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Developing Ethiopia's Nutrition Workforce of Tomorrow: Creating a Capacity-Based Curriculum in Pre-Service Training Institutions

Before the *Empowering the New Generation to Improve Nutrition and Economic Opportunities (ENGINE)* project's launch in 2011, few facility-based health workers and even fewer agricultural extension workers (AEWs) were adequately trained to provide nutrition services. Pre-service health and agriculture education programs offered scant information on nutrition and graduates left school unprepared to provide nutrition services as required in their professional roles. ENGINE therefore worked with health and agriculture pre-service institutions to identify and resolve specific gaps in the nutrition curriculum.

ENGINE TECHNICAL BRIEF 3

EMPOWERING NEW GENERATIONS TO IMPROVE NUTRITION AND ECONOMIC OPPORTUNITIES



PRE-SERVICE TRAINING

Through an assessment of the nutrition curriculum in 12 pre-service institutions, which included one university, one health science college, and one agriculture technical vocational and education training college (ATVET) in each of the four project-supported regions, ENGINE identified a lack of skills-based content as the most pertinent gap to be addressed. Though some courses introduced nutrition theory, the schools offered no instruction on practical skills such as counseling, use of

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anthropometric materials, and techniques for cooking diversified foods. The schools lacked skill labs and provided no information on Ethiopia's nutrition programs, which students would need in their careers.

ENGINE interviewed staff at the regional and *woreda*-level health and agriculture ministries, frontline health workers, AEWs, and Ministry of Education staff to identify the nutrition skills these professionals routinely used in the provision of nutrition services. With this information, the project developed a list of nutrition core competencies for health workers (subdivided by specialty) and another for agriculture workers. After discussion of the lists with representatives of the health, agriculture, and education ministries and the twelve universities, ENGINE worked with the project-supported institutions and instructors to incorporate the competencies into 98 nutrition courses (14 ATVET, 25 agriculture B.Sc, and 59 health science) in 14 institutions (two additional schools were added after the initial assessment), ensuring that the courses teach the skills graduates would need to provide nutrition services in Ethiopia.

The agricultural training centers added nutrition content to existing courses, however, the information was not included in the final Center of Competency exam. To require students to master the nutrition skills, the nutrition competencies would either have to be taught in stand-alone courses or included in the official graduation requirements for ATVET schools. ENGINE and the educational institutions successfully advocated with the Ministry of Education and Ministry of Agriculture to require the incorporation of the nutrition core competencies into the existing coursework and graduation requirements in all ATVET and agricultural universities in Ethiopia.

Using Jhpiego's Standards-Based Management and Recognition (SBM-R) tool, ENGINE supported 369 educators to self-identify gaps in five key aspects of education, analyze the causes of the gaps, and create and implement an action plan aimed at strengthening their work. The main challenges the instructors identified were weak pedagogic skills, insufficient nutrition content in curriculum, insufficient assessment of courses, nonexistent, poorly equipped, or insufficiently used nutrition labs, and absent or dysfunctional quality assurance systems. ENGINE held workshops for the instructors to address these gaps and provided materials such as reference books and papers, guidelines, anthropometric equipment, scales, calipers, and cooking demonstration sets to equip nutrition skills laboratories.

The 14 universities' achievement of the nutrition education performance standards improved 62 percent between April 2012 and May 2014. Some of the specific changes included:

◆ Improved classroom instruction:

- Course syllabi are now provided at the beginning of courses,
- Instructors consistently develop lesson plans, and
- Instructors have shifted from a didactic teaching style to interactive facilitation.

◆ Increased practical instruction:

- Nutrition lab corners have been established in nursing and midwifery departments, and
- Learning guides are available for students in nutrition skills labs.

◆ Institutions have developed more rigorous approaches to assess the effectiveness of their courses (see Figure 1).

Nutrition Forums

The 14 institutions integrated the core competencies into the curriculum for entering students, but did not change the course of study in the upper levels. To ensure graduating students were familiar with the nutrition core competencies and existing nutrition programs in Ethiopia, ENGINE organized nutrition forums each year. The day-long events introduced the National Nutrition Program and National Nutrition Strategy, nutrition-sensitive agriculture, and the basic roles graduates

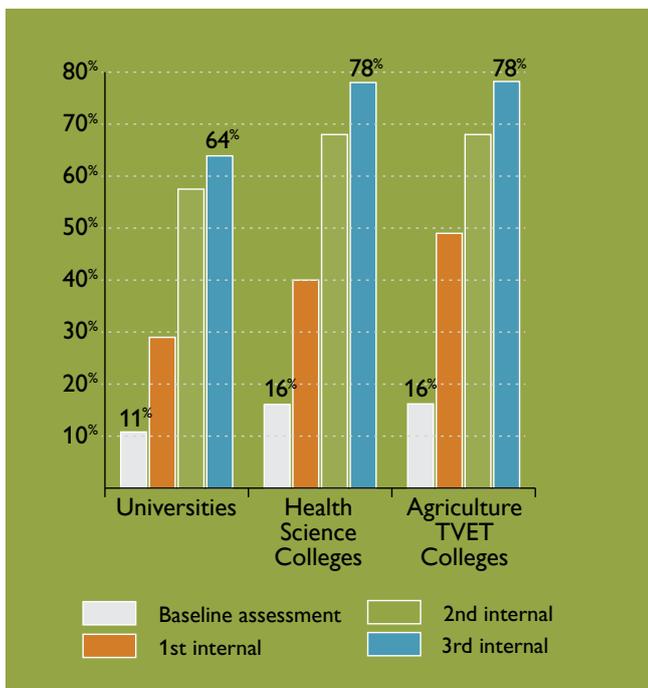


Figure 1. Institution’ SMB-R® progress in compliance with Nutrition Education Performance Standard



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Mary Harvey, USAID Nutrition Coordinator and Ayano Beraso, Hawassa University Vice President, at the opening ceremony for Hawassa University’s Academic Center of Excellence for Nutrition that was formed with the help of ENGINE.

might play in the provision of nutrition services. These forums reached 7,439 students.

Supporting Nutrition Research

ENGINE supported the development of an Academic Center of Excellence for Nutrition at Hawassa University College of Agriculture, the first of its kind in Ethiopia. In the center equipped with essential tools for service delivery and research, students provide state-of-the-art nutrition services under the supervision of qualified instructors and partner with professionals on research focused on Ethiopia’s nutrition priorities.

ENGINE believes that the Hawassa Center of Excellence is a promising platform to support nutrition research and learning in Ethiopia. Through the Growth Through Nutrition project, USAID and Save the Children will continue to grow the center as a national resource and supporting its staff in the development of distance learning programs for established professionals.

ENGINE also provided financial support for 108 masters and 7 doctorate candidates’ research on subjects such as nutrition education, micronutrients, breastfeeding and complementary feeding, and food security, health, and nutrition. The project compiled the masters’ students’ research in a booklet disseminated to key stakeholders at a national workshop in project year four.

LESSONS LEARNED

By equipping students, health extension workers, health clinic staff, AEWs, and their supervisors with competency-based nutrition skills, ENGINE has contributed to the development of a workforce capable of supporting nutrition-sensitive agriculture activities and created a sustainable pipeline of well-trained future professionals.

- ◆ **Working within government structures and priorities accelerates progress.** Because ENGINE’s work with the existing structures for pre-service training aligned with the Government of Ethiopia’s overall vision for improving Ethiopia’s educational institutions—namely it created a more practical, competency-based curriculum—the health, agriculture, and education

ministries readily adopted the proposed curriculum changes, not just for the institutions working with the project, but for all agricultural institutions in the country.

- ◆ **To improve nutrition pre-service education, support must be comprehensive.** Most projects provide instructors with teaching skills training and assume nutrition content is integrated. However, ENGINE identified specific gaps, including curriculum content, and supported the institutions in addressing all of their needs (training of instructors, establishment of nutrition skill labs, provision of education materials, and implementation of the SBM-R to monitor the quality of education). This paid off.

ENGINE introduced the idea of the center of excellence to decision makers and identified a similar institution in South Africa as an example. The project provided technical assistance to identify the steps the school should take to develop the center. The university provided 95 percent of the materials for the new nutrition lab; ENGINE provided the remaining 5 percent.

- ◆ **Intensive research is needed to identify solutions to Ethiopia's most pressing nutrition problems.** To develop capacity for nutrition research within Ethiopia, ENGINE supported several master's and doctorate-level students' studies. However, in an effort to develop evidence and large-scale solutions, such as identification of bio-fortified crops for widespread production, the Growth Through Nutrition project will support group proposals for ambitious studies, rather than individual research projects. The new project will also continue support to the Hawassa University Center of Excellence as a way to grow capacity for nutrition research in Ethiopia.
- ◆ **Institutions have huge potential if projects facilitate their vision and push them to take the lead.** ENGINE's contribution to the Hawassa University Center of Excellence was minimal compared to the university's own contributions. The school mobilized existing resources and worked with other partners to generate additional contributions.

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ABOUT ENGINE

The Empowering the New Generation to Improve Nutrition and Economic opportunities (ENGINE) project was the U.S. Agency for International Development Ethiopia Mission's flagship multisector nutrition project. ENGINE, which was implemented from September 2011 to September 2016, built on the Government of Ethiopia's National Nutrition Program and the U.S. Government's Feed the Future initiatives to prevent undernutrition during the first 1,000 days of life, from the start of pregnancy until the child is two years of age. The project was led by Save the Children in partnership with Tufts University, Jhpiego, Land o' Lakes, the Manoff Group, Valid International, and Jimma University and worked in 116 *woredas* across the Amhara, Tigray, Oromia, SNNPR, and Somali regions of Ethiopia.

ENGINE partnered with Ethiopian ministries to strengthen existing multisector coordination and support the development and revision of nutrition policies, guidelines, and standards. It integrated instruction on nutrition into the pre-service curriculum for health and agriculture workers and built the capacity of frontline

workers to provide high quality nutrition services. The project's social and behavior change communication activities promoted optimal maternal, infant, and young child feeding practices and dietary diversity at the community level. Work with vulnerable households educated participants about nutrition-sensitive agriculture techniques and livestock management to increase consumption of nutrient-dense foods and augment household income. ENGINE promoted improved water, sanitation, and hygiene practices to prevent diarrhea in children and improve nutritional status, mainstreamed gender in all its activities, and implemented a rigorous research strategy to support and guide effective nutrition policies and practices.

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