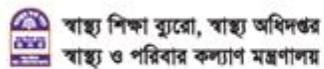




eLearning Courses for Field Workers: Documentation Report

Bangladesh Knowledge Management Initiative

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Introduction

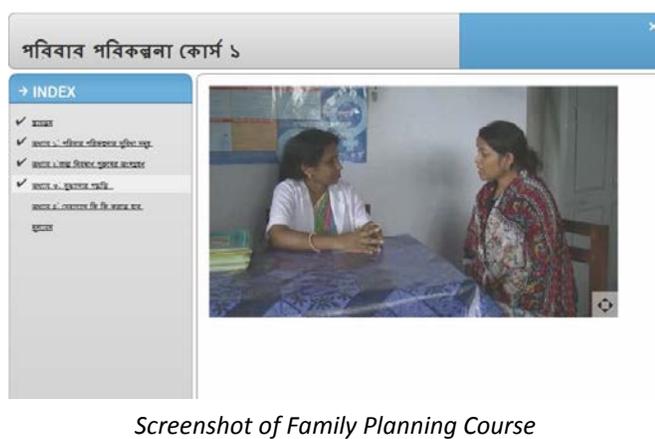
With funding from the United States Agency for International Development (USAID), the Knowledge for Health (K4Health) project of Johns Hopkins University Bloomberg School of Public Health's Center for Communication Project (JHU-CCP) has developed, implemented and evaluated eLearning courses in a number of countries. The K4Health project uses eLearning as a tool for strengthening the capacity of the health professionals of varied categories.

The K4Health project in Bangladesh, named as the Bangladesh Knowledge Management Initiative (BKMI), is working to build the capacity of the Government of Bangladesh's (GoB) Ministry of Health and Family Welfare (MoHFW) to improve and coordinate Health, Population and Nutrition (HPN) behavior change communication (BCC) programs by leveraging knowledge management (KM) approaches.

As part of BKMI, an eHealth pilot was conducted with approximately 300 community-level field workers in Sylhet and Chittagong districts. During the pilot, the field workers were oriented on how to use netbooks loaded with digital resources, and then field workers used the resources in their day-to-day client counseling. The netbooks contained an HPN eToolkit and eight eLearning courses. The eToolkit is a collection of gold standard BCC materials on family planning (FP), nutrition and maternal, newborn and child health (MNCH). The eLearning courses consisted of eight training videos with assessments on these health issues and also on interpersonal communication and counseling (IPCC) and integrated messaging.

The eLearning video courses

The eLearning courses are a set of eight videos of 12 to 18 minutes duration, divided into chapters for easy navigation. The videos were designed to be used by low-literate field workers to enhance their knowledge and skills, and supplement the trainings they receive. The content is video-based and has a multiple-choice assessment at the end to measure learner progress. In addition, any writing that appears on the screen during the course was spoken via voiceover.



Screenshot of Family Planning Course

By enabling training to take place in a daily working environment rather than attending in-service training once a year or even less, the eLearning courses are expected to facilitate the learning and development of skills of the field workers on an as-needed basis, in a way that is

responsive to their needs. Thus, the courses increase opportunities for knowledge and skill building for the field workers.

Selection of topics of the courses

After discussion with USAID, GoB counterparts and other stakeholders, a plan was made to develop video-based eLearning courses across health, population and nutrition. Two videos would be on Family Planning; two on Maternal, Newborn and Child Health; two on Nutrition; one on Integrated Messaging and one on Interpersonal Communication and Counseling skills. The two nutrition courses were adapted from existing videos, developed by Alive and Thrive.

To make the whole development process –from conceptualization to production -- easy on all relevant stakeholders, it was decided to work on two courses at a time.

Outline development and review

After an extensive review of relevant documents and reports, the technical experts of BKMI team developed the outlines of the eLearning courses.

BKMI team members, GoB counterparts, other technical experts and USAID reviewed the outlines for technical accuracy and overall content. They were then modified according to the feedback received from the reviewers. The revisions were made after consulting the documents to ensure that the suggested changes were correct and followed the updated guidelines.

Structure and development of the scripts

The scripts were developed keeping in mind the enter-educate approach to make sure that they are both entertaining and educational. Each video consisted of short episodes of some or all of the following:

- Narratives by medical doctors, teachers, religious leaders. Doctors, teachers and religious leaders are very reliable sources of medical and other health and well-being related information to the general population. Appropriate visuals were used in the background during the narration to avoid boredom.
- Skits highlighting specific issues. People enjoy skits which dramatize a certain situation. Drama has proved to be a popular medium of enter-educate approach in the country.
- Testimonials of field workers and community people. Testimonials draw people's attention as they identify themselves with the person – whether a field worker or a mother.
- Training sessions. Training sessions were used to teach certain aspects of the course which needed a systematic teaching style.

- Animation to grab viewers' attention and to make the episodes more interesting and fun.
- Recapitulations and summarization of the main messages.
- Course assessments with questions. As these are learning courses, self-assessment by field workers was thought to be a good learning tool and also allowed for the project team to monitor the learning of its users.

Scripts review

The BKMI team, GoB counterparts and USAID/Dhaka office staff reviewed the scripts. The reviewers were asked to consult the outlines so that the changes suggested were on par with the guidelines. After minor revisions, translations were completed and the Bangla versions of the scripts were finalized.

Bangla shooting scripts development and review

The scripts were modified based on the observation and feedback, and were translated into Bangla. The translation was done very carefully to make it culturally acceptable and ensure at the same time that the messages were kept intact and that the drama and entertainment value were kept alive. At this stage the scripts needed to be ready for filming so each section of the script was timed to ensure that the videos were of appropriate time length.

The scripts were sent to the respective GoB counterparts for review and appropriate feedback was incorporated and the final scripts were ready for filming.

Pretesting of the videos with the field workers

Two scripts of the videos were thoroughly pretested with the field workers and the findings were incorporated before beginning filming. There were hardly any modifications suggested by the pretest audiences. The scripting and filming of all the videos followed a similar style and formatting. Because of time limitations, the other six scripts were pretested and vetted by GoB.

Selection of audio-visual production agency

A Request for Proposals (RFP) was sent out to a number of production houses asking for technical and cost proposals. Three agencies responded and sent proposals. The proposals were reviewed and scored by the BKMI team in Dhaka and Baltimore. AVCOM, a production house with extensive experience in developing training videos on health issues was selected.

Filming of the videos

After finalization of the scripts, the BKMI officials held a number of meetings with AVCOM to ensure proper planning for the shooting. The process included developing a detailed timeline and dates for filming, venue identification, cast selection, rehearsal and other logistics.

BKMI staff and GoB counterparts (when available) were present during the shooting.

The videos were filmed in rural and peri-urban settings. Most of the characters in the videos were played by professional actors. However, some characters, including the field workers, were performed by actual field workers.

Review of videos

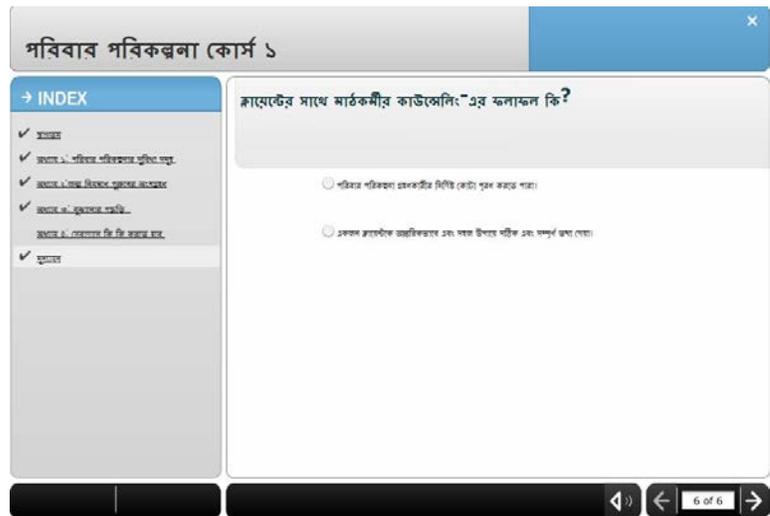
The draft videos were then shared with the mid-level managers of the three units of GoB for their feedback. Some of the comments that were acceptable keeping the goals, objectives and purposes of the courses were incorporated and the videos were finalized.

Delivering video courses on eLearning platform

In order to provide a digital learning experience for field workers, an eLearning platform was needed to host the video courses and assessment questions. In order to fit the content for the intended audience, a customized platform was deemed necessary.

The BKMI staff determined that the following specifications were needed:

- An operational offline eLearning platform to reach low-connectivity settings in rural Chittagong and Sylhet;
- Any text-based content handled by the field worker had to be delivered in Bangla script;
- To enable the best performance of video-based content, courses had to be developed on Flash.



Assessment Questions in Multiple-Choice Configuration

A Content Management System (CMS) and Learning Management System (LMS) were needed to be requisitioned from a third-party vendor. The CMS is the mechanism where courses are developed and saved in an online repository maintained by a third-party vendor until the course author is ready to publish the content. As soon as the courses are published from the CMS, they are deployed to the LMS, which is the application that organizes course sessions for

the end user. An operational offline LMS was required for field implementation so the third-party vendor would need to build a customized offline LMS that would sync learner results and status on course progression to the online LMS, where BKMI staff can readily access results and status.

Rapid Intake Inc., based in Utah, USA, was commissioned to provide the CMS and LMS. The CMS was developed through the Unison platform to accommodate any Flash-based content that course development required.



User Homepage with List of Courses Separated into the following tabs—
“To be Taken”, “In Progress”, and “Passed”

After the CMS and LMS were developed by Rapid Intake, BKMI started to develop courses in the CMS without much issue. However, the LMS required greater customization as it was to be deployed offline and had to accommodate Bangla script in its navigation and assessments. BKMI staff translated into Bangla the learner system jargon associated with use of the registration fields, course management, course taking, and assessments in the LMS. Rapid Intake staff incorporated the translated Bangla into the script that was developed for the customized offline LMS.

After the deployment of the courses to both online and offline LMS, many functions of the offline LMS failed to operate per the specifications set in the contract with Rapid Intake. One, the Bangla script did not render properly in the course navigation and assessments. Two, the offline LMS did not synch with the online LMS. Three, Rapid Intake did not provide timely customer support to amend the issues associated with the offline LMS.

Uploading eLearning Courses

The BKMI team worked with the research subcontractor, Eminence, to upload the eLearning courses on 300 netbooks before the eHealth pilot implementation started in Chittagong and Sylhet. Due to the inability of the offline LMS to synch to the online system, paper-based assessments were developed for the eight courses in order for the team to be able to track the learning progress of field workers.

Use of the eLearning courses by field workers during the eHealth pilot

The main purpose of the eLearning courses was to enhance the knowledge and skills of the field workers on key aspects of FP, nutrition and MNCH as well as on IPCC and integrated messaging. Key informant interviews (KIIs) and focus group discussions (FGDs) conducted during routine monitoring visits revealed that field workers enjoyed the video format of the courses, that their

knowledge had increased on specific issues, and that they scored high on the assessments. The field workers also stated that they liked having evaluations so that they could monitor their own learning progress.

During the monitoring visits it was found that many of the field workers were showing the videos – at least sections of them – to the mothers and other household members during regular counseling sessions. The field workers mentioned that the families/clients loved the enter-educate aspect of the videos and wanted more of them on several topics (see recommended topics below).

As the video clips from the eLearning courses are now being used during counseling and the clients also like to watch them, the recommendation from the field is to add more videos. Some of the field workers also mentioned that as they did not get much training, it would be very helpful if more elaborate discussions and demonstrations were added in the eLearning courses.

The video format of the courses was very well accepted in the community both by the field workers and by the clients (individuals and families) for the content and communication channel. It is recommended that more video-based courses be developed following the same development process which was inclusive and worked very well to ensure correct messages and ownership by the stakeholders and field workers.

Key recommendations for development of future eLearning courses

- Identify a local eLearning vendor to ensure close communication with the BKMI team
- Consider developing eLearning courses for field workers on the following topics that they recommended:
 - Expanded Program on Immunizations (EPI)
 - Non-communicable diseases (NCDs)
 - Temporary family planning methods and their side effects
 - Adolescent nutrition and health
 - Side effects of vaccinations
 - Ways to avoid formalin in food
 - General diseases like cold, fever, cough and skin diseases
 - How to treat common childhood illnesses
 - Sexually transmitted diseases
 - Detailed information on Non Scalpel Vasectomy (NSV), cancer, harmful effects of tobacco, asthma
 - How to involve in-laws and families in making different health related decisions
- Consider developing longer courses
- Consider making the course assessments more challenging

- Institutionalize the courses so they are part of in-service training of field workers
- Edit current eLearning courses for different audiences. For example, can be used to improve knowledge of field workers, can be used as a counseling tool for clients, and can also be shown in clinic waiting rooms
- If eLearning videos will be used for counseling client, consider having better sound quality so that the videos can be played in outdoor environment with large audience

Next steps

The BKMI team is currently exploring ways to continue its eHealth activities in Bangladesh, and expand the use of the eLearning courses that were created.

An eLearning concept paper that articulates the plan for scale-up and vision for future use and development of courses, including hosting, number of users, and plan for long-term sustainability is being drafted.

As the next phase of the project focuses primarily on strengthening GoB capacity at the central and district levels, as well as the capacity of USAID partners, the project will be developing two courses for this audience in its first year, one on Messages and Materials Design and Development, and the other on Monitoring and Evaluation of BCC. Two workshops were conducted on these topics under BKMI 1, and the development of new eLearning courses that are based on the workshops will allow a wider audience to have access to the information, will allow the course participants a place to refer back to if they need it, and also expand on what they already learned. BKMI will look into a variety of course delivery formats, considering the audience. Other topics for eLearning courses for central-level BCC program managers will be considered for years two and three. An RFP will be released and a local vendor will be selected to develop the new courses.