Commentary

Embedding international research in global public health pedagogy: bridging the teaching–research divide for equitable learning.

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Abstract

The increasing complexity of transnational public health challenges requires educational approaches that equip future professionals with the skills to critically engage with evidence and address diverse global health priorities. This commentary argues that embedding international research within global public health pedagogy can strengthen equitable, inquiry-driven, and practice-oriented learning. International research engagement enables students and educators to participate in collaborative knowledge production through cross-border partnerships, comparative research, authentic research projects, internships, and global learning experiences. Such approaches may enhance critical thinking, analytical competence, cross-cultural understanding, and evidence-informed decision-making. However, meaningful integration remains constrained by institutional, financial, technological, ethical, and political barriers, particularly within low- and middle-income countries. To address these challenges, an equity-oriented framework comprising progressive curriculum integration, equitable partnerships, and reciprocal capacity strengthening is proposed. Embedding international research into global public health education is an important strategy for preparing reflective, globally competent, and socially responsive public health professionals capable of addressing contemporary and future global health challenges.

Keywords: Global public health pedagogy; Research–based learning; International research; Pedagogical integration; Equitable learning

Background

The persistent divide between teaching and research remains a contentious issue in higher education. This divide is not only pedagogical but also structural, institutional, and epistemic, shaped by workload allocation models, promotion criteria, funding priorities, academic prestige systems, and differing perceptions regarding the value of teaching and research within universities. Consequently, many higher educational institutions (HEIs) worldwide continue to adopt a siloed approach to teaching and research, with research often being favoured over teaching (1). However, there is an increased recognition of the importance of a teaching-research nexus in enhancing students' learning and capacity building to address real-world problems, particularly in highly dynamic and complex disciplines such as public health (2). With the recent rise in teaching academic (i.e., teaching-only) positions in HEIs in the UK, USA, Canada, and Australia (3), the teaching-research divide is likely to deepen, with potential negative impact on various fields, especially global public health, where a synergy between teaching and research is often required to drive interventions and address global health challenges.

Recent transnational global public health challenges, including the COVID-19 pandemic, climate change (4), and health inequalities (5), underscore the growing need for evidence-based and inquiry-driven learning approaches to adequately prepare public health practitioners to address these global threats. However, due to the prestige often associated with major research funding and the emphasis placed on research in promotion criteria, many HEIs and academics tend to prioritise research over teaching (3). Besides, the increased globalisation and marketisation of higher education, where the ranking of universities and academics is often based on research-measurable indicators, further deepens the research-teaching divide (3). Thus, while research continues to gain much attraction, drive innovation, and influence public health policies, on the other hand, teaching is often seen as largely remainingconstrained to conventional didactic models, characterised by repetitive and passive learning approaches.

While many public health educators already incorporate contemporary research, guest lectures, community-based learning, and inquiry-driven approaches into their teaching, opportunities for systematic and equitable integration of international research experiences remain uneven across institutions and regions. Emerging pedagogical approaches increasingly demonstrate the value of integrating teaching and research within global public health education. For example, collaborative North–South and South–South institutional partnerships can promote shared learning opportunities by enabling students to engage with international datasets, comparative case studies, and context-specific public health challenges across diverse settings (6).

Similarly, pedagogical models incorporating independent research projects, international or community-based internships, public health masterclasses, and authentic student-led research activities provide opportunities for students to connect theoretical learning with real-world

public health practice (7, 8). These approaches may strengthen critical inquiry, cross-cultural understanding, and research competence while fostering more equitable and globally engaged learning environments. This commentary argues that integrating international research within global public health pedagogy is essential for promoting equitable, inquiry-driven, and practice-oriented learning capable of preparing future public health professionals for increasingly complex transnational health challenges.

In this commentary, international research refers to cross-border and collaborative research activities that enable students and educators to engage with diverse public health systems, populations, datasets, and contextual realities (9). Global public health pedagogy refers to teaching and learning approaches designed to prepare students to understand and respond to complex transnational public health challenges through critical, interdisciplinary, and equity-oriented learning. Equitable learning within this context refers to inclusive educational practices that promote meaningful participation, reciprocal knowledge exchange, critical inquiry, and fair access to research opportunities across institutional and geographic contexts (6). The integration of international research into global public health pedagogy, therefore, provides an important pathway for strengthening equitable learning by exposing students to diverse perspectives, collaborative knowledge production, and real-world public health problem-solving across different settings.

The case for research-embedded pedagogy in global public health

The increasing complexity of global public health challenges necessitates a shift towards transdisciplinary and practice-oriented learning in the global public health education system. As diseases and other health risks know no boundaries, interdependence remains integral to global public health education and practice (10). Arguably, traditional didactic approaches often fail to adequately equip students with the requisite knowledge and skills necessary to effectively address the ever-changing dynamics in global public health. Cassens and Prasch (11) argued that research-based learning approaches are required to enable students to develop independent problem-solving skills and adaptability, which are essential for global public health officials, unlike didactic approaches that focus on passive knowledge transfer. Additionally, embedding research into teaching promotes critical appraisal, equity-oriented inquiry, and cross-cultural competence, which are essential for addressing real-world public health challenges (11). Meanwhile, despite the importance of research-embedded pedagogy in producing graduates capable of translating evidence into global public health policy and practice (12), many HEIs in low- and middle-income countries (LMICs) face structural barriers, including funding gaps (13), which hinder students' ability to fully participate in global public health research and discourse. This highlights the need for concerted efforts to integrate international research into public health pedagogy in LMICs, enhancing students' competencies and access to scholarly tools, and promoting inclusive teaching and learning in global public health.

International research as an equity-oriented pedagogical resource

The internationalisation of research-embedded public health pedagogy could foster cross-border or context-specific collaborations, enabling students and faculty to engage with diverse healthcare systems and cultural contexts, and address global public health challenges. For example, research-integrated teaching models that pair institutions across regions to promote mutual learning, skills exchange, and institutional capacity building, such as joint data analysis, shared seminars, virtual exchange, co-supervised projects, community-based research, or comparative case studies (14), provide opportunities for students and faculty to participate in global research inquiries. These models also enhance students' access to real datasets from diverse geographic locations, international policy frameworks, and comparative research projects, fostering methodological rigour and promoting the cultural competence necessary for transnational global public health practice. It is also pertinent to know that this partnership could also reproduce inequalities as well (7).

Meanwhile, considering the limited research capacity of many students and faculty in LMICs, particularly in SSA, due to structural underinvestment in the education system, unequal access to resources, and colonial histories of knowledge production, these international partnerships could promote balance in intellectual authority and redress historical inequalities in public health knowledge generation (15). Additionally, it could promote decolonisation and the co-production of knowledge in global public health by challenging colonial hierarchies in knowledge production and creating more equitable, reciprocal, and participatory research relationships. Within research-engaged teaching, this may be operationalised through shared governance of research agendas, co-designed curricula, equitable authorship practices, reciprocal student and faculty collaborations, community-engaged learning, and fair distribution of funding, data ownership, and dissemination opportunities between researchers from LMICs and high-income countries (16).

Pedagogical models and practice examples

Integrating international research in global public health pedagogy requires the use of innovative pedagogical models and varied practice approaches. Kiviniemi and Przybyla (6) suggested that the use of an integrative curriculum model that includes several elements of capstone, such as independent research work, a public health internship with a partnering institution, and a study abroad experience, enables students to understand how various public health concepts interrelate and have a real-world experience of addressing public health problems from a diverse perspective (6). In the Netherlands, the use of masterclasses to integrate research into public health education and practice has shown a significant improvement in the research skills and competencies of public health professionals, thereby enhancing their capacity to address practical public health problems (17). Although implemented within a high-income setting, this model may also be transferable to global health promotion contexts, particularly within LMIC institutions, through the use of collaborative virtual learning, context-specific case discussions, mentorship, and interdisciplinary problem-solving approaches that can be adapted to varying institutional

resources and public health priorities. Research-based learning approaches that engage students in authentic research projects, such as small-scale studies, data analysis, and systematic reviews, enhance their ability to develop analytical skills and contribute to the production of knowledge (18, 19). Thus, the use of research-integrated curriculum models in public health education positions students not merely as recipients of knowledge but as active participants in the research and learning process.

Gaps and challenges

Despite the compelling pedagogical basis, integrating international research into global public health education remains constrained by interconnected institutional, pedagogical, technological, financial, ethical, and political barriers. Structural limitations, including inadequate digital infrastructure, unstable internet connectivity, limited research funding, and unequal access to international datasets and collaborative platforms, continue to hinder research-engaged pedagogy, particularly across many LMIC institutions (20). These challenges are further compounded by institutional workload models, promotion criteria prioritising research outputs over pedagogical innovation, and insufficient support for international teaching and research collaborations (21). Consequently, opportunities for sustained student participation in authentic and internationally collaborative research activities remain unevenly distributed.

Pedagogical and ethical challenges also complicate the integration of international research into public health education. Differences in language, curriculum priorities, research ethics procedures, and supervisory capacity may affect equitable participation and knowledge exchange across institutions. Furthermore, power imbalances between partners from high-income countries and LMICs may influence agenda setting, authorship, funding control, ethical approvals, data ownership, and dissemination practices, potentially privileging external priorities over community benefit, reciprocal learning, and locally driven public health research and capacity strengthening.

Towards a Framework for International Research Pedagogy

Embedding international research into global public health pedagogy requires an equity-oriented and research-engaged framework that bridges teaching and research to strengthen inclusive learning. This proposed framework is built on three interconnected pillars: progressive curriculum integration, equitable partnerships, and reciprocal capacity strengthening (see Figure 1). Progressive curriculum integration involves embedding authentic and context-specific research tasks across the curriculum, enabling students to engage with real-world public health challenges through inquiry-driven and evidence-informed learning approaches (6, 12). Such approaches may support the development of critical thinking, analytical competence, and problem-solving skills required to address local and global public health issues.

Equitable partnerships require co-designed and mutually beneficial collaborations across North–South and South–South contexts, supported through shared governance, reciprocal agenda setting, ethical data-sharing practices, and sustainable funding arrangements (12). These mechanisms may contribute towards strengthening equitable knowledge exchange and reducing extractive approaches that often disadvantage LMIC institutions within global public health research collaborations. Finally, reciprocal capacity strengthening should extend beyond research ethics and dissemination training to include mentorship, curriculum co-design, digital infrastructure support, leadership development, community engagement, grant-writing skills, and multilingual dissemination practices that enhance culturally responsive and sustainable international collaborations (6).

Conclusion

The growing complexity of transnational global public health challenges underscores the need for a pedagogical shift towards more research-engaged and globally responsive public health education. Embedding international research within global public health pedagogy is therefore not a luxury but an institutional and educational imperative for preparing reflective, critically engaged, and practice-oriented public health professionals capable of responding to complex global health challenges.

Achieving this shift requires higher education institutions, educators, and research funders to move beyond siloed approaches to teaching and research. Key priorities include:

• Progressively integrating authentic research tasks across public health curricula.

• Recognising pedagogical scholarship within workload allocation and promotion criteria.

• Investing in equitable global partnerships and shared research infrastructure.

• Supporting reciprocal capacity strengthening initiatives for students and faculty.

• Promoting inclusive research governance, ethical collaboration, and culturally responsive partnerships.

• Strengthening mentorship, equitable participation, and meaningful knowledge exchange across diverse global contexts.

Abbreviations

UK: United Kingdom; USA: United States of America; COVID-19: Coronavirus Disease 2019; HEI: Higher Education Institution; LMICs: Low- and Middle-Income Countries; SSA: sub-Saharan Africa.

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Competing interests

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