The Community Integrated Nutrition and Education Centers(CINEC) Project: a HeadStart Type Program for Rural Haiti

TABLE OF CONTENTS

Acknowledgements

I would like to give my sincere thanks to the CINEC teachers, primary school directors, and parents who responded generously with their time and insights to make this evaluation possible. Acknowledgement is also given to Kathy Jesencky, Cecile Dubuisson, and Adeline Andre of CARE and Joe Coblentz, Ann Fitzcharles and Mike Baldwin of USAID for their gracious help, and to Fred Wescott for his assistance in data processing.

EXECUTIVE SUMMARY

1. The Community Integrated Nutrition and Education Centers Project (CINEC) is a comprehensive preschool program. It serves approximately 24,000 children from six months to six years old in 96 rural Haitian communities.

2. The present evaluation was undertaken for CARE and USAID. Its purpose was to assess how well, at the end of its first five years, CINEC is meeting its objectives to improve these children's preparation for primary school and their subsequent primary school performance. A number of formal and informal methodologies were employed, including sampling, interviews, observations in CINEC classrooms, weighing and measuring, and the collection of examination results.

3. Examination results for 558 non-CINEC and 818 CINEC graduates attending grades one through three in the same government of Haiti national primary schools were collected and submitted to a Chi-Square test of independence. It was concluded that higher average exam results are dependent on CINEC attendance with a less than 1 percent chance ($p<.01$) that this higher rate occurs as a result of random variation.

4. Height for age, weight for height, and weight for age measures were collected for 125 interns (age 4-5 years) and compared to the National Center for Health Statistics/Center for Disease Control (NCHS/CDC) reference data. With the same cutoffs used in the 1978 Haiti Nutrition Survey (HNS), the intern sample was 92 percent normal in weight for height; 89.6 percent normal in height for age; 73.6 percent normal in weight for age (Gomez-like classification); and 88.8 percent normal in the Waterlow classification system.

5. The CINEC intern sample was also compared with three preschool samples of the HNS. Using the measures above, the CINEC sample had a better nutritional profile than either the HNS's representative rural sample or its representative national sample. In all measures except the 80.0 - 84.9 percent wasting category in weight for height classes, the intern sample more closely approximated the nutritional status of the materially advantaged special sample than it did the other two.

6. Observation and interview data also concur that CINEC has produced a well conceived program which is advancing these rural children's preparation for primary school.

7. Levels of parent and community involvement were observed to be high for rural Haiti, although lower than anticipated by CINEC personnel. Alternative strategies are presented, and it is suggested that parent involvement especially must be viewed as an on-going, long term developmental process.

8. The CINEC program's deficiencies in collecting age, height, and weight data seriously impair both its nutritional surveillance and nutritional impact analysis functions. A computerized data collection system is recommended, as is more diligent supervision.

1.0 CINEC HISTORY & DESCRIPTION

1.1 Purpose of the Report

The purpose of this report is to present the findings of an evaluation which was begun in June of 1983 for CARE and USAID of the Community Integrated Nutrition and Education Centers (CINEC). The CINEC project represents an ambitious attempt to create a comprehensive, holistically conceived preschool educational program in rural Haiti. Targeted at children in their most formative years, it was designed to provide rural children from six months to six years with an academically and nutritionally enriched environment.

This evaluation measured CINEC's progress towards its stated goals:

1) improving the preschool child's physical and mental preparation for the new national educational system by nutritional supplements and intellectual stimulation; and

2) improving the subsequent school performance of those preschool children.

Thus this report will focus on issues of child development; it will not address questions of supply, finance, communications, and other more mechanical or administrative aspects of the program. A concurrent evaluation of all USAID Title II Maternal Child Health projects in Haiti touched upon some of these broader issues. The interested reader is encouraged to consult that report as well.(1)

1.2 History of the CINEC Program

The history of the CINEC program has its roots in the 1974 evaluation undertaken by the Ministry of Education.(2) This study confirmed the widely held suspicion that the bulk of the national educational system was not meeting the needs of its students. Moreover, the evaluation's most grim findings concerned the most materially disadvantaged but numerically dominant segment of the society : the rural population. For example, even in the few country areas where schools did exist, enrollment was distressingly low, especially at the advanced primary level. There was commonly found to be a so-called "pyramid effect" meaning that for every 100 rural children who begin First Grade, only three or four would still be enrolled by Grade Seven.

(1)
Jeannine Coreil et al. An evaluation of mother child supplementary food programs in Haiti, 1983.
(2)
Republic of Haiti. Rapport final: Projet integre d'education rurale en Haiti, 1976.

As a result of this study and with funding from the World Bank, the Government of Haiti (GOH) created the "Projet d'Education". The purpose of this project was to effect major changes in its national educational system, particularly in the rural areas. With this impetus, new schools were constructed; new curricula were created and new books written; teacher training was upgraded; and new means of student evaluation and progress measurements were instituted. All of these changes and refinements were, however, aimed at improving educational service delivery to primary and secondary students only. The program gave no consideration to children during their youngest, most formative years.

Thus in 1976, based on its long experience in the Haitian countryside with nutritional programs targeted at young children, CARE began formulating a plan to address preschoolers. CARE hypothesized that there are three major factors which interactively combine to cripple the academic potential of rural Haitian children. The three factors are:

1) deficient preschool skills development,
2) the limited formal education of the parents, and
3) disease and malnutrition.

First, the typical rural Haitian child does not have the opportunities to develop the skills and experience which are critical to school success. For example, unlike the average middleclass child, the rural child usually arrives at school having had no contact with books, pencils, pictures, etc. Thus while middleclass and even some low-income urban children experience school as an extension of the home environment, for the rural child everything concerning this milieu is foreign. The rural child is neither psychologically nor intellectually prepared for the demands that school will make of him or her.

Second, neither are the parents prepared for the demands that school will make of their children. Having had little or no formal education themselves, they are ill-equipped to support their children or even to understand the educational direction that their children must take. Rural parents perceive school as a good and necessary thing for their children and as the potential means to secure a better material future. However, they hardly comprehend the importance of motivating the child to develop study habits, of regular school attendance, etc.

And finally, the third major handicap to rural educational development is the nutritional and health condition of these children. National statistics show that only 26.8 percent of Haitian children in the 0 to 5 years age group have what is considered a normal weight for their age. Among the rest, 46 percent exhibit first degree malnutrition; 24.1 percent show second degree malnutrition; and 3.2 percent are considered to

suffer from third degree malnutrition.(3) Resulting from this nutritional inadequacy are such endemic diseases as gastroenteritis, upper respiratory diseases, and malaria --- which further debilitate these rural children.

1.3 GOALS/OBJECTIVES

Thus in 1976, CARE proposed the "Community Integrated Nutrition and Education Centers Project" (CINEC), a HeadStart-type program for rural Haitian preschoolers. As the name implies, CINEC applied a holistic approach to early childhood education. It considered the child's environment as a totality, involving nutritional health as well as socialization and informal educational processes. CINEC's major goal, as stated above, was to improve the preschool child's physical, social, and intellectual preparation for school, and consequently to improve the child's primary school performance. The project also set out to achieve intermediate programmatic objectives. These intermediate objectives were:

1) Nutritional Care --- To supplement the children's daily protein and calorie intake with commodities provided by USAID's Title II food program. Fresh fruits and vegetables would be provided by the center's demonstration garden.

2) Nutritional Surveillance --- To weigh participant children monthly beginning at six months with registration into an externe program, continuing monthly until age five with entry into the daily preschool intern program, and ending at age six with registration into primary school.

3) Health Care --- To provide improved preventative health services to participant children through innoculation programs, distribution of vitamin A, and regular visits by medical personnel.

4) Hygiene and Nutrition Education --- To develop good hygiene and nutrition habits by emphasizing and interweaving these topics throughout the academic curriculum, e.g. by using fruits and vegetables to teach color and shape.

5) Intellectual/Social Stimulation and Development --- To introduce the children to experiences, situations, concepts, and materials not encountered in their home environments which are necessary to succeed in primary school.

6) Psycho-Motor Development --- To develop large and small muscle movement, rhythm, agility, etc., through physical education activities.

(3) Republic of Haiti, National Health Survey, 1979

7) Community Involvement --- To promote community involvement in CINEC by requesting contributions in labor and/or materials to the centers' construction and upkeep, and by making the centers open to community functions.

8) Parent Involvement and Education --- To increase parental knowledge, interest, and support of their children's education by recruiting them to help run the centers, to act as teachers' aides, by exposing them to the same health and nutritional concepts as their children, and by providing them with special adult education opportunities.

1.4 Project Description

In 1977, CARE began constructing CINEC centers. Each center is located next to a new Projet d'Education built primary school, which is a model of the curriculum reforms. Thus the CINEC centers are situated to provide the new educational system with entering six year olds who are prepared to benefit from its changes.

By the end of the 1982-83 year, there were the 96 completed centers serving approximately 24,000 rural children as shown in Table 1.

TABLE 1
CINEC CENTERS
CONSTRUCTED AS OF
ACADEMIC YEAR 1982-83

	Cap Haitian	Arti-bonite	Grand Anse	South	Port-au-Prince	Central Plateau	Year's Total
1977-78	02	04	-	-	-	-	06
1978-79	03	09	-	-	-	-	12
1979-80	17	09	-	-	-	-	26
1980-81	12	09	-	-	-	-	21
1981-82	-	-	08	04	-	-	12
1982-83	05	04	01	-	01	08	19
Totals	39	35	09	04	01	08	96

1.5 Project Design

Each center is designed to serve 250 client children according to the following schema:

Externes: Two hundred children participate in a monthly dry distribution or externe program. This distribution of cornmeal, bulgur, nonfat dry milk, and vegetable oil is meant to supplement the child's daily food intake. During the dry distribution, children are to be weighed and measured, and the mothers are to receive a short health/nutrition lesson. An innoculation program and vitamin A are also available to these children.

The 200 externe children are divided into four age groups--with approximately 50 children in each cohort.

Interns: Each fall, the preceeding year's oldest externe cohort becomes the group which participates in the daily preschool program. The children are now called "interns" and they continue to receive the same supplemental foods as the externes, but in the form of a hot lunch prepared at the center. They are also to be weighed and measured and to receive health surveillance.

Thus, ideally, a CINEC child's health and nutritional development have been monitored since infancy until s/he enters the new primary school system.

1.6 Mothers' Participation

Mothers of intern children are expected to participate in their children's preschool education by volunteering as teachers' aides. As aides, they cook and serve the meals, and help the children to bathe and brush their teeth. Mothers also participate in classroom activities, leading the children in song, distributing materials, and surveying the playground. Ideally, mothers of both intern and externe children attend family education courses.

1.7 Center Direction: The Responsables

Each CINEC center is directed by a woman called a "Responsable" who is envisaged as playing a multiplicity of roles --- preschool teacher, community worker, adult educator, and nutritional specialist. Each responsable follows a six month training program which develops the basic skills necessary to function in each of these roles.

1.8 Integration into National System

After the CINEC centers are built and equipped and the responsables are trained, both become integrated into the national educational system. Regional supervisors for the Office of Adult Education and Community Action (ONAAC) and regional national school inspectors visit the centers to aid and monitor their functioning. All CARE financial responsibility, except for the provision of PL480 commodities, ends one year after each center begins to function.

2.0 THE CINEC EVALUATION

2.1 Purpose and Scope

The purpose of the CARE and USAID sponsored evaluation of CINEC was to assess, at the end of its first five years, the program's success in producing an academically and nutritionally enriched environment. To do this, it posed the following questions :

Has CINEC created an environment which is conducive to the intellectual and social development of preschool children?

- What new concepts are these children learning?
- To what new materials and experiences are these children being exposed in preparation for primary school?

Has the CINEC program better prepared these children for academic achievement in primary school?

- If so, how can the children's achievements be measured?
- Are they demonstrable in the examination results of these children once they reach the new GOH schools?

Has CINEC created an environment which is conducive to the physical development of these rural children?

- How is nutritional supplementation progressing?
- Is nutritional surveillance being accomplished?
- How are good nutrition and hygiene habits being promoted?

Has CINEC had an impact on the nutritional status of these children?

- If so, how can this impact be measured?
- Is it demonstrable in the height or weight gains of children at the end of their CINEC careers?

2.2 Methodologies

The CINEC evaluation applied these methodologies :

Sampling of the oldest centers to obtain a representative group which has interns who had been in the program for at least three years and/or graduates at the primary level.

Measurement of the end-of-year heights and weights for the 1982-83 academic year's sample intern children.

Collection of examination results for CINEC and non-CINEC children attending grades one through three in the GOH schools to which the sample CINEC centers are attached.

Observations of classroom environments in the sample CINEC centers; the community involvement strategies of four CINEC responsables; and of the domestic environments of one center's children.

Interviews with the parents of CINEC children at four centers; with fourteen CINEC responsables; with primary school personnel at all of the centers visited; and with community leaders in three CINEC locales.

Testing of the interns' abilities to count and to differentiate color and shapes.

2.2.1. The Execution of the Evaluation

In June of 1983, a random sample was drawn from those centers that had begun operations in 1978 through 1980. From these 44 oldest centers, all in the Cap Haitien and Artibonite regions, the following 10, or 23% of the total, were selected to collect observational, interview, and nutrition/examination results data:

Region	Center
Cap Haitien	Cana
	Chabaud
	Leroux Pilette
Artibonite	Chevreau Lombard
	Grand Rac
	Hatte Grammont
	Souvenance
	Hatte Chevreau
	L'Estere
	Petites Desdunes

After this sample selection, a search was made of all the inscription forms on new students, which the responsables are directed to send each year to the national office. This was done with the assumption that entry data (i.e. age, height, and weight measurements upon inscription into the program as externes) would be available for the intern cohorts in the 10 sample schools. This original inscription data would then be used as a rough baseline with which to compare the nutritional status of the interns as they finish the program 3 or 4 years later. However, an inventory of these data revealed that they were either too incomplete (i.e. many centers had not sent the forms at all and most others had many vital statistics missing) or too unreliable (i.e. improbable height or weight measures for age of child) to be used. Thus this strategy was abandoned for one which considered only the nutritional status of these interns at the end of their CINEC careers.

The Grand Rac center was dropped from the sample at the time of the site visit for two reasons:

1) Due to a heavy rain which turned the irrigated region into quagmire, only three interns were present and rescheduling was reportdly futile. The evaluation visits were slated for the last ten days of the primary school calendar and, as many interns are brought to the centers by older school children, intern attendance rates drop at this time.

2) As the school director was also absent that day, it was impossible to have access to promotion records. Thus the Grand Rac center is not included in any of the quantitative or qualitative analyses.

Because of the total loss of physical measurements for Grand Rac, and low attendance in the other Artibonite centers visited(4), an additional center was added to the nutritional impact sample. The Savane Tapion center in the Artibonite region was selected from an inventory of all the various CINEC data forms stored at the national office. It had the most complete set of age, sex, and year-end measurements data on file. Thus, although this center was not site visited, it is included in the nutritional impact analysis.

Finally, in April of 1984, because exam results had been unavailable for many grades of the original sample schools, a second random selection was made. Again from the 44 oldest CINEC/GOH primary school complexes, seven schools were chosen and visited for supplemental examination results data. These schools were:

Cap Haitien	Bonamy
	Roches Plates
	Dereal
	Bois de Lance
	Breteau
Artibonite	Rossignol
	Moreau Drouet

Thus interview, observation, and nutritional impact data were collected at nine CINEC centers or at slightly over 9 percent of the 96 total operating centers. Examination results data were collected from 16 schools or at almost 17 percent of the CINEC/GOH primary school complexes.

(4)
Although the CINEC school theoretically runs from October through July, intern attendance in all areas drops with the end of June primary school closing. In the Artibonite, however, there is low attendance even in June, reportedly due to the rain, the heat, the rice harvest, and the increased marketing activities of the mothers.

3.0 CINEC EVALUATION RESULTS & RECOMMENDATIONS

3.1 Physical Settings

Within its modest center buildings, CINEC has created attractive, thoughtful physical settings well suited to its purposes.

First, the long rectangular structures have been divided into five distinct spaces : a large classroom, a small kitchen with charcoal braziers, a small home economics room, a large multi-use room, and a storage room (see Appendix A).(5) It is a well conceived, functional use of space. For example, one evaluation visit coincided with that of an innoculation team from the Department of Public Health (DSPP), but classroom activity and food preparation continued uninterrupted.

With the exception of one center situated on such barren, sandy soil that new paint is probably weather beaten only weeks after application, the interiors are colorful and fresh; even during unscheduled visits, the centers were reasonably clean. Latrines are located behind the buildings.

Second, wallspace is used with a purpose. For example, Creole posters from the DSPP such as one urging parents to give vitamin A to prevent eye disease are standard wallhangings, and most responsables make other instructional posters (e.g. with pictures clipped from magazines). One center even has a small mural in the multi-purpose room painted by the primary school director. Environments are thus created which stress the importance of the written symbol and are rich in visual cues.

Third, Haitian-made round tables and little rush chairs (ti-chèz), brightly painted in primary colors, are both attractive and used as pedagogical tools. For example, responsables allow those children at green tables to go first to the latrine, then those at red tables, etc.

(5)
In 1981, because of Project financial constraints and in order to have a more economical design which could realistically be replicated by the GOH, this form was modified somewhat and reduced in size. The present design has centers sharing kitchen facilities with the primary schools; the home economics room has been integrated into the multi-purpose room; and the classroom, which is the room most utilized, has been enlarged.

Fourth, in home-ec rooms, large clay pots (canari) layered with sand and charcoal serve to provide potable water for those centers which do not have wells. They also serve as an adult educational device. Usually, a large picture detailing how this device can easily be made from locally available materials is attached to the nearby wall.

And finally, most centers had playground equipment of iron construction to promote physical education. For those centers without such equipment, it might be feasible to consider cheaper, locally available alternatives (e.g. old tires set upright in cement to form tunnels).

3.2 Enrichment Materials

In addition to the enrichment materials described in the physical setting section 3.1 above, each center has a large blackboard and numerous other smaller enrichment materials. For example, small individual chalkboards are available to each child (e.g. for lessons on drawing shapes) and there are various locally made sorting, counting, and stringing devices. All serve to provide intellectual stimulation, as well as to contribute to small motor development.

3.3 Nutritional Supplementation

Externes: As mentioned above, children from six months through four years receive monthly supplements of cornmeal, bulgur, oil, and nonfat powdered milk. Although these children were not targeted for special attention by the evaluation, an unscheduled walk through one CINEC community found several mothers giving breastfed babies and newly weaned children cornmeal porridges made with milk. Reportedly, they did so because of the responsable's instructions.

Interns: Interns receive the same food supplements provided to externes through the hot lunch program when school is in session, and by dry distribution when school is in recess (August and September). Midmorning, each child is given a double portion of nonfat dry milk which has been reconstituted with boiled water; around midday, a meal is served based on either cornmeal or bulgur with other ingredients added, depending on the responsable. For example, some use local, relatively inexpensive vegetables such as okra to make a sauce, or cooked nutritious leaves resembling spinach (legim) which may be gathered in the vicinity. The estimated nutritional values for meals served at the centers are listed in Table 2.

Table 2

Nutritional Value of
Intern School Lunch

	Approx. Daily Amount	Calories	Grams of Protein
Bulgur	50 gms	177	5.6
Cornmeal	75 gms	273	5.9
NFD Milk	150 gms	545	54.0
Vegetable oil	23 gms	203	-

approximate calories supplied each lunch = 925-1,025

Based on the calculation that a preschooler requires 1,830 calories and 34 grams of protein daily, each lunch provides 50-56 percent of needed daily calories and 145 percent of daily protein needs.

3.3.1 Commentary and Recommendations

One common complaint of the responsables about the meals is that more variety is needed. Since an estimated 59 protein grams is supplied by each meal, it is unfortunate that they insist variety should be added with yet more high protein additions such as beans or dried fish. Some buy these from their $6.00 monthly Department of National Education (DEN) allotment or, reportedly, with their own money. The allotment must be used to buy charcoal (at $1.40 to $2.00 a bag), soap, etc. Also, each parent is requested to donate a $0.40 monthly per child contribution to aid in the cost of preparing the food and providing a varied menu. The collection of these monthly donations is, however, most problematic as will be discussed in 3.4 below.

From a nutritional and educational point of view, the responsables are correct: A greater variety is needed. A variety of vegetables made into sauces or cooked with the cornmeal or bulgur would supply vitamins and nutrients that are missing in the menu. It would also educate both the children and the parents in the use and value of these vegetables.

Two suggestions are offered: First, the CARE nutritionist should continue promoting the value of the highly nutritious, gatherable food stuffs which may be found in these communities. Despite the very low status of these vegetable products, she has had impact as evidenced by the few responsables who serve them and the CINEC mothers who have begun to follow their leads. The responsables' universal inclusion of these gathererables in the lunches would be the lowest cost way to supply needed nutrients. In so doing, the responsables would also give an air of respectability and value to these presently underutilized vegetables.

Second, it would appear to be highly desirable for CINEC to rededicate itself to its original idea of demonstration gardens. Only one such garden was encountered in the thirteen centers visited and, reportedly, there are few gardens in the program. As stated in the original CINEC proposal, these gardens would serve valuable nutritional and educational functions.

3.4 Parent Participation

The amount and type of parent participation varies significantly from center to center, and especially from region to region. In the Cap Haitian region, there are a number of mothers who come almost daily to the centers to work as teacher's aides. For example, Cana has alternating groups of 2-4 mothers who are at the center daily as does Chabaud, and Leroux Pilette had nine mothers who each performed a small appointed task the day of the visit. Reportedly, fathers only participate on a task basis, i.e. when a labor intensive job needs to be done.

However, parents in the region of Cap Haitian do not make the small monthly contributions requested toward defraying the costs of soap, charcoal, etc. One responsable reports that although at a parent's meeting, all agreed to send the monthly amount, the next day not one intern appeared at the center. She was forced to visit each individual household to say that the request had been rescinded before the children were allowed to return.

On the other hand, although the Artibonite region's mothers seldom appear to work as aides, more parents do, with varying consistency, send small monthly contributions. Only one Artibonite center had a mother who appeared daily to help with food preparation, and this woman had her third child presently attending the center. As a result, most responsables pay someone a small sum to do the cooking, although one responsable does everything herself.

3.4.1 Commentary

Although CINEC personnel perceive parent involvement as "low" and thus as a failure for the CINEC program, this evaluator does not share their opinion. Parent participation is a new concept to these people and, after their own fashion, they are responding.

In the Artibonite, where more money is available because of major cash cropping (rice) and wage labor incomes, the parents respond by sending a little money periodically. Mothers do not typically work as aides, however, because they are involved in commerce, in cultivating their own rice crops, or in working for others as day laborers. As one mother said, "I work to feed my children; if I come to the school, I can't work".

In the Cap-Haitian region, where cash is scarcer and mothers are less involved in cultivation or marketing, they respond in greater numbers by serving as aides. Parents also rationalize that the GOH and CARE give money for food, and so the responsables could only be asking for contributions for their own income producing reasons. In other words, one gives money to private schools, not to state schools.

Finally, it must be noted that parent participation in the formal education of their young is an educated, middle-class concept which is often problematic even with low-income groups in the U.S. Such parents are not purposely negligent in their duties to their offspring but, rather, do not perceive such involvement as incumbent in the parenting role. To label them "remiss" or "negligent" only serves to confound the situation. In rural Haiti, this concept is being introduced by CINEC. Thus it is suggested that CINEC consider parental participation as a developmental process which must be cultivated over time. It is not a short-term goal which can be achieved in three or four years.

If greater participation than is now occuring is deemed important by CINEC personnel, it is also suggested that they consider alternative approaches. For example, the cooperative nature of the intern program could be stressed, as the concept of cooperatives is one which is more readily understood by these rural people. A cooperative committee could be formed consisting of families with interns in the program. This committee could play the major role both in defining and assigning tasks that need to be done and in collecting the small fees. In this way, jobs would be created which are appropriate to the lifestyles and time demands of the families involved; and the committee, not the responsable, would control and monitor the monthly contributions.

3.5 Adult Education

The adult education component of the program, which was conceived primarily as home economics training for CINEC mothers, has not proceeded as planned. Originally, the Office of Adult Education and Community Action (ONAAC) was to have placed a teacher in each CINEC locale. But because that office's goals changed in the interim, only 27 centers presently have ONAAC agents in their communities.

Mothers who work regularly as teachers' aides receive some practical training, however, and responsables also give short lessons on nutrition and food preparation during the dry distribution. Moreover, the present ONAAC strategy is to place an agent in each community in the south in which a new center is being constructed. Thus while adult education has not proceeded as originally planned, neither has it been totally abandonned.

3.5.1 Recommendation

The re-introduction of demonstration gardens which was recommended in 3.3 above for nutritional reasons could also serve educational functions. For example, women could learn to establish kitchen or courtyard gardens, which would impact on family nutrition and provide potential cash crops.

Alternative demonstration projects are also highly recommended, especially in those locales where gardens may not be feasible, e.g. due to insufficient water supply. For example, women could be taught poultry and small livestock production, while men could learn large animal husbandry, engage in soil conservation, reforestation, etc.

3.6 Community Involvement

A related issue to 3.4 above is the involvement of the greater community, especially the community councils, in the affairs and running of the centers. But while parent participation appears largely dependent on environmental variables (i.e. type of cropping, female work load), community participation appears dependent on the personality and community work strategies of the responsables.

What is needed in the way of community council participation also varies from community to community. For example, in the low heavily irrigated Artibonite, rain often destroys the roads. Thus during site visits, one center needed work on the nearby roadway so that the food truck could make its deliveries. An adjoining center farther down the road where it became impassable, needed men and horses or donkies to transport the foodstuffs.

The responses of the two community councils to the requests of the responsables represent a study in contrasts. The first responsable who was visited three times in the course of the evaluation and who obviously has superior community involvement skills, had her request promptly enacted. A delegation appeared the next day to repair the driveway to the center. The second responsable, who was also admittedly at a loss for ways to involve her local council, had difficulty finding available labor even when small quantities of foodstuffs were offered in exhange.

3.6.1 Recommendation

Two suggestions are offered to help new responsables develop community involvement strategies and to help older responsables correct deficient ones :

1) Send responsables with proven community skills out to work side-by-side with these responsable for brief, "hands-on" demonstrations (see 3.11).

2) Re-introduce the questionnaires and worksheets that were designed and used in the early years of the project (see Appendix D). These demanded that responsables study the domestic lives of a sample of CINEC families. These forms also demanded that they familiarize themselves with the agricultural production, marketing practices, consumption habits, etc. of their communities. Re-introduced, these forms could supply part of the needed community baseline data (see 3.8.1). Moreover, they would provide timid or less creative responsables with a point of entry, as well as serving to sensitize them to their communities.

3.7 Testing of Counting Skills/Colors/Forms

To test in a nonthreatening way the interns' counting skills, their abilities to differentiate shape and color, and their abilities to transfer these skills to unanticipated stimuli, the evaluator introduced the following tasks in eight sample schools:

[6]

1) From a bag of round lollipops in various colors, each student was asked to select the five that s/he wanted.

2) Each student was asked the shape of and the color of each lollipop that s/he had selected.

3) Finally, as a group, those students with yellow suckers were asked to raise their hands; then those with green; etc.

In seven of eight centers, interns responded to all these tasks with a better than 80 percent degree of accuracy. At the eighth center, the test was a failure as interns were only attentive to grabbing suckers (see comments on supervisory needs, section 3.11).

3.8 Vital Statistics Data Collection System

During the 10 site visits, responsables were asked for the 1982-83 academic year inscription form (Enquete Preliminaire) for each intern present that day. This form is designed to elicit such vital information as date of birth, sex, and first-of-year and end-of-year height/weight measurements as well as basic sociological data (for sample, see Appendix C). Wherever these forms were unavailable, the responsable was asked to present

(6)
In a first center which is not enumerated in the sample, colored balloons and hard candies were used to achieve similar results, but were more difficult to tabulate.

these data in whatever other way she might have recorded them (e.g. in her attendance notebook). The status of the most vital of these data --- age, October height, and October weight --- at each center is listed in Table 3.

Table 3

Status of Intern Vital Statistics Data
at Randomly Selected CINEC Centers
End of Academic Year 1982-83

N=225

Center	N	Actual/Estimated Age		Oct. Weight		Oct. Height	
		#	%	#	%	#	%
Chevreau Lombard	22	19	86	20	91	22	100
Hatte Grammont(1)	26	–	–	–	–	–	–
L'Estere	28	23	82	04	14	09	32
Petites Desdunes	26	16	62	26	100	26	100
Grand Rac(2)	03	–	–	–	–	–	–
Souvenance	33	27	76	31	70	23	70
Hatte Chevreau	21	20	95	20	95	20	95
Chabaud(3)	35	–	–	–	–	–	–
Cana	17	00	00	16	94	15	88
Leroux Pilette	14	12	87	02	14	03	21
Totals	225	117	52%	119	53%	118	52%

N equals number of present day evaluation visit

1 Reportedly, the notebook containing birthdates and inscription height and weight measurements was lost as a result of two personnel changes during academic year.

2 Number too small; dropped from sample.

3 Reportedly collected and sent to regional supervisor but never received in the national office.

3.8.1 Commentary

Theoretically, this inscription form system is a sound one. It should be providing CINEC with conclusive data with which

1) to monitor the nutritional status of each chil'd and
2) to calculate nutritional impact rates.

The system is not serving these functions, however, and its execution is problematic at all personnel levels.

1) The Responsables: Although a few responsable are conscientious about maintaining their entire set of records, including inscription forms, most are not. A few are seriously negligent in their execution of these duties. For example, as will have been noted in Table 3, Cana had no actual or estimated birthdates available for its seventeen present interns, although most had been in the program for three years. Similarly, Leroux Filette and l'Estere had few beginning-of-year height (only 21 percent and 32 percent respectively) or weight measurements (each had only 14 percent).

Inspection of the inscription forms on non-sample centers (i.e. from those centers which had sent the forms at previous years' end as directed to the national office, which were inventoried as part of the evaluation), revealed a similar pattern of omission.(7) For example, although most responsables are fairly diligent about recording the actual or estimated birthdates of infants as they enter the program, they often neglect to take weight and height measures.

In fairness to the responsables, it must be stated that even those who are negligent about recording the most vital statistics on age, weight, and height, often do inscribe the basic sociological data which are requested (e.g. presence of father in home, number of siblings). Also, since many rural parents do not have the births of their children officially documented and cannot recall the date, it is often impossible to record the exact day, month, and year of birth.

2) The District Supervisors: At this second personnel level, there is little to suggest that anything is being done to oversee either the quality or the quantity of the collected data. For example, in terms of the interns' vital statistics, an even adequate supervisory performance would exhibit awareness of data deficiencies at some point during the academic year. This would be evidenced by their collection at a later time. There was no indication, however, that even this stop-gap procedure was being implemented.

Nor is there any indication that district supervisors correct those responsables who fail to send data to Port-au-Prince. The inventory of all data in storage revealed that the same responsables either send or do not send their data, with little variation in the pattern, year after year.

(7)
The exact number of these omissions was not counted as a serious perusal of the data indicated that at least 50 percent of the vital statistics were missing. Given the obvious strength of this pattern, it was the opinion of the evaluator that an exact tabulation would be a waste of time.

3) The National Administrators: The national administrators have exhibited concern about this problem as evidenced by their discussion of it at every annual training session. Discussion has not led to resolution, however, nor has the threat to withold paychecks. They appear at a loss for alternative strategies.

3.8.2 Recommendations

The following recommendations are offered as a feasible way to

1. circumvent the personnel problems with the present system and

2. provide CINEC with the data it so urgently needed for nutritional surveillence and to calculate the program's nutritional impact.

1) Streamlining Data Needs: Sociological information is valuable when probing such questions as which children benefit most/least from nutritional supplementation. Presently, these questions are infinitely less important, however, than doing nutritional surveillence and determining if the program is improving the nutritional status of its client population. Thus it is suggested that, until that time when the most crucial statistics on age, sex, entry height/weight, and year-end height/weight are being systematically and correctly collected, that the sociological data be omitted.

2) Computerizing Data Collection/Analyses: With the purchase of a computer for the CARE Port-au-Prince office, it is strongly recommended that CARE program its surveillence activities and its nutritional impact analyses. Such a computerized system could run roughly as follows :

A) Upon inscription into the program or in October for continuing students, responsables would record name, sex, date of inscription, height and weight, and the actual or clinically estimated birthdate of each child.

B) From a printed list of sequential numbers, responsable would give each new, first time entry child an individualized I.D. number which would also contain the I.D. number or letters of the center (e.g. CA001 would be the first child enrolled at Cana).

C) The responsable could record these vital statistics, including I.D. number, into their attendance books, (as many are presently doing), for a permanent record which would always remain at the center.

D) Responsables would also fill out a new inscription form (see model below), which would be sent to the national office via the supervisors.

E) These data would be entered into a program which could, among other things, identify those children with low weight to height ratios --- the most sensitive anthropometric measure obtainable given of the dearth of accurate birthdates in rural Haiti. These children would be targeted for special attention. The program could also identify inconsistent or improbable data points, as well as missing ones. Responsables supplying such data points should be given special supervisory attention. However, it is anticipated that once the responsables begin receiving nutritional supplementation results and know what to do with them, missing data points will cease to be a problem.

Model Inscription Form

Child's Name _____
First Last

I.D. Number _____Sex_____(_____)*

Date of Inscription _____ _____ _____(---------)*
day month year

Date of Birth ____ _____ _____(-------)*

Height _____(---)* Weight _____(---)*

(* Alpha-Numerics to be supplied by the data processor.)

F) At year's end, responsables would submit a second form to the national office with the child's name, I.D. number, and final weight and height.

G) Data on the second important programmatic measure, examination results impact, could be computerized in much the same way.

3.9 CINEC NUTRITIONAL IMPACT

With the exception of Grand Rac, for the reasons stated in section 2.2.1 above, each intern child present on the day of the June site visit was weighed and measured by the evaluator on a spring balance scale. These measures, the measures collected in October of 1982 by the Responsables (see 3.8), and the Savane Tapion data (see 2.2.1) were entered into a database program where they were analyzed for completeness and internal consistency. Of the 243 records, only 125 had complete and consistent information. For example, records showing decreases in weight of several kilograms from initial to final weighing were deselected (N=1), as were any decreases in height (N=6), or records in which age (N=64), initial (N=66), or final measurements (N=2) were missing. The large percentage of data that was not usuable (49 percent) indicates the dimensions of the need for improved training and supervision (see 3.11 below).

The data on the 125 CINEC interns who had complete and consistent records were then used for four anthropometric analyses of nutritional status : height for age, weight for height, weight for age (Gomez classification), and the Waterlow system. To allow comparisons with the Haiti Nutrition Survey (HNS) preschool sample, these four analyses used the same cutoff points or values as were used in the 1978 HNS analyses (see Tables 4 through 7). Thus Table 4, which analyses weight for height, defines "wasting" as "a weight for height value less than 85 percent of the reference population". Within the wasting category, a weight for height value less than 80 percent of the reference is considered "acute undernutrition", while 80 to 84.9 percent values are considered "marginally undernourished". In Table 5, children with a height for age less than 90 percent of the reference median are classified under "stunting" and are considered to be suffering from growth retardation that may have been due to nutritional deficiencies.

In the Gomez classes on weight for age of Table 6, children 75-89.9 percent of the NCHS/CDC reference median are considered to have first degree malnutrition; those 60-74.9 percent, second degree; and those less than 60 percent, third degree. All children who are greater than 90 percent of the reference median are classified as "normal", including overweights. The Waterlow system in Table 7 permits the combined assessment of the extent of acute and chronic undernutrition by establishing categories of wasting, stunting, and concurrent wasting and stunting. In this instance --- and in opposition to the cutoff used in Table 5 --- children less than 80 percent of the reference median weight for height are classed in the category of "wasting", if they are 90 percent of the median height for age. Children are considered "stunted" if they are below 90 percent height for age, but above 80 percent median weight for height. Children below the above cut-offs for weight for height and height for age are classed as "concurrent wasting and stunting".

Table 4

Percentage Distribution of CINEC Intern Sample by Weight for Height Classes by Sex

	Percentage of Reference Median			
	Wasting		Normal [a]	
	<80	80.0 - 84.9	85.0 - 120+	Total [b]
Girls	1.5(1)	7.4(5)	91.1(62)	100%(68)
Boys	1.7(1)	5.3(3)	93.0(53)	100%(57)
	1.6(2)	6.4(8)	92.0(115)	100%(125)

a) Includes overweights

b) All percentages are weighed by universe population proportions. The actual number of persons surveyed is given in parentheses.

Table 5

Percentage Distribution of CINEC Intern Sample by Height for Age Classes by Sex

	Percentage of Reference Median				
	Stunting		Normal		(a
	<85.0	85.0-89.9	90.0-94.9	>95	Total
Girls	2.9(2)	7.4(5)	25.0(17)	64.7(44)	100% (68)
Boys	1.7(1)	8.8(5)	15.8(9)	73.7(42)	100% (57)
	2.4(3)	8.0(10)	20.8(26)	68.8(86)	100%(125)

a) All percentages are weighed by universe population proportions. The actual number of persons surveyed is given in parentheses.

Table 6

Percentage Distribution of
CINEC Intern Sample
by Gomez Classes
(Weight for Age)

	Degree of malnutrition a)				
	3rd	2nd	1st	Normal	
	<60.0	60.0-74.9	75-89.9	>90	Total (b
Girls	-	10.3(7)	16.2(11)	73.5(50)	100%(68)
Boys	-	8.8(5)	17.5(10)	73.7(42)	100%(57)
	-	9.6(12)	16.8(21)	73.6(92)	100%(125)

a) Percentage of reference median weight for age

b) All percentages are weighed by universe population proportions. The actual number of persons surveyed is given in parentheses.

Table 7

Percentage Distribution of
CINEC Intern Sample
by Waterlow Classes

	Waterlow Class				
	Wasting	Stunting	Wasting & Stunting	Normal	Total (b
Girls	1.8(1)	10.3(7)	-	88.2(60)	100%(68)
Boys	1.5(1)	8.8(5)	-	89.4(51)	100%(57)
	1.6(2)	9.6(12)	-	88.8(111)	100%(125)

a) All percentages are weighed by universe populations. The actual number of persons surveyed is given in parentheses.

3.9.1 Comparison of CINEC & Haiti Nutrition Survey Samples

Tables 8 through 11 compare the CINEC intern sample and three of the HNS sample universes on weight for height, height for age, and weight for age (Gomez) and Waterlow measures. The "Rural" sample referred to in these tables is HNS's "Representative Rural Sample" comprising all of rural Haiti. The "National" sample listed is HNS's "Representative National Sample" comprising all rural Haiti and metropolitan Port-au-Prince. Finally, the "Special" sample is the HNS's group of children from private nursery schools and socially advantaged families in Port-au-Prince. These special sample children's anthropometric indices provide a reasonably valid estimate of the nutrition status attainable by the general preschool population in Haiti.

Table 8

Percentage Distribution by
Weight for Height Classes
CINEC Intern Sample
& Haiti Nutrition Survey Samples

	Percentage of Reference Median			
	Wasting		Normal a)	
	<80	80.0 - 84.9	85.0 - 120+	Total (b
CINEC	1.6%	6.4%	92.8%	100% (125)
Rural	6.4%	10.4%	83.2%	100% (4460)
National	6.0%	9.9%	84.1%	100% (5353)
Special	0.1%	1.2%	98.7%	100% (730)

a) Includes overweights

b) All percentages are weighed by universe population proportions. The actual number of children surveyed is given in parentheses.

Table 9

Percentage Distribution of
Height for Age Classes
CINEC Intern Sample
& Haiti Nutrition Survey Samples

Percentage of Reference Median

	Stunting		Normal		
	<85.0	85.0 - 89.9	90.0 -94.9	>95.0	Total (a
CINEC	2.4	8.0	20.8	68.8	100% (125)
Rural	8.7	19.9	35.1	36.3	100% (4460)
National	8.0	18.6	34.6	38.8	100% (5353)
Special	0.1	0.3	7.4	92.2	100% (730)

a) All percentages are weighed by universe population proportions. The actual number of children surveyed is given in parentheses.

Table 10

Percentage Distribution of
Gomez Classes Weight For Age of
CINEC Intern Sample
&
Haiti Nutrition Survey Samples

	Degree of Malnutrition a)				
	3Rd	2nd	1st	Normal	
	<60.0	60.0-74.9	75-89.9	>90.0	Total b)
CINEC	----	9.6	16.8	73.6	100% (125)
Rural	3.5	26.0	46.4	24.1	100% (4460)
National	3.2	24.1	46.0	26.8	100% (5353)
Special	----	0.5	15.1	84.4	100% (730)

a) Percentage of reference median weight for age.

b) All percentages are weighed by universe population proportions. The actual number of children surveyed is given in parentheses.

Table 11

Percentage Distribution of
Waterlow Classes
CINEC Intern Sample and
Haiti Nutrition Survey Samples

	Waterlow Class				
	Wasting	Stunting	Wasting & Stunting	Normal	Total (a
CINEC	1.6	9.6	-------	88.8	100% (125)
Rural	3.0	25.2	3.4	68.4	100% (4460)
National	2.9	23.6	3.1	70.4	100% (5353)
Special		----	---		100% (730)

a) All percentages are weighed by universe population proportions. The actual number of children surveyed is given in parentheses.

3.9.2 Discussion

Since the usual caveats about small sample size apply here, these findings should not be considered conclusive. Nevertheless these results suggest that CINEC is positively impacting on the nutritional status of its intern population. In every single measurement, the CINEC intern sample has a higher nutritional status than either the representative rural sample or the representative national sample. Indeed in every measure but one --- the percentage of children in the 80.0 to 84.9 percent wasting category in the weight for height classes of Table 8 --- the CINEC intern sample more closely approximates the special sample than it does the other two.

The question remains, however, as to whether CINEC is impacting on an already advantaged population. That is to say, do the CINEC children come from a representative rural population? Although this question cannot definitively be answered at this time because no baseline data were available, it is most improbable that this is the case since:

1) The GOH primary schools in which the CINEC centers are based, especially the first built which include those in the present sample, were targeted for materially disadvantaged rural areas.

2) Discussions with both GOH school authorities and

CINEC personnel confirm that these sample centers are indeed in disadvantaged areas.

3) Observations in the sample communities and of the interns themselves also tend to confirm the representativeness of the sample.

Finally, although theoretically CINEC was not to accept third degree malnutrition cases but was to send such cases to recuperation centers, in practice this was seldom the case. Most CINEC locales did not have such recuperation centers within their vicinities, and responsables simply registered children on a first come, first served basis to fill their quotas of 50 children in each cohort. Baseline studies which would include measurements of children upon entry into the program urgently need to be done, however, to verify these observations. No such baseline data were available for this study.

3.10 Examination Results

It was hypothesized that CINEC graduates would have higher average examination results for all academic subjects in primary school than those children who did not attend CINEC. To test this hypothesis, exam results for the third trimester of the 1982-83 academic year were collected on students attending grades 1 through 3 of the same GOH schools to which the sample CINEC centers are attached. Results for all subjects were then averaged to determine whether a student had or had not achieved a median score of five.(8) A score of five or more denotes a passing grade; a score of 4.9 or lower is failing. Pass/Fail exam records were thus obtained for 818 students who had participated in the CINEC program as interns, and for 558 students who had not been interns, for a total of 1,376 records.

At each grade level, the frequencies of passing were higher for CINEC than for non-CINEC children. These findings are summarized for all three grades in Table 12; individual results for grades 1-3 are presented in Tables 13 through 15.

(8) A median score of 5 is considered passing in GOH primary schools.

Table 12

Frequencies of Pass/Fail Exam Results
For CINEC & Non-CINEC Students
In GOH Primary Schools
Grades 1 - 3

	Pass	Fail	Total
CINEC	648	170	818
Non-CINEC	369	189	558
Total	1,017	359	1,376

Table 13

Frequencies of Pass/Fail Exam
Results For CINEC & Non-CINEC students
In 1st Grade of GOH
Primary Schools

	Pass	Fail	Total
CINEC	251	43	294
Non-CINEC	60	32	92
	311	75	386

Table 14

Frequencies of Pass/Fail Exam
Results for CINEC & Non-CINEC Students
In 2nd Grade of GOH
Prinmary Schools

	Pass	Fail	Total
CINEC	262	65	327
Non-CINEC	153	84	237
	415	149	564

Table 17

Chi-Square Test On CINEC & Non-CINEC
Pass/Fail Rates For
Grade One Students

	CINEC Actual	Non-CINEC Rates	Expected CINEC
Pass	251	65.2% X 294	192
Fail	43	34.8% X 294	102

Chi-Square Calculated 8.91
Chi-Square Tables 6.64

Table 18

Chi-Square Test On CINEC & Non-CINEC
Pass/Fail Rates For
Grade Two Students

	CINEC Actual	Non-CINEC Rates	Expected CINEC
Pass	262	64.6% X 327	211
Fail	65	35.4% X 327	116

Chi-Square Calculated 35.12
Chi-Square Tables 6.64

Table 19

Chi-Square Test On CINEC & Non-CINEC
Pass/Fail Rates For
Grade Three Students

	CINEC Actual	Non-CINEC Rates	Expected CINEC
Pass	135	68.1% X 197	134
Fail	62	31.9% X 197	63

Chi-Square Calculated = .007
Chi-Square Tables = 6.64

Since the calculated values of the Chi-square exceed the critical values for the aggregate data on Grades 1-3 (see Table 16) and for Grades 1 and 2 (see Tables 17 and 18), the null hypotheses are rejected in these instances. Thus it is concluded that achieving a median score of 5 or higher (i.e. a passing grade) is dependent on CINEC attendance, with less than 1 percent chance ($p<.01$) that this occurs as a result of random variation.

Since the calculated value of Chi-Square does not exceed the critical value for the Grade 3 pass/fail data when tested alone (see Table 19), the null hypothesis is retained in this case. It is concluded that achieving a median score of 5 or higher for grade 3 is not demonstrably dependent on previous CINEC attendance. The small calculated Chi-Square value in Table 19 reflects the relatively small differences between the observed and expected frequencies.

Thus in this initial analysis, CINEC data are consistent with those collected from HeadStart programs in the United States. As with HeadStart, results from the first several grades of primary school strongly suggest the positive effects of CINEC attendance on subsequent academic performance. By the third grade, however, the statistical significance of these results tends to disappear. In terms of CINEC, these findings underscore the need for longitudinal research which would minimally track graduates though the courses of their primary school careers. For example, is 'diminished third grade impact a temporary aberration? What is the cumulative effect of CINEC attendance on students' entire primary school performance?

3.11 Need to Develop Strong Field Supervision

A major challenge confronting CINEC --- as well as most all rural institutions in Haiti with which this writer is familiar --- is the development of a strong yet sensitive team of field supervisors. In the three supervisory zones visited, it was observed that the supervisors diligently oversaw the centers' physical maintenance (e.g. inventorying teaching materials, checking hygienic standards). Yet, in the opinion of this writer, supervisors tend to overlook, or do not see as with in the supervisory purview, other equally or more important aspects of the centers' functioning.

1) Collection of Vital Statistics : As discussed in ection 3.8 above, there is lack of evidence that the supervisors are effectively overseeing the collection and recording of vital statistics.

2) Classroom Guidance : None of the three supervisors whose areas were visited are themselves preschool educators. As a result, there appears to be little direction given to those responsables whose pedagogical techniques are still in the formative stage, or whose techniques or performance are deficient. Although continuing education (recyclage) sessions

for responsables are held annually, the responsables still need to be observed in the classroom with their students. In this way, individual problems can be identified and corrected. Based on observations and questions directed to responsables, it must be concluded that the present supervisors are not or cannot provide this guidance.

3) Community Work Guidance : As suggested in section 3.6, there is also the need to help some responsables to develop their community involvement strategies. Community leaders especially can be most influential in convincing parents of young children of the benefits of CINEC enrollment.

4) Mental/Emotional Support of Responsables : For the most part, the responsables are young single women who leave their home environments to work in distant communities. In most schools, the responsables and the single primary teachers band together to form strong support groups. For example, primary teachers in one school were found to be remaining through part of their own vacations, rather than leave the CINEC responsable alone for the entire month of July. In another center, however, a responsable with a record of absenteeism and tardiness was found alone and in distress during July. These and other adjustment problems deserve attention.

3.11.1 Recommendations

In this evaluator's opinion, there is only one possible source of future supervisory candidates : the CINEC responsables. Not only would the possibility of promotion increase responsable motivation, but many responsables possess the very qualities which are needed to build a strong field supervisory team : firsthand, intimate knowledge of preschool education; proven capacity in community development work; organizational and data collecting skills; maturity and sensitivity in dealing with the problems of others; and a high degree of dedication to the CINEC program. Thus while it is a shame to take superior ability out of the CINEC classroom and from direct involvement with the communities, promoting especially competent responsables to supervise the others is the surest way to institutionalize these positive qualities.

4.0 Summary and Conclusions

1) The examination results analysis for those continuing in GOH schools confirm that the program is positively impacting on their subsequent academic careers. CINEC graduates are achieving significantly higher exam results than their non-CINEC peers.

2) Observations in CINEC classrooms also confirm the quality of intellectual stimulation occuring there. The interns' responses to the lollipop test and to the questions concerning the gift watermelon (see 6 below) are excellent examples. The presentation of such surprise stimulii could not have been anticipated and thus their responses could not have been rehearsed. The interns display the intellectual responsiveness and eagerness of well stimulated and trained preschoolers anywhere.

3) The evaluation's nutritional impact analysis also suggests that CINEC is achieving improvement in the nutritional status of its client population. A larger, more conclusive study is needed, however, as the project's data bank was too incomplete and had too many deficiencies to permit a more thorough, definitive analysis.

4) It is strongly recommended that the weight for height ratio be adopted as the standard nutritional impact measurement. Since it eliminates the need to have exact date of birth, it is the most sensitive anthrometric measure which can be collected.

5) From building design to choices for enrichment materials, the centers are well conceived and equipped for their child developmental purposes. Moreover, the CINEC project is a paradigm of how low-cost, indigenous materials can be used to create a functional yet attractive preschool environment, complete with preschool educational materials. It is indicative of the tenor of the program that, rather than resorting to the importation of these needed but costly items, they were attractively duplicated locally with materials at hand. For example, brightly painted gourds are used as receptacles for different varieties of beans which are used for counting and color sorting.

6) Without a doubt and with few exceptions, one of the greatest assets the CINEC project has is its responsables. In the course of the evaluation, fourteen responsables were encountered and they are, overall, an impressive group of young women.

First, except for the responsable whose class failed the counting/color test described in section 3.6 who still needs direction and guidance, the responsables are accomplished classroom performers. Although they have more limited educational experiences --- usually three years of secondary

school with some having normal school or home economics background, plus six months of CINEC training --- they can reasonably be compared with most U.S. preschool education majors. The most skilled among them could be compared with superior preschool teachers anywhere. For example, one responsable turned a gift watermelon into an inpromptu 45 minute lesson on shape, color, taste, nutrition, and French language skills.

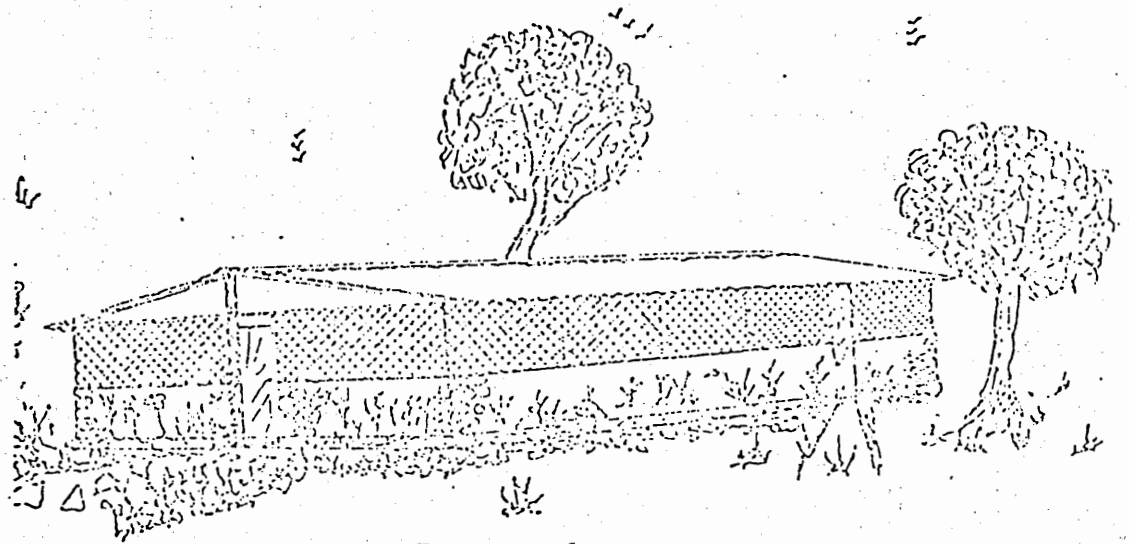
And second, many responsables have such good community skills and such a degree of sensitivity that they become focal figures in their areas, especially for the women. Community women come to them with requests for advice, to care for an injured child, to observe them, and to learn from them. Similarly to the one-room country school teachers in U.S. history, such responsables often serve as agents of positive social change.

7) A major indicator of the success of the CINEC project is the degree and manner in which the program has been embraced by the Department of National Education (DEN). First, DEN has adopted the principles of CINEC for its own statement of the objectives of preschool education. And second, despite the many demands on its limited budget, the Department has taken on financial responsibility for the functioning of the 96 existent centers and for the salaries of the responsables. In effect, the CINEC centers represent the preschool component of the Haitian national educational system.

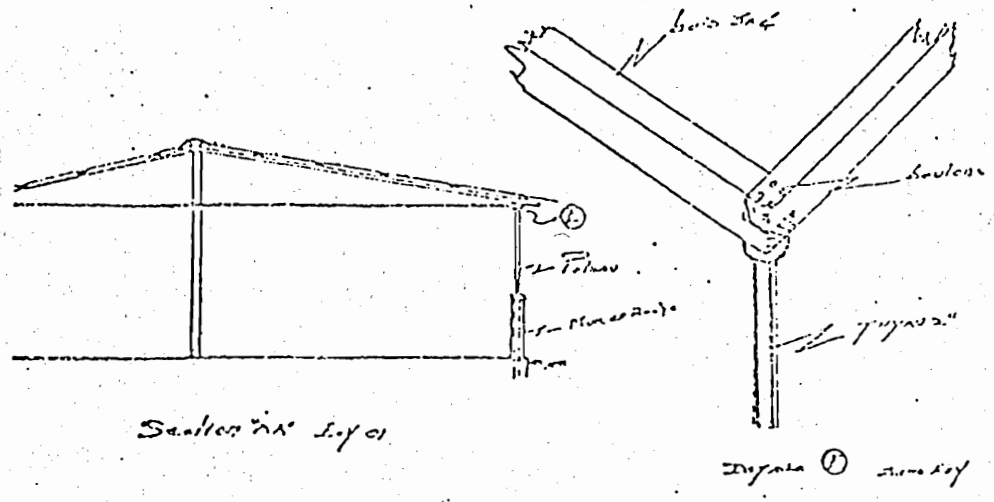
8) Finally, over 70 interviews with persons with a variety of connections to CINEC --- parents, GOH school personnel, community people, local CARE employees, the responsables, CINEC and USAID administrators --- elicited uniformly positive responses. In a manner that is unprecedented in the experience of this researcher, everyone is enthusiastic about CINEC.

For example, parents state regret that there was no CINEC to benefit their older children; primary school teachers opine that no child should be allowed to enter first grade without completing CINEC training; local leaders praise the contribution CINEC is making to their communities; and CINEC, CARE and AID employees express their satisfaction about being part of it.

CINCO CENTER DESIGN PLAN

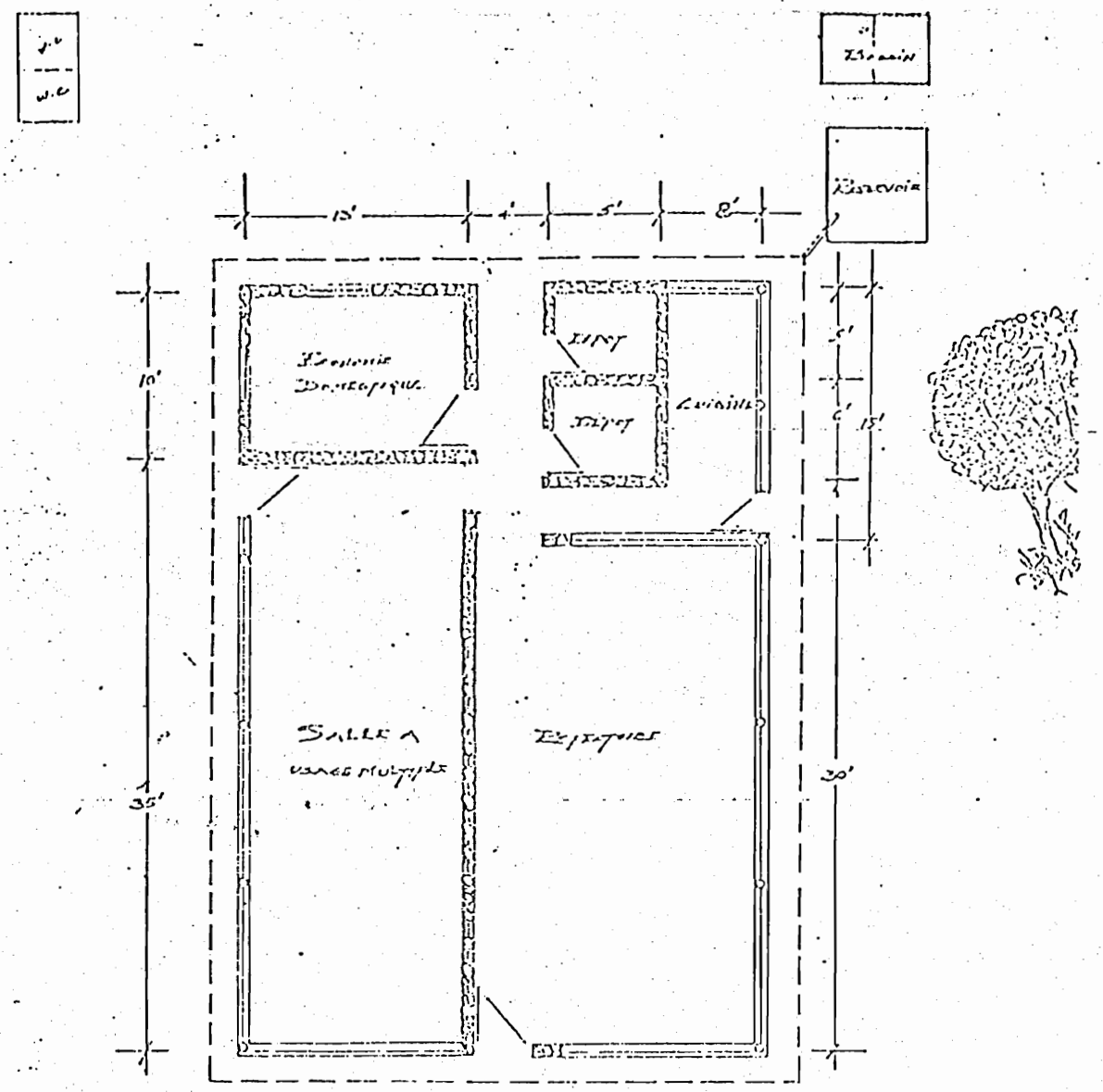


Perspective

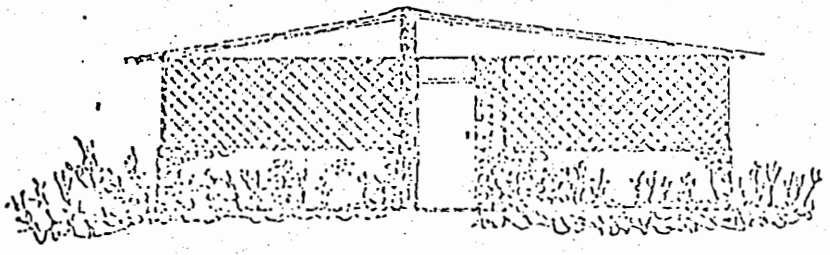


Section "A" Layout

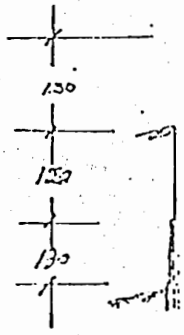
Detail ① Layout



PLAN Echelle



FACADE Echelle



CHEC

FICHIER PRELIMINAIRE

L'annee scolaire _____ |__|__| 1-2

Nom du district _____ |__|__| 3-4

Nom du Centre _____ |__|__| 5-6

Cet enfant participe dans le programme journalier (5 ans) 1 |__| 7

de distribution seche (0 a 4 ans) 2 |__|

Nom de l'enfant _____

Numero d'identification..... |__|__|__| 8-10

Date de naissance _____ _____ |__|__| 11-16

Jour mois annee

Source de l'information .....Acte de Naissance 1 |__| 17

Estime 2 |__|

Sexe de l'enfant ..... Masculin 1 |__| 18

Feminin 2 |__|

L'adresse de l'enfant.

Communaute _____ |__|__| 19-20

SNSM No. _____

Est-ce que la mere est

1 vivante 2 morte 3 inconnue |__| 21

Occupation de la mere : _____ |__|__| 22-23

Est-ce que le pere est :

1 vivant 2 mort 3 inconnu |__| 24

Est-ce qu'il y a le pere ou un parent male qui s'occupe de l'enfant qui vit dans la maison

1 pere 2 parent |__| 25

Combien de personnes vivent dans la maison |__|__| 26-27

Combien d'enfants (moins de 14 ans) vivent dans la maison |__|__| 28-29

Age de l 'enfant en mois a la pesee a l'entree ..... |__|__| 30-31

Poids de l'enfant a l'entree _____ livres |__|__| 32-33

_____ kg

Taille de l'enfant a l'entree _____ pouce |__|__| 34-36

_____ cm

Age de l'enfant en mois a la pesee a la sortie

Poids de l'enfant a la sortie _____ livres |__|__| 39-40

_____ kg

Taille de l'enfant a la sortie _____ pouce |__|__|__| 41-43

_____ cm

NUTRITION ANNEXE

Enquete sur la Communaute

- Agriculture - Elevage

1) Qui ca yo planté pi plus lan communaute icit?

2) Qui ca qui poté plus cob?

3) Qui ca nou mangé pi plus?

4) Est-ce que li baye problem? oui ☐ non ☐

5) Est-ce que nou rainmin li? oui ☐ non ☐

6) Si neu pa rainmin li, pou qui ca nou mangé li?

7) Si li baye problém pou qui ca nou mangé li?

8) Est-ce que gain dlo pou rouze jaain? oui ☐ non ☐

9) Est-ce que nou payé pou dlo? oui ☐ non ☐
Combien?

10) Est-ce que nou con qui moune qui responsable tét dlo? (sindic)

11) Qui moi qui gain plus la pluie?

12) Qui lot moi qui poté la pluie?

13) Qui moi qui poté la pluie douce?

14) Qui moi qui poté lavalasse?

15) Est-ce que te gain lavalasse anné ca a? oui ☐ non ☐

16) Qui denié foi te gain lavalasse?

17) Est-ce qué moune icit planté poua? oui ☐ non ☐

18) Est-ce qué tè icit fè poua? oui ☐ non ☐

19) Est-ce qué moune icit planté?

Tomate oui ☐ non ☐

carrotte oui ☐ non ☐

chou oui ☐ non ☐

Lot qualité légumes oui ☐ non ☐

20) Est-ce qué te icit fè légumes? oui ☐ non ☐

21) Qui qualité felles pou mangé nou cab join lan rage?

22) Qui qualité fèlles pou mangé nou planté doye caille (lan lacou)

23) Qui calité fèlles pou mangé nou planté lan jadin?

24) Est-ce qué noune icit van' fèlles? oui ☐ non ☐

25) Est-ce qué fèlles icit gain prix? oui ☐ non ☐

26) Est-ce qué te icit baye mangnoc? oui ☐ non ☐

27) Est-ce qué tè icit baye: Pistache? oui ☐ non ☐

Noix? oui ☐ non ☐ Koroli? oui ☐ non ☐

28) Est-ce qué nou con essayé planté:

Patate jaune? oui ☐ non ☐

Jouroumou? oui ☐ non ☐

Zaboca? oui ☐ non ☐

29) Est-ce gain empil: Véritable? oui ☐ non ☐

Banane? oui ☐ non ☐

30) Qui bet yo gadé plus icit?

31) Est-ce qué bef join mangé?

.../...

32) Qui coté bef bouč dlo?

33) Est-ce qué bef icit baye bon lét? oui ▱ non ▱

34) Est-ce qué lét icit gain prix? oui ▱ non ▱

35) Est-ce qué gain cochon? oui ▱ non ▱

36) Est-ce qué maladie tué cochon icit empil? oui ▱ non ▱

37) Qui coté yo tué bet icit?

38) Est-ce que yo payé pou tué bet? oui ▱ non ▱

39) Est-ce qué gain empil bét que auto tué anné ca a?

oui ▱ non ▱

40) Est-ce que gain cabrit? oui ▱ non ▱

Poule? oui ▱ non ▱ Lapin? oui ▱ non ▱

41) Est-ce que nóu rainmin vian' lapin? oui ▱ non ▱

43) Si yo tap fč cadeau lapin, est-ce qué nou ta mangé'l?

oui ▱ non ▱

44) Est-ce qué gain plus zoizo l'heu li fč frécheu décem'

oui ▱ non ▱

45) Qui calité zoizo yo mangé bô icit?

46) Est-ce qué yo capab qaimbé'l tout l'heu?

oui ▱ non ▱

47) Qui gen nou qaimbé zoizo?

LE MARCHE

1) Y a-t-il un "ti maché en ba pié boua" en dehors des jours reguliers de marche?

2) Dans ce "ti maché en ba pié boua", a part des fruits saisonniers, trouve-t-on:

   A) des céréales?

   B) des pois?

   C) de la viande?

   D) du poisson?

   E) des légumes?

3) Y a-t-il une petite "boutique quartier"?

   oui ☐ non ☐

4) Faites une liste de ce qu'on peut y acheter comme nourriture?

   1.....4.....7.....10.....

   2.....5.....8.....11.....

   3.....6.....9.....12.....

5) Y vend-on du kola? oui ☐ non ☐

   A quel prix?

   Est-ce un article très recherché? oui ☐ non ☐

6) Combien de jours réguliers de marché y-a-t-il dans cette communauté?

7) Quel est le prix:

   A) De la grande marmite de mais

   B) Du riz ordinaire

   C) Du Petit mil

   D) Des pois: rouge _____ beurre _____

   blanc _____ nourrice _____ noir _____

   tendre _____ congo _____ France _____

   France _____ souche _____ inconnu _____

8) Peut-on acheter une grande marmite de feuilles cassées pour toufées à moins de 45 cts.? oui ☐ non ☐

9) Faites la liste des feuilles pour toufées que vous avez vues sur le marché.

1._____ 5._____

2._____ 6._____

3._____ 7._____

4._____ 8._____

10) Quels sont les légumes les plus courants et quelle quantité obtenez-vous pour 50 cts.?

Exemple:	Mirliton	3 petits	45 cts.
1.			
2.			
3.			
4.			
5.			
6.			

11) Ayez-vous vu des patates jaunes sur le marché?

oui ☐ non ☐

De quelle localité viennent-elles?

Combien peut-on en acheter pour 20 cts.

12) Avez-vous vu du giraumon sur le marché?

oui ☐ non ☐

13) Avez-vous remarqué de la viande sur la marché?

Un morceau de foie de 2 gdes. est-il plus petit ou plus grand que ce morceau?

+ petit ☐ + gros ☐

1/4 pouce d'épaisseur

.../...

14) Quelle est la qualité de viande la plus disponible et le moins chère?

animal: partie:

15) Avez-vous du poisson sur le marché?

séché: oui ☐ non ☐

frais: oui ☐ non ☐

16) Est-ce que vous avez vu du lait au marché?

oui ☐ non ☐

combien le litre?

17) Vend-on du lait de cabrit? oui ☐ non ☐

est-il accepté? oui ☐ non ☐

le mélange-t-on au lait de vache? oui ☐ non ☐

18) Avez-vous vu des marchandes de fresco au marché?

oui ☐ non ☐

a combien vend-on le fresco?

avez-vous une idée comment et avec quelle eau le sirop a été preparé?

combien de livres de glace utilise-t-on un jour de marché?

19) Les gens achètent-ils de l'eau glacée?

oui ☐ non ☐

combien coute une louche d'eau glacée?

20) Les gens semblent-ils investir plus d'argent dans les tissus et autres que dans la nourriture?

oui ☐ non ☐

21) Essayez de faire une liste des autres bourgs et villages qui apportent des produits pour être vendus dans votre communauté.

Exemple: Souvenance.....aubergine

13

- ATTENTION SEVRAGE -

1) Avez-vous vu du lait en poudre sur le marché?

oui ▱ non ▱

2) Du lait évaporé? oui ▱ non ▱

3) Avez-vous vu des tétines en vente?

oui ▱ non ▱

à quel prix?

4) Quel est le prix de la petite marmite de:

Coeur de maïs?

Arrowroot?

Farine de riz?

Farine de banane?

Farine de petit mil?

Amidon?

Sucre rouge?

Farine "France"

5) Avez-vous remarqué:

du Maizena? oui ▱ non ▱

de l'Argo? oui ▱ non ▱

SUR CETTE PAGE FAITES, TOUTES SORTES DE REMARQUES INTERESSANTES SUR LES MERES "CINEC".

Mangent-elles avant de venir au Centre?

Les mères enceintes ont-elles l'air de savoir qu'une peu de lait leur ferait du bien?

SUR CETTE PAGE RAPPORTEZ LES REFLEXIONS QUI ONT ETE FAITES SUR CERTAINS ENFANTS?

EXEMPLE: Mango cé cochon - anné ca - a-tout cochon mo[illegible]a qui fait mango pourri.

Choisissez dix (10) familles ayant des enfants participant au projet CINEC et les 5 autres dans la communauté en ayant soin de ne pas prendre des enfants familles ni aisées ni trop pauvres.

En posant les questions, vous remplir les cases correspondant a la question, s'il n'y a pas réponse mettez des pointilles.

LA FAMILLE

I. Combien de membres y a t-il dans la famille?

Masculin /___/ Feminin /___/

II. Combien d'enfants?

0 - 1
1 - 2
2 - 3
3 - 4
4 - 5

Il y a t-il des viellards dans la famille?

Oui /___/ Non /___/

Des invalides?

Oui /___/ Non /___/

III. Combien de fois mange-t-on dans cette famille?

IV. Fait-on certaines considerations pour les bébés? Oui /___/ Non /___/

les prescolaires Oui /___/ Non /___/

les viellards Oui /___/ Non /___/

V. Quand on sert lesrepas dans la famille donne t-on le meilleur morceau -
au père Oui /___/ Non /___/
aux beaux parents Oui /___/ Non /___/
au fils aîné Oui /___/ Non /___/

VI. Est ce qu'une portion raisonnable est servie aux enfants?

Oui /___/ Non /___/

VII. Est-ce la quantité preparée est elle proportionnèlle aux nombre de membres de la famille?

Oui /___/ Non /___/

VIII. Le père prend-il du grog pour se "réchouffer" le matin?

Oui /___/ Non /___/

IX. Dans la famille mange t-on :

a) de l'acassan Oui /___/ Non /___/
b) du mais bouilli Oui /___/ Non /___/
c) des oeufs bouillis Oui /___/ Non /___/
d) de l'arbre à pain Oui /___/ Non /___/
e) des patates bouillis Oui /___/ Non /___/
f) de l'arbre vertitable bouillie Oui /___/ Non /___/
g) de la cassave Oui /___/ Non /___/

X. Mange t-on a) les patates - avec de l'avocat quand il y en a
b) l'arbre à pain - " " " " " "
c) l'arbre veritable- " " " " " "
d) le mais bouilli - " " " " " "
e) la cassave - " " " " " "

Non / /