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**Training Health Care Professionals
in Low-Resource Environments : Applying
Active Teaching Learning Strategies in Ethiopia**

own health workers, because the health challenges in Ethiopia are staggering. Consider the following figures:

- 1/6 of Ethiopian children die before age 5
- 1/2 of Ethiopian children are malnourished
- 1/8 of all Ethiopians face acute hunger
- 3/4 of Ethiopians do not have safe drinking water
- 2/5 of Ethiopians do not receive any health care whatsoever
- When the EPHTI started, life expectancy was as low as 41 years. Now, life expectancy has improved to nearly 56 years.

These realities are a challenge for Ethiopia's health care system. Tragically, most of the common illnesses and deaths that occur could be easily prevented or treated, and 10 years ago there simply were not enough health personnel to treat the mostly rural residents of this country of more than 79 million. However, while struggling under the crushing weight of poverty and killer diseases, Ethiopia has proven it can build a sustainable health workforce to meet the needs of its population through the work of the EPHTI.

This achievement is due in large part to a network of Ethiopian government officials and university faculty who have painstakingly tailored health science curricula to specifically address the Ethiopian context. These supplementary health learning materials have strengthened the education of thousands of local health workers, which has translated into improved health care delivery for approximately 56 million Ethiopians.

On the basis of a response to the expressed needs of the Ethiopia government to The Carter Center, the EPHTI was developed to address the gaps in health care at the time of Prime Minister Meles Zenawi's assumption of power in 1991. A review of the social services in Ethiopia at this time concluded that extending basic health services to the half of the Ethiopian population that was without access to basic health care was of the highest priority (Carlson, 2007). It became clear that to accomplish these objectives major changes in training mid-level and rural health workers were essential, and building a standardized preservice educational system for health care workers that could produce better quality and higher quantities of these professionals was a priority. In addition, this training had to be done in a sustainable and capacity-building way, using locally available resources, and be tailored to the Ethiopian environment.

The evolution of governmental will, international donor and nongovernmental organizational support, and grassroots participation from universities and instructors became today's EPHTI. All stakeholders from these sectors of the Ethiopian health care landscape were invited to participate in the early planning and development of the EPHTI, and a comprehensive and collaborative network was formed. Because The Carter Center planned from the beginning that the EPHTI would be locally owned and administered by Ethiopians after the initial 13-year start-up period, the resulting Ethiopian-owned initiative is one that

has built the capacity of the Ethiopian health education network in a sustainable way. All the training and learning activities by the EPHTI were conducted within Ethiopian borders, and the focus on training of instructors and students was intended for the development of rural services, the premise being that people who came from rural areas will be more likely to return to rural areas to work—a theory later shown to be substantiated by Serneels et al. (2010).

The underlying principle of the EPHTI is a capacity-building strategy built around the notion that Ethiopians should play the primary role in meeting their country's community health needs. With its Ethiopian partners, The Carter Center helped the Ethiopians implement the EPHTI with three major objectives in mind:

1. Develop health learning materials (lecture notes, teaching modules, and manuals) that address the major health problems of the country and meet the specific learning needs of health center team personnel
2. Improve the knowledge and skills of faculty and instructors in teaching through intensive 2-week teaching learning workshops on pedagogical and technical skills
3. Improve the teaching learning environments of Ethiopia health sciences classrooms by providing scientific journals, relevant textbooks, teaching aides, anatomical models, computers, and basic consumable supplies and infection prevention materials

The EPHTI sought to create environments in which senior international experts would work side by side with Ethiopian teaching staff to train health center teams and develop learning materials based on Ethiopian experiences that are directly relevant to Ethiopia's health problems. The health center staff, in turn, carried the responsibility of training and supervising all community health workers, including traditional birth attendants and community health agents. Thus, the basic training for health center teams given in the universities of the EPHTI network has a direct and immediate impact on all modern primary health services throughout the country, extending even into villages and homes.

The EPHTI's interdisciplinary network of education professionals, government agencies, and practitioners takes a grassroots approach to training the next generation of Ethiopian health care workers. A fundamental tenet of the program is that Ethiopians know best how to deal with Ethiopian health issues. Thus, the focus of the program is to integrate all Ethiopian expertise—from university instructors to the female village caretakers—into specific curricula and training approaches for students studying to be health care providers. Such improved health education and training for those who treat the community—particularly women, who are not only traditional village-level health care providers but increasingly are earning more advanced degrees as clinic and hospital practitioners—benefit all levels of

So what has the EPHTI accomplished toward its goal of training better health workers and giving better health care to the citizens of Ethiopia? In short, it has improved the teaching of health professors and the learning environments of their students. Approximately 17,000 health center team professionals have been trained by the seven EPHTI-networked universities since its inception. These professionals have dispersed throughout the country to staff rural and urban clinics, hospitals, and health care sites and have gone on to improve the quality of health care delivered to their respective communities.

Specifically, the EPHTI has made great strides toward fulfilling the particulars of providing better health education for its students:

- Ethiopian-specific learning materials have been developed by Ethiopian faculty on almost 200 topics and in various formats, and more than 500,000 copies of these learning materials have been distributed to universities and clinics nationwide.
- More than 2,500 instructors have been trained in various skills to improve their teaching abilities.
- More than 7,000 textbooks and medical journals, and more than \$500,000 in computer and laboratory equipment and teaching aids, have been given to Ethiopia's classrooms to provide better learning environments for its health students.

TEACHING LEARNING WORKSHOPS

The strengthening of Ethiopian teaching staff emerged as one of the top priorities of the EPHTI during its initial development, and addressing the needs of seven regional universities that were in turn charged with educating and training thousands of health professionals required a national comprehensive approach.

The method by which the EPHTI brought together Ethiopian health sciences faculty to meet its objective of strengthening their ability to teach was done through national teaching learning workshops. Thirteen of these 2-week workshops were held over the last 10 years of the initiative. These intensive training sessions were instrumental in meeting this primary goal of the program and, ultimately, to improve the skills of health sciences instructors in a cohesive, comprehensive, and standardized method.

Two types of national-level workshops were held: (a) one for the more senior faculty at each of the universities and (b) a general one designed for the junior faculty. The deans or administrators of the seven universities in the EPHTI network would select four senior-level faculty participants and four junior-level faculty participants to attend each annual national teaching learning workshop, for a total of 28 to 30 participants at each. After participating in the national teaching learning workshops, each group would return to their home institutions and conduct their own version of the workshops. These “cascade workshops” helped the skill strengthening techniques reach thousands of Ethiopian faculty throughout the decade of the EPHTI (see “CASCADE WORKSHOPS” section).

Each teaching learning workshop covered the topics outlined in this book, including classroom and clinical setting teaching strategies, theories of learning, understanding the learner, and evaluation. Every workshop included group discussion, field trips, and many learning activities, which are also presented in this book at the end of their corresponding chapter. All national and cascade teaching learning workshops ended with a Teaching Learning Episode (TLE), which we discuss in detail in the next section.

THE TEACHING LEARNING EPISODE

The culminating assignment for each 2-week teaching learning workshop in pedagogical skills was the presentation of a TLE. During the first week, all workshop participants were assigned to a TLE group. The two criteria for the group assignments were (a) representation of participants whose university or health facility teaching responsibilities included one or more of the disciplines in the community health team (professional nurse, health officer, medical laboratory technician, and environmental health technician) and (b) representation from at least three universities. Each group had four or five members. Each presentation was planned to last approximately 75 minutes.

TABLE 10.1

EVALUATION CRITERIA FOR A TEACHING LEARNING EPISODE	
Category	Criterion Descriptors
Content	Appropriate to level of learner and cultural variation in the audience
Communication	Faces learners when speaking, voice is modulated, uses gestures that are culturally acceptable and appropriate, attempts to minimize vocalized pauses
Interaction with audience	Invites questions and comments, listens to learners, encourages learner-to-learner interaction
Teaching learning strategies	Uses varied active teaching learning strategies, explains the teaching learning strategies, engages learners in critical thinking
Use of media	Appropriate use of color and print, writing or print is legible
Use of time	Involves all group members, abides by time limits of the session

Each person was given a videotape of his or her TLE group's presentation with a guide for using the videotape for self-evaluation. During the preparation session we discussed how to use the videotape for self-evaluation. Participants were provided with access to Davis's (1993) book *Tools for Teaching*, with special emphasis on chapter 42, "Watching Yourself on Videotape." We also suggested that they consider asking a trusted fellow faculty member at their university to view the tape together and assist with the self-evaluation process. Davis (2009) emphasized that "faculty members at all levels and in all disciplines can benefit from the opportunity for self-reflection provided by carefully planned observation by peers or a faculty development specialist" (p. 472).

CASCADE WORKSHOPS

On the basis of the train-the-trainer concept, whereby a small set of people are trained in a subject and then those who have been trained go on to conduct their own training sessions for a larger group of people, the teaching learning workshops of the EPHTI allowed for the formation of intensive 2-week pedagogical training workshops for selected Ethiopian faculty from each university, who would then return to their respective home campuses and conduct similar intensive workshops for their colleagues. This cascade effect of pedagogical training, in 2-week workshops both at the national level and on participants' respective home campuses, was the method by which the active teaching learning strategies described in this book were utilized and disseminated.

The Accelerated Health Officer Training Program

In 2005, working closely with Ethiopia's Ministry of Education, Ministry of Health, regional health bureaus, and seven partner universities, the EPHTI helped launch the Accelerated Health Officer Training Program (AHOTP), to respond to the staffing shortage caused by the growing number of new government-built community health centers in the country (Ethiopian Ministry of Health and Ministry of Education, 2005). To help jump-start the program, the EPHTI supported renovations to expand the teaching capacity of 17 training hospitals, building classrooms and libraries at these health facilities for practical training purposes. The EPHTI's curriculum, developed for regional health science universities, was also available for use in the AHOTP program. In fact, because of the existence of the EPHTI and its network of universities, the Ministry of Health was able to adapt the public health curriculum from the EPHTI health learning materials for use in the AHOTP program and was thus able to launch the ambitious AHOTP program a full year ahead of schedule.

The AHOTP program's objective is to train 5,000 health officers within 5 to 6 years (allowing for various challenges faced along the way). These newly trained health officers will be drawn from a combination of nurses and general science students, on similar tracks to upgrade their clinical skills to those of health officers.

Health officers are the leaders of the community-based health center professional staff in Ethiopia and are supported by nurses, medical laboratory technicians, environmental laboratory technicians, and health extension workers at the health center level. There is currently a shortage of health officers in Ethiopia as the government builds more health centers to serve the population's needs. The EPHTI has utilized its network of universities, the universities' affiliated training hospitals and regional health bureaus, and its health learning

the Irish government, and others. The purpose of the replication conference was

LEARNING ACTIVITY 10.1

DEVELOPING A TEACHING PLAN FOR A TEACHING LEARNING EPISODE

OVERVIEW

The question to be addressed in this learning activity is the following: How do we structure learning so that we address the learner at the appropriate level, know the intent of the learning, and can plan for effective evaluation?

DIRECTIONS

In this learning activity, you will be divided into groups that are, we hope, representative of the community-based team—health officer, public health nurse, medical laboratory technician, and environmental sanitarian. Each team will choose a topic from a list provided. As a group, you are to follow the directions and structure a teaching learning episode for a selected discipline, community, family, or village. You

DEVELOPING YOUR GROUP PRESENTATION

1. Describe the selected population (learners), that is, who, what, when, and where you teach.
 - a. What level students do you teach?
 2. Briefly describe the topic that your group will be teaching.
 3. List three to five learning outcomes or behaviors for this teaching episode.
 - a. Describe the level of learning intended for the students.
 4. Describe the sources of information that you use. Use the modules, lecture notes, and other materials that you might have available.
 5. What teaching materials are needed to support your teaching episode?
 6. What teaching strategies are likely to accomplish desired outcome/results?
 7. How will you evaluate learner achievement of objectives and/or outcomes?
 8. How will you evaluate your effectiveness as a teacher?
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