CHAPTER I

INTRODUCTION

BACKGROUND

"Ignorance is the ally of hunger. Together with poverty which it often accompanies, it is basically responsible for virtually every case of malnutrition", says Autret. It has been shown that in many places in the world, malnutrition is the result of ignorance and prejudices rather than of the poverty and shortage of food. "Everything begins with education" is the opinion of Maheu (1967) the Director General of UNESCO. This undoubtedly expresses the need for an integral education meaning that basic understanding about foods and nutrition is an important part of total education. The concept that man should eat what instinct dictates has long been abandoned, and the need for food and nutrition education has been amply debated in all the national and international meetings where problems of a world wide, continental, regional and national basis have been discussed. All such meetings have confirmed that food and nutrition knowledge must be started at an early age in order to achieve a greater impact on the behaviour of an individual. Among these discussions, the one, most worth mentioning here is that, held during the joint FAO/UNESCO/WHO meeting, in the year 1964, on the role of a teacher in teaching food and nutrition, at which it was stated that "although the solution

of the problems of nutrition depends to a large extent on the solid economic and agricultural development of the country and the quantity and quality of the food available at reasonable prices, it has been generally recognized that the food habits and cultural patterns also influence nutrition. But how can the traditional, faulty food habits and the rigid cultural patterns which come in the way of good nutrition, be changed or modified, or corrected? The simple and the best solution is to educate individuals in nutrition.

It is heartening to note that such an awareness in 'nutrition' is being created in Science Colleges in general and Home-Science Colleges in particular in our country and elsewhere. One of the objectives of Home-Science Colleges is to develop good nutritional habits and this purpose is served by providing instruction through various subjects in the field of nutrition.

'NUTRITION' IN HOME-SCIENCE COLLEGES

Home-Science is the art of human-relationships as it consists of different domestic areas. The area of foods and nutrition needs a special stress for the special reason. Home-makers must be efficient at planning and preparing nutritive foods and inculcating good food habits in their families, which is very essential from the point of view of developing a healthy nation.

The field of foods and nutrition as it stands at the faculty of Home-Science, the M.S. University, Baroda, includes various subjects like (1) Elementary Foods and Nutrition, (2) Meal-planning, (3) Food-preservation, (4) Food-Science, (5) Applied Nutrition, (6) Infant Nutrition and (7) Nutrition-Education, which are being taught at undergraduate level.

Course on 'Elementary Foods and Nutrition' concentrates on seven basic food groups, nutrients and the deficiency diseases. 'Meal Planning' includes planning of cheap and nutritious meals for different age and income groups. The syllabus on 'Food-Preservation' consists of various food-preservation techniques used for preserving various foods. The course on 'Food-Science' teaches about the changes in the behaviour of foods when subjected to different conditions. The main objective of 'Applied Nutrition' course is to lay emphasis on the application aspect of knowledge regarding nutrition. 'Infant-Nutrition' covers the basic facts concerning growth and development aspects, and the diets for the children. Lastly 'Nutrition-Education' subject which has been incorporated in the curriculum very recently, trains the students from the point of view of communication methods related to the teaching of basic concepts of nutrition to primary and secondary level school children as well as the people in the community.

Thus Home-Science trained personnel have the distinctive knowledge required for training of teachers, social education officers and Gram Sevikas in training centers. At the State level Nutrition Extension Officers can be trained by Home-Scientists. This country has numerous outlets through which Home-Scientists can be used to improve the nutritional status of the nation.

The share of Home-Scientists specially the nutrition-experts is highly appreciable, in the sincere endevour, undertaken by the Indian Government to lay a strong foundation for a concrete and a massive Nutrition-Education programmes in different states of the country which would hopefully yield rich dividends in the years to come.

PROGRAMMES FOR NUTRITION-EDUCATION

To integrate nutrition-education at primary school level, National Council of Educational Research and Training (NCERT) has formulated plans to implement it in five regions with five regional centres namely Punjab, West Bengal, Madhya Pradesh, Gujarat and Tamilnadu, with financial assistance from United Nations International Children's Emergency Fund (UNICEF). In all these mentioned, zonewise regional centres, projects are launched for the last three years and the work in the same direction is yielding positive results.

Apart from formal teaching institutions, the state authorities, through Health Education Bureau and Nutrition Division have developed a programme of health and nutrition

education with more emphasis on nutrition and on personal, community and environmental hygiene.

Another popular programme called Applied Nutrition Programme (ANP) emerged officially in 1963 on an all India pattern with the avowed aim of assisting the people in the practical application of the knowledge of nutrition with the primary purpose of ameliorating the conditions of needy expectant and nursing mothers and the pre-school children in the villages. To-day this programme is strongly supported by the central government under the leadership of Community Development and Co-operation and those state governments involved. It is now being implemented in ten states and is developing in most of the others.

For the successful working of these and many such similar programmes which are run with the main aim of improving nation's health; training in the methods of health and nutrition education is included in the courses of instruction for medical officers, nurses, sanitory inspectors, health visitors, teachers in colleges of agriculture, veterinary science, human nutrition and Home-science. The same is also included for teachers in appropriate public health institutions concerned with the training of public health workers, gram sevak and gram sevika training centres and social education organizers' training centres. With an idea of penetrating the nutrition education also in the lower strata of the community, even block level officials, village level workers,

members of Panchayati Raj institutions and above all the farmers and the illiterate villegers themselves too, are imparted the knowledge of foods and nutrition and that of health under these programmes.

The above information can lead one, most willingly, to conclude without hasitation that 'Nutrition' is the subject of enormous importance, the knowledge of which is being shared by the people belonging to almost all the different categories of the society. But why? This can be perhaps truly answered by quoting what Sekhon (1974) has said, "The improvement of nutritional status of the population to enrich quality of life, nutrition education is very necessary".

Indeed a great awakening is being witnessed for the need of educating the educated as well as the non-educated, the 'haves' and 'have nots' i.e. the rich and the poor, in the area of nutrition, as it is the global problem.

IMPORTANCE OF NUTRITION-EDUCATION

Nutrition is the subject of national importance. It is the foundation of good physical and mental health. The immediate relationship of food to the health of the individual extends to become an influence upon the health of the society in which he lives. It has been said that "Nutrition is the science concerned with the movements of atoms in man to the movements of man in the society."

From the point of view of psychologists food is a basic need of human beings. From the point of view of physiologists and medical doctors, good nutrition is the foundation of good health. The retarded physical and mental growth of our youth is more often than not a result of under nutrition. According to educationists education is the corestone of good nutrition. This is mainly because it is primarily the responsibility of the educators to help the individual to understand what is good nutrition, good food habits and how to change nutritional needs. It is his responsibility to teach what are the different choices for meeting the daily food requirements.

Education in nutrition seeks to create an awareness of what we eat and its relation to our health. It does more. Gandhiji used to call education an instrument rather than an end in itself. Nutrition education is an instrument to achieve better dietary practices through better use of food resources. Nutrition education plays a very important role in diffusing ideas of balanced nutrition and cheap sources of protective foods. Through nutrition education we can raise the status of certain foods and bring them in favour with the people. The programme of nutrition education is very important from two angles. Firstly upon the health of the children lies the foundation of the future health of nation. Secondly the children when taught the subject of nutrition, convey their impressions of the schools to their houses, and parents which result in spreading the relevant education to the masses.

According to Swami Vivekananda, "Education is the menifestation of the perfection already in man"; which means that man due to his almost unlimited potential for expansion of consciousness as different from other living objects, can consciously and intelligently interprete his own actions. Animals instictively indulge in eating because of hunger. So does man, but man alone appreciates the biological mechanism as well as the socio-economic technology involved in the utilization of food for the survival and overall happiness of the species. Thus, the science of food and nutrition must be included as a subject of fundamental importance as it is intimately connected with the very process of survival of the human race.

A nutritionist would certainly agree with Dupin (1965) when he says that "nutrition education is imperative not only from the view point of health plans but also economic plans". To know how to make the best use of food resources is a principle of practical economics which not only means less expenditure at the family level but also can permit greater development of external trade for all those countries which are par excellence, food producers.

Nutrition education "an art and science in itself" according to Leveston (1968) should begin soon after the child is born. "Just as the child learns to write and speak", Escudero (1938) says, "it should learn to eat". Unfortunately parents cannot always educate the child well,

as regards nutrition, because many parents are ignorant about the basic rules of a good diet and can only teach what they have seen done or have heard their elders say. These rules handed down from generation to generation, may or may not agree with the canons of nutrition science, but in many cases they do not or do so partially. This lack of knowledge is not an exclusive trait of the less privileged classes, but has been observed in all socioeconomic groups and in all latitudes, in the most primitive and in the most highly developed societies. A study by Wilson and Lamb (1968) in the United States showed that a large group of women accept false beliefs about food, despite the fact that they have completed secondary or university education. When one speaks of beliefs and taboos, in referring to the more primitive groups of individuals, and of fallacies when dealing with more developed groups, one is basically dealing with two problems that have a common denominator: ignorance of what constitutes a correct diet and the existence of mistaken attitudes and habits - in the first instance imposed by religious beliefs and in the second by erroneous information.

According to Burton (1966) "education in nutrition is equally essential to correct erroneous information as to transmit reliable information. Foods and nutrition education should be integrated into all educational programmes, without limits imposed by cultural, economic or geographical

differences. The problems of nutrition are not particular to certain groups of people; they are diverse and exist everywhere. To quote Mehren (1968), Assistant Secretary of the U.S. Department of Agriculture, "Malnutrition in this country is not only due to poverty. Poor choice of food due to ignorance, faulty information and the simple lack of appreciation of the relationship existing between good nutrition and the health and well being of the individual, are the general causes in all ages and in all geographical areas, and in different cultures, different ethnic groups and different economic levels."

In fact war against nutritional problems can be won not in the farm houses or drug stores but in the millions of class-rooms with the help of advanced educational technology. This is truly the need of the day. It was not until rather recently that the full impact of the nutritive qualities of food on health and welfare of man was realized. Research findings on the effect of malnutrition on child mortality, on the frequency and severity of illness a person suffers, on physical fitness, on productivity and on mental development have alarmed the authorities entrusted with policy decisions on foods for the people.

It was once assumed that given the necessary educational opportunities and the environmental conditions, every child will grow into a bright intelligent and productive member of the society. Modern knowledge of nutrition however points

out that a child deprived of adequate food in quantity will be handicapped in development and intelligence, Bose, (1975). Profound significance of such observation makes it imperative that food should be carefully chosen to meet the essential requirements of nutrition at every stage of development in a man's life. Matter has assumed added urgency, due to limited availability of many articles of food and constraints of purchasing power. Nutrition education has to play an important role, in the connection.

In a developing country like ours where the availability of food is limited by low purchasing power of the people, by inadequate agricultural production and by high rate of population growth, a careful planning of food consumption balancing the nutritional requirements and the best use of the available food resources, is imperative. Knowledge of Nutrition properly imparted should considerably help in this exercise.

Nutritional deficiency diseases pose a major public health problem in our India today. India is the second most densely populated country in the world where approximately 15% of the world's population live on 2.4% of the world's land area. The ever burgeoing population (2.5% annual increase) has more than defeated the hope and promises of adequate food for all, inspite of the Green Revolution and the bumper harvest of 1976, '77 and '78. Sukhatne (1965) estimated that approximately half of India's population was

malnourished. The 6th plan ('78-'83) gives a similar estimate; 48% in the rural areas and 41% in the urban areas do not even consume 1000 calories per day.

If it is an accepted fact that malnutrition is not due to merely the inavailability of agricultural production to cope with the demand of increasing population but is mainly due to other factors viz. ignorance, false beliefs, taboos, superstition, traditional customs etc. In a country like India where poverty prevails, where deep rooted traditions, taboos and false beliefs have imprisoned the people the problem of nutritional disorders is more acute. Although all groups amongst poor are malnourished, yet there are some who are particularly vulnerable. They are the infants, the todlers, the pre-schoolers, the pregant and the lactating women. These demographic segments cumulatively account for approximately 30% of the total population of 625 millions who need urgent attention in terms of adequate nutrition and health care.

This reflects that nutrition plays a very important role in national development, since it ensures healthy population. There is no doubt that only a nation of sturdy people with strength and stamina, can face the challenges of modern life successfully. The intellectual and moral progress of a nation also depends upon the physical fitness of its people. Therefore if our country has to realise, its mental and moral potentialities of our people, we must lead a

healthy and vigorous life. It is a pity that large number of people in our country are still not nutrition conscious. There is much ignorance as to what constitutes the balanced diet. Even educated people in high income groups suffer from this ignorance. There is a greater emphasis on certain foods to the neglect of others, which have even more nutritional values.

Majority of the people feel, that abundance and availability of food alone can solve the nutritional problems, (Ganguly, 1975). It means that the countries which have enough to eat do not face the problems of nutrition. But the truth is far from it. Inspite of their affluence, all developed countries are very much concerned about the problems of nutrition and are careful in planning Nutrition Education to be rendered right from the primary school level.

Since "Nutrition" is regarded as the most vital problem of our country, the planning commission has rightly pointed out that all our plans and programmes are bound to be failure if ill health due to mal-nutrition continues, to cripple our citizens. Thus nutrition-education should form an integral part of country's food policy, because through such an education, best utilization of the available resources for optimum nutrition of the people can be obtained.

Indeed, the need of the hour, to-day is to incorporate basic information in regard to human nutrition, into the frame work of our educational curricula so that the younger

generations could grow with the basic knowledge of foods and nutrition they would require later. So there is an urgent need to create awareness for nutrition education through a well planned educational programme at all stages of education which would enable our students to appreciate the importance of our problem. Students in the schools should be told as much as they can assimilate at that age, so that they are sufficiently nutrition-conscious. The investigator is of the view that most of the Home-Science Colleges in India, have rightly incorporated, the subject of foods and nutrition, in their curricula since the college adolescents who are mainly the girls - the future house-wives and mothers - who are mature enough to understand and realize the application aspect of the subject more thoroughly and in turn help to over come the ignorance about nutrition which is the chief cause of mal-nutrition.

SOME ISSUES IN TEACHING 'NUTRITION'

As discussed earlier, information about nutrition is imparted formally right from the nursery school to the university level. Besides, the government has also launched several efficient nutrition-education programmes to enable the literates and the illiterates to be benefitted in terms of the adequate nutrition knowledge. Inspite of this, some of the basic issues that developing country like ours has to face today, are as follows: (i) Why most of our children are under-nourished? (ii) Why our pregnant and

lactating women are anemic? (iii) Why our youths lack energy? (iv) Why do we as a nation lag behind in games and athletic activities? (v) Why are the matured girls after being graduated from the Home-Science Colleges, still practising the conservative, conventional food preparation styles? (vi) Why can't they actually follow the right methods of cooking to conserve maximum nutrients in their kitchens with all the information they have acquired? The simple answer is, our educational process has failed, to an extent, in helping the learners to apply the knowledge with understanding. The students are deprived of the opportunities to get the first hand experiences through practical work. But why so? What creates such a situation? Is the syllabus very short lacking in the necessary knowledge? No, the syllabus is undoubtedly rich enough to provide varied and necessary concepts. Is the duration for teaching and learning very short? It isn't so. Even the time at the teacher's disposal is plenty. Then, are there no books or information available on the subject? Perhaps not; the supply of books to the university library is perennial. Is there no facility to make and use the audio-visual aids which make teaching interesting and learning meaningful? Infact most of the institutions can afford to use various teaching aids. Are the teachers in-charge untrained? Perhaps the teachers in charge are also trained professionally to do their jobs successfully. It can be truly admitted that, with all these, nothing substantial has been reflected to help the teacher or the learner. By and

large, the average achievement level of students does not show a happy picture of growth but the contrary of it. Investigator has a feeling that the situation can be improved by teaching the subject of nutrition in such a way that the students obtain maximum gains from the subject taught to them. In other words, the subject of nutrition should be taught effectively. But what is "effective teaching"? How can the subject of nutrition be taught effectively? Does "effective teaching" mean, teaching by using maximum teaching aids? or does it mean achieving only the instructional objectives? or that incorporating both in the educational system to make teaching effective? However, speaking frankly, the investigator, through her several years of teaching experience has gathered that some of the students find the part of the subject of nutrition a little more difficult compared to other subjects offered and their overall performance in the subject is also not up to the mark which is reflected in their achievement scores in the subject. This clearly suggests that most of the time the instructional objectives are not fully achieved. What is the real reason for this? The investigator has a feeling that one of the important reasons for this drawback may be the existing teaching method, the so called conventional lecture method, which is not only age old but which also lacks the useful and important medium attributes. It concentrates only on one component neglecting the larner's role in the teaching process. In fact it would not be wrong to say that

teaching at the university level is usually done in the form of lecturing, almost in the style of a one way traffic. What happens in the over-crowded class-rooms, to the students at the receiving end is probably nobody's concern, much less of the recipients themselves. In fact the traditional method of teaching chokes our students with a sense of inferiority when they are not in a position to assimilate what has been taught to them through lecturing. Consequently most of our teaching especially at the college level fails to achieve the objectives formulated before since the teaching method does not seem to attract the interest and the attention of the learners. This is not to say that lecturing is completely meaningless, but when it is coupled with other components like laboratory demonstrations, library reference work, and discussion, the learning out-comes become more useful and paying. In brief the teaching technique should be geared to the needs of the learners and the environment or the climate of the class-room where the students would be able to participate in the teaching learning process.

The other reason for the same drawback seems to be the poor teacher student ratio which exists to-day in higher education, as a result of which unmanageable classrooms tend to create boredom and fatigue on the part of the teacher and the taught.

The investigator interested in getting rid of these persisting defects, looked through the relevant literature

and studies to find a solution. It was revealed that one of the best ways could be to introduce a shift from teacher based to environment based learning. By an environment based system is meant a shift from teacher teaching to the learner learning in an environment where technological aids as well as teachers are available as resources. It is also heartening to note that studies and investigations in this area continue to highlight the need for evolving better teaching methods and procedures in the class-rooms. It would be interesting and essential, therefore, to first probe deeper into the researches and research findings in order to explore the possibilities of providing suitable methodology of teaching. Studies in instructional technology may also prove beneficial in developing and comparing better strategies of teaching an important subject like 'nutrition' in higher education. What follows now is a review of the researches carried on in our country and abroad in the field relevant to the present investigation.

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