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ABSTRACT

Presenting proceedings and materials covered at an Asian curriculum workshop involving 15 participants from 7 countries (Afghanistan, Bangladesh, Indonesia, Malaysia, the Philippines, India, and Sri Lanka), this document includes: a discussion of criteria for curriculum analysis re: health education and nutrition instruction for grades 6-10; a description of field visits by workshop participants to innovative projects; and a discussion re: the coordination of curriculum and rural transformation. Included in the section on criteria are discussions re: goals, aims, and objectives; content; teaching strategies; resources; evaluation; and criteria development, feasibility, relevancy, comprehensiveness, and use. The section on national criteria addresses: content (health/nutrition); employable skills; rural transformation; teaching strategies and resources; and evaluation. Presenting guidelines for possible innovative curriculum development, five field visits are discussed in terms of participant observations and comments. The discussion of curriculum and rural transformation focuses on: rural transformation definitions; agency coordination; the development of data gathering instruments to identify community needs; and both broad and specific areas to be considered in curriculum development for regional, rural transformation. (JC)

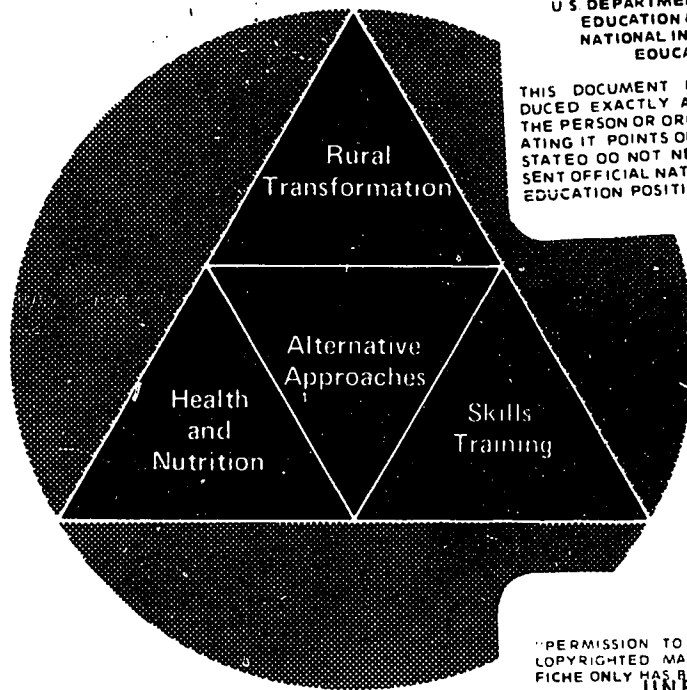
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Sub-Regional Curriculum Workshop
Colombo, Sri Lanka
1-30 October 1976

Final Report

Curriculum for Development: Analysis and Review of Processes, Products and Outcomes



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CURRICULUM FOR DEVELOPMENT:

Analysis and Review of Processes, Products and Outcomes

The *Asian Programme of Educational Innovation for Development (APEID)*, initiated on the recommendation of the Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia (May-June 1971, Singapore) and the authorization of the General Conference of Unesco at its seventeenth session (Paris, 1972), aims at stimulating and encouraging educational innovations linked to the problems of national development in the Asian region.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through their national centres which have been associated by them for this purpose with APEID.

The Asian Centre of Educational Innovation for Development (ACEID) has been established at the Unesco Regional Office for Education in Asia (Bangkok) to co-ordinate the activities under APEID and to assist the associated national institutions in carrying them out.

The main objectives of APEID are :

- to promote awareness of the need for educational innovation;
- to promote understanding of innovative practices, and to encourage experimentation and adoption of educational innovations;
- to help strengthen national capabilities for the creation and use of educational innovations;
- to identify and stimulate innovative activities and co-operative action among Member States; and
- to promote the transfer of experiences.

Sub-Regional Curriculum Workshop
Colombo, Sri Lanka
1-30 October 1976

Final Report

Curriculum for Development : *Analysis and Review of Processes,* *Products and Outcomes*



Sri Lanka Foundation Institute
Curriculum Development Centre, Ministry of Education, Sri Lanka
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Opinions expressed in this publication represent the views of the participants of the Sub-Regional Curriculum Workshop, and do not necessarily coincide with the official position of Unesco. No expression of opinion is intended herein concerning the legal status or the delimitations of the frontiers of any country or territory.

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Chapter One

INTRODUCTION

Background

A Sub-Regional Curriculum Workshop, organized by the Asian Centre of Educational Innovation for Development, the Curriculum Development Centre, Ministry of Education, Sri Lanka and the Sri Lanka Foundation Institute, met in Colombo from 1-30 October 1976. The purpose of the Workshop was, broadly, to provide experiences in the analysis of curriculum materials with a view to fostering awareness of alternative approaches to the attainment of educational goals, and to provide experiences in developing instructional materials for grades VI through IX or X relating to the areas of health and nutrition, the development of skills and rural transformation.

Objectives

The objectives of the Workshop were:

1. To familiarize the participants with curriculum projects relating to the three areas of (a) health and nutrition, (b) skills training and (c) rural transformation in grades VI through IX or VI through X (whichever range is applicable to their countries);
2. To develop in the participants the skills in preparing criteria for curriculum analysis and to enable them to learn the techniques of curriculum analysis and development;
3. To develop in the participants the skills in the application for curriculum analysis in revising their own curricula for the respective grades; and,

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4. To provide experiences for the participants in developing instructional materials in the above three areas for the respective grades.

Participants and faculty

Fifteen participants from seven Member States - two each from Afghanistan, Bangladesh, Indonesia, Malaysia and the Philippines, one from India and four from Sri Lanka attended. In addition to the participants - observers from Sri Lanka also attended the Workshop. (Appendix I).

The Faculty of the Workshop was composed of the following persons:

Dr. P. Udagama, Secretary and Director General of Education, Ministry of Education, Sri Lanka - Director of the Workshop.

Mr. R. Paskaralingam, Additional Secretary, Ministry of Education, Sri Lanka.

Mr. K.D. Ariyadasa, Deputy Director General of Education and Director, Curriculum Development Centre, Ministry of Education, Sri Lanka - Faculty Member and Executive Director.

Dr. M.B. Buch, Professor and Head, Centre of Advanced Study in Education, M.S. University of Baroda, Baroda, India.

Dr. (Mrs.) Genoveva Matute, Professor and Dean of Instruction, Director of the Bilingual Education Project, Philippine College, Manila, Philippines.

Mr. D.A. Perera, Director of Education, Curriculum Development Centre, Colombo, Sri Lanka.

The Unesco Regional Office for Education in Asia was represented by Dr. A. Latif, Chief of the Asian Centre of Educational Innovation for Development and Dr. Thamrong Buasri, Curriculum Specialist, ACEID, Bangkok.

Inauguration

The Workshop was inaugurated on 1 October 1976 at the Sri Lanka Foundation Institute by Dr. P. Udagama, Director of the Workshop. In his inaugural address he emphasized the need for Member States to evolve their own strategies for curriculum development unhampered by theoretical considerations and philosophical foundations borrowed uncritically from alien cultures. He drew attention to the present construction of an education designed to enable people to cope with their environment but which almost completely ignores the heritage of the people who have lived in that environment for centuries. He advanced the view that unless and until curriculum workers have faith in the people for whom education is being planned, curriculum development will lack the quality of being part of the people, their life and culture. He urged the participants to think afresh regarding age-bound, subject-centred curriculum construction, and pointed out the inhibiting effect of schools as they are generally organized now. He said that schools in general are isolated from the community, from productive work, from the thoughts and aspirations of the people and that as institutions they kill initiative and produce failure. Nevertheless he emphasized that schools should play a central role in the evolution of our future society. He urged curriculum workers to overcome the constraints imposed by their own earlier education and participate in designing an education which provides for the improvement of the deprived, disadvantaged, socially disabled and oppressed sections of society.

Mr. K.D. Ariyadasa, Director of the Curriculum Development Centre of Sri Lanka, and Mr. Heino Froehling, Director of the Sri Lanka Foundation Institute welcomed the participants. Mr. S.K. Banerjee, deputizing for the Resident Representative of UNDP, then addressed the participants. Dr. A. Latif, Chief of the Asian Centre of Educational Innovation for Development (ACEID), welcomed the participants and the resource persons on behalf of Unesco and ACEID and stated that APEID was a co-operative programme of 17 Asian Member States which has 46 Associated National Centres. The long-range objectives of the programme are to promote awareness of the need for innovation and the possibilities for change and to assist Member States in

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creating and strengthening national capabilities for the development and use of innovation in education linked to the needs of national development. He thanked the Governments of the Member States for extending their co-operation to the Programme. Mr. D.K. Subasinghe, Secretary of the Sri Lanka National Commission for Unesco proposed the vote of thanks.

Election of Office Bearers

The plenary session of the participants of the Workshop met under the chairmanship of Dr. P. Udagama, Secretary and Director General of Education, Ministry of Education, Sri Lanka, to elect the office bearers of the Workshop. Mr. W. Diyasena, Sri Lanka, was elected Chairman of the Workshop and Dr. Abdur Rashid, Bangladesh, and Miss Srie Soehartie, Indonesia, were elected Vice-Chairmen.

Organization and procedure

The activities of the Workshop were in four phases. The first phase involved the participants in a general discussion centring round the suggested criteria and the methods of analysis of curricula. This discussion took place at different times during the course of the Workshop, viz., immediately after the presentation of the criteria, after the discussion of the participants' reports on the analysis of their national curricula, and finally after the study-cum-observation visits to projects in the areas of health and nutrition, development of skills and rural transformation. This phase also included the discussion of the guidelines for developing and using criteria.

The second phase consisted of an exchange of inter-country experiences based on the examination and analysis of existing curricula undertaken during the in-country orientation phase of the Workshop. The deliberations in this phase helped to evolve a synthesis of inter-country experiences in developing or examining curricula in the three areas selected for discussion in the Workshop. The programme in the third phase consisted of study-cum-observation visits to projects in the three areas of concern.

Introduction

The final phase commenced with an exercise in the analysis of curriculum materials. The next activity was developing guidelines for studying communities, evolving data-gathering instruments for the purpose and discussing the possibility of using the data gathered to identify curriculum development problems. This was followed by the development of specimen instructional materials.

During the course of the Workshop, the participants discussed issues in plenary session and also worked in small groups.

The final report of the proceedings of the Workshop was adopted at the concluding session held on 30 October 1976.

Chapter Two

CRITERIA FOR CURRICULUM ANALYSIS

Introduction

The in-country orientation phase which preceded the Workshop was devoted to an analysis of existing curricula in the three areas of concern using the set of criteria prepared by the host country, Sri Lanka, at the request of ACEID. The terms of reference under which these criteria were produced are as follows:

To evolve a set of criteria for the examination and analysis of existing curricula in grades VI through IX or in grades VI through X (whichever range is applicable to Member States) with a view to determining how far national goals in the vital areas of health and nutrition, the development of skills and in rural transformation are, in fact, being realized through:

- (a) the curriculum as a whole, and
- (b) specific subject areas or specific programmes that form part of the curriculum.

Apart from the criteria themselves, the document prepared by Sri Lanka included a 'Definition of Terms' and 'Broad Guide Lines for the Examination and Analysis of Curricula'. Participating countries submitted reports of their analysis.

The suggested criteria for the examination and analysis of curricula

A. Goals, aims and objectives

1. In the design of the grades VI-IX or VI-X curriculum (i.e. deciding what subjects and what other projects and activities, if any, should be included in the curriculum

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for these grades): (a) were the goals of the educational system, and (b) the aims of the VI-IX or VI-X stage of education duly considered?

2. If the answers to (1) are in the affirmative, have they been explicitly stated?
3. If the answers to (1) are in the negative, can the goals of the system and the aims of the specific state that are implicit be spelt out?
4. Was an attempt made to consider what may be termed national goals for education as can be gathered from such sources as the Constitution, Developmental Plans, Policy Declarations, and the recorded and unrecorded aspirations of the people?
5. If the answer to (4) is in the affirmative, have they been explicitly stated? And, if the answer is in the negative, can they be stated now?
6. How do they compare with the goals referred to in (1a)?
7. Through what individual subjects, groups of subjects or other projects and activities in the curriculum are the outcomes expected to be attained in health and nutrition? What (employable) skills development and rural transformation are being achieved?
8. Is it possible to explicate the specific objectives of these individual subjects, groups of subjects or other projects and activities?
9. Do these specific subject objectives and the aims for grades VI-IX or VI-X (these aims may be called stage-wise objectives or intermediate goals) referred to in (1b) tie up with and lead to the attainment of the goals of education referred to in (1a)?
10. Are they internally consistent and have they been cumulatively built up?
11. Are they consonant with national goals referred to in (4)?
12. Have any significant aims and objectives been omitted?

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13. Has the community reaction to the goals, aims and objectives been studied? If the answer is in the affirmative, what action was taken in the light of such reaction?
14. In like manner, was the teacher reaction studied? If the answer is in the affirmative, what action was taken in the light of such reaction?
15. Have regional or sectional interests or institutions expressed views of favourable or unfavourable to the goals, aims and objectives explicit or implicit in the curriculum and, if so, what action was taken on the points of view expressed?

B. Content

1. Do the content and scope facilitate the stated or implicit goals, aims and objectives?
2. Are the content and scope suited to the grades for which they are intended?
3. Where more than one subject relates to the areas of concern; i.e., to health and nutrition, (employable) skills development, and rural transformation, has the content selection been co-ordinated with a view to attaining the purposes intended?
4. Does the selection and presentation of content bring out the underlying principles that give it structure or are they largely fact-oriented?
5. In the case of skills development does the content foster understanding of the processes involved?
6. Has sequencing been done with due regard to the nature of the subject and to the way children are motivated to learn?
7. Apart from the cognitive skills, do the content, its structure, scope and sequence assist in inculcating the values and attitudes that are consonant with the goals of the system?

Criteria for curriculum analysis

C. Teaching strategies

1. Are traditional strategies based mainly on the perpetuation of the printed word or do the strategies advocated reflect knowledge and understanding of how children learn?
2. Have children's interests been considered in the selection of teaching strategies?
3. Do the strategies take cognizance of the educational reasons for repeating classes and dropping out of the system and are they designed to remedy them?
4. Do the strategies require the use of materials and equipment readily available in the country and, wherever feasible, are the strategies activity-based?
5. Are the strategies calculated to foster, apart from the cognitive skills, the affective and the psychomotor domain objectives as well?
6. Do they provide all possible opportunities to pupils with disadvantaged socio-economic backgrounds?

D. Resources

1. Have problems arising from the inadequacy of human resources, if any, been taken into account?
2. If there is a quantitative inadequacy (a shortage of teachers) does the curriculum provide for measures such as the utilization of the unutilized potential in the community for successful curriculum implementation?
3. If the inadequacy is qualitative (if the teachers lack academic or professional expertise) has the curriculum been so formulated as to be capable of interpretation and implementation by the teachers in service, in their present state of knowledge, strengthened by whatever continued education as may be available to them?
4. Have plans been devised for such continued (in-service) education of teachers?
5. Has thought been given to the problems arising from the

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- inadequacy of material resources, if any? (Here material resources relate to physical plant, laboratory and workshop accommodation, equipment and teaching aids).
6. Has the curriculum been formulated realistically, taking the state of the material resources available into account, and, does the curriculum provide for the improvization and the utilization of the resources locally available to the fullest?
 7. Has time as a resource been taken into account, and, are the inputs of time consonant with the achievement of goals, aims and objectives of the system?

E. Evaluation

1. Is there evaluation material teachers may use?
2. Are the goals, aims and objectives which may be inferred from these compatible with the goals, aims and objectives of the curriculum obtained from (1)?
3. Are there goals, aims and objectives for which no suggestions have been made for evaluation?
4. Are the evaluation techniques suggested within the competency of the teachers?
5. Are material resources adequate to carry out the evaluation techniques suggested?
6. Are teachers expected to produce some of the evaluation material on their own? If so, do the teachers' guides contain adequate guidance? Or is this provided through in-service education programmes?
7. Have any suggestions been made to develop the skill of self-evaluation in pupils?
8. Are there any words of caution or some indication that significant aims and objectives may not be adequately tested by the techniques suggested?
9. Do the suggested techniques leave any place for the subjective opinion of teachers based on extended observation of pupils?

Criteria for curriculum analysis

Examination of the criteria

A number of sessions were devoted to an examination of the criteria and the methods of analysis suggested. There was consensus that the suggested criteria were useful in determining how far national goals in the vital areas of health and nutrition, development of skills and rural transformation are being planned through the school curriculum.

The initial discussions were mainly about the definition of terms. The fact that many terms overlapped made the analysis difficult. It was agreed that the definition of goals, aims and objectives cited in the Sri Lanka document was usable. A further clarification of these definitions was to associate them as indicated below.

- Goals - education system;
- Aims - sub-system of education system
e.g. aims of primary education, secondary education or aims of a subject area;
- Objectives - instructional units/activities.

Another term which led to much discussion was 'employable skills'. A view was advanced that school cannot teach 'employable skills' because the skills that schools may develop may, in fact, not be employable in the usual sense of the term. It was agreed that the term 'employable skills' may have more than one meaning. It may refer to manipulative skills which may be employed in everyday living as, for example, the skill of using a hammer to drive a nail. Or, it may refer to a manipulative skill with which some money can be earned. It was also agreed that skills involved not only a psychomotor component but cognitive and affective components as well.

The discussion also led to the recognition of certain aspects which, it was felt, should be referred to explicitly in the criteria; for example:

1. In developing curriculum materials for consecutive grades or school levels, it is essential to balance them. This is an important consideration and hence the criteria should explicitly refer to it.

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2. It is necessary that curriculum materials give a fair degree of freedom to the teachers to include new content necessitated by the explosion of knowledge. Teachers should also have the freedom to omit certain content which may become out-of-date. This does not imply a wholesale change of the content by the teacher but only certain changes to keep the content up-to-date.
3. The need for the content to be relevant to the pupils' environment is implicit in the criteria. But this aspect is of sufficient importance to require explicit mention.
4. The teaching strategies need not only to be activity-based but should also lead to creative and productive work by pupils. Hence the criteria should refer to strategies leading to creative/productive work by pupils.
5. There is an urgent need to develop self-learning strategies and hence it is better that the criteria should refer to them explicitly.

The discussion also elicited that some of the criteria are not easily applicable in certain situations. Some countries are still in the process of developing their curricula and hence appropriate curriculum materials are not available for study. In this situation, the criteria may be useful in developing the new material. In others there is no central national curriculum which could be analysed. A variety of curricula are used and it is not feasible to analyse all of them.

Broad guidelines for the development and use of criteria

A. Development of criteria

Owing to the variety of conditions which obtain in the different countries participating in the Workshop, it was felt that the development of a single set of criteria applicable to all the countries may neither be possible nor desirable. The Workshop was of the view that each country should evolve its own set of criteria for curriculum analysis and therefore favoured the preparation of broad guidelines which each country may use in the development of its own criteria. The following guidelines were discussed:

Criteria for curriculum analysis

1. The assumptions implicit in the criteria should be acceptable to the country

The criteria referred-to in the section on examination and analysis of curricula imply many assumptions regarding school organization, curriculum development and evaluation.

For example, criteria 13, 14 and 15 under "goals, aims and objectives" imply that certain steps are being taken to develop them. First, national goals are ascertained; then, aims and objectives are developed. This is followed by studying teachers' and parents' reactions. This is not the only procedure for involving the community in the development of goals, aims and objectives. An alternative procedure could be the following:

- a) Ascertain national goals;
- b) Study community needs with teacher participation in selected communities;
- c) Evolve sets of objectives, content, teaching strategies;
- d) Evolve flexible national curriculum.

There could well be other procedures by which the communities and teachers and others concerned may be involved in the development of goals, aims and objectives. Hence, in the development of criteria it is essential to recognize explicitly the assumptions implied by the criteria one accepts.

2. The criteria should be feasible

The resources available for using the criteria for curriculum analysis should be kept in mind in developing the set of criteria. The time of professionally competent people is at a premium in most countries. Criteria which demand an excessive use of highly trained professional time may actually not be feasible. Applying the criteria should not involve the use of procedures which may be too expensive either in terms of time or money.

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3. Criteria should be relevant to curriculum development

The curriculum analysis should lead to the improvement of the curriculum materials. Hence, the criteria should cover the aspects directly relevant to curriculum development and not so much other matters such as school supervision or teacher education.

4. Criteria should be comprehensive

The discussion reported in the previous section indicates that some factors may not receive adequate consideration in developing criteria. One needs to study the curriculum development process and the structure of the curriculum materials which are to be produced to ensure that all aspects directly relevant to curriculum development are taken note of by the criteria.

5. Analysis of curricula should elicit to what extent the existing curriculum is workable and suits the changing needs of the community

In developing a set of criteria for analysis of curricula, it is essential to keep in mind the major purpose for which the criteria were evolved, namely, the improvement of the curriculum development process resulting in improved curriculum materials. Curriculum analysis is not a barren academic exercise. It should result in some corrective measures being taken. Hence in designing criteria one should be careful to ensure that remedial action is possible.

6. Criteria should be reviewed periodically

Innovative practices are likely to arise. Current practices may no longer be adequate. In other words, the assumptions implicit in the criteria may no longer be valid. Hence criteria should be reviewed and renewed periodically.

B. Use of criteria

The guidelines for the use of criteria as given on the next page were discussed.

Criteria for curriculum analysis

1. A variety of people should be involved in the analysis of the curriculum materials

It is desirable that people who were not directly involved in the development of the curriculum materials be involved in their analysis. Depending on the particular way in which the criteria are structured, different groups of people may take part in the analysis. For example, in the criteria relating to strategies or methods of teaching, it would be very desirable to involve teachers in the analysis. At least some of these teachers should be outside the curriculum development groups.

2. An appropriate sample of curriculum materials should be subjected to analysis

As it may not be possible to analyse all of the curriculum materials relevant to the areas of concern, a sample may be selected. Each country should determine what is an appropriate sample considering the resources which it can command and its own national priorities.

3. The analysis should be done quickly

If the analysis of the curriculum materials takes as long a time or more than the time required to develop the materials themselves, then the analysis may not be useful. In the context of many Asian countries, action needs to be taken quickly to remedy existing defects. A quick analysis resulting in some remedial action being taken quickly may permit innovative curriculum development procedures.

Chapter Three

REVIEW OF NATIONAL CURRICULA

Introduction

During the in-country orientation phase which preceded the Workshop, participants were expected to analyse their curricula using the set of criteria supplied to them. Reports of this examination and analysis were circulated prior to the commencement of the Workshop. The examination and analysis was limited to the areas of health/nutrition, employable skills and rural transformation at the grades VI to IX/X stage of education. Each country's report was presented and discussed at the Workshop. It was agreed that the inclusion of the full country reports would make this report far too voluminous. Hence in presenting the overview given below, only extracts from the country reports have been included.

National goals, educational goals and objectives

The reports submitted by the participants clearly indicated that national curricula were developed keeping the national and educational goals in mind. These national goals have been defined in one or more documents like the country's Constitution, Resolutions of Parliament, Presidential Declarations or declarations by ad hoc commissions or other constituted bodies. The Ministry of Education usually translates the national goals into educational goals from which the educational objectives are formulated.

In Afghanistan, the national goals are based on the pillars of social justice, national unity, patriotism, true democracy and the religion of Islam. In conformity with these goals, the following "general objectives" (goals) of education were approved at a

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meeting of the members of the Economic Board of the Prime Ministry and the members of the Ministry of Education in 1974: (i) to promote sound growth in the youth of the society, to respect the principles of equality of opportunity in the education of students and to eliminate every kind of discrimination and preference; (ii) to promote physical, mental, psychological, emotional, artistic, moral and social developments in students; (iii) to orient the youth in the principles of science and methodology, acquaint them with logical thinking, acquiring sound judgement of realities and a world outlook; (iv) to prepare the youth for practical life and the grown-ups for acquiring literacy so as to get better results from work and actions; (v) to establish and strengthen close and permanent training liaison between teaching institutions and parents; (vi) to pay more attention to the training of students to protect their health and increase their power and achievement of work; (vii) to relate the levels of education and training of teacher institutions, in regard to quality and quantity, with economic and social plans of Afghanistan and with the training of requisite manpower at different levels; and (viii) to equip the youth with the spirit of actual democracy. The objectives of primary and secondary levels of education have been formulated on the basis of these national goals. The Afghan Educational Reforms also stem from these goals. The report indicates that the school curriculum is in consonance with these overall objectives

In Bangladesh the main goal of education is to generate among farmers, workers and other classes of people a feeling for the basic necessities of life and to motivate them for the creation of a new society which is efficient in the solution of everyday problems. The objectives of education in Bangladesh as indicated in the report of the National Education Commission are the following: (i) education for civic responsibility and loyalty to the government; (ii) education for humanism and world citizenship; (iii) education for moral values; and (iv) education for leadership, creativity and research. A National Curriculum and Syllabus Committee, established as per the recommendation of the Bangladesh Education Commission, is presently engaged in the development of the curriculum.

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In India, education is a State subject. However, at Central level, the Central Advisory Board of Education and the National Council of Educational Research and Training (which is an autonomous organization functioning under the Ministry of Education) provides guidelines to the States in the development and implementation of their school curricula. The educational goals and aims have been based on the reports of Education Commissions. The Education Commission 1964-66 underlined national development as one of the most important concerns of education and, in fact, visualized it as the only instrument of peaceful social "change on a grand scale". The report of the Commission was presented and discussed in the Parliament, and a Policy Resolution was adopted by the Union Government in 1968 in which the main recommendations of the Commission were accepted.

The school curricula in India are guided by the constitutional directives, developmental plans and policy declarations of the Central Advisory Board of Education. The Government of India has issued a policy statement which gives direction to the formulation of educational aims and objectives for the school curricula. A working group on curriculum was set up to assist the Education Commission which formulated the goals of education. The framework of the curriculum for the ten-year school, published by the National Council of Educational Research and Training (NCERT) in 1975, reflects adequately the national goals, aims and objectives of education. The national goals of education emphasize the following major aspects of the curriculum :

1. Flexibility within a framework of accepted principles and values;
2. Curriculum to be related to life, needs and aspiration of the people;
3. Science and mathematics for productivity and a rational outlook;
4. Work experience as a source of learning;
5. Social justice, democratic values and national integration;
6. The three-language formula;

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7. Artistic experience and expression;
8. The promotion of aesthetic values through physical education; and
9. Character building and human values.

The analysis reveals that the curricula in the three selected areas are in line with the national objectives, and no significant objective has been left out. The analysis shows, however, some disparity in the sequencing of content which is being corrected in the revision.

In Indonesia, the national and educational goals reflect the philosophy of the Indonesian nation which is embodied in the Pancasila (the five principles). The formulation of the national educational objectives is stated in the Peoples' Council Representative Decree No. IV/MPR/1973, the Outline of National Direction, as follows: Development in the educational field is based on national philosophy, the Pancasila, and is directed towards building up Pancasilaist human beings with noble characters. It seeks to create physically and mentally healthy Indonesian human beings with knowledge and skills and creativity and responsibility and to value democratic attitudes and mutual understanding. It seeks further to develop in them high intelligence and character, with deep affection towards their nation and fellow human beings as stated in the Constitution 1945. These national objectives have been further specified and the national curriculum has been built on these specifications. Since the curriculum 1975 was introduced only in 1976, no detailed analysis has been done as yet.

In Malaysia, the report of the Educational Committee 1956 states "the ultimate objective of educational policy must be to bring together the children of all races under a national system of education in which the national language is the main medium of instruction". Following the declaration of the RUKUNEGARA by the Yang Di Pertuan Agong in 1971, the Ministry of Education formulated the following goals of education to serve as guide for officials of the Ministry. The goals of education are (i) to foster more effective communication among the people of Malaysia; (ii) to perpetuate and enhance the understanding of the values of a democratic society; (iii) to provide equal educational opportunities

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for every individual in order that he can contribute effectively to the nation's progress; (iv) to develop a balanced personality in each individual by providing for the maximum growth of the aesthetic, emotional, physical and intellectual qualities necessary for better appreciation of leisure; and (v) to develop necessary skills appropriate to the utilization of scientific and technological advances in a rapidly changing society. On the basis of these, the aims of primary education and secondary education have been formulated. The curriculum is in consonance with these aims and objectives.

In the Philippines in September 1972, Presidential Decree No. 6-A entitled the 'Educational Development Decree of 1972' was issued, on the basis of which the current reforms in education are being undertaken. This decree outlines the national development goals and the objectives of the educational system. The objectives are intended to:

1. Provide for a broad general education that will assist each individual in the peculiar ecology of his own society, to
 - a) attain his potential as a human being;
 - b) enhance the range and quality of individual and group participation in the basic functions of society; and
 - c) acquire the essential educational foundation for his development into a productive and versatile citizen;
2. Train the nation's manpower in the middle-level skills required for national development;
3. Develop the high-level professions that will provide the leadership for the nation, advance knowledge through research, and apply new knowledge for improving the quality of human life; and
4. Respond effectively to changing needs and conditions of the nation through a system of educational planning and evaluation.

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Basically, the national educational goals embodied in Article XV, Section 8, of the Philippine Constitution and the national development goals mentioned in Presidential Decree No. 6-A, seep down to the objectives of education and to the specific objectives of the different subjects in the curricula and vice-versa. The analysis revealed a high degree of consonance between the curriculum and national/educational goals, aims, and objectives.

In Sri Lanka, the new Constitution adopted in 1972 declares that "the Republic is pledged to carry out the progressive advancement towards the establishment in Sri Lanka of a Socialist Democracy". The national educational goals are in keeping with this basic goal. Besides the Republican Constitution, the following documents were examined for the purpose of this analysis: the Governor General's speech to Parliament delivered on 14 June 1970; the Five-Year Plan presented by the Prime Minister in Parliament in 1971; "Adhyapanye Nawa Maga" (The New Path for Education), a document published by the Ministry of Education in 1972; and "The Medium Term Plan for Education 1972-1976" published by the Ministry of Education. The national goals of education have been identified as:

1. The development of language ability, mathematical concepts and abilities, aesthetic sensibilities and appreciation of the arts and well-informed and sound habits related to health and physical development;
2. The understanding of physical and social phenomena on a scientific basis;
3. The inculcation of positive values and attitudes conducive to the adjustment of life styles on the basis of such understanding;
4. The development and inculcation of humane and moral qualities;
5. The development of skills useful in day-to-day and vocational life;
6. The development of latent talents in children and equipping them to secure gainful employment in keeping with their abilities;

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7. The development of social skills and attitudes which will enable integration with the community;
8. The development of an awareness of the problems facing a fast-changing society and provision of the equipment necessary for involvement in solving those problems.

For the purpose of this analysis, curricula in Health Education and Science, Pre-vocational Studies and Social Studies have been considered as relevant to the three areas under examination, namely health/nutrition, employable skills and rural transformation. The findings of the analysis indicate that the objectives of the above subjects are consonant and consistent with the national goals and aims of education.

Content

A. Health/nutrition

In the area of health and nutrition education, it is found that except in the curricula of one or two countries, no special emphasis has been given to nutrition education per se. Even health education has been given an independent place in the curricula of only a few countries. Either health and nutrition are combined together or health education is combined with physical education. The curricula in this area of almost all the countries are more or less similar. The objectives are more clearly formulated than is the case with the programmes of skills development or rural transformation.

In Afghanistan, in the primary schools, health is to be taught and learnt so that emphasis is placed on good nutrition and healthful practices in the schools and in the homes. The curriculum follows a sequence that emphasizes structure and functions and control of the body with reference to the basic living processes like digestion and respiration, the biological need for air, water, food activity, rest and sleep, mental health, dangers to health from communicable diseases, accidents, drugs and protection of health through public health services and occupational and consumer hygiene. In the lower primary grades, health instruction and healthful school

living is emphasized in the interest of the health of the children. In grades IV-VI, the health curriculum aims at developing attitudes which relate health knowledge to growth. Again the scope and sequence of health instruction has been related to the changing needs and interests of children at different stages. A special feature of the health education curriculum is the inclusion of mental health and family life education.

In Bangladesh, health and nutrition education is one of the primary goals of education. It aims to develop knowledge, attitudes and practices to achieve effective, mature behaviour so that the students take more and more responsibility for their health and the health of family and community in turn. Health and nutrition education is multi-disciplinary in nature. It covers such diverse areas as the nature of disease, the complexity of nutrition, and sanitation. The health and nutrition curriculum for secondary schools aims, among other things, at developing an awareness of health factors influencing the development of a wholesome personality, helping the students in the cultivation of habits of living which will promote their health and developing in children a scientific approach to health problems. The curriculum includes personal cleanliness, food and nutrition for good health, first aid and safety, micro-organisms and diseases, food preservation, and the structure and functions of the human body.

In India, health and nutrition education has not been given an independent place as a subject but is so planned that it cuts across several subjects and activities in the curriculum. In grades IX and X, the Central Board of Secondary Education has established health and physical education as an independent subject. Personal hygiene, environmental sanitation, nutrition, population education and other such topics are also included in subjects like biology, hygiene, domestic science and home science. The programme of health and nutrition education aims at:

1. Creating an awareness in the individuals, families and communities of the need for adequate nutrition in promoting growth, development and health of children;

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2. Imparting knowledge about relationships between food, nutrition, health and hygiene;
3. Fostering desirable attitudes and habits towards food;
4. Making children aware of the hazards of adulteration, contamination and pollution.

In Indonesia both subjects are integrated or combined. Nutrition education deals with kinds of food and balanced dieting. Health education is correlated with Physical Education. Health (including nutrition) topics are included in the science curriculum on the one hand and, on the other hand, topics in health education are found in the curriculum of physical education. The syllabus on health and nutrition education includes units like community health, community health observation and improvement, planning individual health, calorie requirement, out-of-school activities (recreation, rest, relaxation) and advantages of exercise. The major objectives of health and nutrition education are :

1. To help students to understand the relationships between nutrition, health, body growth, energy and intelligence;
2. To make the students aware of the importance of a balanced diet;
3. To make the students accustomed to good food habits;
4. To make the students aware of the importance of sports in relation to health;
5. To impart to the students knowledge and ability to keep healthy; and
6. To develop in the students the capacity to acquire good health for their own benefit as well as for the benefit of others.

In Malaysia, the curriculum in the primary and secondary schools is designed to achieve an appreciation of the importance of health education in the total curriculum, an awareness of the importance of physical, emotional, social

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and community health, proper knowledge and attitudes in matters of health, a sense of responsibility to themselves (school children), their families and the community in health matters, and a willingness to play an appropriate part in the health of the school, the home and the community. The educational system takes care of health and nutrition through (i) the school health programme and (ii) health and nutrition education. The contents of the health and nutrition education syllabus include personal health, emotional and social health and community health. There is a well-planned programme for the in-service training of teachers in the area of health and nutrition education. The strategy is to train key teachers for primary schools who, along with the local health personnel and members of other agencies, organize orientation programmes for other teachers. The home science education syllabus also includes, among other topics, nutrition, mothercraft and home nursing.

In the Philippines the revised primary and secondary education programmes have the teaching of health concepts as one of the objectives of the school curriculum. Health education forms a compulsory subject in the curriculum for grades I-VI. Health education is bracketed with science in the curriculum of grades I-III, whereas health and physical education are integrated in the curriculum of grades IV-VI and through the entire secondary curriculum. Formal health lessons are given at least once a week. For content selection, a projection is made into the future by decision-makers in the area of curriculum. The latest projection suggested the curriculum imperatives which include, among other items, environmental education, population education, nutrition education, conservation education and drug education. These are presently integrated in practically all subject areas both in the primary and secondary levels, giving special emphasis in the subject to which it is most relevant, and in the other subjects giving reinforcement.

In Sri Lanka, for grades VI-IX, the health education curriculum is broad-based and consists of human physiology, personal hygiene, nutrition, public and environmental health.

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Even though there is no separate nutrition programme in the school system, it forms a major area of study in grades VI-IX in health education and science curricula, which are compulsory subjects. Some aspects of health and nutrition education are dealt with in home science and pre-vocational subjects. The school health and nutrition programme is geared to the goals set up in the national Five-Year Plan, which aims at raising the nutritional level of people in the low-income groups. A special feature in developing the curriculum in the area of health and nutrition in Sri Lanka is the special effort made through surveys to find out the requirements of various communities and their problem in health and the attempt to revise the health curricula through community participation. There is close collaboration between the Ministry of Health and the Ministry of Education in this programme and in the training of teachers in health education. The programme also includes projects in the area of health and nutrition education of the children and the community.

In all countries, the pattern of action indicates a team approach based on the collaboration between the Ministries of Education and Health in developing a programme of health and nutrition education for schools and in the training of teachers. In some countries, assistance from UNICEF and WHO have been utilized for this purpose. The need for providing in-service education to the teachers and the need to restructure the training programmes at the pre-service training level are acutely felt. The development of competence of the teachers in the subject of health and nutrition is carried out through teachers' manuals and the organization of seminars and training programmes of short duration.

B. Employable skills

The curricula indicate that, in the seven countries represented, educational programmes seek to develop employable basic skills in the youth. Skills development is given an important place in the curriculum in the grades under consideration, although subject designations differ from country to country; e.g., 'work experience' in India,

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'skills development through vocational education' in Indonesia, 'pre-vocational studies' in Sri Lanka. All country statements clearly indicate that the development of employable basic skills is considered a very important objective.

In Afghanistan, the curriculum of employable skills aims at developing skills in the area of agriculture, industrial arts and home economics. In agriculture the special areas are the raising of crops, and livestock and poultry farming. In industrial arts, skills in the areas of wood craft, ceramic craft, masonry, metal craft and leather craft are sought to be developed. In home economics, units on clothing and textiles are included.

In Bangladesh, basic employable skills are being developed in such areas as agriculture, gardening and livestock. The curriculum in the area of agriculture deals with types of soil, plants and trees of Bangladesh, and different rural handicrafts like leather craft, weaving or carpentry as for small cottage industries.

In India, skills development is ensured through a programme of crafts in the lower grades and a programme of work experience in the higher grades. The programme includes development of such skills as are useful for a programme of pre-vocational orientation. The curriculum aims at providing adequate experiences for the pupils of the higher grades in such areas as maintenance work and production-oriented work. In the lower grades, pupils are expected to develop, to a considerable extent, neuro-muscular skills with greater dexterity. The curricula in grades IX and X include six major areas of productive and creative work - science and technology, agriculture, handicrafts and cottage industries, fine arts, household activities and commerce and trade.

In Indonesia, a prominent place is given to skills development in the school curriculum. At the primary level, 40% of school time is given to skills development and at the secondary level as well, skills development is included not only in the vocational stream but also in the academic stream.

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The curriculum includes a special group of skills comprising agrarian skills, home economics, technical skills and managerial and service skills.

In Malaysia, in addition to the academic subjects at the Lower Secondary Stage (Forms I-III) under the Comprehensive Education System, the Ministry of Education in 1965 introduced four new subjects of a pre-vocational nature, namely Industrial Arts, Home Science, Agricultural Science and Commercial Studies. The aim of pre-vocational courses is not to train pupils to become skilled workers but to expose them to practical subjects. The programme in Home Science seeks to develop self-reliance, initiative and self-confidence and help pupils to acquire the necessary skills to achieve a happy life. The various activities included in the programme are needlework and dress-making, housecraft and laundry, mothercraft and home nursing and cookery.

Depending on the results of the Lower Secondary Education Examination, the pupils are selected into upper secondary education and are channelled into the various streams: science, arts, technical, commercial, agriculture, or vocational.

The vocational schools provide courses in various Engineering Trades, Commerce, Home Science and Agriculture with a view to developing manipulative skills, imparting technical knowledge and developing attitudes and habits necessary for employment in the commercial and industrial world. The courses provided are of two years' duration and approximately one-quarter to vocational education. This gives them entry into the employment market. The more successful candidates are eligible for admission into post-secondary institutions such as Polytechnic and Institute of Technology.

In the Philippines, the elementary work education curriculum is aimed at developing basic employable skills. At the second level, the practical arts and vocational subjects are designed for the development of employable skills and the experiences provided for this purpose are cognitive, affective and psychomotor in nature. The skills aimed-at

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are those that would immediately meet the needs in the industries and occupations that exist in the community. The skills development programme is so sequenced through the four years of secondary education that the developed skills fit into the needs and the developmental level of the learners. From simple basic manipulative skills, the child moves to specialized skills during the four years of the programme.

In pre-vocational studies in Sri Lanka, care is taken to see that programmes are oriented to community needs. For example carpentry relates to repairs of school furniture, shelves and the like. Pre-vocational studies in agriculture emphasize production under existing conditions. Courses of study are so designed that pupils completing the four year pre-vocational studies programme are in a position to execute selected manual skills with some degree of proficiency, to know the appropriate aspects of selected vocations, to become aware that knowledge gained in other subjects can be applied in studying about other vocations, and to develop a feeling of confidence and pride in their ability to participate in the production of marketable goods or the provision of socially useful services.

An overview of the programmes as embodied in the school curricula of the different countries shows that the development of employable skills is sought to be achieved through a programme of work education, project work, or a programme of work experience. All countries are concerned that the outcomes of education for the development of skills do not remain only at the cognitive level and, therefore, teaching strategies include a fair amount of practical work by students.

The programme of development of basic skills will result not only in the development of skills but also in a significant change in the attitudes and values held by teachers and students.

The problem of orienting the teachers to implement the skills-based curriculum is attempted through the in-service education programmes for teachers in all the countries.

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Again, in all of them, an effort is being made to exploit the human as well as material resources available in the community for the development of basic skills among the students.

C. Rural transformation

An analysis of the reports presented by the participants reveals that different approaches have been adopted by Member States to provide experiences in education for rural transformation. Being a non-traditional item in the school curriculum, there is a diversity of approaches in the national curricula of the Member States to achieve this objective. The components of rural transformation have been covered under subject areas like social sciences, natural sciences, pre-vocational programmes and the like. Only the Philippine curriculum mentions in specific terms the subject of rural development.

In Afghanistan, rural transformation is sought to be brought about through the acquisition of permanent literacy during the period of primary education and the inclusion in the curriculum of subjects like industrial arts, and agriculture, which deals with crops, livestock raising, poultry farming, farm management and other farm topics.

In Bangladesh, the study of crops, reforestation, conservation of land and water resources, irrigation, control of insects, pests and co-operative work have been included in the school curriculum toward rural transformation. Population education has also been included in the curriculum as one of the subjects to achieve rural transformation. The curriculum for grades VI to VIII has agricultural science as a compulsory subject and some handicraft/vocational skill courses as electives. In higher grades agricultural science is an elective. Further, there are proposals for non-formal education for regular students and drop-outs from grades VI and upward. For grades IX and X there is also a proposal for a vocational high school curriculum leading to S.S.C. (Tech.).

In India the curriculum does not specifically mention rural transformation but an analysis of the objectives indicates

that it is an integral part of the total curriculum. The programme of work experience and the subject of social reconstruction aim at developing an understanding of the need and the skills for bringing about rural transformation.

In Indonesia no one subject aims at rural transformation; the entire curriculum is so designed that skills development and rural transformation are emphasized in different subjects. Rural transformation is sought to be achieved through the development of applied skills. Subjects like fisheries, farming and livestock-raising in agricultural science aim at motivating pupils to undertake agricultural projects in school or in the community, and to assist the community in agricultural matters.

The curriculum of Malaysia does not specifically mention a programme of rural transformation, but it is assumed that through the programme of skills development and health and nutritional education, rural transformation will result. For the pupils of the lower secondary schools there are pre-vocational courses in elective subjects, some of which are industrial arts, agricultural science, home economics, and commerce and trade. The government of Malaysia has envisaged that the country will become an industrial urbanized country by the early part of the 21st century. Therefore schools in both rural and urban areas follow the same curriculum. The Third Malaysian (Five-Year) Plan aims at eradicating rural poverty and restructuring society. Education as a whole plays a vital role in rural transformation. University students regularly go out to take part in projects on a voluntary basis in the backward rural areas. There are regular courses for imparting vocational skills for school drop-outs or the unemployed, many of whom become self-employed or find employment in the neighbouring villages or towns.

In the Philippines, the present elementary and secondary programmes are multi-disciplinary in approach. Practically all subjects have concepts in health, nutrition and employable skills meant for rural and urban development. The areas that are basically concerned with these, however,

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are social studies, health and work education/practical arts. There is also a special programme for community transformation called "Youth Civic Action Programme". This YCAP period is devoted to the implementation of projects planned in class which are solely undertaken by the students or in co-operation with government and private agencies. The students undertake these projects anywhere in the community, working even on Saturdays and Sundays. YCAP activities range from beautification, reforestation, soil and water conservation, health and nutrition, food production and pollution control to the presentation of cultural programmes to transmit their cultural heritage.

In Sri Lanka the curriculum in the junior secondary school, grades VI through IX, has been designed in keeping with the aspirations of the people for a new social order. Content relevant to rural transformation is therefore found in all of the nine subject areas. Only the content of Social Studies has been analysed for inclusion in the country report. The curriculum for grades VI-IX provides functional literacy, functional numeracy, knowledge and skills for productive activity, population education, health education, child care, education in nutrition and sanitation and education in civic responsibilities. A forward thrust in agriculture is considered basic to a successful programme of rural transformation. To make this provision, the curriculum of social studies is designed with special emphasis on national and rural development. The curriculum includes such topics as needs of the people in the neighbourhood, natural resources, products and employment, water conservation, the development of society, the problems of food, land, employment, technology and development.

An overview of the programmes of Member States reveals that rural transformation includes within its purview such components as awareness of (a) democratic duties, (b) good citizenship, (c) the need for classless societies, (d) the need to remove superstitions and (e) the need for the development of healthy social attitudes. The programme is visualized as multi-disciplinary in nature. A second feature of the

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programme of rural transformation of the Member States is the awareness of the necessity to adopt unorthodox teaching strategies. This is especially seen in the programmes of Sri Lanka and the Philippines where the concept of rural transformation is sought to be developed not within the four walls of the classroom but through an integration of the experiences in the community to which the teachers and students are exposed with the experiences being provided in the formal school setting. The programme of implementing project work in schools is a new effort at exploring a new strategy of bringing the school and the community together resulting in a benefit to both. It is also visualized that for rural transformation the programme of non-formal education is likely to be more effective, but this programme of non-formal education needs to be undertaken by the students and teachers who are in the formal system of education.

The major problems encountered in implementing a programme of rural transformation is in the area of human and material resources. The human resources are mainly the teachers in the school and the leaders of the community outside. Both need a change of attitude - the teachers have to develop an awareness of (a) the necessity to make the school an agent of social change and (b) the community resources that are at the disposal of the school.

Teaching strategies and resources

The structure and function of schools tend to remain static unless special conditions are generated to make the system flexible and prone to change. External compulsions accelerate the change process. The development of a new curriculum is the result of factors both internal and external. Once a new curriculum comes into operation the various components of the curriculum also undergo change. Teachers, teaching strategies and resources are important components of a new curriculum. The reports of the analysis of the national curricula have revealed that all these components are undergoing significant changes. In almost all the countries it has been realized that the new curricula demand new teaching strategies, but the strategies adopted in the several countries are varied. Even within the same

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country, different strategies are employed with respect to the three different areas of health and nutrition, employable skills and rural transformation. At least two of the countries have developed self-learning kits and self-instructional modules following programmed learning techniques, (Philippines and Indonesia).

Another teaching/learning approach has been adopted which poses problems to pupils and helps them to solve the problems themselves. The problem-solving approach is not a new approach, but the use of such learning materials in the classroom situation is new. The very process of identification of problems, whether in the area of health and nutrition or employable skills or rural transformation, puts the pupils on the path of self-learning and thereby creates a feeling of self-reliance and self-confidence so needed in a world of rapid changes.

Project work is a new teaching/learning strategy identified in the analysis of the national curriculum (Sri Lanka). Like the problem-solving approach, project work is not a new device, but the way in which the project work is visualized and implemented is new. The major features of project work are: (a) projects must be community-based or must have a bearing on the development of the school neighbourhood or the wider community; (b) they should be multi-disciplinary in nature; and (c) they should be undertaken by a team rather than by individual pupils. The new curriculum in Sri Lanka has resulted in the innovative use of this teaching strategy - not that this strategy does not pose problems but the very fact that problems are identified and solved by the pupils is a new learning experience for them. It enriches the potential education outcomes of the project approach.

Teaching has been taken to mean a process that goes on within the classroom. This approach has led to pupils being bookish and theoretical. The compulsions of the new curriculum require that the teachers do not remain '4-by-2' teachers, i.e. they are not confined within the four walls of the classrooms nor between the two covers of the textbook. The curriculum which is community-oriented requires the teachers to move out of the classrooms to make their teaching more dynamic and realistic. This instructional strategy which includes activities in the

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community, field surveys and studies and learning from life as it exists in the community is an innovative approach practiced or proposed to be practised in almost all the countries represented in the Workshop.

One more finding of the analysis of the new curricula is the awareness that some aspects of a school curriculum are more of a multi-disciplinary nature. This multi-disciplinary approach is evident in the building up of the curriculum, in field work, in implementing the curriculum or in the inter-disciplinary approach adopted in the training of teachers. Whether it is the question of studying the community health problems or the development of employable skills or the implementation of a programme of rural transformation, the instructional strategy requires co-operative action between the teachers and personnel from other agencies such as agriculture, health, rural development, or the public works department. The traditional subjects in the school curriculum do not suffer through the employment of an inter-disciplinary teaching strategy. The curricula in the three selected areas make it more or less obligatory to adopt an inter-disciplinary group approach wherever it is feasible.

The new curriculum emphasizes a new approach to the identification, development and mobilization of new resources for its implementation. In a world of rapid changes there is a need for providing for the continuing education of teachers. The academic compulsions of the new curriculum underline the fact that teachers should develop a new awareness of the change in their role. Children today may learn more from outside the school than from within the school. This means that teachers should no more consider themselves as the main source of information for the children. They have to perceive their role as being the integrator of experiences which the children get from outside the school with the experiences the pupils get in the formal setting of the school. Again the teachers shall have to develop new skills in identifying resources available in the community for the development of the instructional programme. These compulsions demand continuing education of the teachers. The analysis of the national curricula has shown that all of the countries have significant programmes for the in-service education of the teachers in the context of the new demands imposed

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by the introduction of the new curricula. This is a question of resource development and resource identification and the existence of programmes designed to achieve these ends is brought out in the reports of all the countries.

For programmes of rural transformation or development of employable skills, community resources have to be utilized. There is evidence of this in almost all the countries, but in none of the reports has the identification of the relevant community resources been given special emphasis. Nevertheless, a beginning is noticeable.

In summary it can be said that the new curricula in the areas of health and nutrition, employable skills, and rural transformation have generated the awareness for (a) trying out new teaching strategies; (b) providing for the continuing education of the teachers; (c) identification and mobilization of community resources; and (d) adopting an interdisciplinary and team approach for successful implementation.

Evaluation

One of the criteria for the analysis of the curriculum is in the area of evaluation. Curriculum development is incomplete if it does not discuss the problem of evaluation and does not suggest appropriate procedures and tools of evaluation of the instructional outcomes. Reports of analysis of national curricula throw some light on this field.

In Afghanistan tests are considered more appropriate tools than pupil interviews or questionnaires but, for assessment of more intangible outcomes like pupil motivation or attitudes, interviews and class observations are considered more appropriate.

In Bangladesh a centralized examination system is prevailing now. There are four Boards of Examinations responsible for conducting the S.S.C. and H.S.C. examinations - at the end of 10 years and 12 years of schooling respectively. There is the Bangladesh Technical Education Board which conducts all different types of undergraduate, Diploma and Certificate Examinations on technical education. The National Curriculum and Syllabus

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Committee is currently working on developing a new evaluation examination system.

In India, the curriculum analysis report mentions that (a) the evaluation material is available for the use of teachers; (b) the evaluation techniques suggested are well within the competency of the teachers; (c) the material resources are adequate to carry out the evaluation techniques suggested; and (d) suggestions have been given to develop the skill of self-evaluation by students. The above observations apply to the curricula in general and the three selected areas in particular. The evaluation materials are available in texts and teachers' guides. In addition to that, the test-item booklets for different levels are available for the use of teachers. The evaluation is the traditional examination-centred type. Written and oral tests are the major tools of evaluation.

In Indonesia, in almost all schools, the evaluation is used mainly as a criterion to identify which instructional objectives are achieved by students. The instructional objectives must describe the pupils' behaviours which are observable and measurable. The teachers produce their own evaluation materials. The teachers' guides contain necessary guidelines for evaluation. In the Project Pamong' Solo, self-evaluation for a section of the module is implemented. Tutors give the test. For a block of modules, the teacher administers the test. It is noted that self-evaluation is quite effective as it encourages students to delve more into the learning materials.

In Malaysia, in the curriculum on health and nutrition, the Ministry of Education has drawn up guidelines for the evaluation of the programme. The guidelines deal with the objectives of evaluation in school health education, the agency that would evaluate, devices for measurement and aspects of the school health programme to be evaluated. For the Home Science curriculum, the evaluation consists of two parts: the Objective Theory Paper (75%), together with practical tests for cookery (15%) and Needlework (10%). Multiple-choice tests prevail in the theory paper. Items are developed by a panel of teachers, supervisors, lecturers and heads of schools. Items are processed and item analysis is carried out. The details of evaluation procedures are made known to the teachers.

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In the Philippines the teachers' guides include varied evaluation instruments and techniques which are within the competency level of the teachers. Written tests are reinforced by performance tests and other instruments such as questionnaires, checklists and interviews. Observation is regarded as a vital tool for the cross-checking of evaluation data. Most of the evaluation instruments recommended are to be prepared by teachers, individually or by committees. All of these formal and informal evaluation techniques and tools are utilized in both formative and summative evaluation.

In Sri Lanka, in the area of health and nutrition, some evaluation material has been provided in the teachers' guides. Instructions regarding various techniques other than written tests are also given. The evaluation techniques are within the competency of teachers. Evaluation material has not been provided for the nutrition component in health education, and no instruction is given regarding its preparation. In the case of pre-vocational skills, guidelines for evaluation have been provided. The evaluation scheme includes school-level and national-level evaluation. Assessment procedures for granting school grades are explained. For the evaluation of cognitive learning, structured essay-type tests supplemented by objective and oral tests are used. For psychomotor skills evaluation, observation of pupils at work and assessment of the finished products are used. Pupils are also encouraged to undertake self-evaluation. One limitation in the curriculum evaluation is the inadequate evaluation of objectives in the affective domain. In the case of social studies, the use of multiple choice and structured questions is suggested and some model questions are provided in course guides. An element of continual assessment has been introduced for field work, and the grades obtained form a component of the summative evaluation made at the end of the four-year programme. Inadequate resources and problems of preparing teachers to handle new evaluation techniques are also mentioned in the report on the Analysis of the National Curriculum.

Chapter Four

FIELD VISITS

Introduction

The third phase of the Workshop consisted of field visits to a few projects in the areas of health/nutrition, employable skills and rural transformation. The visits enable the participants to get acquainted with some of the innovative practices now underway in Sri Lanka. The visits also provided a concrete background for the subsequent discussions. Altogether five visits were planned. The visit to the Christ Church Boys' School in Baddegama to observe the pre-vocational studies programme did not materialize because the school was inaccessible due to a major flood. Brief descriptions of the projects observed, and the observations and comments of the participants are given below.

Visit to Mahasen Vidyalaya (Senior School) Nikaweratiya, to observe a school project in rural transformation

A. The project

The school is situated in the Kurunegala District in the North Western Province. It has both the junior secondary stage, grades VI-IX, and the senior secondary stage, grades X-XI. The school is situated on the bank of an irrigation reservoir from which it derives its name. The main occupation of the people in the area is paddy cultivation. Above the reservoir and close to the school is a village called Ambalagoddayagama. The senior secondary students have chosen to assist this village as their "project work", a compulsory component of the senior secondary curriculum. In designing and implementing their project for the improvement of this village, the school has been able to obtain the assistance of other State agencies and resource personnel in the

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area. Project work requires that such support be enlisted. Understanding of community problems and being of assistance to the community to solve their problems are among the major objectives of project work.

At the time the participants visited the school and the village, the pupils had made a systematic attempt to gather data about the village. In this they had received considerable assistance from the local Rural Development Officer. On the basis of this data, they had identified certain priority areas for action, namely, the supply of safe drinking water and the improvement of environmental sanitation. With the assistance of the local Public Health Inspector, a programme for the construction of latrines has been started. A private medical practitioner in the nearby town helps in the health education programme. Nearly all households now use boiled water for drinking. Students have supplied the physical labour required for constructing latrines and sinking a well. Pupils have also assisted the villagers in clearing land for cultivation. The local Agricultural Extension Officer has been of assistance here. The project continues and other problems are expected to be taken up in due course.

B. Observations and comments

The participants were briefed by the principal, his staff and the resource persons from other agencies who were taking part in the project. The participants were also able to meet the pupils engaged in the project.

The participants visited a number of households in the village where they met the Chairman of the Rural Development Society and other community leaders. The visit was followed by a discussion in which all those involved in the project took part. The main observations of the participants were as follows:

1. The objectives of the project are in consonance with the educational goals as reflected in the total school curriculum in Sri Lanka.

Field visits

2. The project is a well-conceived activity making a break-through in the traditional function of the school.
3. An effort is being made to make the pupils and the teachers aware of community problems.
4. The project helps to develop confidence among children that they can contribute to rural transformation.
5. The project helps to bring the school and the community closer.
6. There was evidence of the interest taken by the community in the work of the school. This augurs well to build up further co-operation between the school and the community.
7. A programme of this type could result in co-ordinating the efforts of the various government agencies in working as a team to achieve their ultimate objectives.
8. The project will help the teachers to perceive their new role in curriculum development.
9. The project will have a wholesome effect on teachers, pupils and parents leading to the development of healthy attitudes.

The participants felt that the project would be more effective if the activities were planned over a longer period of time enabling successive batches of pupils to take part in it. Such participation could be diversified and focussed on selected areas so that the impact may be greater. This requires efforts to build up a curriculum of experiences of development-oriented field work in such areas as those of health and nutrition, employable skills, agriculture, cultural activities, adult education, family life education, afforestation and conservation of natural resources. Care needs to be taken to prevent the project from lapsing into an ad hoc activity. Every project of this type should form an element in the comprehensive programme for rural transformation.

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Visit to Bodhiraja Maha Vidyalaya (Senior School) and neighbouring villages to participate in the "School Health and Nutrition Curriculum Revision Workshop".

A. The workshop

This was the second of a series of five-day workshops planned and conducted jointly by the Ministries of Education and Health. This series of workshops is preliminary to the launching of an integrated school and community health and nutrition education programme by the two Ministries. The medical faculty of the University of Sri Lanka assists in conducting these workshops. In Sri Lanka, health problems arise mainly as a result of malnutrition, poor environmental sanitation and poor personal hygiene. One may argue that many of these arise due to poverty, but there is no doubt that ignorance, taboos, misconceptions and the lack of correct attitudes towards health problems also figure among the significant causal factors. A vigorous community-based health and nutrition programme could go a long way in remedying matters.

The participants included heads of schools and selected teachers, representatives of parents, local voluntary organizations, local field staff of the Health and Education Ministries, and representatives of the Curriculum Development Centre and the Ministry of Health. The programme followed by these five-day workshops was as follows:

- 1st day: Medical inspection of children by the participants under the guidance of a team of doctors. Hence this session also serves as a training session for participants to detect abnormalities.
- 2nd day: Meeting of all participants in the workshop. The major work for the day is a symposium on "Challenges in school health and the school health education programme in Sri Lanka" and an analysis of the findings of the school medical inspection.

Field visits

- 3rd day: Community health survey - conducted by teams drawn from the participants. This is carried out in the morning and the data are analysed in the afternoon.
- 4th day: Presentation of reports on school medical inspection and community health survey. Panel discussion on "Health Concepts and Teaching of Health". Plenary session on "Identification of Basic Health Concepts".
- 5th day: Group work. Identification of learning needs and learning experiences related to the health concepts. Presentation of reports.
- 6th day:
(Sometimes)

A major outcome of this series of workshops is the identification of the learning needs of selected communities in the area of health and nutrition and the specification of suitable teaching/learning strategies. This will provide some of the data on which the present school curriculum will be revised. The more significant outcomes, however, are creating an awareness in the community of its health problems and generating a change of attitude in the teacher towards his pupils and the subject itself, resulting from the increased knowledge of the pupils' environment and their health problems. The experience gained from these series of workshops will be used to revise the Teachers' Colleges curricula and to design suitable in-service courses as well. The confidence and the willingness of every teacher, particularly those in the primary schools, to participate in a school medical inspection and a community health survey are the long-term expectations.

B. Observations and comments

The participants took part on the 3rd and 5th days of the School Health and Nutrition Curriculum Workshop. They joined the local teams in the community health survey. The participants also had an opportunity of meeting and holding discussions with the officials of the Health and Education Ministries who were responsible for designing and

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conducting the Workshop. The main observations of the participants were as follows :

1. The Workshop aimed at utilizing the experiences gathered from the survey of the community in revising the health curriculum.
2. The participants were drawn from various social groups such as teachers, parents, village leaders, health workers, trained medical personnel from the Ministry of Health and officers of the Curriculum Development Centre.
3. The survey of the health problems of the community with a view to develop and enrich the curriculum in the area of health and nutrition was an objective of the programme. The survey was confined to 60 families from the Thiranagama village by six groups of participants comprising medical personnel, teachers, parents and community leaders.
4. A Workshop of this type where the teachers are involved in a programme leading to the development of curriculum material is an activity that will result in the professional growth of teachers. Here the participants did not attend lectures on curriculum but were actually involved in the process of developing curriculum material.
5. Through this survey the teachers were given an opportunity to come into contact with the community and thereby to become aware of the social and economic backgrounds of the pupils whom they teach in the schools.
6. The participation of the personnel drawn from the Ministry of Education and the Department of Health was beneficial to the participants, in that they received expert guidance with regard to content and pedagogy.
7. Involvement of teachers in such activities over a period of days definitely resulted in the improvement

Field visits

of the teachers. In addition to the knowledge of the community which the teachers gathered during the survey, they also achieved a better understanding of their pupils.

8. Curriculum materials developed on selected units in different workshops of this type will generate a bank of materials which would be helpful to the Curriculum Development Centre for revising and enriching their materials including teachers' handbooks.

The participants felt that this was a well conceived programme with great potentialities for the professional growth of the teachers. This programme might be made richer :

- a) If the survey questionnaire were more carefully prepared so as to include those items that would give concrete instances and evidence that would in turn be of help in the revision and enrichment of the curriculum.
- b) If the Ayurvedic doctors living in the community were also involved as they are competent to advise on the medical uses of local herbs and as the rural community will have greater faith in them - being people of the area.
- c) If the findings of the survey were fed back to the community and remedial measures suggested to every household by teachers and health workers.

Visit to Majuwana Kanishta Vidyalaya (Junior School) and to the Mawadavila Hand-made Paper Unit

A. "Part-time Technical Training Programme for Out-of-School Youth" at Majuwana Kanishta Vidyalaya

A visit to the Majuwana Kanishta Vidyalaya was made in order to observe the course on paper manufacture by hand that was being conducted by this school as a part of the Ministry of Education's "Part-time Technical Training

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Programme for Out-of-School Youth." At present a variety of such courses, 650 in number with a total enrolment of about 11,000, are being conducted. The enrolment is restricted to unemployed school-leavers more than 17-years-old. The school, although free to select the particular vocational course it wishes to conduct, is nevertheless limited in its choice by the human and material resources it can command. The only financial assistance the Ministry of Education gives is an honorarium to the instructor; all other expenses have to be met by the school. Generally, the students are charged a nominal fee and the courses are conducted outside regular school hours. Each course is not expected to extend beyond six months and certificates are not necessarily issued at the end of a course, although the head of the school may issue a certificate of attendance. The major goals of the programme are:

1. To enable school leavers to acquire specific employable vocational skills needed by the communities in which they live; and
2. To widen the role of the school as a learning centre for the whole of the community (there are other Ministry programmes which also support this goal).

The Majuwana Junior School had selected paper manufacture by hand for the out-of-school youth programme for a variety of reasons. The school had a competent teacher, paper manufacture by hand being a pre-vocational study taught in grades VI to IX. A substantial part of the inexpensive equipment required was also available in the school. Waste paper for recycling could be obtained from the printing presses situated in the area. In the past, a paper manufacturing industry had prospered in this area but due to the importation of paper it had been forced to close. Articles made of paper such as envelopes, wrapping paper, paper bags and file covers were in short supply, and these could be easily turned out.

B. Mawadawila Hand-made Paper Unit

The Mawadawila Rural Development Society initiated the institution of this unit largely in order to relieve the unemployment rampant among the young women of the area, many of whom had completed grade X at school. Twenty-one young women were trained at the Majuwana Kantshta Vidyalaya under the Part-time Technical Training Programme for Out-of-School Youth. The unit is now managed by the Ratgama Multi-purpose Co-operative Society.

C. Observations

The participants, after detailed discussions with the officers of the Co-operative Society, the teachers, students and the 'out-of-school youth', made the following observations:

1. Fifteen out-of-school youth (boys and girls) were at work. There were 13 absentees due to the floods.
2. School leavers from several villages within a radius of six miles followed the course.
3. The course was held for three hours per day, two days a week, for a period of six months.
4. Some of the trained boys and girls found employment in hand-made paper units while others had plans of being self-employed.
5. This is an activity that is aimed at developing vocational skills in the out-of-school youth.
6. This programme indicates how non-formal and formal education can be integrated.
7. The programme has the potentiality of generating interaction between the school and the community.

D. The comments of the participants were:

1. There is a need to diversify activities and projects in the area of vocational skills training.
2. An attempt should be made to provide training in developing closely inter-related skills which might be of use in different types of productive processes.

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3. Although production is not less important, greater stress should be laid on the processes involved and their educational outcomes.
4. The educational aspects of the programme should be emphasized to the teachers, and care should be taken not to create undue hopes of finding employment as a result of this programme.

Visit to Hedunawa Madhya Maha Vidyalaya (Senior School)

A. A school programme in skills development/rural transformation

The school is situated in the Nuwara Eliya District in the Central Province. It has both the junior secondary stage, grades VI to IX, and the senior secondary stage, grades X and XI. It is the leading school in the Kotmale electorate. Among the villages served by this school are Navangama, Pusulpitiya and Muwan-keliella which have a tradition of metal work dating back nearly 2,000 years. The flow of factory-manufactured goods almost completely destroyed the local metal industry but some of the village craftsmen in Kotmale continued to practise their traditional craft against heavy odds. The practice of the craft was generally restricted to certain social groups. During the last four years these local craftsmen have been organized into a co-operative society called the Kotmale Light Engineering Co-operative under the District Development Council programme of the Ministry of Planning and Economic Affairs. This has enabled them to obtain raw materials, equipment and a steady market for their produce.

Metal work is one of the pre-vocational studies in grades VI-IX of the school. The school uses a syllabus and a teachers' guide prepared at the national level. The metal-work teacher in the school who is a native craftsman of the area has been revising the syllabus and teachers' guide. Under the project work component of the senior secondary school, the school has launched a study of the local black-smiths' organization - The Kotmale Light Engineering

Co-operative. The choice of the project was made by the school. Personnel from other agencies engaged in developmental work as well as people from the community are participating in planning and implementing the project. The design includes pupils working in selected village workshops under the guidance of the local craftsmen. Both boys and girls take part in this practical work.

B. Observations

The participants observed students engaged in metal work in the school workshop. They then divided themselves into groups and visited the three blacksmiths' workshops in which the senior secondary students work every week as part of their project work. They also visited the co-operative store which undertakes, among other matters, the distribution of the articles produced by the craftsmen. This was followed by a discussion on the theme "Relevance of the school curriculum with respect to the needs of the Light Engineering Co-operative" in which the workshop participants, the principal and staff of the school, some members of the Light Engineering Co-operative and some parents participated. The following are the observations of the participants :

1. The pupils had participated in discussions with the teachers before the selection of the project.
2. The students undertook a survey of the production processes, marketing, management and finance related to the project as a preliminary stage of the project.
3. While in this stage, they also engaged in working with the craftsmen in their workshops. This helped them to establish a good rapport with the community and also helped to break the cultural and social barriers that divided them from the community.
4. The community co-operated with the school by allowing the pupils to work in their work centres and also by being represented in the Advisory Committee of the project.
5. The students are processing the data they have collected.

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6. The knowledge and skills of the students related to marketing are also enhanced as a result of their involvement in the Co-operative Society.

C. The main comments of the participants were :

1. As a result of their involvement in data collection and processing, the students have acquired certain research skills.
2. The project has brought about in the pupils a positive attitude to manual work.
3. The programme has succeeded in reducing the gap between the school and the community.

Some implications

The observations made during the field visits provide support for many innovative activities now taking place in the field of curriculum development in the participating countries. They also provide some guidelines as to possible innovative practices in the future.

Chapter Five

CURRICULUM AND RURAL TRANSFORMATION

Introduction

As a field of study in which to develop curriculum material, rural transformation is relatively new. The theme was discussed in the Workshop. Rural transformation includes, among others, the improvement of health and nutrition and the development of employable skills. It also requires the co-ordinated efforts of many agencies, a Ministry or Department of Education being only one such. Most of all, curriculum workers and others interested in rural transformation need to be clear as to what the 'transformation' should be about. This was brought home very forcefully by a query which was raised during the field visits to some of the villages. "Why do you want rural transformation? The people are hospitable. They are smiling. They are happy. They have food to eat." This half-serious query in the midst of the obvious deficiencies and hardships faced by the people of the village indicates the need to be precise about the desired 'transformation'. Quite obviously there are many things rural which should not be transformed.

A definition of rural transformation such as "the far-reaching transformation of the social and economic structures, institutions, relationships and processes in any rural area"¹ is far too general.

It is also evident from the Country Reports that an analysis of curricula at a national level is not sufficiently helpful in surfacing inadequacies in the curricula that would lead to change at

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1. Philip H. Coombs, with Manzoor Ahmed, *Attacking rural poverty - how nonformal education can help*, Baltimore, Johns Hopkins, 1974, p. 13.

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the village level. Hence the participants were of the view that what 'rural transformation' means needs to be specified at the village level. During the many informal small-group discussions which took place during the field visits participants considered such questions as the following: Should this steep footpath be widened into a road? Would widening the road increase soil erosion? Can the people cultivate specific crops which would stand a drought much better? This kind of specific consideration which may lead to an adequate understanding of some aspects of rural transformation can arise only in the context of a particular village. Nevertheless, the participants recognized that the rural transformation of a specific village must necessarily take place within the national policies.

The participants agreed that, to specify rural transformation at a village level, one needs to gather data at that level, and involve the community, the school and other agencies in the exercise. The development of the curriculum itself should be undertaken with the active participation of all these groups. This however may be a long-term goal for participating countries. As an interim measure, it is very desirable that national curriculum groups attempt to generate the activities briefly described below. Within the constraints set by participating in a Workshop of this nature the participants attempted to practise these activities. For this purpose the participants divided themselves into groups.

Analysis of curricula

The need for each country to reformulate for itself the criteria for curriculum analysis has been referred to in Chapter Two. This Chapter also indicates broad guidelines for the reformulation and use of criteria. In the absence of specific curricula at village level, national-level curricula may be analysed using the reformulated criteria. But the analysis needs to consider the village-level perspective as well. For example, criterion number 13 under 'Goals, Aims and Objectives' should be taken as referring to the particular village community. Of course, some criteria must of necessity consider a national perspective because the development of a particular village must take place in accordance with national policies. This kind of analysis of existing curriculum material may reveal weaknesses which need

to be remedied and strengths which need to be perpetuated. During this Workshop, it was not feasible for the participants to reformulate the criteria nor was it feasible to analyse selected curriculum material from the standpoint suggested above. Hence the participants used the existing criteria to analyse curriculum materials brought to the Workshop by them.

Devising instruments for collecting data about a village and developing guidelines for their administration

Apart from the logical necessity for collecting data about a village, there are other compelling reasons why it needs to be done. It provides an opportunity for all people concerned to get together, to understand and appreciate each other's point of view and to develop a capacity to work together. It also provides an opportunity for the school to make a significant and tangible contribution to the transformation of a village. Considering most villages in the participating countries, the school is the village institution which is best equipped to gather, store and analyse data.

During the field visits the participants studied some of the data-gathering instruments which were used, with a view to improving them. For this purpose they divided themselves into three groups. The groups revised the questionnaires. The groups also made general suggestions for devising improved questionnaires. Some of these suggestions are given below.

A. Identify the aspects which need to be studied.

1. Natural environment and material resources. Under this aspect should be studied such factors as the land, water, mineral and other resources available, the houses, other buildings and roads.
2. Social and economic environment. Under this aspect should be studied the various social institutions such as the family, religious groups and educational groups, as well as the vocations, incomes and expenditures.
3. Cultural heritage. Under this heading should be studied such institutions as the customs and traditions, songs, dances, legends, heroes and heroic exploits, traditional culinary art and home remedies.

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4. Interdependence. In this category should be studied the relations between the village and surrounding villages, towns and State agencies.
5. Change. Here, the political, economic, cultural and social changes which may be taking place should be studied.

B. Group the questions under appropriate categories.

The following categories were suggested: Education, Health and Nutrition, Socio-economic conditions, Cultural and religious activities, Civic responsibility, and Community resources.

C. Consider the resources - human, material, time-available for carrying out the study.

D. Ensure the participation of all concerned in delineating the objectives of the study and in designing the questionnaires, in particular the community.

E. Include plans for the analysis and use of the data to be collected.

F. Carry out a preliminary survey.

The groups also considered techniques of administering the questionnaires. The following recommendations were made:

1. The objectives of the study should be understood not only by all involved in the data gathering but also by the community studied.
2. The community should take part in the data gathering and not merely be passive participants answering questions and supplying data.
3. If necessary, an adequate and representative sample should be selected.
4. The data-gathering teams should be briefed on the use of the instruments and their conduct during the survey.

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5. Wherever possible, the data should be cross-checked using other techniques such as reference to local documents, maps and photographs.
6. The data gathering should be done in stages.

Using the data to identify problems for curriculum development

The participants, working in groups, studied the data which had been gathered locally. One set of data was from Mahasen Maha Vidyalaya and the other set from a health and nutrition survey. The following extracts from the Group Reports discussed in plenary illustrate the thinking of the participants.

A. Data from Mahasen Maha Vidyalaya - illustrating how the data may be used to identify curriculum development problems

Data	Problems	Implications for the curriculum
1. Area 100 acres uncultivated land 25 acres. Elevation high. Suffers from frequent drought.	Lack of water for irrigation	What kind of irrigation technique of system may be taught and also constructed by the students?
2. Occupations : Agriculture - 11% Labour - 04% Trade - 08% Govt. Service - 07% Private sector - 05% Masons and Carpenters - 02% Others - 04% Unemployed - 59%	Unskilled labour force. Insufficient employment opportunities. Lack of drive to work among the people.	What employable skills may be taught in school? What learning would enable the students to be self-employed? What educational programme would change the people's attitudes towards work? What school products are marketable? What lesson would launch students into co-operative enterprises and initiate cottage industries?

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Data	Problems	Implications for the curriculum
3. Per-capita income Rs. 60/- per month	Low produc- tion from land.	How may students help in- crease family income? How may the yield of the land be increased? What goods can be produced from the community resources? What natural resources of the community have not been adequately exploited? What other products may be raised considering the soil and climate of the village?
4. Health No. of houses without toilets - 21. No. of houses with temporary pit toilets - 17.	Epidemics/ Anaemia/ Bowel diseases.	What sanitary toilets may be constructed by the students within the income of the family? What toilet attitudes, habits and prac- tices may be incorporated in the curriculum?

B. Data from a village health and nutrition survey -
Illustrating how the data may be used to identify
curriculum development problems

1. Breeding places for mosquitoes and flies are found in more than 65% of the houses surveyed. Knowledge and attitudes leading to the eradication of these breeding places should be included in the curriculum.
2. There is no proper disposal of garbage and refuse in some 65% of the households. The importance of proper disposal, the harms resulting from allowing refuse to accumulate should also be included.
3. Environmental pollution caused by animals and the resulting health problems should be given a place in the curriculum.

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4. Adequate knowledge and healthy attitudes leading to better sanitary and toilet habits should be conveyed through the curriculum.
5. Tooth decay and Mosaic skin are some of the frequent diseases prevalent in the sample surveyed. The curriculum should impart the necessary knowledge, attitudes and skills that could assist in eradicating these diseases.
6. The curriculum should give adequate emphasis to the development of healthy habits in oral hygiene.

Preparing curriculum materials

The participants worked in groups to prepare specimen curriculum material, not with the intention of producing specific material which any particular country may use but with the intention of acquiring further insights and skills in developing curricula for rural transformation. The three groups followed different procedures and produced different sets of specimen instructional materials. It was recognized that a necessary step in the process is the correction of the weaknesses in the existing curricula. This may arise from an analysis of the curricula as referred to earlier in this Chapter. It may be followed by the activities briefly described below.

A. Gather data about the community

Reference has already been made to the need to collect data. The participants also addressed themselves to the devising of instruments for the collection of data and advanced some views regarding their use (vide page 53). It was recognized that it is also possible that some data about the community may be available with other agencies. Such data should also be collected. It should be emphasized that "gathering data about the community with the help of the community" is a strategy used to stimulate and utilize their contributions based on their experiences and creativity. Incidentally, it would help to obtain their commitment and support for the programmes which were to be launched.

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B. Identify community needs and problems

It is quite possible to identify community needs and problems in a very general way without doing any systematic gathering of data about the particular community under consideration. Such a procedure is not likely to lead to the commitment and active participation of the community. The community is likely to conclude that outsiders who know nothing about them are planning their development. Hence it is considered essential that community needs and problems be identified on the basis of actual surveys conducted with the participation of the community. Section A on page 55 gives an illustration of how such data may be used to identify community problems. The following is an example of some community needs which may be identified on this basis :

1. The necessity for the provision of:
 - a) opportunities for self-employment;
 - b) a greater range of employable skills and the necessity for the eradication of fly breeding places.

C. Specify aspects of rural transformation

The Introduction of this Chapter deals with the necessity for specifying rural transformation at a village level. Given below are two illustrations of how the data about the community may be used to specify some aspects of rural transformation.

1. The data indicate that places in which flies breed are present in the majority of household compounds. There is no proper disposal of garbage and refuse. The way household animals are looked-after results in health problems and environmental pollution.

In such a situation, an aspect of rural transformation is a 'transformation' of the household compound so that it no longer provides breeding places for flies and there is proper disposal of garbage and refuse and care of animals.

2. The data indicate that many people of working age are unemployed. Nearly a quarter of the land available is uncultivated due to lack of a regular supply of water. The

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per-capita income is very low. One aspect of rural transformation in such a situation is a transformation of the occupational profile of the work force. Another aspect is a transformation of the uncultivated land into productive land by finding ways to cultivate it.

Different aspects may be synthesized. Each community needs to have its own specification for its own transformation. Specifying rural transformation in this manner has many advantages. It leads to the identification of very concrete objectives. It indicates action which needs to be taken by different agencies. It indicates the different educational programmes which may be required for the various groupings of people by age or sex (children, adults, women). It also indicates how inadequate the formal education system is to ensure certain aspects of rural transformation.

D. Identify areas for curriculum development

This step is to identify certain priority areas in terms of community needs, in consonance with the resources which the school has at its disposal and the particular constraints under which the school works. An analysis of existing curricula may be necessary at this point. An example of the kind of work which may be done with respect to the village referred-to in Chapter Four, A, on page 39, is given below:

Broad areas to be covered by the curriculum for rural transformation:

Environmental sanitation:

- Eradication of fly and mosquito breeding places;
- Disposal of garbage and refuse;
- Ventilation of houses.

Environmental pollution:

- Water pollution;
- Air pollution;
- Pollution by animals.

Personal hygiene:

- Health habits;
- Oral hygiene;
- Sanitary and toilet habits.

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Community welfare programme:

- Problems of irrigation;
- Purification of drinking water;
- Problem of unemployment/under-employment;
- Problem of deforestation.

Food production and utilization:

Food production:

- Kitchen gardening
- Extended cultivation.
- Tilling, use of fertilizers and insecticides.

Food utilization:

- Food storage
- Food preservation
- Judicious planning and consumption of meals.

E. Evolve development aims for the school.

These aims should indicate the rural transformation envisaged. Some examples are the following:

- Increasing food production in the home gardens.
- Eradicating breeding places of flies from the home garden.

The aims should indicate a positive contribution which the school is making towards effecting the desired rural transformation. In trying to achieve these aims the school may need the support of various other agencies and resource persons in the community. In particular it needs a positive response from the community as a whole.

F. Design curriculum material.

As a crucial component of the extensive activity of designing curriculum material, the participants felt that it would be most useful to give some examples of objectives which are directed towards meeting specific problems of the community; for example:

Understanding the nutritive value of the various types of foodstuffs available in the community and selecting a judicious combination of these foodstuffs to make a balanced diet.

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This objective comes well within a formal science or health curriculum. But the usual centrally-designed formal curricula may not have dealt specifically with special areas of concern such as foodstuffs available in a local context.

G. Design school-directed development activities.

These activities stem from the "development aims" referred to earlier. The development activities are to achieve these aims, and must of necessity be very specific to the particular community. They need to be designed by the local school staff with the participation of the pupils, the community, other agencies and local resource persons. Hence the development activity needs a format which makes its design relatively easy and not the time-consuming task that curriculum development activities generally are. Figure 1 gives an example.

In summary it may be said that the implementation of the curriculum for rural transformation should result in some observable change in the community. The desirable relationships are illustrated in Figure 2.

Figures 1 and 2 appear on pages 62 and 63.

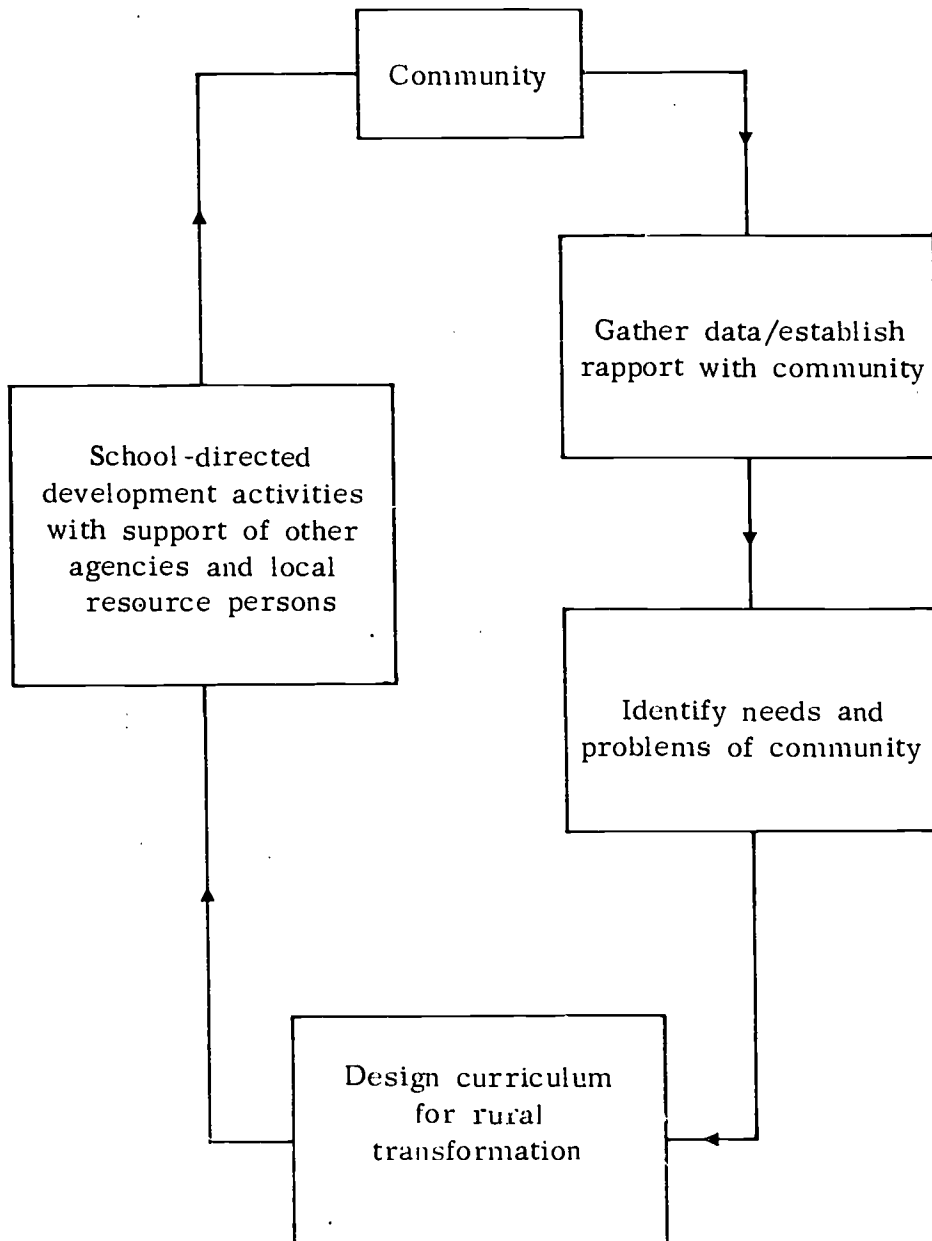
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FIGURE 1. SCHOOL-DIRECTED DEVELOPMENT ACTIVITY

1. Aim: To eradicate mosquito breeding places in household compounds (in a specified area).
2. Students involved: Students of grades VI-IX.
3. Plan of action.

Activities	Persons involved	Materials needed	Target date
Locating breeding places in the home compounds of students.	By each student (Students may help each other)	Check-list of possible breeding places (Output from science lesson)	
Discussing means of eradicating breeding places located.	All students, teachers, Public Health Inspector, some parents	To be supplied by Public Health Inspector	
Eradicating breeding places in the home compounds of students.	By each student (Students may help each other)		
School exhibition on necessity for mosquito control.	Teacher, all students, Public Health Inspector	Charts, posters, exhibits	
Locating breeding places in village compounds and carrying out eradication.	Students, parents, volunteers		
Survey of village compounds to check that they are free from mosquito breeding places.	Students		Periodically

FIGURE 2. RELATIONSHIP OF COMMUNITY PROBLEMS AND CURRICULUM FOR RURAL TRANSFORMATION



ANNEXES
AND
APPENDIX

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ANNEX I

LIST OF DOCUMENTS

1. SRCW (76) CR 1 - Afghanistan Country report
2. SRCW (76) CR 2 - Bangladesh " "
3. SRCW (76) CR 2 (i) - Bangladesh " " Supplement
4. SRCW (76) CR 3 - India " "
5. SRCW (76) CR 3 (i) - India " " Supplement
6. SRCW (76) CR 4 - Indonesia " "
7. SRCW (76) CR 4 (i) - Indonesia " " Supplement
8. SRCW (76) CR 5 - Malaysia " "
9. SRCW (76) CR 6 - Philippines " "
10. SRCW (76) CR 7 - Sri Lanka " "
11. SRCW (76) SP 1 - Criteria for the Examination and Analysis of Curricula.
12. SRCW (76) SP 2 - Analysis of Curriculum Materials.
13. SRCW (76) SP 3 - Pre-Vocational Studies - Sri Lanka.
14. SRCW (76) SP 4 - Pre-Vocational Studies - Syllabi, Sri Lanka.
15. SRCW (76) SP 5 - Project Work: a handbook.
16. SRCW (76) FV 1 - Visit to Mahasen Maha Vidyalaya, Nikaweratiya.
17. SRCW (76) FV 2 - Participation in the school health and nutrition curriculum revision workshop at Bodhiraja Maha Vidyalaya, Thiranagama, Hikkaduwa.
18. SRCW (76) FV 3 - Visit to Christ Church Boys' School, Baddegama.

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List of documents (cont'd)

19. SRCW (76) FV 4 - Visit to Majuwana Junior School,
Keredewala.
20. SRCW (76) FV 5 - Visit to Madya Maha Vidyalaya,
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Mrs. Melba Dytiapco
Dr. Badrul Millat

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Dr. Jaganmay Mitra
(Chairman)
Mr. G. Dharmawardana
Mr. Mohammad O Najand
Mrs. Kirat Singh

Group III

Mr. Junid bin Arope
(Chairman)
Mr. J.M. E. Fernando
Mr. Suhardjo Danusastro
Mr. Abdur Rashid

Group IV

Mr. George Garma
(Chairman)
Mr. E.J. Satgunarajah
Miss Srie Soeharti

Analysis of selected curricular material/ Examination of data-gathering instruments/ Development of instructional material

Group I

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(Chairman)
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Mr. Mohammad O Najand
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A P P E N D I X

Inaugural Address

by

Dr. P. Udagama

Secretary and Director General of Education
Ministry of Education, Government of Sri Lanka

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APPENDIX

Inaugural Address by Dr. P. Udagama
Secretary and Director General of Education
Ministry of Education, Government of Sri Lanka

We consider it an honour conferred by ACEID on us that the Sri Lanka Curriculum Development Centre was selected to organize a Workshop for Curriculum Planners from our friendly neighbouring countries. It is also my very pleasant duty to welcome you all to Sri Lanka and make available to you whatever little expertise we have gathered over the years in the development of new curricula in our school system. When we considered the request of Unesco our desire really was to learn from you and to benefit from your experiences.

Curriculum development as is now undertaken, is an exercise which has begun in recent years. In many countries of Asia it is of very recent origin. The newness of such programmes creates for us a number of difficulties and problems. As a result, we tend to look for guidance in curriculum construction and development to the familiar textbooks which we studied in Western universities. We are guided by their theories, their knowledge and the problems of implementation discussed in such texts.

These textbooks certainly are useful guides in our overall thinking but their details may not be so valuable in formulating our own devices for curriculum development. For example, when in 1972, we devised new curricula for grades VI-IX in Sri Lanka, if we went by the textbook example for curriculum development, our school reforms would have taken place only about 2002 A.D! It would have taken 30 years to formalize our curricula by testing, writing of textbooks and teachers' guides, training of teachers which would have taken that long and none

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of us would have been there to see it implemented one way or the other. We have to evolve our own strategies and ways and means of curricular reforms and implementation.

We who have emerged from a colonial occupation and have had our education in a foreign language should also be aware of certain problems of our own creation. In curriculum development, we are obsessed by the body of knowledge that we acquired in our learning at whatever stage we imbibed it. Hence, we believe that knowledge has quality if imported from the West. We also believe that conceptualized and useful knowledge is of value if it appears to us in a foreign language which has been given authority by some famous writers or professors. Hence, we have neglected indigenous knowledge of our classics of Sanskrit, or Chinese or Pali and also of our people. In fact, in some places we have totally forgotten their existence.

Besides this total dependence of knowledge which emerged from outside, we also tend to feel superior to the so-called uneducated masses of our countries. Hence, the depth of knowledge and the wisdom of our people have not really entered the knowledge base of our curricula. If education is to cope with its environment, people who have lived in that environment for centuries cannot be ignored.

In Sri Lanka we have introduced Pre-vocational Studies at Junior Secondary Stage and the 'Project Work' at the Senior Secondary Stage. In introducing these subjects we have taken some action to remedy the total abandonment of our people and their knowledge. Unless and until we have faith in the people for whom we plan education, our curriculum development and planning will lack that quality of being part of the people, their life and culture.

Quantifying knowledge into subject areas and also into specific age groups may be a convenient device for our thought processes, but it is doubtful whether learning takes place in this way. Our concern therefore, of age-bound, subject-centred curriculum construction has to be thought of afresh. We are trying to get over this difficulty, I presume, through the organization of non-formal and informal education in our country. Whether this is the correct thing to do, I am not fully convinced.

Our curricula now are organizing the teaching and learning of skills, attitudes, besides the usual knowledge component. How we can build into a curriculum the teaching-learning processes in all these areas is yet to be explored in depth. What we know in our own curriculum development is that some of our own cultural values which are essential for development programmes, are, in the process, given low priority or neglected completely. For example, we have discovered a problem which we had not envisaged earlier. We have organized a vocational training programme for out-of-school youth in about 400 senior schools in all parts of the country. These youths have been trained and are able to get a loan of Rs. 1,000/- from the People's Bank for investment in a venture of their own. I am informed that some of the youth do not want to make use of this loan as they are doubtful whether they could use this loan profitably and usefully. In other words, while giving them a vocational training, it appears that we have killed their innate initiative, risk-taking and the possibility of marketing their products. The school curriculum always seems to destroy the venturesome spirit by which the broad masses do find their own employment. In a situation of this nature, what should curriculum planners do to improve the initiative that these children have learnt from their own culture?

We, in the developing world, have little understanding of our own social, economic and cultural facets of our societies. While we pay lip-service to the modernization of our own societies, we are unable to grasp the basic problems of our masses in educating them away from the constraints of their own social systems. What does modernization of our societies mean? It is a problem which we have not yet faced, especially in the context of our rural masses. Modernization, as you know, is the pressing problem in all our colonial societies. True and meaningful interpretation of a modern society has not yet seeped into the knowledge base of our curriculum planners.

Education is basically for tomorrow. This tomorrow in our societies has to be developed with some conscious concept of what our future societies are bound to be. Even our planners have not consciously thought of the future of our societies. In

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short, we do not have a concept of what our society will be in a decade or two or three. Of course, we have the United Nations concept of a just economic order both nationally and internationally. So it should be the purpose of curriculum planners to interpret what this just economic order is, nationally, for our societies. Without a vision of a future, I do not think it is possible to plan for the curriculum tomorrow.

The future of our own societies is a confused one for us in the educational field. There is more in our societies than education with which we are concerned just now. We are living in a world of a number of explosions of which population and knowledge are important to us. Though they may have no apparent mutual connection - both are vital in education. Formal education has to cope with both phenomena. But we may try to look at the population phenomenon and to solve its problems at least in the school situation. We have introduced population education in our school curricula. But outside the school system children and youth mature and later become parents. What do we do for them?

The knowledge explosion has hardly affected our curricula. One way to cope up with this phenomenon is to organize for self-learning. We have hardly touched this area as we have made the teacher central to the learning process.

Our societies over the last two decades have been faced with the explosion of expectations of our peoples. In order to face this situation, we in Sri Lanka are turning the earlier elite system of education into a mass one. Other societies continue to support an elite system even when the masses do not have basic literacy. In most situations competition is fostered in the school instead of co-operation. How our millions are to face the future in a competitive society of scarce resources baffles us. What can curriculum planners do to face such problems?

We are committed to the democratization of education and the modernization of our societies. From personal knowledge we note that some of our Asian societies have faced the problem of modernization with different policies. Some have developed their capital cities to be exact models of the cities of their metropolitan countries. The urban elite is westernized and the

masses live in the classical pattern of poverty while modernization it is believed trickles down to them through education and mass media. Some societies consciously cultivate this type of urban modernization and rural deprivation with the idea that the peasants are happy.

Other nations have taken action to modernize both rural and urban sectors. Still others have invested in rural and urban man at the cost of impressive buildings, highways and similar massive projects. In such countries the accent is on the improvement of man. Education, health, nutrition and welfare services are organized for the well-being of man as the only valid base of modernization and development.

Whatever the national objectives and strategies for national development may be, the school is central to this activity in our societies. Our schools however, remain insular. The school is insulated from the community, from work, from production, from the thoughts and aspirations of the masses from whose taxes we maintain this educational institution in splendid isolation. The school still maintains the idea of the scholar as one steeped in books and useless knowledge, aloof to all mundane matters and in fact above the life of the masses. This mandarin mentality is as abrasive as the white-collar one. In this context a good technician is considered not educated by our schools. Acquisition of skills is still not legitimized by our schools.

In underdeveloped societies the school itself becomes a factor of under-development. In the rural setting the school appears as an alien institution, purveying learning of a sort that is out-dated and eventually the pupils are misinformed. In comparison with the well-equipped and well-organized urban school, the rural one creates an environment of despair. The curricula and the teaching method destroy whatever hope the masses have built in themselves in their struggle against man and nature. This rural symbol of underdevelopment should hamper progress no more in our societies in providing basic general education to our masses.

Our own curricula imported or locally made seem to manufacture failure. In our own system the repetition rate at the

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primary school alone costs Rs. 31 million a year. The failure rate at the earlier General Certificate of Education (Ordinary Level) - the final school examination was so high as to be named the 'slaughter house' by an ILO study in Sri Lanka. 'Merit' and 'standard' are often quoted to justify this failure rate. With such a rate of failure how do we build up a society of young men and women with confidence to overcome the social and natural disabilities of our own societies?

We appear to develop our curricula for specific schools and specific grades of schools. The symbolic school for the masses is an alien institution, insular in outlook, removed from its culture and its activities. It will perhaps be helpful to develop curricula for the child both in and out of school in a non-formal and formal set-up in a particular culture. We may have to plan broadly for the child and his entry into an enrichment of his own culture.

As educators we have to take a fresh look at the school curriculum, the child, his culture and the process of modernization and development. We tend to evade basic issues. We do not look at our own people with compassion and understanding. Our pre-digested knowledge component should not blind us to the reality as perceived by our own people.

In a remote and ancient settlement in Sri Lanka when a Cabinet Minister asked what the community wants from the government, the reply has been "Sir, we know no letters, we do not want jobs, our recourse is the sea. Please give us boats". How does one re-organize the curricular needs of this community? I am afraid we have many school communities that have not been touched by our education. If education reaches them, we seem to destroy their natural pride and ability to cope with the environment.

In our curriculum development and planning we have to be aware of the 'Socio-techno-politico-economic context'. Education must provide for the improvement of the deprived, disadvantaged, socially disabled and oppressed sections of society. Education has also to link learning with productive work. Schooling should not destroy our own cultural values but we must not be afraid to think and plan beyond the constraints of our own earlier

Appendix

education system and our knowledge imported and protected by our middle classes and even the intelligentsia. Let me end with an Arab proverb that says man is often more alien to his times than to his father. This thought ought to help us guide ourselves in the exercise of this workshop concerned with rural upliftment of the Asian masses.

PUBLICATIONS RELATED TO CURRICULUM FOR DEVELOPMENT

Available from Unesco, Bangkok

1. *Teacher education and curriculum for development, 1975*
2. *Science in basic functional education: philosophy, approaches, methods and materials, 1975*
3. *Science in basic functional education: links with real life situations, 1975*
4. *Curriculum development for work-oriented education (in collaboration with NIER, Tokyo) 1976*
5. *Co-operation in curriculum explorations, 1975*
6. *Towards strategies of curriculum change, 1976*
7. *Lifelong education: the curriculum and basic learning needs, 1976*
8. *Integrated approach to curriculum development in primary education in Sri Lanka (in collaboration with IBE) 1976*
9. *Integrated science in the junior secondary school in Sri Lanka (in collaboration with IBE) 1976*