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CEPLANUT food/nutrition & agriculture education project evaluation

by

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INTRODUCTION

In September 1985, INCS received a request from USAID/Zaire to provide technical assistance to review a primary school nutrition/agriculture curriculum, developed by CEPLANUT (Centre National de Planification de Nutrition Humaine). Specifically INCS was asked to send an educational evaluation specialist to Zaire to work with CEPLANUT staff in: designing potential evaluation methodologies to evaluate the curriculum's effectiveness, training staff in survey implementation, and developing a plan for further technical assistance, based on the consultant's assessment of the situation and the needs of the program regarding curriculum revision. This report outlines that consultant's, Christine Myer's, accomplishments and sets forth a plan of action for future involvement in the project.

This project is of particular interest to INCS in that it has provided another opportunity to participate in the development of nutrition education for use in the school system. Educators have stressed the importance of influencing the early behavior of children in terms of food, nutrition, and health and have noted that the school provides a supportive environment for bringing about these changes. INCS is already involved in this field, working with the Ministry of Education in Jamaica to develop innovative educational materials that combine the teaching of nutritional concepts with language arts skills. The CEPLANUT curriculum is yet another approach to the development of country-specific educational materials and demonstrates the importance of proceeding in a well planned, systematic manner.

Christine Hollis
Staff Communications Specialist, INCS
December 1985

EXECUTIVE SUMMARY

The primary school nutrition and agriculture curriculum is one of two educational components of the USAID-funded Zaire Area Nutrition Improvement Project (660-0079). The curriculum, which covers grades 1-6, was developed by the staff of CEPLANUT (Centre National de Planification de Nutrition Humaine) based in Kikwit, Bandundu region. The courses were developed during the 1984-1985 school year, and are now being pilot tested in four representative rural schools in the region. The project staff intends to expand the curriculum to the subregional level, involving several hundred schools, during the 1986-1987 school year.

After visiting the schools, informally testing the students, and reviewing the curriculum and project goals, we have agreed on a two-year evaluation plan. The evaluation, which contains five major components, a separate curriculum review, and a final summative evaluation, will be conducted according to the following methodology:

1) A bi-monthly monitoring system has been developed that will provide feedback on course progress, schools, and teaching conditions in the pilot schools over the next two years.
2) Four separate attitudes/practices surveys were developed for grades 3, 4, 5 and 6. They will be administered by trained CEPLANUT staff during late November/early December, 1985. The survey's purpose is to provide data to guide curriculum revisions, a basis for the proposed observational study, and serve as one of two baselines for a two-year long determination of project impact.
3) An examination of teacher knowledge levels will be developed and administered by CEPLANUT staff in January, 1986. The results of this examination will be used to improve the level of support given to teachers by the curriculum, and serve as a separate determinant of the project's effect on children's levels of knowledge.
4) An observational study in pilot school villages, to be conducted in January, 1986, and January, 1988, will document changes in attitudes/practices, that can be attributed to the project.
5) A curriculum-based test of knowledge in grades 3, 4, 5, and 6 will be conducted at the end of the 1985-1986 school year, then repeated at the end of the 1986-1987 school year in grades 4, 5, and 6. This test will be a baseline/general assessment of children's present levels of knowledge and curriculum-specific measurements of knowledge gained over the year.

A separate review of the curriculum, including appropriateness of content, pedagogy and format, will be conducted in February, 1986. This review, as well as the findings of the aforementioned surveys, will be used to revise the curriculum during March.

A summative evaluation will incorporate the aforementioned evaluation activities into a final report on the projects' impact.

Appendices contain schedules of activities, attitudes/practices surveys, and draft scopes of work for future technical assistance.

RESUME RECAPITULATIF

Le programme de cours portant sur la nutrition et l'agriculture au niveau de l'enseignement primaire est l'une des composantes éducationnelles du Projet d'Amélioration de la Nutrition dans une Région (660-0079) financé par l'USAID. Le programme, qui couvre de la première à la sixième années, fut élaboré par le personnel du CEPLANUT (Centre National de Planification de Nutrition Humaine) basé à Kikwit dans la Région du Bandundu. Les cours furent développés durant l'année scolaire 1984-1985, et sont actuellement à l'essai dans quatre écoles rurales représentatives de la région. Au cours de l'année scolaire 1986-87, le personnel du projet compte étendre le programme pour atteindre le niveau sous-régional avec l'inclusion de plusieurs centaines d'écoles.

Après avoir visité les écoles, testé les étudiants de façon non officielle et passé en revue le programme et les objectifs du projet, nous avons décidé de mettre sur pied un programme d'évaluation de deux ans. L'évaluation qui comporte cinq éléments principaux, une révision séparée du programme, et une évaluation récapitulive finale sera réalisée d'après la méthodologie suivante:

1) Un système de contrôle bimensuel a été mis sur pied qui fournira une rétroaction en ce qui concerne l'évolution des cours, les écoles et les conditions d'enseignement dans les écoles pilotes au cours des deux prochaines années.
2) Quatre enquêtes différentes portant sur les attitudes/pratiques ont été développées pour les 3ème, 4ème, 5ème et 6ème années. Elles seront menées, en fin novembre/début décembre 1985, par des membres du personnel du CEPLANUT qualifiés. L'objectif de l'enquête est de fournir, d'une part des données permettant de guider les révisions du programme et d'autre part une base pour l'étude d'observation proposée. L'enquête constituera en outre l'une des deux bases d'une étude qui durera deux ans et dont l'objectif consistera à déterminer l'impact du projet.
3) Un examen destiné à déterminer le niveau de connaissances des enseignants sera mis au point et administré par le personnel du CEPLANUT en janvier 1986. Les résultats de cet examen serviront à améliorer le niveau d'appui accordé aux enseignants par le programme, et à déterminer l'effet du projet sur les niveaux de connaissances des enfants.
4) Une étude d'observation qui sera menée dans les écoles pilotes des villages en janvier 1986 et janvier 1988, documentera les changements d'attitudes, de pratiques qui peuvent être attribués au projet.
5) Un examen de connaissances basé sur le programme et destiné aux 3ème, 4ème, 5ème et 6ème années sera administré à la fin de l'année scolaire 1985-1986, et répété à la fin de l'année scolaire 1986-1987 pour les 3ème, 4ème, 5ème et 6ème années. Cet examen constituera une évaluation de base/générale du niveau de connaissances des enfants au moment de l'examen d'une part et des mesures, spécifiques au programme, des connaissances acquises au cours de l'année d'autre part.

Une étude séparée du programme, portant sur la pertinence de son contenu, de sa pédagogie et de sa présentation, sera effectuée en février 1986. Cette étude, ainsi que les conclusions des études susmentionnées, serviront à réviser le programme au cours du mois de mars.

Une évaluation récapitulative comprendra les activités d évaluation citées ci-dessus dans un rapport final sur l'impact du projet.

En annexe se trouvent des projets de description des tâches pour l'assistance technique future, des exemplaires des formulaires destinés à l'enquête sur les attitudes/pratiques et ceux qui serviront aux contrôles.

TRIP REPORT - ZAIRE
October 28 - November 15, 1985
CEPLANUT Food/Nutrition & Agriculture Education Project Evaluation
CHRISTINE MYERS

Scope of Work

1) Prepare alternative evaluation methodologies (both formative and summative in nature) that could be used to evaluate portions of the primary school food/nutrition and agriculture curriculum.

2) With CEPLANUT technicians in Bandundu (Kikwit), review resources for implementing the evaluation, utilizing the information to select and recommend appropriate method(s) from among those suggested.

3) Train CEPLANUT staff to develop instrument(s); instruct those responsible in survey implementation, and develop overall evaluation schedule.

4) Review resources and prepare plan for the analysis of the data collected.

5) Work with CEPLANUT and USAID/Zaire officials to develop a plan for future technical assistance; develop report and present recommendations to USAID officials regarding consultancy.

Major Activities

1) Reviewed project curriculum and observed pilot schools; assessed student and teacher capacity for testing; discussed implementation and project needs with staff.

2) Developed monitoring system, evaluation methodologies, and implementation schedule; wrote scopes of work for further technical assistance; reviewed data analysis capability.

3) Developed attitudes/practices instrument with CEPLANUT staff; trained staff in pre-testing; instructed staff in survey implementation.

I. BACKGROUND

The primary school nutrition and agriculture curriculum is one of two educational components of the USAID-funded Zaire Area Nutrition Improvement Project (660-0079). The curriculum, which covers grades 1-6, was developed by the staff of CEPLANUT (Centre National de Planification de Nutrition Humaine) based in Kikwit, Bandundu Region.

The 300 lessons in agriculture and 300 lessons in nutrition/health that comprise the curriculum will constitute the most thorough, and in most cases the only lesson plans to be found in the pilot schools. The approach of the curriculum is far more innovative and participatory than the curriculum guide provided by the government and marks the first attempt to introduce such a detailed course into the public school system. As such, the Department of Education may be interested in incorporating the curriculum sometime in the future.

The courses are now being pilot-tested in four representative rural schools within 250 km of Kikwit. After preliminary evaluations and revisions, project staff plan to print the curriculum and expand the project to include several hundred schools in the Kikwit sub-region during the 1986-1987 school year.

This consultancy was undertaken to develop a methodology by which the project and its effects on children's knowledge, attitudes, and practices could be evaluated. It was also intended to provide a framework from which to strengthen the evaluation methodology of formal nutrition education interventions in Africa.

The project's target group (primary school children) was identified in the project paper as was the means of intervention (formal education curriculum). The curriculum was also developed before any evaluation activities began. In an ideal methodology, considerable formative research would have been undertaken prior to identifying the target group, the behavioral goals, and even the form of the intervention itself. Thus, several of the evaluation components in the recommenations section should rightly have been completed prior to the development of the project goals and the curriculum itself. Had this work been done, and had a baseline been carried out earlier in the project, the proposed evaluation methodology might better have been able to document the medium- and long-term effects of the project. As this will not be possible, the proposed methodology represents the next best effort to accurately measure the project's effects.

As it is, a little more than two years remain in the project's life. Normally that would not be sufficient time to measure substantial changes in attitudes and practices attributable to one or two years of formal education in a rural setting. Nevertheless, in the interest of better understanding the possible areas of impact, and perhaps being able to note certain changes, these longer term components of the evaluation will be included along with measurements of knowledge.

The recommendations that follow are meant to provide three kinds of data:

1) Immediate feedback to strengthen the project and contribute to the development and effectiveness of other evaluation components (formative evaluation)
2) Documentation of the project's implementation (monitoring)
3) Assessment of the project's medium-term impact on the target childrens' knowledge, attitudes and practices (summative evaluation).

The components of the evaluation methodology have been agreed to by USAID/Zaire and CEPLANUT staff. Two instruments have already been developed and a detailed implementation schedule is now being carried out. Because the burden of these activities will overextend the present duties of the staff, it is recommended that an additional Zairian staff member join the nutrition education/monitoring team, at least for the period from January 1, 1986, to July 1, 1986, in order to carry out these activities.

II. RECOMMENDATIONS

A. MONITORING

The first component of the evaluation activities is bi-monthly monitoring in each of the four pilot schools. During each of eleven designated 2-month monitoring periods, a 2-person team will visit the schools for 2-3 days to collect data, observe classes, and administer exams. This monitoring system will allow pertinent feedback to reach CEPLANUT in time to adjust the curriculum as well as to check problems that may have developed in conducting the courses. The system is comprised of the following components:

1) The team will ascertain whether the lessons are being given and at what pace they are being given, in order to adjust the number of lessons as well as the objectives of the knowledge test.
2) The team will collect an in-depth evaluation form completed by the teachers for each lesson, as well as hold meetings to discuss teacher constraints and comments.
3) The team will note student monthly attendance rates and changes in staff in order to better understand the level of exposure to the material.
4) The team will observe each class, noting how the teacher copes with the curriculum, how the material is presented, and general classroom conditions.

B. ATTITUDES/PRACTICES SURVEY

A set of four tests has been developed to assess the present attitudes and practices of children (in grades 3-6) relevant to the curriculum. After testing children in grades 1-2, it was determined that such a test would be inappropriate for those children, as they have no frame of reference for oral or visual tests before grade 3.

The attitude/practices survey was developed jointly by the consultant and the nutrition education team at CEPLANUT, and relates directly to the pilot curriculum at each of those levels. The survey was pre-tested twice at rural schools, and will be administered during the late November-early December monitoring visits. Its format is 15 questions with "yes", "no", and "don't know" responses, to be given orally and individually to one class of each grade in each school (about 350 children).

The survey was designed to be easily hand-tallied, so the data will be available immediately. In this manner, general trends and grade-specific data will be available to guide the qualitative observational study that will begin in January. In addition, the survey will serve as a baseline for a second administration of the exam, toward the end of the project. Although this may be too short a period of time to observe any impact on the community, it is hoped that changes in children's attitudes caused by changes in knowledge may be measured at that time. If attitude changes are noted, they and their impact on behavior might be documented by a second observational study shortly thereafter. The A/P surveys are included in Appendix B.

C. TEACHER KNOWLEDGE TEST

During field visits to the pilot schools, I observed that teachers were teaching according to the letter of curriculum guidelines and apparently had no other reference sources. Because the curriculum is completely new, and these minimally qualified teachers have not been exposed to health/nutrition information before, it should be assumed that they have only a limited knowledge of the subject areas covered by the curriculum. Under the Belgian system, many of the older teachers may have been exposed to agricultural course work. Although many of the teachers in the pilot schools have participated in CEPLANUT's week-long curriculum familiarization programs, the teachers' attrition rate will be monitored over the course of the school year to determine whether the level of teacher training is maintained. Teachers will not be trained by CEPLANUT staff when the curriculum is expanded to the sub-regional level next year; district inspectors will receive a familiarization course and any further teacher orientation will be conducted by these inspectors at their own discretion.

With these field conditions in mind, it will be important to formally measure the knowledge level of the teachers. This test will be based on the curriculum and will be developed by CEPLANUT staff. The rationale behind the test is twofold. First, it is necessary to determine to what extent the teachers will need materials in the curriculum to provide additional support. Second, because the level of teachers' knowledge will affect the project's impact on childrens' knowledge, it is important to pinpoint the teachers' areas of strength and weakness before analyzing the change in childrens' knowledge.

D. KNOWLEDGE TEST

The most quantitative evaluation activity will be a curriculum-based test of knowledge for grades 3, 4, 5 and 6. This test will be developed by CEPLANUT staff, with additional technical assistance, during April, 1986. The same test will be administered by CEPLANUT staff in June, 1986 and again in June, 1987 (grades 4, 5 and 6), as well as in control schools in late May, 1987.

This test will serve two purposes. First, it will provide a general assessment of children's present levels of knowledge. This information will constitute an historical control against the effect of maturation, for the 4th, 5th and 6th grade curriculum. Second, it will provide a measure of knowledge gained over the course of the year by the same students.

A consulting quantitative evaluator will provide technical assistance in the design of the survey instrument, its analysis, and data entry protocol. With the assistance of CEPLANUT staff, the knowledge test will be field-tested at least two times before being finalized. The quantitative evaluator will also be responsible for setting up an analysis protocol that can be performed in Zaire, using statistical analysis packages* on locally available microcomputers.

A scope of work for the quantitative evaluator is included in Appendix C.

*CEPLANUT has recently completed an outside review of data analysis capability and will receive the appropriate software and hardware before the arrival of the quantitative evaluator.

E. OBSERVATIONAL STUDY

An observational study in pilot villages will provide valuable qualitative information, both for the project and its evaluation. This study will be conducted by a trained Kikongo-speaking ethnographic observer while spending a week in each of the four villages in 1986, then again just prior to the PACD. The study will explore in depth some of the information provided by the attitude survey and/or suggested by the curriculum.*

Techniques to be used will include the following:

1) parent interviews and family observation to understand the possible impact that children can have on family food, health, and agriculture practices.
2) observation and informal interviews with children to determine effects of knowledge change on attitudes, and of attitude change on practices.
3) observation of special cases such as older children who become parents and farmers after completing schooling, to determine the impact of the curriculum on their adult lives.
4) general observation of village life, including family garden documentation, impact of rural exodus, and other behaviors that are related to curriculum goals.

A scope of work for the qualitative observer is included in Appendix C.

F. CURRICULUM REVIEW/REVISION

The approach of the curriculum is quite innovative by Zairian standards, and in some cases provides the only set of lesson plans available in the rural schools. Because the curriculum will constitute the only source of information available to the teachers, and because it introduces new teaching techniques, it will be important to ensure that the material is not overwhelming to untrained teachers.

A thorough curriculum review will take into account the available formative data, including the pace at which the courses can be given, the knowledge level of the teachers and the project's rural setting. It should be conducted during February, 1986. In that way, revisions can be made before April, 1986, in order for the curriculum to be printed and distributed to the schools by the beginning of the 1986-1987 school year.

The curriculum review/revision should be performed by CEPLANUT staff with the guidance of expert technical assistance. It should include the following components:

*If the behavioral goals clarification exercise of the curriculum review is completed before the arrival of the observer, it should also be used to guide observations. It is important, however, that the observational study spans two full years, if possible.

1) A review of the technical content of the nutrition health lessons for accuracy and teaching approach.
2) A review of the project's behavioral goals and the ability of the curriculum to address those goals.
3) An assessment of the appropriateness of the present curriculum format versus a modular format.
4) An assessment of the curriculum's capacity to provide adequate information and support for teachers. The curriculum revisions will take into account all of the above activities, as well as ensure standardization of information in order to create measurable knowledge and behavior goals. A scope of work for a curriculum specialist is included in Appendix C.

G. SUMMATIVE EVALUATION

After each of the aforementioned evaluation activities has taken place, it is recommended that a final assessment of the project's impact on the KAP of the target children be made by a trained quantitative evaluator. This summative evaluation will incorporate the five evaluation components into an objective analysis of the following questions:

1) What was the direct effect of the course on the students' knowledge?
2) What was the direct effect of the course on students' attitudes?
3) What was the direct or indirect effect of changes in student knowledge and attitudes on their practices?
4) How did outside variables (attendance, teacher training, teacher knowledge, etc) influence the effectiveness of the course?
5) What were the general indirect effects of the course, i.e. on schools, teachers and family life?

A scope of work for the summative evaluation is included in Appendix C.

APPENDIX A

SCHEDULE OF EVALUATION ACTIVITIES

November-December, 1985	-	monitoring; conduct attitude/practices survey
1986		
January	-	develop and administer teacher test; begin observational study; monitor
February	-	curriculum review
March	-	curriculum revision; monitor
April	-	develop knowledge test; print curriculum
May	-	monitor; field-test knowledge test
June	-	administer knowledge test
July	-	data entry
October	-	curriculum in schools; monitor (pilot)
November-December	-	monitor
1987		
January-February	-	monitor
March-April	-	monitor; choose control schools
May	-	knowledge test in control schools; monitor
June	-	second knowledge test in pilot schools
July-August	-	data entry and analysis
October-November	-	monitor
December	-	second attitude survey
1988		
January	-	monitor; second observational study

PERIODE DE SUIVIS

No 1	16 novembre	- 15 janvier (1986)
No 2	16 janvier	- 15 mars
No 3	16 mars	- 15 mai
No 4	16 mai	- fin de l'année 1985-1986
No 5	début de l'année	- 15 novembre
No 6	16 novembre	- 15 janvier
No 7	16 janvier	- 15 mars
No 8	16 mars	- 15 mai
No 9	16 mai	- fin de l'année 1986-1987
No 10	début de l'année	- 15 novembre
No 11	16 novembre	- 15 janvier (1988)

Pendant chaque période, il faut qu'une équipe de deux personnes fasse une visite à chaque école pilote et :

1) Collecter les évaluations de leçons par les enseignants.
2) Noter le nombre des leçons déjà données.
3) Organiser une réunion des enseignants, discuter et relever leurs problèmes sur les cours.
4) Noter les changements des enseignants et leur formation
5) Collecter des données sur la régularité des élèves en pourcentage.
6) Observer chaque année et noter la performance des enseignants (niveau de compréhension, utilisation du matériel didactique, participation des élèves, motivation, etc.).

APPENDIX B

ATTITUDE/PRACTICES SURVEY
(translated from Kikongo)

3e

1) Est-ce qu'il y a un jardin potager chez toi ?
2) Est-ce que tu travailles dans le jardin ?
3) Est-ce que tu as déjà fait le labour ?
4) Est-ce qu'il faut brûler le champ avant de planter ?
5) Est-ce que le fumier est bon pour le jardin ?
6) Est-ce qu'il faut vendre toutes les récoltes d'un jardin ?
7) Si ta maman est aux champs, nourris-tu tes frères ?
8) Est-ce que le travail aux champs est plus important que la chasse ?
9) Si tu as un gros ventre, est-ce que cela veut dire que tu es bien nourri ?
10) Est-ce qu'un enfant peut bien évoluer s'il ne mange pas bien ?
11) Est-ce que c'est possible d'éviter beaucoup de maladies pour la nourriture ?
12) Est-ce qu'il y a des aliments qui peuvent entretenir les yeux ?
13) Est-ce que les ascaris viennent de l'eau de la rivière que nous buvons ?
14) Est-ce que les ascaris viennent de l'eau de sources que nous buvons ?
15) Est-ce qu'un enfant kwashiocoré peut être guéri par la nourriture ?

4e

1) Quand on mange de la viande tous les jours, est-ce que le jardin est encore nécessaire ?
2) Quand un enfant mange des oeufs, est-ce qu'il devient un voleur ?
3) Le soja est-il seulement réservé aux enfants qui sont malnourris ?
4) Pour l'enfant, le lait NIDO est-il meilleur que le lait maternel ?
5) Un enfant présente les signes de la malnutrition. La maman dit que c'est l'oncle qui veut le manger. Est-ce qu'elle a tort ?
6) Est-ce que l'enfant grandit bien quand il mange avec ses frères ?
7) Est-ce que l'on peut suivre la croissance d'un enfant à partir d'une fiche de consultation préscolaire ?
8) L'eau que nous buvons, peut-elle être à la base de certaines maladies dans notre corps ?
9) Est-ce qu'il y a un jardin chez vous ?
10) Est-ce que vous avez déjà travaillé dans un jardin ?
11) Les arachides, les plante-t-on seulement pour vendre et non pour manger ?
12) Est-ce que l'élevage est plus rentable que le travail de bureau ?
13) Est-ce que les légumes seront désagréables à manger si tu mets du fumier dans un jardin ?
14) Est-ce que les travaux des champs sont réservés aux gens qui n'ont pas étudié ?
15) Est-ce que les travaux des champs sont réservés uniquement aux femmes?

5e

1) Est-ce qu'une femme enceinte ne doit pas bien se nourrir avant la naissance d'un enfant ?
2) Est-ce qu'une femme qui devient grosse doit cesser d'allaiter son enfant ?
3) Est-il bon de ne rien donner à manger à un enfant qui fait de la diarrhée ?
4) Est-ce que la bouillie est une forme d'aliment réservé au bébé ?
5) Est-ce qu'une femme qui vient d'accoucher peut prendre de l'eau ?
6) Est-il bon de forcer un enfant qui fait de la diarrhée à boire quand il refuse ?
7) Peut-on, en plus du lait maternel, donner du luku à un enfant de 2 mois ?
8) Est-ce que quand un enfant partage le même plat familiar que ses frères aînés, il grandit bien ?
9) Est-ce que le travail aux champs nourrit mieux que le travail de bureau ?
10) Le travail aux champs est-il réservé aux femmes ?
11) Est-il préférable d'acheter des légumes au marché que d'avoir un jardin potager ?
12) Faut-il vendre toute la récolte d'un jardin potager ?
13) Est-il préférable de ne pas faire un jardin pour l'oseille puisque le légume, dans nos villages, pousse de lui-même ?
14) Faut-il jeter l'eau de cuisson des amarantes puisqu'elle noircit la sauce ?
15) Est-ce que la diarrhée nous permet de faire un lavement ?

6e

1) Est-ce qu'une femme enceinte doit manger peu ?
2) Est-ce qu'il est bon de donner une bouillie à un enfant de 3 mois ?
3) Est-ce qu'il faut consulter un féticheur quand un enfant est malnourri ?
4) Est-ce que la rougeole est une maladie qu'aucun enfant ne peut éviter?
5) Est-ce que les vaccins ne servent à rien puisqu'ils font mal aux enfants ?
6) Est-ce que vous préférez chomer en ville au lieu de travailler aux champs ?
7) Est-ce qu'il est bon d'avoir un enfant chaque année ?
8) Est-ce qu'il est facile de nourrir une famille de huit enfants ?
9) Si vous voulez étudier, est-ce que vous aimeriez vivre dans une famille de cinq enfants ?
10) Est-ce que les légumes et les fruits sont bons seulement pour les malades qui ne mangent pas de luku ?
11) Est-ce que vous plantez des légumes d'autres régions ?
12) Est-ce que les travaux des champs ne sont pas bons pour les intellectuels ?
13) Est-ce que nous devons abandonner toutes les techniques culturales que nos ancêtres ignoraient ?
14) Quand le sol est pauvre, est-ce qu'il faut cesser de le cultiver ?
15) Est-ce qu'on perd du temps en préparant une pépinière ?

APPENDIX C

SCOPE OF WORK

Job Title: Food/Nutrition Curriculum Specialist

Qualifications:
Experienced in development of primary school curriculum directed toward behavior changes in nutrition/food/health education; field experience in rural Africa preferred; familiarity with French/Belgian school system highly desirable; agriculture background helpful; ability to read and speak French essential.

Duration:
4 weeks between January 15 and March 1, 1986.

Setting:
Four pilot schools in rural Zaire.

Duties:
1) Review grade 1-6 pilot curriculum in nutrition, agriculture and related topics for technical accuracy and appropriateness to rural setting.
2) Review formative research data on children's attitudes/practices, teacher knowledge levels and lesson evaluations, and bi-monthly monitoring data; review behavioural goals and curriculum's ability to address these goals in light of formative research.
3) After visiting pilot schools, advise on appropriateness of curriculum format v.s. modular format, both for the pilot schools and for eventual adoption by Ministry of Education for regional dissemination.
4) Assist staff in curriculum revision.
5) Review support materials and advise on revisions.
6) Ensure standardization of information for teachers with aim of creating measurable (testable) knowledge/behavior goals.

Note:
This curriculum consists of 50 teacher lesson plans in agriculture and 50 lesson plans in food/nutrition for each of 6 grades. These lesson plans, along with supporting flipcharts, didactic materials, and in some cases, teacher orientation courses, comprise the entire package. The teachers themselves are not assumed to have nutrition/health education knowledge, and will rely on the lesson plans for information. Curriculum will be printed in French and Kikongo for 1986 - 87 school year.

Counterparts:
French- and Kikongo- speaking education specialist and nutrition educators from regional nutrition planning office.

End Product:
Final draft curriculum with standardized content, measurable knowledge level/behavior goals, and teacher information that is appropriate to rural Zairian context; documentation of development process and specific goals that are developed.

SCOPE OF WORK

Job Title: Quantitative evaluator/survey statistician

Setting:
Semi-rural Zaire, rural pilot schools.

Qualifications:
Experience in development of quantitative instrument to measure change in knowledge and attitudes; prefer experience testing K & A children aged 8-13; read, speak, write French; experience in statistical design and analysis using microcomputers. Prefer field experience in rural Africa.

Duration:
5-6 weeks between April 1 - May 15, 1986.

Counterparts:
Three French and Kikongo speaking nutritionists and educators, clerical staff with data-entry experience; data analyst.

Duties:

1) Review specific targeted knowledge/behaviour goals of primary school food/nutrition and agriculture curriculum, results of observational study, and attitude/practice survey.
2) Working with staff counterparts, design baseline survey to measure students' knowledge (and selected attitudes) in grades 3, 4, 5 and 6. The survey should be appropriate for post-test of grades 4, 5 and 6 without revisions the following year, and for testing control group at that time. Survey should be designed to measure any change in knowledge and selected attitudes, over one school year, that can be attributed to the primary school nutrition/agriculture curriculum.
3) Pre-test instrument in rural setting and revise as necessary.
4) Pre-code responses and create data entry system for microcomputer users; train counterpart(s) in data entry.
5) Instruct field staff in administration of instrument, provide written guidelines, and supervise field test.
6) Design in-country analysis for post-test and provide written instructions for data analyst.
7) Write scope of work for data analysis portion of future technical assistance. (This TA will incorporate qualitative/observational data, attitude survey, monitoring results and data analysis components into a final report on the impact of the project.)
8) If necessary, develop simple method to ensure that the students can be tested using the instrument and train administrators in the implementation of that methodology prior to survey administration.
   Note: It is assumed that the target children are not visually literate. They do not experience oral true-false tests until grade 3, written true-false tests until grade 5, or multiple choice tests until secondary school. (An oral attitudes/practices test will be administered at test sites during November and December 1985).
9) If possible, adapt instrument for one-time testing of teacher knowledge.

Final Products: Field-tested survey instrument, implementation plan, staff training, data analysis plan, data analysis section scope of work for future TA, documentation of process.

SCOPE OF WORK

Job Title: Qualitative Evaluator

Setting:
Rural areas in Bandundu region of Zaire.

Qualifications:
Degree in cultural anthropology, rural sociology, or ethnography; Kikongo and French speaker; familiarity with methods of observational study; experience in rural Africa; prefer background in food/nutrition, health and/or agriculture; prefer experience in qualitative evaluation or ethnographic observational study; willingness to work in rural village setting.

Duration:
Five weeks beginning January, 1986; 4 weeks beginning January, 1988.

Duties:
1) Review results of attitude/practice survey and other material relevant to nutrition/food and agriculture primary school curriculum.
2) Design qualitative evaluation instrument to measure selected behavior/attitude areas appropriate to the curriculum's goals. This instrument should include observation of nutrition and agriculture practices, sample interviews to determine parent attitudes, effect of child knowledge on household practices, and special cases such as target 6th grade girls.
3) Implement observational study in pilot school villages, spending about 5 days in each village.
4) Report initial findings.
5) After two years, return to villages to assess any change in practices/attitudes that may be attributed to impact of nutrition and agriculture education primary curriculum (e.g., assess differences in weaning practices of mothers who have finished schooling during that period, existence of more diverse gardens/crops).
6) Describe changes in attitudes and impact on practices that can be attributed to the education component of the project.

Final products:
Interim report - March 1986
Final report - March 1987

SCOPE OF WORK

Job Title: Summative Evaluator: primary school nutrition/agriculture project

Qualifications:
Experience in quantitative summative evaluation; prefer experience measuring children and/or formal education programs; advanced degree in social science or health with experience in quantitative data interpretation; field experience in rural Africa; speak, read, write French; survey statistics, qualitative evaluation or nutrition/agriculture background.

Duration:
3-5 weeks November-December, 1987 or January-February, 1988: 2 weeks in semi-rural Zaire, remainder for report preparation.

Duties:
1) Review quantitative and descriptive evaluation data including KAP analysis, teacher tests and observational study reports for control and pilot schools.
2) Review course goals, history and monitoring data with project implementors.
3) Document changes in knowledge, attitudes, and practices that can be attributed to project interventions.
4) Consolidate reports and own analysis into final impact evaluation of project on KAP of participants.

APPENDIX D

LIST OF PEOPLE CONTACTED

USAID/KINSHASA	
Ms. Carol Payne	Health Development Officer
Dr. Glenn Post	Chief, H/P/N Division
CEPLANUT/KINSHASA	
Dr. Banea Mayambu	Médecin-Directeur
CEPLANUT/KIKWIT	
Ms. Sylva Etian	Educational Materials Development Specialist
Dr. Kalengaie Muladi	Project Coordinator
Cit. Diasolva Ngudi	Nutritionist
Cit. Mayo Pulu	Nutrition Educator
Cit. Muanandeke Balanda	Education Consultant
Cit. Munsie Wa Lubie	Education Consultant
SCHOOLS	
Aten	
Citne Kazala Tumba	Directrice
Teachers of 1st, 2nd, and 6th years	
Benzi	
Cit. Mazinga	Chef de Collectivité de Kimuka
Cit. Ozuza Zua Zoe	Directeur
Teachers of years 1-6	

APPENDIX E

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