

The Need for Professional Training in Nutrition Education and Communication



Federal Ministry
of Food, Agriculture and
Consumer Protection



**Report on seven case
studies carried out in
Botswana, Egypt,
Ethiopia, Ghana, Malawi,
Nigeria, and Tanzania**

**FAO-BMELV Project GCP/INT/109/GER:
“Training Needs Analysis:
Course in Nutrition Education, Including e-learning”**

**NUTRITION, EDUCATION AND CONSUMER AWARENESS GROUP
NUTRITION AND CONSUMER PROTECTION DIVISION (AGN)**

June 2011

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



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TERMS USED

NEAC	(= Nutrition education and communication). Helping people to improve their diet through discussion, demonstration and practice
Nutrition educator	Someone who helps people to improve their diet and health through NEAC
NEAC training	The education needed to become a good nutrition educator
NEAC trainers	Those who plan or deliver NEAC training
Nutrition Education	“any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviours conducive to health and well-being” (American Dietetic Association (ADA), 1996)

ABBREVIATIONS AND ACRONYMS

ADA	American Dietetic Association
AED	Academy for Educational Development
AIDS	Acquired Immune Deficiency Syndrome
ASDP	Agricultural Sector Support Program
BCC	Behaviour Change Communication
CAADP	Comprehensive African Agriculture Development Program
CBN	Community Based Nutrition
EDHS	Ethiopian Demographic and Health Survey
EHNRI	Ethiopian Health and Nutrition Research Institute
ENA	Essential Nutrition Actions
ENI	Ethiopian Nutrition Institute
EOS	Enhanced Outreach Strategy (Ethiopia)
FMoH	Federal Ministry of Health
FONATA	Food and Nutrition Association of Tanzania
FR	Formative Research
GHS	Ghana Health Services
GSS	Ghana Statistical Service
HEW	Health Extension Workers (Ethiopia)
HIV	Human Immunodeficiency Virus
HKI	Helen Keller International
ICT	Information Communication Technology
IDA	Iron Deficiency Anaemia
IDD	Iron Deficiency Disorder
IEC	Information Education and Communication
IITA	International Institute of Tropical Agriculture (Nigeria)
IYCF	Infant and Young Child Feeding
IYCN	Infant and Young Child Nutrition
MNCH	Maternal, Newborn and Child Health
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoH	Ministry of Health



NEAC	Nutrition Education and Communication
NFCNS	Nigeria Food Consumption and Nutrition Survey
NGO	Non-Governmental Organization
NNI	National Nutrition Institute (Egypt)
NNS	National Nutrition Strategy
NE	Nutrition Education
PLWHA	Persons living with HIV/AIDS
PMTCT	Prevention of mother to child transmission
RCHC	Reproductive and Child Health Clinics
SAM	Severe acute malnutrition
SUN	Scaling Up Nutrition
TDHS	Tanzania Demographic and Health Survey
UB	University of Botswana
UNICEF	United Nations Children's Fund
VAD	Vitamin A Deficiency
WALA	Wellness and Agriculture for Life Advancement (Malawi)
WFP	World Food Programme
WHO	World Health Organization
WIAD	Women in Agricultural Development (Ghana)



INTRODUCTION

The following report outlines the main findings of the case studies that were conducted by key nutrition professionals in seven African countries: Botswana, Egypt, Ethiopia, Ghana, Malawi, Nigeria and Tanzania in 2011. These case studies form an integral part of the Nutrition Education and Communication (NEAC) project (GCP/INT/109/GER), a needs analysis for professional training in NEAC with a specific focus on Africa. The project was initiated in September 2010 by the Nutrition Education and Consumer Awareness Group of the Nutrition and Consumer Protection Division of FAO and was funded by the German Ministry of Food, Agriculture and Consumer Protection (BMELV). The assessment is a preliminary to developing NEAC training at undergraduate, postgraduate/in-service and extension levels in both face-to-face and distance-learning formats. The NEAC project final report details the full findings of the needs assessment.

Objectives The objectives of the country case studies were to understand better who needs NEAC and NEAC training, what exactly was needed and by whom it could be done, and how; specifically:

- to explore needs relating to NEAC and NEAC training/education, in order to
- assess the need for more and better NEAC, and hence the need for more and better NEAC training
- gather opinions on what kind of training is most needed and for whom;
- collect suggestions for course content and approach
- collect perceptions of desirable format and delivery
- to identify institutions which might be interested in using some of the possible products
- to identify experts who would be interested in helping to develop the course by providing information, experience and case material, reviewing the materials and (possibly) field-testing/trialling them under real conditions.

Implementation The case studies were carried out over a two-month period between February and April 2011 and involved in-depth interviews¹ with up to 14 respondents in each country. These included two key informants, four NEAC educators, four NEAC trainers and a self-administered questionnaire for students. There was also a one-week media survey to estimate public coverage of nutrition issues. The country case study survey documents can all be found at:

<http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>

The surveyors were:

- Dr. Maria Nnyepi (University of Botswana);
- Dr. Safaa Tawfik (National Nutrition Institute (NNI), Egypt);
- Mr. Getahun Ersino (Hawassa University, Ethiopia);
- Dr. Esi Colecraft (University of Ghana);

¹ See Annex 1 for: a) the full criteria for selecting interviewees and b) a detailed list of the interviewees from Botswana, Egypt, Ethiopia, Ghana, Malawi, Nigeria, Tanzania.

- Prof. Beatrice Mtimuni (Bunda College of Agriculture, Malawi);
- Prof. Ignatius Onimawo (Ambrose Alli University, Nigeria);
- Prof. Joyce Kinabo (Sokoine University of Agriculture, Tanzania).

The surveyors were selected as a result of preliminary interviews conducted in the first stage of the NEAC project. They all produced final reports which are referenced throughout this report by citation of the relevant country.²

Main findings Surveyors and respondents endorsed a strong need for nutrition education, nutrition educators and nutrition education training. The key findings include:

Nutrition status and policy

- malnutrition persists with alarmingly high rates of under-nutrition in the surveyed countries, particularly in the under-five age groups, together with increasing prevalence of overnutrition;
- national strategies tend to prioritise direct nutrition interventions such as food fortification and supplementation. Health sector activities commonly focus on infant and young child feeding (IYCF) with a particular focus on exclusive breastfeeding and growth monitoring but also on clinical rehabilitation of malnourished children and support for persons living with HIV/AIDS (PLWHA). A nutrition emphasis in food security interventions is rare.

The presence of NEAC

- the overwhelming perception is that NEAC can play a valuable role in addressing malnutrition issues, particularly with regard to prevention;
- NEAC has had and continues to have a weak presence, even sometimes apparently a declining one;
- NEAC remains largely uncoordinated between initiatives and sectors, and seldom validated by evaluation;
- NEAC must be implemented clearly and constructively in national nutrition policies, programs, institutions and curricula;
- NEAC approaches are largely top-down and information-based;
- the need for effective NEAC was stressed by all respondents. Groups most frequently said to be in need of NEAC are (in order) pregnant women and mothers, schoolchildren and the general population, while professionals who most need nutrition understanding and NEAC skills are doctors, health professionals, school teachers, agricultural extension workers and community health workers.³

NEAC training

- specifically NEAC training is reportedly difficult to find, partly because it is rare (some said non-existent) and partly because it is embedded in a variety of curricula and settings under a variety of names. In academia it can be found as elements

² Ghana case study report, Egypt case study report, Ethiopia case study report, Botswana case study report, Malawi case study report, Tanzania case study report, Nigeria case study report are available to download from <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>

³ See Annex 3 and 'Data tables from the questionnaire' at <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>



of nutrition and dietetics degrees, Home Economics degrees or health promotion training;

- in-service NEAC training is largely occasional or ad hoc, designed for specific interventions, although in several countries some NEAC training for extension workers and teachers is institutionalized, or about to be. Nutrition and NEAC are however thinly represented in food security interventions;
- almost no NEAC trainers/lecturers have specific NEAC qualifications and some universities are engaging guest lecturers from Canada;
- respondents agreed that the process framework in existing NEAC training typically lacks preliminary research and follow-up evaluation;
- learning approaches, especially in universities, are largely academic: all respondents expressed preferences for more active and interactive approaches with a more practical orientation.

Desired training

- four course choices were presented (an undergraduate/basic NEAC course; a postgraduate/in-service course with more of a management emphasis; a cross-sectoral extension course; an advocacy training course).⁴ Interest was spread almost equally between the first three, suggesting that capacity needs can best be met through a framework or suite of training courses which extend and reinforce each other;
- overwhelmingly, respondents opted for a blended learning approach with some distance-learning materials mixed with face-to-face sessions: interest was expressed in e-learning but the practical difficulties (viz. poor connectivity, access to IT equipment) were seen as a constraint for the moment;
- most respondents were interested in participating in the development of one or more of the courses in at least one way – supplying learning resources and stories, reviewing materials etc. Considerable numbers expressed the desire to be involved in trialling the courses.

⁴ See outlines of these courses in the 'interview form' at <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>



1 ■

BACKGROUND AND OVERVIEW⁵**1.1 HISTORICAL BACKGROUND**

Food insecurity and malnutrition continue to affect large numbers of people in the seven surveyed countries. FAO estimates indicate that 925 million people are undernourished, with 239 million from sub Saharan Africa and 37 million from the Near East and North Africa (FAO and World Food Programme (WFP), 2010). Recent national surveys indicate that malnutrition in infants and young children under the age of five is highly prevalent and there has been limited progress in Africa during the last decade in reducing undernutrition. The situation is aggravated by HIV/AIDS, poverty and food insecurity. In Ethiopia, the rate of stunting is 47% followed by underweight rates at 38% and wasting at 11% (Central Statistical Agency and ORC Macro, 2006). In Ghana, “nearly one out of every four children is stunted” by 18-23 months of age (Ghana Statistical Service, 2009). In Tanzania, chronic undernutrition is estimated at 42% (National Bureau of Statistics (NBS) [Tanzania] and ICF Macro, 2011). Diarrhoeal disease continues to present a public health challenge in Botswana, particularly with regard to formula-fed infants. High levels of diarrhoea in infants are also cited in Nigeria. According to the Nigeria Food Consumption and Nutrition Survey 2001-2003, stunting was recorded at 42%, underweight at 25% and wasting at 9% in under-five children. Low rates of exclusive breastfeeding, early introduction of food and liquids (introduced at 3-4 months) along with poor complementary feeding practices are believed to contribute to this. The under-five and infant mortality rates are high (International Institute of Tropical Agriculture (IITA), 2004) indicating that “something urgent should be done to salvage the future of the Nigerian child and the overall future development of the Nigerian nation”. Poor infant and young child feeding (IYCF) practices have been identified as a major common problem in all reports. For example, in Ghana, although exclusive breastfeeding rates have significantly improved, poor complementary feeding is still rife (e.g. feeding children cereal-based watery porridge with few nutrient dense vegetables, fruit and animal source foods). According to the Egypt Demographic and Health Survey, 2008, “feeding practices for only around 40% of children age 6-23 months met the minimum standard” for IYCF (El-Zanaty, Fatma and Way, 2009).

Common to all seven countries are micronutrient deficiencies of Vitamin A, iron (leading to Iron Deficiency Anaemia (IDA)) and iodine leading to Iodine Deficiency Disorder (IDD). Zinc deficiency was reported at 20% prevalence in under-five Nigerian children (IITA, 2004). In Ghana, childhood anaemia has remained at ~70% over the previous two decades and anaemia among women of reproductive age is 57% and as high as 70% in pregnant women (GSS, 2009). In 2010, rates were as high as 61% for Vitamin A Deficiency (VAD) in under five children. In Tanzania, undiversified, cereal-based diets are also contributing to other deficiencies including zinc, selenium and B-group vitamins. A combination of factors is said to be involved, including lack of nutrition knowledge and understanding of the association between food and health; inadequate feeding practices; poor health

⁵ Section 1 refers to section A of the survey report form.

care and hygiene and to a lesser extent food insecurity. The 'nutrition transition' was highlighted in Egypt, Tanzania, Ghana, Malawi and Botswana. In Botswana, the prevalence of overweight and obesity appears to be higher in women compared to men and according to the 2007 statistics produced by the Ministry of Health (MoH) and World Health Organization (WHO), 53.4% of women compared to men (22.1%) are overweight.

Nutrition activities How are these issues being tackled? Surveyors commented on the generally low profile of nutrition, "a forgotten corner", and the lack of awareness at all levels of society. Problems mentioned included lack of integration and cross-sectoral collaboration. "Progress", although a given sub-heading, was rarely mentioned. In Nigeria, although "progress has been made", it is "not enough"; however, Malawi reported a significant drop in micronutrient deficiencies between surveys carried out in 2001 and 2009; although there were reported reductions in stunting and anaemia within a World Vision project 1996-2004, nationally stunting among under fives has only recently reduced (from 48% in 2004 to 42% in 2010- Malawi Demographic and Health Survey).

Core nutritional interventions, addressed in varying degrees in all the seven countries are direct nutrition interventions such as supplementation (Vitamin A, iron and folic acid), universal salt iodization and food fortification. Health sector activities commonly focus on IYCF, exclusive breastfeeding and growth monitoring but also on clinical rehabilitation of malnourished children and support for persons living with HIV/AIDS (PLWHA).

Settings Nutrition activities are commonly located in the health sector. For example, in Tanzania, the MoH has been involved in the promotion and support of breastfeeding and good complementary feeding practices through its Reproductive and Child Health Clinics (RCHC). Health workers have also been involved in the nutritional rehabilitation of severely malnourished children and in nutrition education, hygiene and environmental sanitation.

There are some minor inroads into agricultural activities, but nutrition is not generally considered in this sector and this was mentioned as a problem. Tanzania appears to be the exception: the report mentions several nutrition-related activities in the agriculture sector: the Ministry of Agriculture (MoA) implements training for community members in the preparation and processing of locally available foods to minimise nutrient loss; the Agricultural Sector Support Program (ASDP), along with the Comprehensive African Agricultural Development Program (CAADP) has included nutrition, although limited, in its food production program; and the government-funded school feeding program (originally funded by WFP) now provides meals supplied from locally grown foods.

1.2 HISTORY OF NEAC

The case studies considered the developing role of nutrition education and communication in efforts to tackle nutrition issues. It appeared that in all seven countries NEAC has had and continues to have a weak presence, even sometimes apparently a declining one, and remains generally uncoordinated and unvalidated, with largely top-down approaches. Some NEAC activities can be traced back a number of decades. For example, in the



1920s the Tanzanian Ministries of Agriculture and Education established gardens in government schools and combined them with child feeding practices lessons for the mothers. In Ethiopia, when the Ethiopian Nutrition Institute (ENI) was active in the 1960s and 1970s, there was some form of NEAC in the media with the broadcast of nutrition related messages.

Extent Today most of the cited activities involving NEAC relate to maternal and child health (MCH) issues, breast feeding, complementary feeding and/or IYCF. Other NEAC activities have reportedly grown slowly and largely in an uncoordinated manner. For example, in Tanzania “the agricultural sector’s approach focused on food security and food groups while the education sector focused on cookery at secondary school level and nutrition per se at tertiary level”. Nutrition education was also reported as an element of the National Program for the Prevention and Control of IDA and the National Program for VAD.

Some NEAC activities have limited reach. In Tanzania, the NGO COUNSENUth educates health professionals on nutrition and HIV/AIDS mainly in its own project areas. Some schools have integrated nutrition into the curriculum but this is not consistent across or within the countries; in Tanzania, for example, nutrition is “only mentioned when teaching biology”. School gardening is also reported as a NEAC activity by the respondents in Botswana, and school feeding programs are in place in Egypt, Nigeria and Ghana, but it is not clear how far these two programs have an education element.

Reports confirmed that NEAC, like other nutrition-focused activities, is not strongly recognised in agriculture. Where it is considered, it is associated with women’s activities. For example the Women in Agricultural Development (WIAD) in Ghana provide NEAC to farm families under the umbrella of the Ministry of Food and Agriculture. In Tanzania as part of the food security program under the MoA nutrition training and awareness is incorporated into the ‘Women in Agriculture’ program.

Educational approach The reported NEAC activities predominantly involve information transfer and Information, Education and Communication (IEC) materials in the form of posters, brochures, booklets and pamphlets. For example health professionals may provide ‘health talks’ on Mother and Child Health (MCH) issues, along with dietary counselling for specific conditions combined with the dissemination of information pamphlets. Some Malawi respondents complained that the prevalent “six food groups” dietary guidelines failed to help households plan their meals. Likewise, most workshops commonly involve information transfer.

There are some examples of more interactive and participatory approaches. In Ghana, awareness building and education for behaviour change is integrated into Ghana Health Service (GHS) activities and there is now a trend towards effective counselling skills to replace the previous prescriptive advice to mothers, with a “growing recognition that improving counselling skills of nutrition educators is paramount and therefore more effort is being put into capacity building for this”. The ‘community conversation’ aspect of the Community Based Nutrition (CBN) in Ethiopia incorporates the ‘triple-A approach’ whereby people are encouraged to ‘Ask, Analyze and Act’ with the help of

health extension workers (HEW). The triple A originates from the UNICEF concept of assess the problem, analyze its causes and take actions. The Ethiopian adoption of the Essential Nutrition Actions (ENAs) also involves training in counselling approaches. In Nigeria, “MNCH Week” is a multi-faceted package which includes counselling activities by trained counsellors. In Malawi the Wellness and Agriculture for Life Advancement (WALA) NGO established mother/care groups to ensure that messages reached every household in the community.

Evaluation The point was frequently made that it is hard to estimate the success of NEAC activities because evaluation is not widespread: “almost never done,” said one report. As an example, trainer workshops are given by the MoH in Botswana for the management of severe and acute malnutrition (SAM) in children and for IYCF in the context of HIV, but the follow-up activities are not generally evaluated. Only two examples were given of formal evaluations: one of social marketing of food fortification in Nigeria and another of audience ratings of nutrition radio programs in Tanzania. Some conclusions may also be drawn from the evaluations of an entire intervention or through general observations. For example, in Ghana, it was reported by respondents that the “long-standing NEAC programs such as those related to MCH services delivered through the health sector were effective because of; 1) the consistency with which information is provided, and 2) observable improvements in MCH indicators among those who use the services”. A similar sentiment was reported in Egypt.

It may be that internal evaluations of (for example) NGO projects are not widely publicised or apparent to respondents, but this in itself would be a reflection of a weak national NEAC strategy on learning from national experience.

1.3 INSTITUTIONAL AND POLICY PICTURE

Some indicators of a healthy situation in nutrition education are a working national nutrition policy with a strong NEAC strategy, plans for government staffing and staff training, dedicated institutions and active professional networks. Respondents were asked to comment on these.

The seven countries are linked by the low profile of NEAC in national policies, although there are signs of progress and action. Four of the surveyed countries, Tanzania, Nigeria, Malawi and Ethiopia have nutrition policies; two of which are recent (Ethiopia, Malawi).

The development of a national nutrition policy is currently being discussed in Ghana. In Egypt, a National Food & Nutrition Policy and Strategy (2007-2017) has been developed but it is not active yet. In Ethiopia, nutrition is only now emerging as a national priority (National Nutrition Strategy 2008). In Botswana, several policy documents incorporate some aspects of nutrition, the most significant being the National Plan of Action on Nutrition: however there is no specific national nutrition policy and no evidence of nutrition within the agricultural policy. Malawi is implementing the National Nutrition Policy and Strategic Plan (2007-2012) and an Infant and Young Child Nutrition (IYCN) Policy and tackling identified weaknesses such as poor co-ordination between government and



NGOs, the absence of a clear NEAC strategy and lack of adequately trained staff. The recently developed Malawi Nutrition Research Strategy (2009-2013) highlights nutrition education as one of nine thematic areas requiring research. In Nigeria, a National Food and Nutrition Policy, a National Plan of Action and other relevant policy documents on education, school health, IYCF and micronutrient deficiencies are in place; it was mentioned however that there are some difficulties in implementing national plans. In Tanzania, the National Nutrition Strategy is currently being reviewed by the Ministry of Health and Social Welfare.

Jobs Many government ministries especially at district level do not have enough trained nutritionists and in some cases the work is being done by non-nutritionists. There was also a general complaint that not enough nutrition posts were available. Malawi national policy calls for nutrition specialists in each ministry and department. Although there is a lack of trained nutritionists, considerable progress has been made during the last year in filling vacant nutrition posts at both national and district levels. This is evident in the Office of the President and Cabinet as well as in health and agriculture. In Tanzania, “a number of graduates who have studied nutrition are working in banks and other sectors. This is because nutrition is not given priority and the employment system does not absorb nutritionists. Hence, motivation to study nutrition is going down”. There is said to be no clear career structure for nutritionists.

Institutions and networks Some respondents (e.g. Botswana, Ethiopia) indicated that establishing national institutes solely dedicated to nutrition and nutrition education could be hugely instrumental in the implementation of a NEAC strategy. Of the seven countries, only Egypt appears to have an active National Nutrition Institute.

Most countries have national professional bodies, although respondents indicated that they do not generally give a high focus to nutrition education. They include the Nutrition Society of Nigeria, with over 500 members, and the Nigerian Institute for Food Science and Technology which may be involved in aspects of NEAC through seminars, conferences and workshops that they organise. Ghana’s professional association, the Ghana Nutrition Association, the Food and Nutrition Association of Tanzania (FONATA) and the Botswana Dietetic Association do not reportedly prioritize NEAC. As one surveyor aptly stated “networks and institutional support for NEAC are generally weak in the country”. This sentiment largely applies to all surveyed countries except in Egypt, where the NNI has an instrumental role in promoting nutrition education.

Future plans Where there is no clear NEAC strategy or policy, as the Botswana report commented, it is difficult to state “what the priority is and if any plans are for NEAC”, and future plans are often not clear.

On the other hand, some national strategies being developed show signs of an improving climate favourable to NEAC. In Ethiopia, under the Enhanced Outreach Strategy (EOS), the Community Based Nutrition (CBN) program will involve communities in the diagnosis and treatment of malnutrition and vitamin A supplementation, with the aid of health workers. The national nutrition policy that is being planned in Ghana will have a strong NEAC component. There will also be a focus on consumer protection issues to deal with

poorly labelled food items on the market. The School Health Program plans to collaborate with FAO to implement school gardens and use them as a platform for NEAC and is currently also working with WFP to develop IEC materials (for example on food groups and nutrients) for both teachers and students in school feeding programs. The Malawi nutrition education and communication policy and strategy are currently in development and will be supported by the planned new cadre of extension workers, including nutrition extension workers. A large 1000-day nutrition education strategy will start in four districts in July 2011 under Malawi's national strategy for Scaling up Nutrition (SUN).

In Tanzania, the National Nutrition Strategy (2009-2015) will provide a framework for sustainable improvement in nutrition and NEAC. The policy, to be published soon, makes "provision for improving knowledge, skills and competences of service providers at all levels to be able to provide adequate support in nutrition. This will look into training curricula, training materials and messages, creation of critical mass for in service training and for monitoring and evaluation of nutrition programs". Specific efforts are being made by the CAADP and the Tanzania Food Security Investment Plan to synchronize food production and nutrition for better health. There is also a plan to employ nutritionists at regional and district levels in the MoH.

In Nigeria, the Federal MoH plans to develop tools for advocacy in collaboration with UNICEF: other proposed work includes the review of the School Health Policy (which will be called the National School Health and Nutrition policy) and the National Food and Nutrition Policy.

Challenges A number of recurring challenges were mentioned in the case studies.

National

- lack of nutrition and NEAC at policy level;
- inadequate funding for nutrition and NEAC interventions;
- poor institutional presence of NEAC and lack of prioritisation from professional associations;
- poor employment opportunities and career structure for nutritionists;
- thin coverage in school curricula;
- lack of distinction made between food security and nutrition security;
- lack of a multi-sectoral approach to nutrition: for example, absence of nutrition posts or policy in the MoA and MoE; nutrition insensitive agriculture interventions; nutrition interventions which do not integrate related sectors/disciplines. (Co-ordinating nutrition related activities between the ministries, governmental organizations and NGOs is critical to economy of effort, spreading good strategies and gauging how the country is tackling malnutrition.) Coordination of nutrition messages is frequently emphasized in order to ensure that the same behavioural changes are being promoted by all parties.

National context

- poor social awareness of nutrition and the lack of appreciation of its importance among all groups and all levels of society;
- competition from commercial marketing products and services that allegedly improve health.



Capacity

- lack of professional nutrition educators; lack of competence in NEAC;
- lack of professional nutrition education trainers with competence in NEAC;
- traditional training e.g. information delivery (talks, lectures) rather than participatory and skills-based.

General fragmentation/lack of coordination

- fragmentation of nutrition activities at community level due to lack of co-ordination between NGOs, International organizations and local government.

Management/Logistics/Funding/Resources

- challenges in coverage, particularly in rural communities, or limited channels such as health clinics;
- lack of resources, e.g. for scale up of successful project interventions, for program development at community level;
- duplication of efforts, misuse of resources and underutilised human resources.

2 ■

THE NEED FOR NUTRITION EDUCATION AND COMMUNICATION⁶

To establish the need for nutrition education, surveyors asked about the social awareness of nutrition and popular perceptions of food values; which groups in the population were most in need of changed nutrition practices and perceptions and which professional groups most needed nutrition understanding. All respondents were asked what NEAC activities were ongoing in the country and in what settings, and how effective they perceived them to be. Surveyors also reviewed the country's media for a week to estimate the level of public interest in nutrition issues.

2.1 SOCIAL AWARENESS OF NUTRITION ISSUES

All seven case studies reported low social awareness of nutrition. In Botswana, awareness was said to be lower in the rural areas, while a contrasting challenge in urban areas was unreliable commercial information communicated through the media. In Ethiopia poor awareness was noted even among the educated. Although some Ghanaian informants stated that nutrition awareness was higher among the educated, urban population, it was still said to be only medium level: according to the School Health Program director, only those in nutrition-related fields “know something about nutrition and others may have a vague idea”.

⁶ Section 2 refers to section B of the survey report form

2.2 POPULAR PERCEPTIONS, ATTITUDES AND PRACTICES

A number of misconceptions and poor practices contribute to poor nutrition. A recurring misconception is that malnutrition is due purely to insufficient food, although there are “high rates of stunting and wasting even in communities where there is surplus production”. Misconceptions may stem from cultural and traditional beliefs or from unawareness of the link between nutrition and health. Some characteristic beliefs are that colostrum should be withheld from newborn babies; plain porridge is sufficient for complementary feeding; meals are not real meals without the customary staple; fruit is not a food; fruit and vegetables have little food value; imported foods are more desirable; fatty foods are healthy; certain foods have special (unproven) powers (e.g. beetroot is good for anaemia); fatness /overweight is desirable; and men should be fed first.⁷

2.3 MEDIA COVERAGE

All surveys included a one-week review of the nation’s media (daily newspapers, TV and radio programs) to establish the number of nutrition items published or broadcast. The low media presence of nutrition items was noted in all seven countries, except in Egypt where the media appears to be a popular tool for nutrition items; with obesity and related diseases being the main focus. “Some of the media programs have regular contact with the NNI and other national scientific centres to provide them with scientific material, e.g. the nutritional weekly page of El Ahram, the most popular newspaper, and the daily nutritional program of national radio and TV channels.” In Ethiopia, nutrition-related information was not observed in the national newspapers except for three articles on global hunger, food prices and food security.

In Botswana, the Molemo-wa-kgang TV program featured items on IYCF and nutrition for the elderly, but the reach of TV in the country is low and hence their overall impact is likely to be poor. In Malawi, encouragingly, nutrition issues were represented in the media by two weekly 30-minute radio programs entitled ‘Mwana Alilenji’, meaning ‘What can a child cry for?’ and ‘Uko ndiko kudya’, meaning ‘Proper eating’. In Ghana there were three nutrition-related newspaper features in five national newspapers in the course of the week, dealing with, for example, the nutritional benefits of mangoes and vegetables. However, during public health campaigns, such as breastfeeding week in Ghana, there is a marked increase in nutrition-related items in the media. In Tanzania there has been some use of radio: Nestlé sponsors a daily five-minute talk on the popular radio stations, and a special committee on women and children’s issues broadcast nutrition relevant radio programs - with, however, very low audience ratings (estimated at 1.4% in 2004).

⁷ The main misconceptions mentioned are broadly categorised in Annex 2



2.4 WHO NEEDS NUTRITION EDUCATION THE MOST?

Respondents indicated that there was a strong need for nutrition education. The groups said to be in particular need are (in order) pregnant women and mothers, schoolchildren and the general population.⁸

2.5 WHICH PROFESSIONAL GROUPS MOST NEED TO UNDERSTAND NUTRITION AND NEAC?

Doctors and health professionals were prioritised as the professional group most in need of understanding nutrition and NEAC,⁹ followed by school teachers, agricultural extension workers and community health workers. The main reasons given for selecting these groups were their access to the community, their influential role and authority and the respect they enjoy.

2.6 CURRENT NEAC PROVISION AND ITS EFFECTIVENESS

As reported by the surveyors, many respondents, even those working in nutrition (for example in Ethiopia) found it difficult initially to understand the terminology. Some reasons may be because NEAC is subsumed under many names such as counselling, health extension, campaigns etc. and seldom identified or named as education. Additionally, nutrition education is often understood to consist entirely of giving nutrition information, hence 'nutrition education' is taken to mean only this and most educational activities consist of only this activity.

Hence answering specific questions on provision, process and approach of NEAC was initially challenging. NEAC, where understood, is generally reported to be limited. As stated in section 1, NEAC is generally provided by the health sector or by NGOs working in the health sector. Some of the most frequently listed settings are PLWHA, health extension for mothers and IYCF, special public health campaigns, schools and media. Occasionally mentioned were hospital counselling, NE for farm families, agricultural extension (Egypt) and community based NE; with a number of ad hoc or sporadic activities. Most respondents said it was impossible to estimate program effectiveness because of the lack of evaluation. However, in Egypt it was perceived that the most effective activities are MCHN related "because of the consistency with which information is provided through antenatal services and child service, for example, the national program for the promotion of breastfeeding practices".

⁸ See Table 1, Annex 3

⁹ See Table 2, Annex 3

3 ■

**HOW NUTRITION EDUCATION IS BEING DONE:
GENERAL IMPRESSIONS AND SPECIFIC PROGRAMS****3.1 GENERAL IMPRESSIONS AND SPECIFIC PROGRAMS**

Section 3 combines sections C and D of the surveyors' case studies reports. In Section C all respondents were asked to give general impressions of the nutrition education being carried out, while Section D consisted of interviews with individual nutrition educators about specific NEAC programs. The responses have been conflated here.

There was again some confusion with the terminology. Direct NEAC (aiming to change people's dietary habits), NEAC training (professional training for nutrition educators) and learning about nutrition science were frequently mixed up. This may be partly due to the fact that all these activities are traditionally seen as transferring information about nutrition rather than as behaviour change or professional skills development. The programs described below have therefore been selected as those closest to "direct NEAC", while professional training programs have been transferred to sections E and F. Surveyors struggled to find and interview 'nutrition educators'; interviewees generally maintained that NEAC is not readily recognizable; hence it is difficult to evaluate its quality.

Interviewees described programs from:

- NGOs or organizations working in health, for example the micronutrient and child blindness A2Z Project in Tanzania with Helen Keller International (HKI);
- health sector programs. In Ethiopia the surveyor spoke with health practitioners (clinicians and physicians) or health officers who participated in routine hospital counselling. In Botswana, the surveyor contacted the co-ordinator of a hospital rehabilitation program which provides dietary counselling to the caregivers of malnourished children;
- agricultural programs. Some NEAC is present in agricultural programs: in Ghana, for example, the WIAD provides NEAC to farm families.

3.2 PROCESSES, APPROACH AND EVALUATION

The process framework for the development of educational interventions ideally includes formative research, training of educators and evaluation. Of these, training of educators was reported as the main element by all surveyors. Three countries said that formative research was rare and it was clearly not a standard practice: for example, interviewees in Botswana were not familiar with any and the Malawi report mentioned that training needs assessment was seldom done. However two large-scale formative research projects aimed at developing IYCF messages were mentioned: a LINKAGES project in Ethiopia and the TIPS approach used by the Ghana Health Services (GHS) in Ghana. Some health interventions (many donor-sponsored) employ formative research to develop NEAC materials: for example in Nigeria the objectives of NEAC programs are developed by the relevant sponsors, UNICEF or the Federal MoH.



All reports said that evaluations were almost never done. An exception was the home food fortification program in Botswana which involved a single follow-up visit to assess the adoption of the new technology. Some evaluations are based on the entire intervention/program and are not specific to NEAC; for example the Hearth Project in Malawi, which included elements of NEAC, was evaluated through growth monitoring. Likewise in Nigeria the women's training program was assessed through focus group discussions, but the NEAC aspect was not specifically evaluated.

*NEAC approaches*¹⁰ Respondents were asked to choose the most common educational approaches from IEC, information transfer, BCC and participatory approaches, all of which were briefly explained. Generally, IEC and information transfer were mentioned as most frequent, some reasons being the ease with which IEC materials can be produced and distributed and the fact that "the unit cost (time and money) per participant is lower compared to participatory approaches". BCC in the health sector was occasionally mentioned (Ghana, Egypt). NEAC approaches ranged from question-and-answer dialogue to one-way communication by the counsellor giving advice on (for example) foods to consume or avoid when taking medication; breastfeeding and feeding practices; or suitable diets for patients with HIV/AIDS or Type-II diabetes. In the rehab program in Botswana, which is new and has not yet been evaluated, there is an interesting level of engagement: caregivers receive nutrition education and attend cooking demonstrations to prepare nutrient-dense meals, while "graduate" caregivers share their experience with newcomers. In addition to the dietary counselling, psychosocial counselling is provided. Most countries did not mention participatory approaches: in Ghana they were the least common, although in Nigeria and Egypt they appeared to be relatively widespread and prevailing approaches included listening to talks and asking questions, sharing and talking about experiences, and observing and discussing dietary practices.

3.3 LESSONS LEARNED AND POSSIBLE IMPROVEMENTS

The improvements that were suggested were mainly programmatic, logistic or management-based rather than pedagogical: for example more funding, allocation of sufficient financial resources and human resources, use of mass media and the entertainment industry to disseminate information, more situation analysis, advocacy, curriculum development and curriculum reviews. Other shared obstacles were poor supervision and lack of training continuity. The need in Ethiopia for the establishment of a separate nutrition institute was reiterated. In Ghana, the challenge of financial constraints was emphasised, as well as the strong need for more "regular staff training to improve technical knowledge and delivery skills, use of mass media in market places and the need for communication packages designed for the Ghanaian context". On the methodology front, suggestions were for more visual educational tools, learning aids and more participatory methods. In Tanzania and Ghana, it was recommended to tailor IEC materials to the audience for relevance and effectiveness, considering for example literacy levels, language and local food availability. In Nigeria, one of the improvements suggested was "closing the information gap between researchers and extension workers".

¹⁰ See 'Data tables from the questionnaire' at <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>

Successes ‘It pays to practise good eating habits and it is possible for people to change from bad to good eating habits’ said the surveyor from Nigeria. Successes mentioned included recovery from SAM, observed improvement in dietary and feeding practices and increased awareness of nutrition and the nutritional value of traditional foods. On the other hand, it was pointed out that overall improvement in nutrition may be difficult to correlate to NEAC alone.

4 ■

THE NEED FOR NEAC TRAINING¹¹

The surveyed countries are similar in that a standalone NEAC training program is not offered by any institution. NEAC is integrated at various levels in undergraduate, postgraduate or extension courses under different names and disciplines.¹² In academia it can be found as elements of nutrition and dietetics degrees, Home Economics degrees or health promotion training.

Although Nutrition and NEAC tend to fall under the health sector, many health professionals (nurses and doctors) have very little nutrition or NEAC training in their curricula, although in Egypt, the NNI is addressing this gap through its training provision. Equally the trainers/lecturers are not qualified in NEAC, with the exception of a lecturer at the University of Botswana who has qualifications in both education and nutrition. It should be emphasized that this general situation does not differ greatly from that of the developed world.

4.1 GENERAL NEED FOR NUTRITION EDUCATORS

The general consensus from the surveyed countries is that there is a strong need for trained nutrition educators. The main settings prioritised were (in order):

1. communities;
2. hospitals, clinics and health facilities;
3. schools.

4.2 CURRENT PROVISION OF NEAC TRAINING

“NEAC training” was explained as educating nutrition educators, and included tertiary education NEAC modules and professional training of trainers. In tertiary degrees and professional training, it is reportedly thin on the ground. In Tanzania most university degrees do not have NEAC training; the exception is the Human Nutrition curriculum in Sokoine University of Agriculture and even there it was reported that it is a challenge to find a NEAC instructor. In Ghana, NEAC training was said to be “essentially absent”, hence “most informants struggled with this question”. In Hawassa University in Ethiopia, the NEAC module in the Masters in Community Nutrition is taught by an

¹¹ Section 4 refers to section E of the case study report form

¹² Section 6 of this report outlines what respondents considered to be the essential and desirable elements of the curriculum



external lecturer from Canada and the undergraduate NEAC module will be run for the first time next year. In Ghana, however, NEAC training is integrated into the health promotion module of the diploma course offered by the Rural Health Training School, targeted to nutrition technical officers and disease control officers for positions in the GHS and other public health agencies. It is also incorporated into the nutrition courses offered by the University of Ghana and the Ghana University of Development Studies. Similarly, in Malawi the BSc nutrition training at Bunda College of Agriculture is said to offer minor elements of NEAC. In Botswana NEAC is found in various programs: for example, the Home Economics Education Program (Family and Consumer Science program at UB), the Nursing Programs at the Institute of Health Sciences and UB and the certificate program in Health Education at Boitekanelo College. In Nigeria, NEAC training is a module or component of the syllabus for Nutrition and Dietetics tertiary programs.

In-service NEAC training is also limited. Much is occasional or ad hoc, designed for specific interventions. In Nigeria, the WHO/UNICEF periodically run a two-week training course for tertiary lecturers and there is extension training including NEAC in the HIV/AIDS programs. The GHS in Ghana delivers occasional training in IYCF on request at a cost of \$60 per head. In Ghana some nutrition educators had attended one-week training workshops provided by government agencies in collaboration with international development partners - for example, a workshop on 'communication strategies for development' in relation to the WHO guidelines for the management of SAM. In Egypt, WFP has provided nutrition education training for kindergarten teachers.

In some cases in-service NEAC training is institutionalized or about to be. Malawi, with technical support from FAO and finance from the One UN Fund, is piloting a new cross-sectoral extension course in nutrition and food security which includes a NEAC element. Nutrition education is integrated into the clinical nutrition training program in the NNI in Egypt. The Open University of Tanzania provides nutrition education to mostly teachers and health workers through distance learning, for example in the Bachelor of Science with Education. Additionally, some community development colleges in Tanzania provide NEAC to community workers. In Ethiopia, the HEW may receive some NEAC training as part of the Essential Nutrition Actions and the CBN programs.

5 ■

HOW NEAC TRAINING IS DONE¹³

The questions in this section concerned impressions and observations of some aspects of training quality: the process by which the training was developed, training approaches used and the improvements that were needed. Surveyors asked all respondents for impressions and also looked at a few specific NEAC training programs.

Much of the training described was not NEAC training per se, but could be broadly

¹³ Section 5 refers to Sections F and G of the case study report form

categorized as:

- (a) “learning about nutrition”, sometimes with a small NEAC component, but often not
- (b) learning to do nutrition-related activities such as growth monitoring or surveys.

This in itself suggests that dedicated training of nutrition educators is a rare phenomenon.

5.1 DETAILS OF NEAC TRAINING: GENERAL IMPRESSIONS AND SPECIFIC PROGRAMS ^{14, 15}

Most of the courses described were university degree courses in nutrition with a NEAC component.

5.2 QUALIFICATIONS AND EXPERIENCE OF NEAC TRAINERS

The general consensus is that there is little professional training for those who teach nutrition educators or organize and manage NEAC interventions. Although most trainers/lecturers had qualifications in nutrition, and some in education, almost none had training as a NEAC trainer (one had studied BCC). The exception, already mentioned, was the lecturer from the University of Botswana. In Ethiopia, Hawassa University had a NEAC module in their undergraduate degree, but had not yet found an instructor, while the Masters module was provided by an external lecturer. In Tanzania, only one qualified person was identified while others had developed their skills on the job. However in Nigeria, Ghana and Malawi the experience of some of the trainers was found to be high, with varying strengths in field experience and experience of training professionals. In Ghana, one trainer had taken courses in BCC and advocacy skills as part of an undergraduate degree in Community Nutrition.

5.3 NEAC TRAINING DEVELOPMENT FRAMEWORK: NEEDS ANALYSIS, EVALUATION AND ASSESSMENT

Observations from specific training programs and degree courses bore out general impressions that in NEAC training, as in direct NEAC, needs assessment and evaluation were rare; some of the respondents did not know of any at all.

Exceptionally, some degree and postgraduate courses were preceded by a needs assessment: for example in Hawassa University the Nutrition Masters was developed by consulting a large group of working nutritionists in 2006. Most of the informants from Ghana were not aware of any needs assessments. In several reports reference was made to formative research conducted by NGOs or international organizations, for example a course provided by UNICEF in Tanzania (PLWHIC, IYCF and non-communicable diseases) had adapted an internationally developed needs assessment for Tanzania: learners contributed their experiences during the training but were not involved in developing the

¹⁴ Some of the programs that were mentioned in Section 4 of the survey reports were transferred here

¹⁵ The programs that are examined in this section are listed in Annex 4



learning objectives. An HKI advocacy training for district health managers in Tanzania “aimed at advocating for increased prioritization of nutrition issues in district development plans” and “allocating resources in their annual health development budgets”. The needs were therefore based on annual zonal reviews of activities and were also evaluated in this way. It was reported as being effective in increasing Vitamin A supplementation and deworming activities in local health plans.

Evaluations of university courses were generally not reported, aside from the student assessments and exams and in some cases a student course evaluation. However, in Nigeria, the National University Commission in conjunction with professional associations is involved in program evaluation; and in the university system in Malawi, the curriculum is reviewed after the full cycle of curriculum implementation.

5.4 LEARNING APPROACHES

General impressions were that learning approaches are a mix of academic and practical elements, depending on the context and level. It was clear however that most university courses had a thoroughly academic orientation: probably more academic than the lecturers appreciated, since the students perceived fewer practical components than the lecturers did. In Ghana the Public Health Nutrition degree was reported to be “100% theory”. One university course (at Hawassa) appeared to show a full range of more active and interactive activities; and the HKI advocacy training course in Tanzania for district health managers appeared to be fully work-related and needs-based, with actual performative aims.

All agreed that students tended to dislike a lot of reading and writing and preferred action and interaction. Students often voiced preferences for more participatory and hands-on activities which were not present in their courses (e.g. case studies, discussions, simulations, work placements). In Nigeria, teachers and students had different ideas of what activities students preferred. “Of the course activities preferred by students, six were reported by teachers as those not preferred by students”, including “extensive reading, research, writing essays and dissertations, writing diaries or blogs, projects and surveys and case studies”.

5.5 POSSIBLE IMPROVEMENTS AND LESSONS LEARNED

There were general demands for more NEAC training and more funding. On top of these, almost all surveyors reported the need for more visual and job aids, and above all more practice: applied learning, learning by doing, supervised work practice, case studies and practicals, and hands-on experience. The Tanzania report emphasised a need for harmonising the NEAC curriculum at all levels, including the understanding of nutrition issues. With regard to in-service and short training programs the Nigeria report commented that a needs assessment should be carried out before designing the training program; that trainees should be adequately supervised to ensure effectiveness of the training and that regular training and re-training should be periodically carried out.

The Ghana surveyor summed up: "... programs specifically focused on NEAC are limited ... and those providing training in NEAC have little or no specialized qualification ... although all have some level of field experience ... and experience in professional training. The content of most of the courses/programs that cover NEAC ... do not have a practical orientation ... Important challenges ... are student misperceptions about nutrition and poor infrastructure".

It was noted in Tanzania that the nutrition education curriculum should extend from pre-primary school to higher levels and that the course curriculum should develop the skills and competence of a nutrition educator. For example competence in cascade training system would be necessary to extend the training to community settings. An interesting suggestion from Ghana was that an exchange program would be a welcome opportunity for students to learn about other approaches of improving nutrition.

6 ■

NEAC TRAINING: DESIRABLE CONTENT AND APPROACH¹⁶

6.1 CURRICULUM CONTENT

Informants reviewed a list of possible knowledge, competence and awareness objectives, derived from a review of the literature on NEAC training needs and reported what they thought were essential curriculum elements. In view of the general absence of NEAC training, there was probably some voting in the dark: Ethiopia for example reported that everything on the list was favoured because "we have never had NEAC training materials". Nevertheless, most of the knowledge and competencies listed were rated as essential by most respondents. Theoretical knowledge of NEAC was not quite so popular in Nigeria, Tanzania and Malawi, although more favoured by students than by other respondents. There were some interesting discrepancies between students' choices and those of others: 82% of Ghanaian students regarded "knowledge of best NEAC practices around the world" as essential compared with only 18% of other respondents, and 100% of students favoured learning to "plan, implement and evaluate NEAC" while only 64% of others thought it essential. In Malawi fewer respondents perceived the need for recognizing the nutrition education requirements of nutrition and food security interventions, but most of the students canvassed saw it as essential. These large discrepancies inspire speculation.

Three awareness objectives were proposed for the essential curriculum:

- (a) familiarity with national/international professional communities;
- (b) familiarity with international associations and development organizations involved in nutrition and nutrition education initiatives;
- (c) acquaintance with web sources of usable learning resources and materials.

¹⁶ Section 6 refers to Section H of the case study report form



Opinions on these were also very divergent. In Malawi, all three were generally regarded as desirable rather than essential. Most Nigerian respondents considered only the first desirable. In Ghana all favoured the first while students in particular saw the second and third as essential, with quite a disparity between students and other respondents.

Although for the most part, student and non-student responses were in agreement on curriculum priorities, the differences – at least in Ghana – suggest “students’ desire for more familiarity with international programs and competencies in program management”.

6.2 COURSE APPROACH

Respondents were asked what course approach would be most desirable in a NEAC training course: a practical orientation aiming at working competence; an academic orientation aiming at understanding principles; a mix of theoretical and practical with more emphasis on the practical; a mix but mainly academic or an equal mix. The majority of respondents’ indicated their preference for a mainly practical course with practical assignments and exercises, some work experience of a work placement, illustration from real-life cases, worked case studies, and analysis of working problems.¹⁷

7 ■

NEAC TRAINING NEEDED¹⁸

7.1 VALUE TO THE COUNTRY AND FOR OWN INSTITUTIONS

Four course choices were offered, with outline descriptions of course curricula: an undergraduate module, a postgraduate module/in-service course, an extension course and an advocacy workshop at policy level.¹⁹ All respondents were asked which would be most valuable to the country and which they would prefer for their own institution. Surveyors reported varied responses regarding the best choice for the country, coming out in favour of the first three almost equally, with a large number of excellent reasons for each choice.²⁰ One extra course was suggested: nutrition education materials for schoolchildren in Tanzania. Choices for specific institutions were equally varied. Two reports raised the question of how to ensure adequate nutrition knowledge in non-nutritionists, for example agricultural extensionists or educators.

In Ethiopia, the main preference was for the undergraduate course module, stressing the need for more nutrition professionals since nutrition is emerging as a priority. Informants from the health sector favoured the course for extension workers as a large proportion of

¹⁷ See Table 3, Annex 3.

¹⁸ Section 7 refers to Section J of the case study report form

¹⁹ See outlines of these courses in the ‘interview form’ at <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>

²⁰ See Tables 4 and 5 in Annex 3

the population can be reached through extension nutrition educators.

In Malawi, the academic institutions also highlighted undergraduate training. The other informants recommended the extension course as of most use to the country because of the shortage of frontline extension staff, with the proviso that the trainees should be able to “understand the key messages without the basic nutrition knowledge”.

In Nigeria, the undergraduate and the advocacy courses were prioritised as of most value to the country. For themselves, more institutions selected the postgraduate and in-service courses, although both undergraduate and extension courses also had significant support.

In Ghana, the respondents who gave highest priority to the extension module highlighted that there were a good number of university programs in nutrition but that they “usually do not have an extension component and so students have limited contact opportunities with the community which affects their future effectiveness as nutrition professionals”. The general reason for choosing the undergraduate module was for capacity building and increasing the number of nutrition professionals in all settings. Regarding value to their own institutions, 50% of the Ghanaian respondents selected the postgraduate module as it would increase the competence of professionals working in NEAC or because postgraduates might be in a position to advocate for more resources for nutrition education. Logistical challenges were getting time off work to participate in courses and obtaining funding. The agriculture sector key informant prioritized the advocacy workshop for her institution because “we need to get people at the top to understand the issues and prioritize NEAC. The effectiveness of the frontline staff or extension workers depends on the support from the above so the advocacy module would be most helpful for us”.

In Botswana, all four programs were preferred at different levels and for different reasons and each “had a role to play in the NEAC training landscape in the country. The differences, it would appear were on targeting people who venture into NEAC at different stages of their professional development as well as the NEAC demands of their role in the institution”.

In Tanzania, “the course with the highest potential value in the country differs in terms of institutions interviewed”. Academic institutions preferred undergraduate and postgraduate/in-service courses, whereas informants from the Ministries prioritised an advocacy workshop at policy level. Nutrition educators preferred the extension course. “In addition, there is a need to develop curriculum/course content for young children (school children) as (they) can be good for disseminating what they learn in school and are the ones who are mostly affected by nutrition related problems”.

In Egypt, the extension course and the postgraduate/in-service course options were considered to be most useful to the country; and again, the postgraduate/in-service course was highlighted for its potential value to the institutes.

7.2 DELIVERY OPTIONS AND DESIRABLE ELEMENTS



Respondents were asked what delivery options were most attractive:

- (a) traditional face-to-face;
- (b) paper-based distance learning;
- (c) IT-based, offline distance learning (CD, DVD, USB stick etc);
- (c) web-based online distance learning;
- (d) blended (a mix of face-to-face and distance learning).

The overwhelming response was for blended learning. Students were slightly more conservative and opted more often for the familiar face-to-face course presentation. In Ethiopia, “those who preferred the blended format thought it would give them the chance for interactive learning and access to updated materials while those who preferred face-to-face only saw it from the simplicity of face-to-face discussion and the opportunity to interact and share experiences”. The reasons for choosing traditional face-to-face methods were the benefit of receiving immediate feedback from teachers/lecturers and the option of asking teachers questions personally. Logistical challenges were also highlighted such as limited internet facilities and poor computer literacy.

8 ■

E-LEARNING: DEMAND AND CAPACITY²¹

Most of the surveyed countries reported a low to medium demand for e-learning. Although e-learning centres are available in some universities, the respondents were not very aware of e-learning programs and their success or failure. In Malawi, the demand appears to be low as a high proportion of the population live in rural areas where electricity may still be unavailable or unreliable. In Nigeria, computers are not widely owned by individuals. Although the University of Ghana has established e-learning platforms for distance learning in recent years, the coverage of internet services is poor and electricity supply can be seasonally unreliable. However, in Ghana too an interest was expressed in the use of e-learning. A similar response was reported in Egypt and Botswana where there is an interest in e-learning but many challenges with regards to the electricity supply and internet coverage persist. In Ethiopia, students thought it was a good way of obtaining training materials and considered it convenient, but “in general the country’s demand and capacity for e-learning is limited to few circumstances and groups (mostly for people in universities, higher NGO’s and government offices)”. In Botswana, it is expected that internet and wireless connectivity will grow because the government has invested heavily in this sector.

9 ■

FURTHER PARTICIPATION²²

Respondents were asked what kind of participation they would be prepared to offer. Many indicated that they are willing to participate further by providing cases and experiences; reviewing learning materials, trialling courses and contributing to the NEAC online forum. For each proposed course a good number of respondents both wished to have such a

²¹ Section 8 refers to Section K of the case study report form

²² Section 9 refers to Section L of the case study report form

course and also wished to be involved in developing it – for example eighteen African institutions were interested in adopting and trialling an undergraduate module, of which ten were universities.

10 ■

CONCLUSION

The case studies confirmed that malnutrition remains a grave problem, at least partly attributable to lack of knowledge and awareness at all social and institutional levels and in all sectors and settings, and to poor dietary practices, which are often remediable. National strategies tend to prioritise direct nutrition interventions such as food fortification and supplementation. Health sector activities commonly focus on IYCF and growth monitoring, but also on clinical rehabilitation of malnourished children and support for PLWHA. A nutrition emphasis in food security interventions with a focus on prevention of malnutrition is rare.

NEAC continues to have a weak presence in national policy, with complaints of lack of strategy and funding, staffing, dedicated institutions, training, advocacy and interest from professional nutrition associations. NEAC activities per se are hard to identify: they are mainly concentrated in counselling for IYCF in normative health programs with a particular focus on exclusive breastfeeding; other initiatives are said to be generally fragmented and uncoordinated. Little nutrition education is going on in schools and it is unclear how far school gardening and school feeding contribute educationally. NEAC activities generally involve some training of trainers, but formative enquiries and evaluation are not standard practice except in major donor-funded projects, and effectiveness is hard to estimate in the general absence of evaluation. Methodologically, most NEAC was characterised by respondents as one-way and top-down, consisting mainly of talks and advice, presentations, leaflets, posters etc., although some specific initiatives are promoting more enquiry, interaction and action orientation. Respondents indicated a need for more participatory approaches.

The need for NEAC was stressed by all respondents; particularly for pregnant women and mothers, schoolchildren and the general population. Professional groups prioritized were health professionals, extension workers and schoolteachers, largely because of their contact with and authority in the community.

“NEAC training”, that is, professional training for those who teach nutrition educators or organize and manage NEAC interventions, is reportedly even more difficult to track down, partly because it is rare (some said non-existent) and partly because it is embedded in a variety of curricula and settings under a variety of names. In academia it can be found as elements of nutrition and dietetics degrees, Home Economics degrees or health promotion training. In-service NEAC training is largely occasional or ad hoc, designed for specific interventions, although in several countries some NEAC training for extension workers and teachers is institutionalized, or about to be. Almost no NEAC trainers/lecturers have specific NEAC qualifications and some universities are having to import instructors.



Insofar as it was possible to analyse existing NEAC training, respondents agreed that the process framework typically lacks preliminary research and follow-up evaluation. Learning approaches, especially in universities, are largely academic: all respondents expressed preferences for more active and interactive approaches with a more practical orientation.

There was wholesale approval of the elements of a proposed “ideal” NEAC training curriculum derived from the literature on NEAC training needs, with less unanimity on the value of NEAC theory (students were more in favour) and on the nutrition education requirements of food security interventions. Students showed a greater interest than other respondents for familiarity with international programs and best practices and for program management competence.

Interest was spread almost equally between three of the four course choices presented (an undergraduate/basic NEAC course; a postgraduate/in-service course with more of a management emphasis; a cross-sectoral extension course), suggesting that capacity needs can best be met through a framework or suite of training courses which extend and reinforce each other. Overwhelmingly, respondents opted for a blended learning approach with some distance-learning materials mixed with face-to-face sessions: interest was expressed in e-learning but the practical difficulties were seen as decisive for the moment. Most respondents were interested in participating in the development of one or more of the courses in at least one way – supplying learning resources and stories, reviewing materials etc. Considerable numbers expressed the desire to be involved in trialling courses.

The project hopes to produce and promote permanently available and adaptable training resources in practical work-oriented nutrition education and communication. It appears from these case-studies that this initiative would not only address a strongly felt need but would also be a timely intervention at a moment when nutrition awareness is growing, policies and strategies are being re-shaped as part of the international Scaling Up Nutrition roadmap and the 1000 Day Initiative, and education and practical skills development are being re-valued as key factors in improving dietary practices.

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ANNEX 1: CRITERIA FOR SELECTING INTERVIEWEES

- (a) **Key informants** Two people with a good overview and long experience of nutrition issues in the country (e.g. a university lecturer, the chairperson of a professional association or NGO group, a senior staff member in a national nutrition institute). One should be from an academic background and one should have more program experience.
- (b) **Government staff** Program officers from the ministries of Health (Nutrition), Agriculture (Extension) and Education (Health and Nutrition Curriculum).
- (c) **Nutrition educators** Four experienced nutrition educators directly engaged in organising and practising nutrition education and communication in different contexts¹. The activities should be normative, i.e. not pilot projects or highly-funded short-term interventions.
- (d) **NEAC trainers** Four trainers/facilitators/lecturers delivering some form of NEAC training in different contexts.² Two should be from universities.
- (e) **NEAC students** One or more classes/groups of NEAC students (preferably in-service students) who can respond to a short questionnaire distributed by their teachers.

¹ E.g. schools/school feeding/school gardening; HIV/AIDS care; GMP and maternity care; community groups; hospital counselling; food security and horticulture projects and programs (with nutrition); agricultural extension advice for home gardens; workplaces and canteens; national campaigns and national IEC.

² E.g. for extension workers, community workers, teachers, undergraduates, postgraduates, in-service health professionals, NGO staff; laid on by universities, colleges, government ministries or institutes, professional associations, NGOs or development organizations

LIST OF INTERVIEWEES FROM THE SEVEN SURVEYED COUNTRIES

BOTSWANA

NAME	AFFILIATION
Dr. K. S.M Gobotswang	University of Botswana
Ms. M. Phegelo	Ministry of Health (Dept. Of Public Health)
Mrs. Chakalisa	Ministry of Education (Curriculum Development - Home Economics)
Mrs. K. Moruisi	Ministry of Health (Dept. of Public Health)
Mrs. Sebi	Ministry of Agriculture (Food Security Unit)
Ms. O. Ntshebe	Ministry of Health / PEPFAR Collaboration
Mr. M. Galeemelwe	Ministry of Health (Dept of Public Health)
Mr. J. Makjanda	Baylor Children's clinical Center of excellence
Mr. Pati	Project Concern International
Ms. J.Buka	Ministry of Health (Scottish Living Hospital)
Dr. S D. Maruapula	University of Botswana
Mrs. Semele	Institute of Health Sciences (Gaborone)
Mr. Batlhophi	Institute of Development Management



EGYPT

NAME	AFFILIATION
Dr. Eman Sultan	NNI
Dr. Madiha Said Mohamed Abdel-Razik	Faculty of Medicine, Cairo University
Dr. Sahar Abdalaziz Khairy	NNI
Dr. Gulsen Saleh Ahmed	NNI
Aisha Gamal eldin	MoH
Dr. Nabih Abdel-Hamied Ibrahim	Egyptian Food Safety Information Centre (EFSIC) - Food Technology Research Institute (FTRI)-Agriculture Research
Dr. Amal M.Hassan	EFSIC-FTRI
Prof Saneya Abd ElAzim Wahba	National Research Centre
Dr. Nagwa Khallaf	NNI
Doaa Hamed Sabkhawy	Directorate of Health Affairs Dakahlaya
Dr Neamatallah Gomaa Ahmed	University of Ains Shams/Faculty of nursing
Doaa Mounir Genena	High Institute of Public Health
Medical Research Institute	Institute of Development Management
Elsayed Mohamed Ayyad Abd El Fatah	Faculty of Science, Private
Gihan Omar Abo-Elghait	Faculty of Home Economics, Private
Elsayed Mahmoud Hammad	NNI

ETHIOPIA

NAME	AFFILIATION
Cherinet Abuye (PhD)	Food Science and Nutrition Directorate
Yewelsew Abebe (PhD)	Alive & Thrive
Ms. Abeba Gobezie	Ex-FAO staff
Ferew Lemma (PhD)	FMOH
Mr. Muluken Orion	DPPC (FMOA)
Dr Henok Tadele (MD)	Black Lion Referral Hospital, Addis Ababa
Dr Mihiret Gudisa	'Hadare' Hospital, Awassa
Mr. Tezera Sintayehu (HO)	'Hadare' Hospital, Awassa
Ms. Hiwot Abebe (MSc)	Hawassa University
Mrs. Getenesh Birhanu (MSc)	Hawassa University
Mr. Getahun Ersino (MSc)	Hawassa University
9 students	Hawassa University

GHANA

NAME	AFFILIATION
Margaret Adabuga	WIAD, MoFA
Martin Nyaaba Adokiva	University of Development Studies, Temale
Gabriel Alattiah	Kintampo Rural Health Training School
Mr. Armah	GHS
Richmond Arveety	University of Ghana School of Public Health
Ellen Gyekye	School Health and Education Program (Ghana Education Services)
Gloria Kobati	GHS
Anna Lartey	University of Ghana (Nutrition and Food Science Department)
Gloria Obeng-Amoako	Plan-Ghana
Wilhelmina Okwabi	GHS
Adam Sandow	National Catholic Secretariat
Priscilla Tete-Donkor	Princess Marie Louise Hospital
Victoria Tskepor	WIAD, MoFA

**MALAWI**

NAME	AFFILIATION
Gabriella Chapoku	NRC
Hilda Chilabade	Dowa District Hospital Ministry of Health
Chikondi Chiumbuzo	Ministry of Education
Luca Collen	Kamuru College of Nursing
Numeri Geresomo	Bunda College of Agriculture
Alexander Kalimbira	University of Malawi
Dalitso Kamngombe	MoH
Magareth Lwanda	Ministry of Agriculture and Food Security
Maureen Maguva Tembo	DNHA OPC
Regina Mandere	World Vision
L Manyoza	World Vision
Martha Mwale	Nthen District Agriculture Office
Julita Nsajama	Wala
Marion Sanuka	National Resources College
V.Shaba	Malawi College of Health Science
Edwin Siyame	Bunda College of Agriculture
Pickmore Swira	Ministry of Gender Children and Community
Autile Sanvila	MoA

NIGERIA

NAME	AFFILIATION
Prof. C. O. Asinobi	Imo State University, Owerri
Dr. P. N. Obiakor	Imo State University, Owerri
Mr. F. A. Esekhiogbe	Ambrose Alli University, Ekpoma
Mrs. R. E. Eromonsele	Primary Health Care Department of Esan West LGA, Edo State
Mrs. B. O. Inegbinebor	Primary Health Care Department of Esan West LGA, Edo State
Mr. Charles Nkwoala	Michael Okpara University of Agriculture, Umudike
Mr. Arese Osifo	Ambrose Alli University, Ekpoma
Mrs. Lois Onyike	Imo State Ministry of Health
Dr. Amaka Odenigbo	Michael Okpara University of Agriculture, Umudike
Mr. Andy Offor	Imo State University, Owerri

TANZANIA

NAME	AFFILIATION
Mrs. Shao & Mrs. Gwalasa	Tanzania Food And Nutrition Center
Mrs Shirima, R.	COUNSELING NUTRITION & HEALTH (COUNSENUTH)
Elina Maseta	Open University Tanzania
Rashidi Heri	Muhimbili University Of Health And Allied Sciences
Rehema Katema	Longido Secondary School
Mr. Mtambo Karim	Ministry Of Agriculture
Mrs. Zena Amiri	Tanzania Institute Of Education
Mr. Joseph Mugyabuso	Save The Children In Tanzania
Margareth Benjamin	Hellen Keller International
Prof. Nyaruhucha	Sokoine University Of Agriculture
Ms. Judica	Mandaka Teachers College
Dr. Mtweve	Kilimanjaro Christian Medical Centre University
Mrs. Marandu	Monduli Teachers College
Mr. Majengo	Tanzania Commission for AIDS (TACAIDS)
Dr. Sibulaga	Ministry Of Health and Social Welfare
Mrs. Lyimo, Ms Hanifa, Ms Neema, Mr Kingo	Ministry Of Community Development Gender And Children

ANNEX 2: SOME POPULAR NUTRITION PERCEPTIONS, PRACTICES AND ATTITUDES

BREASTFEEDING AND IYCF PRACTICES:

- 'Shortness (stunting) is something genetic rather than the consequence of malnutrition' (Ethiopia);
- 'Mothers give butter to newborn children, thinking it will soften the intestine of the baby' (Ethiopia);
- 'Koko' (cereal-based porridge) is the best complementary food for children (Ghana); similarly in Malawi plain unenriched porridge is considered to be an appropriate complementary food;
- Children need water during exclusive breastfeeding as milk alone cannot satisfy the child's need for water in hot weather (Ghana);
- 'Women should withhold colostrum from the baby' (Botswana).

MISCONCEPTIONS ABOUT THE VALUE OF FOODS:

- 'A meal made of stiff maize meal (paleche) and pounded beef meat (seswaa) is more filling than other food combinations' (Botswana); similarly in Malawi, maize is considered the main staple and there is an overdependence on it;
- Fruits are not considered as food in Ghana and the nutritive value of fruits and vegetables is not recognized in Tanzania and in Egypt;
- 'Certain diets are associated with certain capabilities For example ... the fortified sorghum-soya blend 'Tsabana' was popularly associated with increasing libido in men' (Botswana);
- Beetroots cure iron deficiency anaemia or eating unripe plaintain provides iron.

FOOD STATUS AND BODY IMAGE:

- Imported foods are believed to be better than local indigenous food (Malawi, Botswana). Some food is viewed as prestigious (often high in fat) (Ghana, Tanzania);
- In general nutrition issues are considered to be women's issues;
- There is an attitude that men should be fed first (Ethiopia);
- People are unwilling to cross ethnic boundaries in their diet and consume unfamiliar foods (Ghana, Malawi);
- It is thought that being fat and overweight is healthy (Ghana, Tanzania, Malawi), but 'thin' wins beauty pageants (Malawi).

ANNEX 3: QUESTIONNAIRE DATA ANALYSIS

For further questionnaire analysis, please refer to "Data tables from the questionnaire" at <http://www.nutritionlearning.net/moodle1/course/view.php?id=5&username=guest>

Table 1: Which specific target groups are most in need of nutrition education in order to improve their diet and health?

		%
pregnant women & mothers	56	28
schoolchildren	39	20
general population	26	13
people living with HIV/AIDS	13	7
men/fathers	11	6
farmers	8	4
home gardeners	7	4
old people	7	4
caregivers	6	3
adolescents	5	3
adolescent girls	3	2
diabetics	2	1
health workers	1	1
other	13	7
total	197	

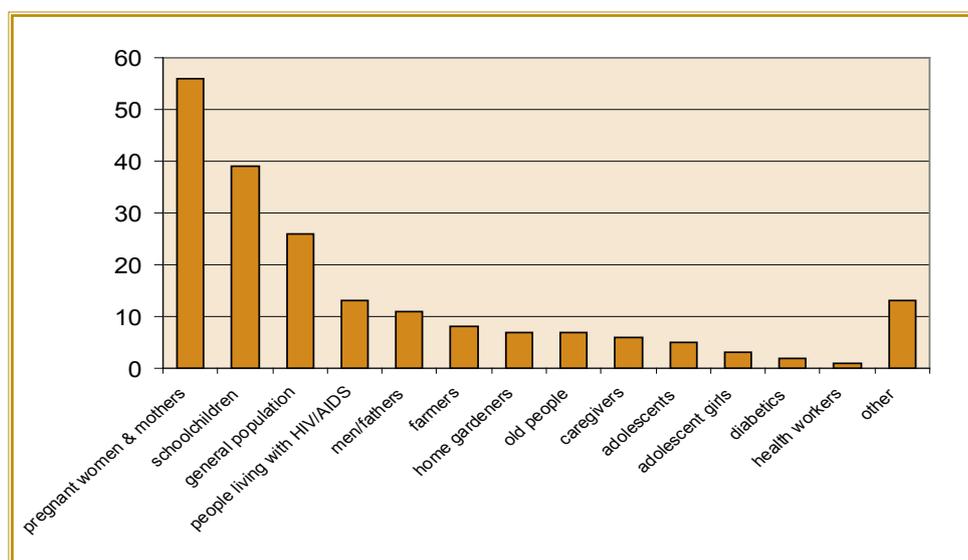


Table 2: Which professional groups most need to understand nutrition and NEAC?

		%
doctors and health professionals	55	23
schoolteachers	40	17
agricultural extension workers	31	13
community health workers	31	13
policymakers	25	11
the media	22	9
government staff	11	5
food aid staff	9	4
other	11	5
total	235	

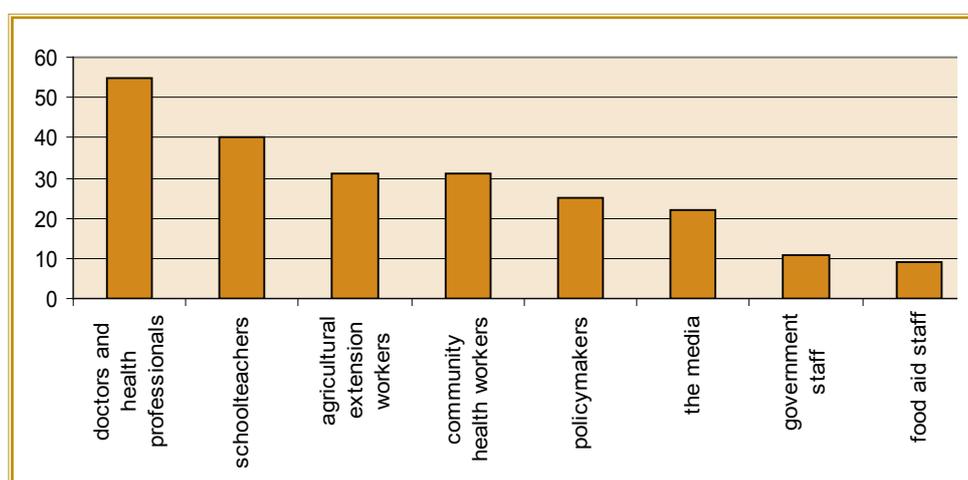




Table 3: Course Approach

- What approach would you see as most desirable in a NEAC training course?

		%
mainly practical	53	67
50-50	13	16
mainly academic	6	8
practical	5	6
academic	2	3
total	79	

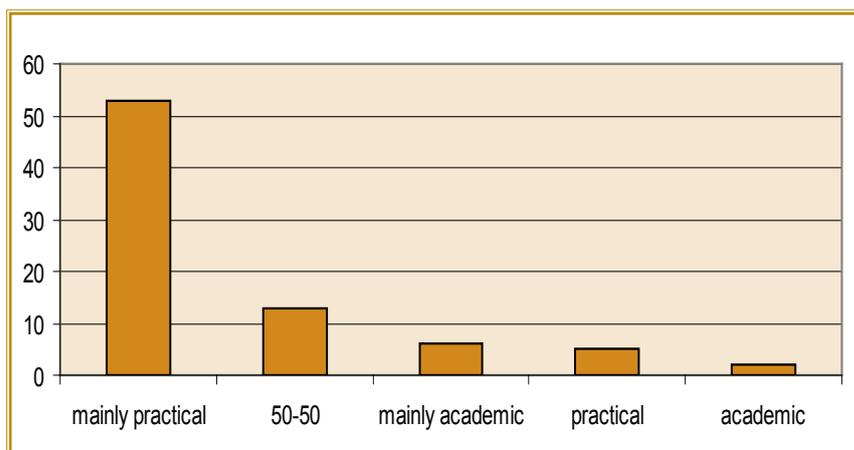


Table 4: What kind of course would be of most value to your country?

- An extension course
- An undergraduate course module
- A postgraduate module/in-service course
- An advocacy workshop at policy level

		%
extension course	35	29
undergraduate course module	32	26
postgraduate module/in-service course	6	8
advocacy workshop at policy level	23	19
total	122	

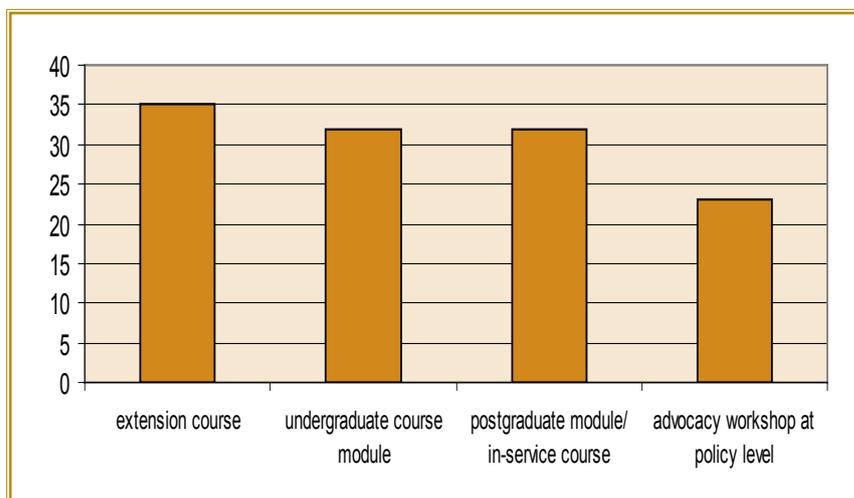
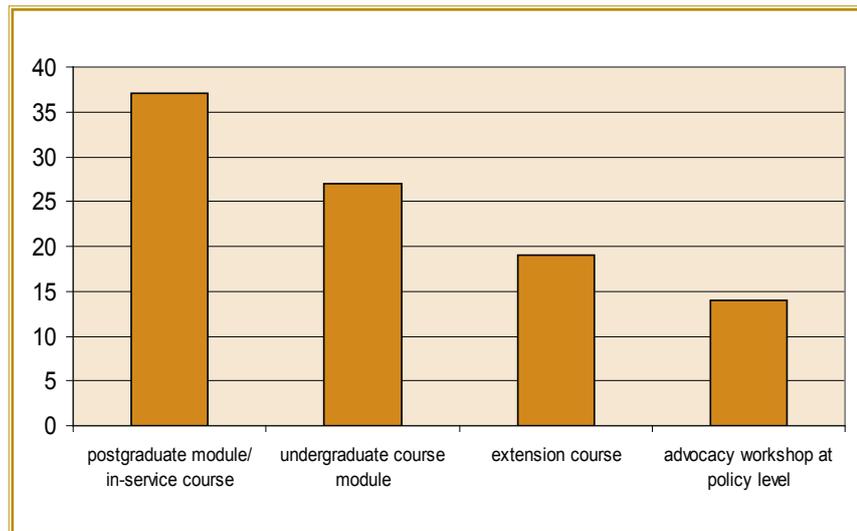




Table 5: What kind of course would be of most value to your institution?

- An extension course
- An undergraduate course module
- A postgraduate module/in-service course
- An advocacy workshop at policy level

		%
postgraduate module/ in-service course	37	38
undergraduate course module	27	28
extension course	19	20
advocacy workshop at policy level	14	14
total	97	



ANNEX 4: NEAC TRAINING PROGRAMS REPORTED

TRAINING

TANZANIA

Nutrition training (clinical nutrition and theory and practice on nutrition in various contexts) in:

1. Muhimbili University of Health and Allied Sciences
2. Kilimanjaro Christian Medical Centre
3. Open University of Tanzania: Provides nutrition education to mostly teachers and health workers through distance learning (for example in the Bachelor of Science with Education)
4. Sokoine University of Agriculture

Human nutrition – NEAC is a standalone course at level three. MSc in Human nutrition is being currently reviewed.

5. An HKI advocacy training for district health managers

BOTSWANA

1. Home Economics Education Program (Family and Consumer Science program) in the University of Botswana.

The Nursing Programs contain some NEAC training in:

2. the Institute of Health Sciences, 3. in the University of Botswana
3. Certificate program in Health Education at Boitekanelo College

ETHIOPIA

Hawassa University:

1. NEAC in the BSc Human Nutrition
2. Community Nutrition in the MSc Applied Human Nutrition
3. Health Extension Program, FMOH

GHANA

In-service training in NEAC

1. Training in counselling skills and an integrated course in infant and young child feeding (IYCF) for frontline staff, offered by the GHS

Pre-service training

2. The Ministry of Health's Rural Health Training School which provides pre-service training for nutrition technical officers and disease control officers for positions in the Ghana Health Services and other public health agencies. This is a diploma-level program. NEAC is emphasized in a 3 credit course in health promotion as part of the 90 course credits offered through the program
3. Undergraduate degree programs in Nutrition and Community Nutrition offered through the University of Ghana and the University of Development Studies (both are public institutions). No stand alone courses in NEAC



NIGERIA

1. NEAC is part of the Higher National Diploma (HND), BSc, MSc and PhD in nutrition. Nutrition training in Universities, Polytechnics and Schools of Nursing
2. Training programs (sponsored by UNICEF and WHO) prior to implementation of MNCH week

MALAWI

1. Minor elements of nutrition education as part of community nutrition in the BSc training offered at Bunda College. Bunda College offers nutrition at undergraduate and postgraduate levels
2. Natural Resources College (NRC) offers nutrition at diploma level. It's a short course aimed at equipping the extension agents with relevant food and nutrition knowledge that could be passed on to the community groups they interface with

EGYPT

1. NE training for kindergarten teachers funded by WFP
2. Professional training program in clinical nutrition organised by the training department of the NNI
3. Training of facilitators as part of the RADCON network. Materials were developed by the Food Technology Research Institute

