

# THE PLANNING OF NUTRITION EDUCATION IN SCHOOL PROGRAMS<sup>1</sup>

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*The absence of nutrition training in the schools of Central America and Panama is explained by a vicious circle in which nutrition is not taught for want of teachers trained in the subject and the teachers are not trained because no program exists. It is up to the planners to break this circle by preparing nutrition curricula relevant to the needs and resources of each country and compatible with its education laws.*

Planning is a scientific method and, as such, relies on essentially uniform principles regardless of where or to what applied. It is known that the planning of any program will always require passing through certain stages covering aspects that are determined by the method itself, whatever the program may be. Thus, planning a program of nutrition education for schools involves the performance of a number of tasks inherent in the method, such as identifying problems and needs, establishing priorities, determining available resources, preparing the action plan, programming its implementation, developing alternative solutions to the problems found to exist, and finally arranging for an evaluation.

It follows, then, that if all these aspects must be considered when planning a program of any kind, the persons in charge of planning a program of nutrition education for the schools have much in common with the planners of nutrition programs for action by the public health authorities or by agricultural extension workers. In the educational field, however, there are certain problems directly related to planning that

occur with sufficient frequency to merit special examination.

First of all, there is the fact that in public health or agricultural extension it is sometimes possible to prepare specific plans at the local level through a center or agency covering a given group; in the educational realm the task is more difficult because the local unit involved is a school, and any program conducted there must be conceived as part of the national education plan. The national plan, in turn, is governed by laws and regulations in accordance with the basic education legislation of the country or with school reform legislation. This body of law is a key determinant of any program and often presents a barrier to the introduction of new subjects in the curriculum, as indeed it has in the case of the efforts to include nutrition training in the school programs of Central America and Panama. Those who have dealt with the problem know from experience that it is all but impossible to introduce nutrition education into a school program if the existing curriculum does not provide for this subject. Furthermore, it is extremely difficult to obtain an amendment to the laws and regulations governing the curriculum.

In the case of nutrition an attempt has been made to circumvent these obstacles by introducing the subject through such other means as comprehensive instruction (orga-

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nized by areas of interest or work units), making it possible to integrate this instruction with other subjects in the curriculum or to include nutrition training as an adjunct to another course as, for example "nature study." While these means have permitted some saving in time by obviating the wait for formal educational reform and have, to a certain extent, yielded constructive results, they are not the most satisfactory solution.

Teaching authorities, including the teachers themselves, give less importance to nutrition when it is not listed in the program as a separate subject, frequently relegating it to a secondary position or, in the worst cases, neglecting it completely.

It has also been found that there is a lack of uniformity in instruction (a matter of great importance in any country) because the training of teachers in the field of nutrition varies so widely. If the program to which nutrition instruction and activities have been added is interpreted and developed by a teacher with some preparation in this field, who knows its importance and is happy to teach it, he will surely see that his pupils understand the lessons and assimilate and practice what they learn.

On the other hand, if the teacher has little or no background in nutrition, he will feel uncertain of his knowledge of the subject and will often prefer to omit it. Moreover, not being aware of his country's problems in the field of nutrition, he will not give the subject the required importance and will emphasize the rest of the program. These are the reasons why nutrition is often taught in a superficial way or shunted aside completely. The result is that students in some schools receive instruction in nutrition, while those in others do not, with the attendant disparity in education.

Nutrition has also been overlooked in the fields of supervision and evaluation, making the problem of teaching nutrition even more serious. Even when this subject

is included, no guides or directions are offered for teaching it or for periodic or final evaluation of the instruction. Consequently, the teacher who fails to teach it is not concerned by this failure because there is no system of control or evaluation that will reveal the omission. On the other hand, the teacher who has taken the trouble to teach it feels somewhat frustrated by the fact that no one has taken his effort into account and no encouragement is offered him. It is necessary, therefore, to do something to resolve this problem, and one way of helping to solve it would be to see that the subject is established as a separate and continuing course when nutrition programs for the school are planned and, at the same time, to establish a system for supervising and evaluating such instruction.

Nutritionists in general, particularly those engaged in teaching, know the importance of teaching nutrition as early in life as possible and they are therefore interested in having it taught in the schools. However, this has yet to be fully understood by most of the education sector in the countries of Central America and Panama, which gives rise to the second problem to be examined. If a survey were taken in schools and homes and it were asked whether it was conceivable for a teacher to graduate without having the basic knowledge of arithmetic or grammar needed to teach those subjects, the organizers of the survey would surely be considered either deranged or ignorant. However, teachers are being graduated with no knowledge of nutrition, a subject that is almost as important for the population as other basic subjects, since the solution of so many pressing health problems currently besetting our countries depends on a knowledge of nutrition. If there is no conviction of the need to teach nutrition, all planning is bound to prove useless, and for this reason it is advised that after the respective programs are planned, an indoctrination campaign be carried out to make the teaching profession aware of the urgent and im-

perative need to introduce nutrition into the appropriate national education plans.

There is a vicious circle at the present time in which nutrition is not taught in the schools because there are no teachers trained to provide this instruction and the teachers are not trained because of the lack of a program requiring such training. It is a matter of grave importance to break this circle and seek the establishment of specific and continuing nutrition programs in the elementary schools. This would create a need to train teachers and would lead, as a natural consequence, to the introduction of nutrition programs both in the teacher-training schools and in the universities where teachers are trained or graduated.

As part of this action scheme, it is essential, therefore, to envision what might be termed a "plan of attack," consisting primarily in convincing educational authorities and leaders, as well as teachers themselves, of the necessity and importance of teaching nutrition in the countries of Central America and Panama. After this work of persuasion has been done, it will be easier to proceed to the planning of programs, and when such programs are part of the over-all educational program of each country we will have the assurance of a more uniform pattern of instruction, with truly beneficial results.

The foregoing shows the advisability and the need to establish programs on sound and permanent foundations. It remains now to examine the specific problem of planning nutrition instruction within the educational systems of Central America and Panama. This problem consists in planning the programs to conform to the characteristics of the country in which they are to be carried out.

Perhaps as a result of the lack of nutrition training among educators, or perhaps because of time limitations, it has been noted that in some countries of the Central American area, when the question arises of introducing nutrition into school programs, the

usual reaction has been to turn to programs prepared *in* and *for* other countries in which this subject is already being taught. Such an approach in itself would not be wrong if the programs from other countries were used only as reference sources, which would be very helpful; but in most cases the programs from other countries are merely transplanted just as they are, which results in the establishment of a "completely imported" program. This technique would be useful, or at least less harmful, if the conditions of the country adopting the program were identical or quite similar to those of the country from which the program is taken, but generally speaking there is no such similarity and therefore the program is not well adjusted to the size of the country, being either too large or too small. Consequently, the program is either discarded or fails. For this reason, it is necessary, before establishing or planning a given program, to make a careful study of the problems and needs of the country in which it is to be applied, in order to have a reliable basis for its preparation.

If the program is to be suitable and achieve wide acceptance, it is also important to take into account the idiosyncracies of the local population and the feasibility of the program in terms of existing resources. It should be kept in mind that an excellent program has often failed because it is too ambitious. Such a failure represents a loss of valuable time and generally leaves the participants with feelings of distrust or opposition that lead to the forestalling of subsequent attempts to establish similar programs, even if the latter are based on careful studies and research. In such cases it is impossible to regain the confidence of the people and hence difficult to achieve acceptance of the new plan.

In this connection it is also desirable that the program be prepared in such a way that the people "feel" that the program belongs to them. This feeling of "identification" will

greatly facilitate implementation of the program because those for whom it is prepared will make the maximum effort to achieve its ultimate aims.

### Preparing a Program of Nutrition Education

The discussion that follows will center on a brief presentation of the points to be kept in mind in preparing a nutrition education plan, including the study of teaching systems, consideration of the various levels of instruction, determination of the amount of teacher preparation, availability and preparation of reference materials, and finally, the procedure for evaluating the plan.

#### *Study of the Educational System*

The first factor to be considered should be the educational system prevailing in the country where the nutrition instruction is to be given. That system includes the teaching plans and programs governing the activities of the educational institutions. It is important, therefore, to have full knowledge of the pertinent laws and regulations in order to adapt more easily to them; this knowledge must be acquired through research. The planners must know when the educational system was established, how it operates and what type of instruction it provides for, as well as its relation to the prevailing policies in the country, the plans and programs it includes, the possibilities of changing it in the future and of introducing nutrition teaching. In short, the planners must not overlook any of the aspects directly related to the plan they desire to work out and incorporate into the system, since all of them will undoubtedly affect it in one way or another.

#### *Instructional Levels*

This is a matter which, while included in the preceding category, should be dealt with separately because of its particular importance for the teaching of nutrition. From

the instructional standpoint it is useful and essential for knowledge to enter the mind of the child in progressive stages. This is as true for nutrition as for other subjects. As is known, it is virtually useless to plan for the primary level if this instruction is not reinforced and continued at the intermediate and vocational levels. An example of this is found in some countries in which the teaching of nutrition has been introduced at the secondary level but is not offered at the primary and vocational levels; the student reaching secondary school begins to receive instruction for which he has no prior foundation and which demands that he practice certain habits he ought to have acquired at an earlier age. He therefore finds himself in a conflicting situation in which what he knows and what he does are two entirely different things and it is often too late for him to change his habits. His learning is thus limited to the acquisition of knowledge that he does not put into practice and will therefore soon forget. And if the nutrition instruction is again discontinued when the student reaches the vocational level, obviously what he has learned is all but useless and the plan will therefore yield very little practical benefit.

Now let us suppose that this student chooses teaching as his profession. He can hardly teach nutrition when his own knowledge is so inadequate. Finding himself in these circumstances, and compelled to teach, he will either recognize his inability and refrain from teaching the subject or, what is even worse, he will offer a faulty kind of instruction based on superficial and, in some cases, erroneous concepts.

Hence it is felt that the only way in which nutrition programs and nutrition teaching programs will produce positive and lasting results is to plan them for *each and every* level of instruction found in the educational system of the country in which they are to be carried out.

### *Background and Level of Training of the Teachers*

Since the teacher is the primary interpreter of the program and the person directly responsible for carrying it out, his background and training in this field are matters that cannot be ignored if planning is to be effective. In this regard, the following aspects should be taken into account: the type of teachers the country has; the type of institution where they receive their teaching degree (teacher-training school or university); their academic background, and whether it includes nutrition; differences between rural and urban teachers; the procedure by which teachers are appointed; the methods used to supervise and evaluate their performance; what type of incentives, if any, they are given in their work; what is expected of them; and any other factors affecting the plan and its implementation.

It is also important to provide for the training of teachers who have no background at all in the subject. This is essential, since nothing is gained by planning a good program if those who are to carry it out are not prepared properly. If this is not done, the program will eventually be shelved and accordingly rated a failure.

### *Availability and Preparation of Reference Material*

It is necessary to ascertain whether the tools most essential for teaching—reference sources or works—are available. While it is true that pamphlets and studies on nutrition education issued and distributed by the Institute of Nutrition of Central America and Panama have been available for many years, one of the principal obstacles to the teaching of nutrition in this area has been the shortage of nutrition textbooks in Spanish.

Furthermore, it has often been observed that very few teachers are familiar with these pamphlets and little use has been made of

them. It is now hoped that the problem may be solved by publishing a nutrition textbook for vocational schools, including teacher-training schools, to serve as an officially authorized reference source for teachers. A publication of this kind would also ensure a greater degree of uniformity in the teaching of nutrition.

The availability of textbooks is very important for the development and execution of plans and programs, and they must serve not only the needs of the teacher but also those of students at the different levels. This point should be taken into account in planning so as to preclude a lack of textbooks from jeopardizing the success of the program and, rightly or not, serving as an excuse in the event of its failure.

### *Evaluation*

As is well known, evaluation is one of the most important aspects of program planning. First of all, an initial evaluation must be made to provide a point of departure that will enable subsequent planning to proceed on a realistic and practical basis according to the requirements and problems of a country.

It is also necessary to determine the nature and frequency of future evaluations of the plan in order to discover possible errors and make the necessary adjustments and changes. Periodic evaluations will help ensure that the program is being carried out properly and will offer an opportunity to encourage those responsible for its execution, according to the progress observed at each evaluation. The adverse effects of failing to evaluate the teaching of nutrition should be stressed; it is important to adopt specific evaluation procedures and to decide how frequently and by whom evaluations should be made, since this is the only way of determining whether a plan is appropriate and to what extent it has met with success.

### *Establishment of Priorities*

The establishment of priorities—one of the key steps in planning—is a difficult task requiring much experience and study by those responsible for it. In practice, it is impossible to formulate or select a plan on an arbitrary basis. Those responsible for plan design and implementation must be certain that the plan is responsive to the needs of the country and will yield definite benefits for its population. Otherwise, they will be acting in detriment not only to education but also to the economy of the country, since the failure of a plan entails a loss of time, money, and most importantly, public confidence in the planners and their efforts.

It may be asked at what point a beginning can be made to break the vicious circle hindering the effectiveness of nutrition education in the schools. Such questions arise as whether it is more important to teach the present student or to train the teacher, and how it is possible to know whether a plan is suitable. Actually the reply to all these questions depends on the circumstances and needs of each country, its resources, the possibilities of introducing nutrition into the curricula and of preparing the corresponding plans. If there is an opportunity to introduce nutrition into general primary school programs, either because an educational reform is being carried out or because the programs are being revised, this opportunity should be utilized and action taken to introduce the subject at that level, while awaiting a later opportunity to introduce it at the other levels.

Ideally, the subject should be introduced simultaneously into primary and vocational programs; this would prepare teachers and at the same time allow them to put their training into practice. Several Central American countries have done this by including it in such courses as home economics.

But it is not always possible to implement such a twofold program. When this

cannot be done it is recommended that the planners prepare plans of different kinds and have them available for use at a given time.

In the following paragraphs an attempt is made to describe plans of various kinds for each level of instruction and to indicate the advantages and disadvantages of each, as well as the means of putting them into practice. These plans may serve as a guide to planners of nutrition education, but the choice of the most appropriate plan would have to be made by those responsible for carrying it out in a given situation, on the basis of their own judgment and experience.

### **Plans for Introducing Nutrition at the Various Levels of Instruction**

#### *Primary Level*

At this level, nutrition practices and concepts can be introduced in two ways:

1. As part of established programs such as nature study or social studies.

*Advantages:* There is no need to wait for an educational reform in order to introduce the subject. Neither is it necessary to prepare a separate program or to establish a specific schedule of hours for instruction; the program can be carried out through the use of comprehensive teaching methods.

*Disadvantages:* There is a tendency to play down the importance of the subject and to relegate it to a secondary position or omit it entirely in the interest of other points of the program of which it is a part.

There is not always specific supervision or evaluation of the program, without which it is impossible to be sure of the results being achieved.

2. The subject can be introduced as a separate part of the over-all teaching program.

*Advantages:* Nutrition as a subject will be considered at the supervisor level and by those responsible for executing the program and will therefore acquire importance.

Greater emphasis can be placed on the teaching of nutrition.

A specific hourly schedule would be established for the program.

Specific standards for supervision and evaluation of the subject would be provided.

The results can be more accurately assessed.

*Disadvantages:* A change in the education laws is required to permit introduction of the subject.

The large number of subjects already included in the teaching programs sometimes makes it difficult to introduce new subjects and to establish a specific hourly schedule for their development.

The teacher must have a thorough knowledge of the subject to ensure proper implementation of the program.

#### *Intermediate or Prevocational Level*

At this level there are also two possible ways of introducing the subject. One is to teach it, as is already being done in some countries, as part of other programs (health or hygiene); or, if sufficient time is available, to teach it as an independent subject.

At this level, the advantages and disadvantages are similar to those described in the preceding section. However, a particular problem can arise if nutrition is taught in conjunction with another subject: for a number of reasons the subject will not always be taught on a compulsory and continuous basis or in proper sequence. In one country, for instance, nutrition was included in the home economics program, which was compulsory only in the first year. Hence, some students took this course only in the first year, or in the first and third but not in the second. In either case the instruction was incomplete and instructors had to teach students with varying degrees of preparation. Moreover, since the subject of which nutrition was a part was given only to female students, the male students completed their secondary schooling without having acquired any knowledge of nutrition. This is a problem that must be kept very much in mind when considering the introduction of nutrition at the intermediate level as part of an existing program.

#### *Vocational and University Levels*

The vocational and university levels are of major importance since it is there that teachers are trained.

The subject may be introduced in any of the following ways:

1. Organization of periodic, short in-service training courses for teachers.

*Advantages:* These courses can be given at any time of the year.

They can include persons from different areas or localities.

They help improve instruction by training persons with no previous opportunity for receiving instruction in this subject.

*Disadvantages:* Owing to the limited time available, it is difficult to select the content of the instruction to be given.

Short courses such as these lose their effectiveness if not continued.

The instruction is incomplete and superficial.

The courses do not always give very satisfactory results because of the large number of persons generally participating.

It takes considerable time to prepare teachers through these courses.

They cost a great deal of money.

It is difficult to evaluate them.

2. Inclusion of advanced nutrition courses and nutrition teaching courses in regular teaching programs.

*Advantages:* The teacher acquires sound and continuing instruction in the subject.

Greater importance is given to the teaching of nutrition.

It is possible to organize a formal course presenting the knowledge and practices of nutrition needed by future teachers.

It eliminates the need for future short courses and therefore saves time and money that can be used for other purposes.

*Disadvantages:* Introduction of such courses requires revision and modification of plans and programs currently in effect, as well as the implementation of an educational reform.

The personnel required to teach such courses in the teacher-training schools are sometimes in short supply or simply non-existent.

It is necessary to change the teaching schedules, which are often very full.

3. Organization of nutrition courses at the university level.

*Advantages:* They can be organized during vacation periods.

Teachers from different areas or localities can take part.

Credits can be given to the participants.

The organization of a formal course is feasible.

Since attendance is voluntary, better results are achieved.

Better supervision and evaluation of the courses is possible.

*Disadvantages:* It is often necessary, for want of properly trained local personnel, to use foreign personnel to give the courses, which is very costly.

In order to introduce the courses it is necessary to interest university authorities and to persuade them, which frequently takes a great deal of time and requires a certain amount of prestige.

### *Ways of Carrying Out the Plans*

At the primary level, as at the intermediate and vocational levels, there must be a review of existing plans and programs to determine whether the subject of nutrition can be introduced immediately and, if so, how this can be done to provide the greatest benefit to the country. For example, if an educational reform is in progress, there is an opportunity to see that nutrition is given the importance it deserves and is established as an *independent and permanent* subject.

It is always preferable to select the course that, in addition to being the most feasible, represents an advance for the country and meets the actual needs of its people.

Regardless of the plan selected, if it is not to fail provision must be made for training teachers to carry it out.

### **Summary and Conclusions**

The planning of nutrition education in schools involves a number of problems of which the following are the most important: (1) the lack of an awareness among teachers of the need for and the importance of teaching nutrition; (2) inadequate plans and programs; and (3) the failure to prepare teachers of nutrition.

When planning nutrition education, the following aspects should be taken into account: the educational system, level of teaching, preparation and training of school-teachers, the existence of reference works and sources of consultation, and finally, the evaluation of the plan and the programs.

When planning nutrition education programs for schools it is essential to ensure that these programs are, insofar as possible, *permanent, continuing and independent*.

At the same time, provision must be made for the introduction of nutrition instruction at all levels of education in the country and, when establishing priorities, it should be borne in mind that it is essential not only to teach students but also to teach teachers.

It is advisable for alternative plans to be drawn up providing various ways of introducing nutrition education into school programs so that the most useful, feasible, and advisable, at any given time and according to the needs of the country, may be available. Furthermore, when a plan is selected or drawn up, it should be viewed in terms of its relative advantages and disadvantages as compared with others, and the one that will be of greatest benefit to the country should be chosen.