

CHAPTER III  
Interdisciplinarity in the present research

INTRODUCTION

This chapter focuses on the interdisciplinary aspects of the problem selected for present research. The major points discussed in the chapter are

1. Limitations of the disciplinary studies about nutrition.
2. Limitations of the multidisciplinary studies about nutrition.
3. Methodological issues involved in the present study.
4. Need for holistic perspective about nutrition.
5. The need for combining educational and anthropological perspective to solve the present problem of nutrition education.
6. The important cultural constructs in the present study.

### 3.1 Limitations of the unidisciplinary studies about nutrition

From the discussion in the first chapter it is evident that a socio - culturally complex phenomenon has been selected for analysis. If a concrete interpretation of the phenomenon is made possible, it will have considerable implications for methodology of social sciences on one hand and policy towards an important dimension of quality of population in India on the other.

Each five year plan in India has paid more or less attention to the problem of improving quality of the population irrespective of the fact that economic growth was their major concern. This has, of course, included packages for improving the nutritional status of the population as it directly affects the quality of the population <sup>1</sup>. For stabilizing of these packages policy-makers have sought research assistance from a number of disciplines like Medical and Health Sciences, Engineering, Anthropology, Sociology and Psychological Sciences<sup>2</sup>. Thus, there is no doubt that the problem of nutrition has been thoroughly studied by different disciplines. Besides the applied research, these disciplines have also carried out pure research to strengthen their own theoretical perspectives. These developments show that the problem, hitherto, has been either dealt within a unidisciplinary or a multidisciplinary perspective.

The unidisciplinary perspective lays emphasis on tackling a problem through the use of theoretical postulates and methodology of a single discipline. The multidisciplinary

approach permits study of the same problem from the view-point of more than one discipline ; however, it also emphasizes on the mutual exclusiveness of all the disciplines involved in a particular exercise. These conditions obviously imply that (a) In a unidisciplinary study only a partial view about specific dimensions of a phenomenon is achieved, (b) While in a multi-disciplinary study totally different interpretations of the same phenomenon might result. There are peculiar limitations to the unidisciplinary research about nutrition improvement :

1. Medical sciences exclusively identified the physiological and other related biological aspects of nutritional improvement .
2. Psychological sciences isolated only the cognitive causes and effects of nutritional improvement<sup>3</sup>.
3. Anthropology and social sciences focused on the broad cultural aspects in an exclusively particular context instead of dealing with the general patterns related to the process. This had an inbuilt limitation of the theoretical tradition of anthropology in India i.e. there were few serious efforts at totally new theoretical constructs related to typically Indian phenomena<sup>4</sup>.
4. The theoretical limitation of Sociology to deal practically with full effect with the nutritional problems was rooted in its general insistence on isolating structural elements of any socio-cultural phenomenon. This had a limiting effect at the practical level in the form of inability to deal with dynamics of nutritional process<sup>5</sup>.

### **3.2 Limitations of the multidisciplinary studies about nutrition**

The multidisciplinary research is constrained to achieve lasting solutions to the problem of nutritional impoverishment due to following limitations : (i) Multidisciplinary effort is mainly characterized by team work on the nutritional problem by experts in different disciplines. This has definitely helped to study the broader dimensions of the problem ,but again such an effort is constrained to achieve lasting solutions due to inability to reach any generalizable conclusions<sup>6</sup>. (ii) Multidisciplinary research has helped to identify certain broadly defined variable related to nutrition. However, this broad conception of the problem has limited the search for the basic social , cultural units of analysis. That means that multidisciplinary approach does not lead to the emergence of structural -dynamic models of nutrition<sup>7</sup>.

### **3.3 Methodological issues involved in the present study**

The above discussion shows that there are certain methodological issues involved in finding a solution to the problem of nutritional impoverishment . This is reflected in a generalized state of nutritional impoverishment of the Indian population<sup>8</sup>. These are : (i) How does one delineate the problem of nutritional impoverishment?; (ii) What are the assumptions to be adopted to define the problem?; (iii) If concepts and techniques from the unidisciplinary and multidisciplinary approaches are not adequate what are the kind of new concepts and techniques to be developed? One may try to answer these questions in a sequence.

### 3.4 Need for holistic perspective about nutrition

How does one delineate the problem of nutrition impoverishment ?

The answer to the first question is already attempted in the first chapter. It is understood that the problem of nutritional impoverishment is apart of the larger problem of quality of population. This directly and indirectly affects the health, productivity and educational potential of an individual as well as society. At the broader level, nutritional status is a resultant condition of the dynamic interplay of a large number of social and economic factors. These very same factors affect the nature of other dimensions of development.<sup>9</sup> This extrapolation makes one point very clear that the problem of nutritional impoverishment can be tackled effectively only in a holistic perspective.<sup>10</sup> This holistic perspective must serve certain methodological functions. These are :

(a) Relating nutrition with other socio-cultural phenomena. It is particularly to be noted here that the state of nutrition is directly affected by socio-cultural factors like social discrimination, economic capability, taste for food types, religious beliefs, range of food items available in the market as well as, those cultivated locally , control over resources for production of food etc.. These factors interact with each other to produce a particular state of nutrition.

(b) Providing new cultural construct that can be conceptualized as an integrated system. Indeed, the present study aims to contribute towards this in a small way.

(c) Providing compatibility of data.

What are assumptions to be adopted to define the problem?

If the holistic perspective discussed above is to be implemented effectively, certain assumptions towards nutrition need to be adopted. However, adoption of the newer assumptions is not to be self-fulfilling only. It must lead to the emergence of theoretical constructs that conform to the norms of disciplinary knowledge.

These assumptions are : (a) Nutrition is an integrated system of production, distribution and consumption of food. (b) Nutritional improvement strengthens social development. (c) An agrarian community serves as a heuristic unit for analysis of nutritional processes . (d) An agrarian community provides a model of social organization of mobilization of nutritional resources.

(e) Nutritional information is a resource for nutritional improvement of a population. (f) An agrarian community is a social system consisting of groups of individuals with patterned interactions amongst themselves. (g) Nutritional information is an integral part of the social interactions between members of an agrarian community. (h) Exchange of nutritional information is related to the ecology of the agrarian community. (i) Exchange of nutritional information is a process of learning by individuals. (j) Incidental learning by individuals is structured.

### **3.5 The need for combining educational and anthropological perspectives to solve the present problem**

This set of assumptions helps to define the problem

precisely. Basically, one is dealing with an educational problem. Due to this, one is interested in bringing about a desired change in the behaviour of a community through an instructional programme. Therefore, it is required to :

- (a) Identify the learning processes related to nutrition in the community.
- (b) Identify the potential learners of the educational programme.
- (c) Identify the learning needs related to potential learners.
- (d) Define the goals of the education programme.
- (e) Define the context of the education programme with respect to learning needs.
- (f) Develop an instructing system for transfer of educational content.

This specification of the structure of educational programme is followed by the requirement to arrange the programme in such a manner that it is compatible with the perceptions of the learners. It follows that more the compatibility between these two aspects, more will be the effectiveness of the programme. If concepts and techniques from the unidisciplinary and multidisciplinary approaches are not adequate, what kind of new concepts and techniques are to be developed ?

Against the requirement mentioned above that there should be compatibility between structure of the programme and perceptions of the learners , one has to view the curriculum construction and programme development procedures in education. Traditionally, 'education' has mainly depended on survey techniques and control - experimentation techniques for the above purpose. These procedures certainly helped the efforts at curriculum and

programme development within the framework of normal school system, because here one is mainly dealing with the narrowly, however a well defined situation( with a manageable number of factors), characterized by short term objectives and an universal cultural context that led to the success of these procedures in a formal system.<sup>11</sup>

When one is dealing with a large open cultural system with its complexity and the behaviour of the cultural system is controlled by the larger environmental system, then the traditional educational techniques will not be useful. In the present case, such an eventuality is obviously present because here one intends to bring about a change not only in the perception of the learner but also in the relationship between the learner and his ecosystem. Also, education will not be able to deal with the problem at the theoretical level since such a perspective encompassing cultural and ecological aspects together is conspicuously absent in it.

On the other hand, one has to search for disciplines that deal with the cultural and ecological aspects in an integrative manner. These must also possess techniques of data collection and analysis that allow effectiveness in the programme development.

In spite of the limitations mentioned in Chapter I, one can consider Anthropology to serve the above purpose. There are certain marked advantages of an anthropological perspective that will certainly be helpful in dealing with the present problem. These are viz.

(a) Anthropology is holistic : Nutritional behaviour of an agrarian community will not be studied in isolation. Instead, there will be an attempt to relate nutritional sub - patterns in the community with its economic, ecological and larger cultural aspects. (b) Anthropology is historical : The relatively more permanent patterns of nutritional behaviour of the community will be identified. (c) Anthropological approach entails comparability : Nutritional behaviour of the community could be reduced to generalizable constructs that will allow comparison of the community specific behaviour with other communities. On the other hand, comparison of community's behaviour with that of the other communities is also possible.

These characteristics of Anthropology are in consonance with the very cross - disciplinary nature of the theory of Anthropology. Since its formal inception, Anthropology has shared theoretical and methodological concerns with neighbouring disciplines like Ethnography, Sociology, Psychology sciences and Ecology. Particularly in the 1960s, Anthropology started paying serious attention to the problem of attaining precision in predicting the behaviour of social groups. This concern went hand in hand with the emergence of two major perspectives in Anthropology viz. environmental perspective and personality perspective.<sup>12</sup>

The environmental perspective is very useful to deal with the present problem since it sees the interdependence of environmental conditions of a social group with its cultural

behaviour. In the present context, Environmental Anthropological provides one with following important conceptual constructs that will allow a precision in the arrangement of a nutrition education programme viz. (a) Exchange of information; (b) Interpersonal communication networks; (c) Agrarian village; and (d) Cultural ecology of nutrition.

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Before one goes on to the interdisciplinary dimension of these constructs, it is required to understand the anthropological dimension of these. This will be helpful to define the characteristics that the constructs will attain in the present interdisciplinary context. Thus, here one will consider the above mentioned constructs one by one as follows :

(a) Exchange of information : Two anthropological concepts are interwoven here viz. 'exchange' and 'information'.

The concept of exchange remained in Anthropology primarily through the economic studies carried out in non - western societies, especially, in tribal societies. It mainly includes the discriminatory as well as reciprocal transfer of objects, animals and wives among members of the same or distinct social groups. It is essentially based on the principle of ascribing value to the thing made available for exchange. This value may be either monetary or attached with the principles of power and prestige.

To extrapolate upon the concept of 'information', it is necessary to take a recourse to the view about 'culture' in Anthropology. One should refer to two major perspectives about

'culture' in that discipline. The first one is called as a realist approach which considers culture as an attribute of the social life of man. According to this view, culture exists at the normative, observable level of day to day life of a society ; and it can be understood as a hierarchy of cultural traits organized into cultural complexes.<sup>14</sup> On the other hand is the idealist approach to culture. This view looks upon culture as a system of ideas. These ideas are abstract in nature and distinct from the day to day life of a social group. The cultural system, according to this view, depends upon the communication of ideas.

Thus, apparently the idealist view of culture comes closer to the concept of information used here. In the present study information has been regarded as a cognitive phenomenon. This phenomenon performs two functions viz. a) Identification of things and b) Ascribing meaning to the things and their interrelationships. If one relates this concept of information with the idealist view then culture(or system of ideas) becomes a system of ascribing meaning to a range of things coming within human cognition. Thus, apparently the concept of information used here is much analogous to the idealist concept of culture.<sup>15</sup>

When the concept of 'exchange' and 'information' are interwoven together with respect to the principle of action or observable behaviour, then 'exchange' and 'information' refers to the communication of ideas between individuals and groups.

b) Interpersonal communication network : The concept of 'network'

is much in use in Anthropology for a long time. However, anthropologists had difficulties because of lack of a common understanding about the exact meaning of the term

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Nevertheless, a critical review of all the attempts at defining networks helps one to reach a functional definition of

network "which is a field of relationships between

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individuals". If one relates this concept of network with the idealist perspective, then a network becomes a system of linkages between individuals through which ideas are exchanged. Obviously, the act of exchange of ideas amounts to communication.

(c) Agrarian village : There is a long tradition of village studies in Anthropology. However, these studies mainly focused upon the day to day life of village communities. Given the particularist orientation of anthropological studies, these treated events from different space-time references as isolable entities and followed with differential treatment.

Nevertheless, it can be generally noted that an agrarian village is a corporate organization made up of functional endogamous groups enjoying a patron - client like relationship with certain segments of the larger social system. In such an organization , the social relationships are centred around agricultural and related economic activities. Additionally , the development of the means of communication have further facilitated the process of incorporation of the village community into the larger social system.

(d) Cultural ecology of nutrition : In anthropological perspective

nutrition has been understood as the behaviour related to production , distribution and consumption of food. Thus, through nutrition a social group establishes relationship with its ecosystem. If one relates this concept of nutrition with the idealist view of culture then nutrition becomes a communicative act among members of a social group and between a social group and its ecosystem. To state more precisely, the cultural ecology of nutrition consists of a composite system made up of two systems viz. socio - cultural sub - system and ecological sub - system that exchange information with each other. Nevertheless, the information of the ecological sub - system is communicable only through abstraction by the concerned social group i.e. the group perceives the ecological sub - system with the help of cultural perceptions and accordingly acts on it ; thus, leading to changes in the subsystem. This elaborate discussion about the important conceptual constructs in Anthropology helps one to see their conversion into interdisciplinary form. This conversion will be reviewed sequentially as follows :

1. Information remains as a system of ideas but it acquires new characteristics that are specific to a defined social field viz. nutrition. Thus, information becomes a system of ideas about nutrition ; and it becomes a system characterized by constant inflow and outflow of ideas related to nutrition. Thus, there emerges a specific category of information i.e. nutritional information.

2. The cultural ecological context with their specific behaviour content defines the learning needs. 3. If the community has optimized its nutritional resources through interaction with the ecosystem , then the focus of an educative programme must shift to environmental management education. This might be required against the possibility that the community has destabilized its ecosystem through optimization behaviour.

Thus, the interdisciplinarity of the present study is proved at the theoretical and axiomatic level. There is no doubt in the mind of the researcher that he is dealing with an essentially educational problem that can be explored and tackled only through collaboration and convergence with Anthropology. Practically, interdisciplinarity of the study can be represented through the interrelationship between the processes of learning (a concept rooted in education) and enculturation (a concept from Anthropology). Indeed, both the concepts deal with same phenomenon of transfer and internalization of information by individual members in a group. However, the integrative use of theoretical constraints and methods of both the disciplines is contributing by way of more explicit understanding required for preparing any programme in the area of development. Thus, it results in enrichment of thought and action required for improvement in the Quality of life.

**Summary :**

There are peculiar limitations to the unidisciplinary research

about nutrition improvement. These are :

1. Medical sciences exclusively identified the physiological and related biological aspects of nutrition improvement.
2. Psychological sciences isolated only the cognitive effects of nutrition improvement.
3. Anthropology and related social sciences focused on the broad cultural aspects in an exclusively particularistic context instead of dealing with the general patterns related to the process.
4. The theoretical limitations of Sociology to deal effectively with the nutrition problem was rooted in its general insistence on isolating structural elements of any socio - cultural phenomenon.

The multidisciplinary research is constrained to provide enduring solutions to the problem of nutritional impoverishment due to following limitations :

1. This kind of approach does not allow to develop any generalizable models.
2. The broad conception of the problem has limited the search for basic social, cultural units of analysis.

The overview described above shows that there are certain methodological issues involved in finding a permanent solution to the problem of nutritional improvement. These are (i) What are the limitations of the problem ? (ii) What assumptions need to be adopted in order to define the problem ? (iii) If the concepts and the techniques of the unidisciplinary and multidisciplinary

approaches are not adequate to explain the problem effectively, what kind of new concepts and techniques are to be developed ?

With respect to the first question, it is to be noted that the problem of nutrition impoverishment can be tackled effectively only in a holistic perspective. Effective realization of the holistic perspective depends upon certain assumptions about nutrition. However, these assumptions must lead to the emergence of theoretical constructs that conform to the norms of disciplinary knowledge. This is made possible in the present study as following points show.

Educational science has depended on survey techniques and control - experimental techniques to satisfy this kind of requirement. Nevertheless, utility of these types of techniques was proved more appropriate in formal schooling situations. When one is dealing with a large, open complex cultural system interacting with the larger environmental system then these techniques are not sufficient. Therefore, one has to search for a discipline that deals with the cultural and ecological aspects in an integrated manner. One can consider Anthropology to serve this purpose. In present context of the study, Environmental Anthropology provides one with following important conceptual constructs that will allow a precision in the arrangement of a nutrition education programme viz. (a) exchange of information, (b) interpersonal communication network, (c) agrarian village, and (d) cultural ecology of nutrition. Conversion of these conceptual constructs into interdisciplinary form is attempted here.

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