

2 Global health pedagogy

The art and science of teaching global health

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This online chapter is dedicated to global health educational pedagogy – the art and science or the theory and practice – of teaching global health. There is now widespread acceptance and recognition that this field requires specialised knowledge and skill beyond that which can be acquired by field experience. Leaders and learners of global health programmes agree that a codified body of knowledge is urgently needed to produce the next generation of experts in the field. The intent of this chapter is to provide you with a broad array of educational tactics and approaches as well pedagogical perspectives available to global health educators. Our aim is to highlight the rich landscape of tools, frameworks and theories educators use to teach their diverse groups of global health students. The following chapters will explore these topics in greater depth. We conclude with a list of suggested pedagogical resources for areas not covered in this book.

Terminology

For the purposes of this chapter, we will use the definition provided by Koplan and colleagues, where “global” represents a scope of problems, unrestricted by borders, that require an interdisciplinary and multi-sectoral approach with the ultimate goal of health equity (Koplan *et al.* 2009). In addition to this definition, we will also use the lens proposed by Philpott, whereby global health is a frame of mind or a way of looking at the world (Philpott 2010).

The field of global health is vast, encompassing education, research and practice. We cannot teach our students everything about the field, nor can we design a curriculum that covers an entire topic area. Rather, educators must tailor learning objectives to the interests, ambitions, time, context and resources of the students and educational institutions. Context is arguably the most important of all of these variables, and teaching must reflect the diversity of learners and learning environments (Rowthorn and Olsen 2014). There are, however, some universal goals or competencies that learners at all levels should acquire and these will be discussed in the

following sections. An excellent programme should provide learners with the skills: to understand challenges that cross disciplines and borders; to collaborate effectively in teams; and to prioritise local community needs and values. The Lancet Commission on Education, calling for a redesign of professional education, made two main recommendations which are particularly salient for our discussion: interdependence and transformative learning (Frenk *et al.* 2009).

Global health is, fundamentally, an interdependent activity. Frenk *et al.* (2009) describe the mobilisation of “people, pathogens, technologies, financing, information, and knowledge” and the resulting risks and opportunities shared by global populations that are dependent on the same health resources. Acknowledging this interdependence and translating information and skills drawn from various professional disciplines is a primary aim of global health pedagogy. Anthropology, service-learning, social equity, human rights, economics, engineering and implementation science are a few fields that can contribute to understanding the economic, social, psychological, political and service delivery challenges inherent to the field.

Transformative learning is one of the cardinal goals in andragogy, or adult learning. This is significant as most students in global health programmes are adults. According to Knowles, adult learners are: internally motivated and self-directed; inclined to bring life experiences and knowledge to their learning; goal and relevancy oriented; practical; and like to be respected (Knowles *et al.* 2014). These criteria demand innovative educational methods as opposed to the traditional didactic models of instruction (Frenk *et al.* 2009). Problem or case-based simulation and collaborative learning are often more useful than didactic approaches. Andragogy is one of many learning theories applicable to global health education. For the rest of our discussion, we will use the term “pedagogy” to cover both andragogy and pedagogy.

The remainder of this chapter is devoted to teaching methodology. We will first introduce considerations in curricular design and competencies and then discuss the components of a programme and available pedagogical tools.

Curricular design considerations

Current global health literature focuses on content and competencies over approaches to teaching and evaluation methods. When designing a global health education programme, educators typically identify two main parts of the curriculum – pedagogy and the timeline associated with experiential learning. When present, the experiential curricular component of the programme requires the educator to organise teaching materials around the times prior to, during and after the field experience. A time-based approach prompts questions such as: What is the learner ready to learn? What conflicts

Table 2.1 Key questions for programme design

<i>Learner</i>	<i>Objectives</i>	<i>Methods</i>	<i>Outcomes</i>
<ul style="list-style-type: none"> • Programme or practitioner-oriented • Undergraduate or graduate student • Professional 	<ul style="list-style-type: none"> • What do the students want to know? • What do you want the learners to accomplish? (be able to do/ know) • What makes an effective practitioner? 	<ul style="list-style-type: none"> • What educational pedagogies can be used? • What is the most efficient vehicle to teach the desired outcome or objective? • Which tools and methods are gold standard for the field? 	<ul style="list-style-type: none"> • Evaluation and assessment methods: learners vs. programme; summative vs. formative; qualitative vs. quantitative

will the learner face at these times? What activities are best for the learner? In this section, these are organised into a time-based framework. Table 2.1 lists key questions to guide design considerations.

Connecting curriculum and competencies

The best programmatic and curricular practices suggest adopting an interdisciplinary, competency-based approach that harnesses the power of technology (Frenk *et al.* 2009). However, given the diversity of learners with multiple professional skills, varying learner goals (Doobay-Persaud, *et al.* 2017), variable faculty perspectives, and constraints of time and resources, it is imperative that educators consider each of the variables carefully when designing curricula.

A general guide to competencies can be found in the work conducted by the Consortium of Universities for Global Health (CUGH) education sub-committee. These competencies outline the specific knowledge, skills and attitudes that all participants in global health should possess, and additional recommendations for those in the specialised or advanced practice workforce (Jogerst *et al.* 2015). These competencies, and the entire competency-based global health education movement, is not without critics and constructive conversations. These include the distinction between acquired and participatory competencies, as well as the risk of imparting a false sense of expertise on learners who have only demonstrated competency in one specific context or geo-cultural setting (Eichbaum 2015, 2016). This is further discussed in *Chapter 4*. There have recently been efforts to increase co-education between partner or host communities and sending institutions/universities. The voice of low and middle-income countries (LMIC) in the setting of competencies has been noted to be limited and efforts are underway to rectify this (Cherniak *et al.* 2017), as explored in *Chapter 3*.

The field experience or STEGH

The field experience represents one of the key curricular components of global health education. Institutions should model best practices for their students, using the structure of these experiences to teach the importance of bidirectional, ethically sound, equitable, global/local and interdependent partnerships. An example of bidirectional benefit is supporting trainee and faculty exchanges from partner institutions who come to their “Global North” partners to teach, learn and be trained. This is a feature at some, but far too few, academic professional schools – and when done, generally the institution in the Global North does not host the same number of students as they send to their partner institutions in the “Global South”.

The Medical Education Partnership Initiative (MEPI) is a prime example of this model. MEPI awards grants to institutions in sub-Saharan Africa to develop medical education and junior faculty research capacity by leveraging existing infrastructure and human resources. Training programmes and opportunities for professional development and education may include LMIC partner faculty receiving research training at US-based academic institutions, building local capacity in medical research. Focusing on informational exchange, sometimes controversially referred to as “reverse innovation”, is also a valuable feature of these programmes, highlighting the importance of interdependence and solidarity. For students planning their own field experiences, engendering social accountability into their work is a critical teaching point and the responsibility of the sending institution. This notion of structure as a means to educate the learner and mitigate the ethical challenges, particularly the unintended, harmful consequences of good intentions, has been addressed in the academic medical literature. Recent work describing best practices in short-term experiences in global health (STEGHs) as well as the Working Group on Ethics Guidelines for Global Health Training (WEIGHT) project focus on developing cultural humility and highlight the importance of bidirectional partnerships. This work recommends that trainee and institutional involvement should focus on community-led, sustainable, longitudinal efforts in capacity building – the tri-fecta of global health efforts (Crump and Sugarman 2010, Melby *et al.* 2015).

Students in graduate education or certificate programmes are often asked to complete a capstone, thesis, scholarly project or practicum involving their field experience. Learner goals for these final projects should include the development of professional competencies in the domains of partnership, programme management, and communication – emphasising dependability, flexibility, adaptability, creativity and resourcefulness. Such projects include research, capacity building or service. An asset-based approach to engagement will yield significant learning dividends (Evert 2014).

The importance of a conceptual understanding and approach to global health should be explicitly discussed with trainees; definitions and theoretical

frameworks should be emphasised. Educators should provide expert supervision, guidance and feedback before, during and after their outreach work and conclude with structured critical reflection (Logar *et al.* 2015). They should encourage global/local or “glocal” work in their programmes, recognising that the skills needed for caring for vulnerable populations globally and locally are virtually the same. Efforts should be made to continue to share innovations and models between community public health and global health programmes, education and research (Rowthorn and Olsen 2014).

Pedagogy for the field experience

The following pedagogies are best suited to the three different points in the experience-related timeline. Although we have organised these into pre, during and post experience, many may be used at various points in the educational process. For those programmes that are completely virtual in nature or do not have a field experience component, these techniques may teach students about the salient topics for understanding global health.

Pre-departure training and pedagogy

Context-specific pre-departure training (PDT) provides the learner with a framework and tools to successfully navigate their field experiences with cultural humility and appropriate communication practices. It can mitigate the cognitive dissonance or harm that can occur for both trainee and host when expectations and reality are misaligned. All stakeholders fare better when everyone, trainees and hosts alike, are well prepared and expectations have been made clear. Institutions and faculty invest the bulk of their time and resources to PDT and tend to focus on ethical and safety preparedness. Consequences of trainees being unprepared for the field include burnout and students who are less likely to serve the underserved in the future (Dyrbye *et al.* 2010).

Prior to departure, all trainees should set personal learning objectives for the field experience and examine their motivations for both their field experience and involvement in global health in general. In addition, they should work to identify personal knowledge gaps to foster self-directed learning. The introspection techniques suggested by Pinto and Upshur allow honest evaluation of the true beneficiaries of the experience and can help students understand how power and privilege based on difference can affect one’s motivations and ultimately mitigate some of the challenges they will face in the field. This type of analysis that mitigates discrimination comes from the equity and social work fields but is particularly useful for global health trainees (Pinto and Upshur 2009). Other students’ reflections on challenges and concerns faced during their experiences can be used prior to departure to further explore possible difficult

outcomes and discuss alternative perspectives or recommendations (Bui *et al.* 2016, Chuang *et al.* 2015, List *et al.* 2006, Logar *et al.* 2015).

Pedagogical examples

Didactics

Didactics and coursework in the form of seminars, lectures, journal clubs and peer discussion can introduce the important background theories and challenges of global health. Lectures and seminars convey many of the knowledge-based competencies and content described in the literature. Some examples of the core topics amenable to this teaching method include:

- Understanding context-specific cultural and moral beliefs about health in general.
- Examining and determining objectives of the experience (research, education, clinical service, capacity building etc.).
- Understanding the burden of disease, socio-economic determinants of health, health systems, global health governance, human rights, ethics, sources of disparities, economies of health.
- Describing the social, religious, political, historical and economic landscape of a field site.

Case studies

Case-based learning in the health fields with seminal global health educational texts and courses using this as a primary pedagogical method is cogent and timely (Skolnik 2012). Case studies and problem-based learning (PBL) can be used in large or small groups, and in faculty or peer-led settings. It has the advantage of allowing learners to sort factual data, apply analytic tools, articulate issues, reflect on their relevant experiences and draw conclusions that can be applied to new situations. Cases also add meaning by providing learners with the opportunity to see theory in practice, particularly the interprofessional and multidisciplinary challenges in the field. The advantages of PBL include the development of a workforce with adaptable critical thinking and collaborative problem-solving skills. PBL is learner-centred and promotes innovation to overcome obstacles to global health challenges; these include peer-led facilitated small group discussions.

The business school-style case study is being used to educate trainees about how programmes, governments and enterprises build strategies and systems to meet the needs of patients and populations. They can examine the programmatic, organisational and policy-related decisions global health leaders face

in various disease conditions, within and across healthcare delivery systems in resource-limited settings (Bui *et al.* 2016, Loh *et al.* 2015). Many academic institutions have hosted global health case competitions where interprofessional teams propose innovative solutions to global health challenges. Along with the analytic and strategic skills described above, this exercise is an opportunity for building teams.

Simulation

Preparation via didactic, online and case discussions have great benefits as they can convey information at low cost and with few faculty resources. However, they fall short of replicating experiential learning. Simulation-based learning, especially high-fidelity scenarios with actors, allow trainees to develop clinical and practical skills tailored to resource-limited settings as well as cultural, professional and ethical competencies that preserve patient and trainee safety. For simulation to be effective, it must be accompanied by structured debriefings guided by trained faculty. Simulation curricula developed for global health professionals and trainees have been used successfully in the areas of practice and ethical challenges (Crump and Sugarman 2010, Logar *et al.* 2015).

Critical reflection

Structured critical reflection can be a powerful pedagogical tool for global health students when facilitated by a skilled teacher. It can be used at any point in the global health field experience and will be discussed briefly below and later in this chapter. A distinction has been made between reflection and critical reflection. Critical reflection requires that learners assimilate an experience and acknowledge how it will influence their knowledge, skills and/or behaviour going forward (Bui *et al.* 2016).

Educational methods: Online and experiential learning

Online learning

Online resources, distance learning and hybrid courses and programmes have made many of these educational methods more robust and accessible. Unite for Sight and CUGH provide pre-departure training, best practices for NGOs, discussions, cases and ethical guides on their websites (Unite for Sight 2015, CUGH 2016). Global Health Case Studies from a Biosocial Perspective, a no fee case-based discussion around service delivery, can be found on edX via Harvard University. Case-based ethics modules and curricula can be found on the American Medical Student Association (AMSA) website, the

Table 2.2 Free online resources for global health pedagogy

<i>Title</i>	<i>Type</i>	<i>Description</i>	<i>Website/URL</i>
Ethical Challenges in Short-Term Global Health Training	Website	Case studies highlighting ethical challenges encountered in global health settings	http://ethicsandglobalhealth.org/
Getting the Most Out of Your Global Health Elective at UNC SOM	PowerPoint	Pre-departure training and re-entry guidance	www.med.unc.edu/oia/medical-students/2015-msl-getting-the-most-out-of-a-gh-elective
Global Ambassadors for Patient Safety	Website	Patient safety workshop	www.healthcareers.umn.edu/courses-and-events/online-workshops/global-ambassadors-patient-safety
Global Health Case Studies from a Brosocial Perspective	Website	Case studies exploring biosocial determinants of health	www.edx.org/course/global-health-case-studies-biosocial-harvardx-sw25x-0
Global Health: An Anthology	Website	Critical reflection on global health experiences	www.cfhi.org/reflection-in-global-health-an-anthology
GSL Tools and Syllabi	Website	Creating global health training programmes, curriculum design	http://globalsl.org/wiki/gsl-practice-research-wiki/gsl-tools-and-syllabi/
The Consortium of Universities for Global Health	Website	Case studies focusing on medical practice in low-resource settings	http://cugh.org/resources/case-studies-reasoning-without-resources
The Practitioner's Guide to Global Health	Website	Pre-departure training and re-entry guidance	www.edx.org/course/practitioners-guide-global-health-part-1-bux-globalhealthx-1
Two Screens and an Ocean: Collaborating Across Continents and Cultures with Web-based Tools	Website	Case study on web-based collaboration	www.researchgate.net/publication/228968728_Two_Screens_and_an_Ocean_Collaborating_Across_Continents_and_Cultures_with_Web-based_Tools
Unite for Sight	Website	Ethical considerations for photography in low-resource settings	www.uniteforsight.org/global-health-university/photography-ethics

Global Ambassadors for Patient Safety (GAPS) curriculum (University of Minnesota Health Careers Center 2016), and through the online modules based on the WEIGHT guidelines (Crump and Sugarman 2010). These no-fee resources are best used with faculty guidance in conjunction with lectures or small group sessions.

Distance learning or hybrid learning, existing entirely or partially online, can provide a platform to achieve many of the goals of global health education. Learning material can be accessed by a larger audience and can target professionals, particularly adult learners. The asynchronous aspect of online education allows an international or part-time audience to participate easily.

Furthermore, web-based collaborations have given us the capability to easily cross traditional boundaries of geography, language, time and culture, building cross-cultural effectiveness and communication skills at low cost. Research in the field of distance learning reveals that virtual partnerships can build true relationships, which is a worthwhile goal in all contexts (Frydenberg and Andone 2010).

Intra-experience learning

Learners preparing for careers in the field and trainees conducting longitudinal projects need to build the ‘soft skills’ typically associated with the management and leadership world. A survey of employers has shown that desirable characteristics include those required to develop realistic and contextually appropriate partnerships (Rudy 2015). Skills cited include teamwork, collaboration, contextual awareness and project management. It is a worthwhile exercise for a partner to assess a trainee’s competence in these domains during the field experience.

Ongoing reflection in the form of journaling or weekly reflections, host communication on expected progress, and regular communication with mentors (both on the ground and at home) is important to ensure that the desired learner skills and attitudes are being acquired. Great care must be taken when communicating with trainees abroad as they can be vulnerable in new environments, and despite excellent preparation, they can suffer consequences of the ethical dilemmas inherent to these experiences. Faculty have the opportunity to reinterpret challenges in the field through a lens of cultural humility; these moments are particularly valuable for students and can be transformative. Highly trained faculty should be conducting these “check-ins” to balance both the trainee’s and host’s morals and dignity. These themes should continue through the post-experience reflection.

Community-based participatory research

Another example of experiential learning, community-based participatory research (CBPR), is a service-oriented strategy that looks to the community to define its research priorities, needs and methodology (Community-Campus Partnerships for Health 2006). The community participates as an equal partner or leader in the research team. This approach lends itself to relevant and useful research that is applicable and easily disseminated to those whom it affects. It is collaborative, equitable and has partnership at its core. CBPR was born out of the social and political movements geared to overcoming social inequalities. It was further supported by the critical pedagogy of the oppressed, proposed by Paulo Freire, which upholds that education is a political act and should be used to fight colonial mindsets, whereby people should transform their own world (Freire 1970). CBPR can be used to combat neo-colonial trends in global health and can demonstrate community empowerment, solidarity and equity, which are notoriously difficult to teach and learn.

Post-experience

Some of the most salient learning can come after the field experience, when learners have the time to critically reflect, assimilate knowledge and experience, and leverage this for their future experiences and careers. This is usually the time when most evaluation and assessment occurs, both for the learner and the programme. Identifying the ethical, collaborative and professional dilemmas associated with the structure of the field experience is invaluable for programme improvement. Guided critical appraisals of challenges from the perspectives of students and hosts usually pave the way for transformative learning. Boston University's edX guide and Unite for Sight have useful online material to support students on their return home (Boston University EdX, CH1_BM_9781138236332.docx - CIT000001 Unite for Sight 2015). These support the student's transition, both psychologically and practically, for "reverse culture shock." These modules, as well as reflections and prospective cases, can be discussed and facilitated by mentors to guide students through the common challenges and opportunities that arise after their field experience. We recommend using these tools prospectively, perhaps one week prior to departure and upon return so that trainees can anticipate dilemmas and prepare for structured critical reflection.

Assessments and evaluation

While mastery of knowledge-based content is easily measured, assessing the experiential learning component can be challenging. As previously described,

this experience can take many forms including clinical or community-based research, clinical or community service, capacity building or educational programming. When planning field experiences, it is best to focus on maximising partner benefit; goals and assessment should focus on how the student can realistically contribute to the partner's mission. In addition, attention must be paid to both formal and informal feedback mechanisms to detect how students may be upsetting a local homeostasis or detracting resources from the primary mission of sites.

Assessments and evaluations can be used to drive learner outcomes, and making students aware of these rubrics and tools can help them during their learning. In critical reflection for example, the learner who knows that he or she is expected to use the lens of transforming perspective during challenging moments is more likely to achieve that outcome. Evaluations should prioritise collaboration, cultural humility and teamwork, as well as some of the "soft skills" such as communication, dependability, open-mindedness and flexibility. Partners and other team members should be involved in these assessments and the students should be fully aware of this aspect of the assessment. In this way, we can strive for "360" evaluation. As field experiences are cross-cultural experiences, similarly the pedagogies of education and assessment are culturally informed. Thus there can be challenges in obtaining candid feedback from partners in cultures where hospitality, agreeability and indirect communication predominate. Therefore, unless there is a "safe" space to do so and shared understanding of the construct of assessment tools and intentions for learner development, obtaining constructive feedback from partners can be challenging due to cultural norms.

There are formal assessment tools from the field of international education and engaged citizenship that can be applied to global health education. The Global Perspectives Inventory Intercultural Development Inventory, and Global Engagement Survey are both tools that hold potential for global health education. The Global Perspectives Inventory (GPI) measures how students view their own culture, and relate to people from other cultures (Daneshyar 2011). The GPI utilises six scales: cognitive knowing; cognitive knowledge; intrapersonal identity; intrapersonal affect (acceptance of cultural perspectives different from one's own); interpersonal social responsibility; and interpersonal social interactions. The GPI is designed to focus on connections between global student learning and inter/intrapersonal development through fieldwork experiences. The second instrument relevant for global health is the Intercultural Development Inventory (IDI). Intercultural development, also known as cultural sensitivity or cultural humility, is a necessary component of the ability to work and learn in a setting that is different from the frame of reference of the learner (Mahoney and Schamber 2004). This ability can be challenging

because it requires at least the acceptance of actions different from one's own, and when more advanced, the ability to adjust one's actions and relate. These abilities are captured in the Developmental Model of Intercultural Sensitivity (DMIS), which assesses an individual's perspective of development. The DMIS is a research-based model that includes an Intercultural Development Inventory (IDI) that assesses the individual's level of development. The DMIS focuses on six developmental stages of intercultural sensitivity, ranging on a continuum from the three ethnocentric worldviews (Denial, Defense, Minimization) through the three "ethnorelative" levels (Acceptance, Adaptation, Integration). Understanding these stages is crucial to constructing a relevant competency-based education. Lastly, the Global Engagement Survey (GES) measures intercultural competence, critical thinking, civic engagement and social responsibility among students following a fieldwork experience (Morais and Ogden 2011).

Challenges and directions

One of the difficulties in global health education is that many of the skills and competencies discussed here are simultaneously very difficult to teach and measure, yet are integral to effective work in the field. The essential competencies required for our learners are context-specific or fall into the realm of partnership skills such as emotional intelligence and cultural humility, which exemplify the aforementioned challenges. Educators in global health must create innovative teaching platforms to address these obstacles. These strategies must draw on many disciplines, educational theories and strategies to impart the necessary knowledge, attitudes and skills for best practices in global health. Meanwhile, we must engage with our community-based partners, whether domestically or internationally, to co-create curricular and assessment models that have shared meaning and relevance.

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