-OER platform to support educators with monitoring and evaluation tasks, such as structuring committees, developing external feedback processes and data collection priorities.

In supporting users' mastery of this NECC at the individual student level, the NI-OER provides formative and summative assessment tools such as quizzes, vocabulary tests and examinations which include teacher versions with suggested answers. Where there are essay or project assignments, marking rubrics suggest the expected performance and learning outcomes. In order to help clarify expectations for student work in laboratory and clinical settings, the NI-OER provides skills checklists. Supportive evaluation of practice is not easy, even for experienced educators, so the NI-OER Teacher's Guide includes guidance on assessment and evaluation.

When invited, NI has also engaged in consultation with nursing programmes in LMIC to conduct a review and substantive gap analysis of educational programme offerings. To date, these pro bono gap analyses have provided the HEI with a comprehensive assessment and recommendations to strengthen the curricula to meet standards similar to nursing programmes in Canada and the United States.

Core Competency 8: Nurse educators demonstrate the skills of system management and leadership to create, maintain and develop desired nursing programmes and shape the future of education institutions

This NECC is about HEI leadership, which in most countries means responding to pressures such as human resource shortages and globalization by managing change, transition and innovation. Mikkonen et al. (2019) interviewed Finnish nurse educators about their perceived self-efficacy. The study participants understood the importance of improving their ability

to innovate and adapt in response to global sociopolitical trends and competition. This NECC also suggests that nurse educators should play a role in larger system change through governance and advocacy outside the HEI. Further, it refers to demonstrating 'integrity, courage, perseverance, vitality and creativity' (WHO 2016, p.16). Shaping the future is not for the faint of heart.

This particular core competency is likely aspirational for the NI-OER audience of junior educators. It may not be realistic to expect novices to demonstrate such skills. Nonetheless, as the NECC summary notes, all faculty should be able to serve as change agents and role models for their students: 'Education is an important starting point for change. The utility of the proposed competencies will determine their ability to bring about the desired changes. Appropriate use of technology can help to expedite such changes' (WHO, 2016, p.5).

Implications for Nursing and Health Policy

The most important implication is that the NI-OER can positively change lives by preparing young men and women for millions of well-paying, high-demand jobs that advance population health through the contribution of skilled nurses and nurse assistants. From a systems perspective, the implications are potentially very significant. Without belabouring the dismal health statistics in many LMIC, especially for poor people, it is important to emphasize the value of better-trained nurses for the general population. There is also significant impact for nurses themselves – often women with lower socio-economic status, generally poorly paid. The increased quality of nurses graduating from good training programmes will elevate public perception about nurses, their level of competency and thus social status; financial rewards can reasonably be expected to follow.

The direct beneficiaries will be nurse educators, many of whom lack good training themselves and are further constrained by limited resources and supervisory support. Educators in supervisory positions will benefit from access to professional development resources for their faculty. The remote mentoring support and communities of practice may help build locally based collaborative networks for ongoing mutual support. Affordability is a major constraint for accessing quality curriculum and resources. The NI-OER leverages the open access philosophy through technological and instructional innovations to make quality nursing education materials accessible regardless of the economic status of individuals and institutions.

In turn, these beneficiaries – the educators and their HEI – will benefit individual nursing students by helping them to

build professional careers, which will support their own families and impact thousands of individual patients in each nurse's working life. National and sub-national healthcare systems will benefit from improved supply of essential human resources. Employers of nurses, both public and private, will benefit from improved supply and quality of nursing graduates to meet increasing public demand for modern health care that is both high-tech and high-touch.

Summing up, the NI-OER is an innovative approach to support nurse educators, who are a crucial leverage point in health human resources and population health promotion.

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