



REPORT OF A WHO SCIENTIFIC GROUP ON EDUCATIONAL RESEARCH

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1. INTRODUCTION

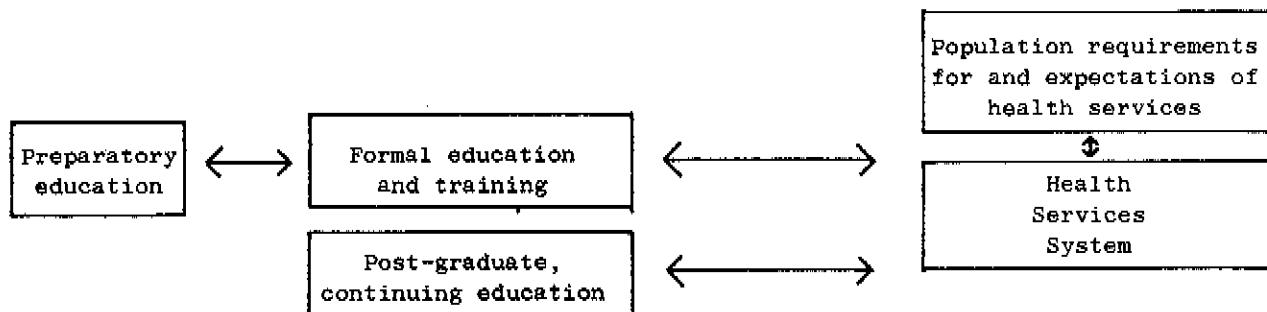
Research in the education and training of health personnel (RETHP) has been carried out on a growing scale for approximately 20 years. Recently there has been a sharp increase, for which there are several reasons. First, methods for conducting educational research have been improved and the number of trained people capable of conducting such research has increased. Second, it is being increasingly recognized that results of such research provide a better basis for decisions than do personal experience and intuition. Also, the costs of education and training as well as the complexity of the issues involved have led to a desire for more objective information and a better understanding of underlying problems.

In some countries, interest in these problems has led to the establishment within institutions of special offices for research in the education and training of health personnel. Organized efforts by national associations have been undertaken in many countries. Faculty members now participate in growing numbers in this research, including those in the basic relevant disciplines of educational theory, educational psychology, sociology, social psychology, and operations research. Reports of RETHP now appear regularly in scientific journals. Well established foundations have provided financial support for major pioneer efforts at the institutional, national and regional levels.

It is acknowledged that RETHP, when soundly conducted, is one means of improving the efficiency and effectiveness of educational programmes, provided the results are made known to those who set policy. It also provides new knowledge and understanding of what is itself a large and important field of education. Both national and regional needs for trained health manpower have grown and become more complex because of the far-reaching changes in economic, demographic, and social forces. Simultaneously, advances in biomedical and clinical research, together with increasing specialization in medicine and science, have made it imperative for educational institutions to carry out reforms for which there are neither precedents nor tested guide-lines. Those responsible for instituting new policies and procedures can look for guidance to the results of a scientific study of the problems. Some forms of professional education, notably medical education, have become so expensive and prolonged that they raise basic questions which can be answered satisfactorily only by suitable economic analysis combined with special types of educational research.

2. THE SCOPE OF RESEARCH IN THE EDUCATION AND TRAINING OF HEALTH PERSONNEL

The content of RETHP may be described and analysed in many ways. The following diagram illustrates the settings in which such research is needed.



The ultimate value of the education and training of health personnel lies in their contribution to the well-being of the population. In any nation, the health services system and the system of formal education and training of health personnel are interdependent. In turn, the health services system should be responsive to the requirements of the population for preventive, curative, and social and physical rehabilitative services. These requirements can be determined by applying the methods of epidemiology and medical and health care research. Such methods are not properly classified under RETHP but are included here because all rational concepts of education for health personnel must recognize that the ultimate

objectives and content of education and training are based on data provided by epidemiology and medical and health care research. In the diagram, these inter-relationships are indicated by two-way arrows. In the national perspective, the study of these inter-relationships is a proper and important concern of educational research, which requires the same disciplinary techniques as those that permit scientific inquiry into the educational process itself.

Although not concerned directly with the education of students prior to their becoming candidates for admission to the formal programmes of education and training, RETHP can clarify the objectives of preparatory education and facilitate continuity of the educational process.

Furthermore, the largely unexplored areas of post-graduate and continuing education are a legitimate concern of RETHP although it is mainly concerned, of course, with undergraduate education in medicine and its equivalents in the education and training of all health personnel.

3. NATIONAL AND INSTITUTIONAL RESEARCH IN THE EDUCATION AND TRAINING OF HEALTH PERSONNEL

RETHP had its origins in the concern of individual institutions with problems of student selection, student attitudes and performance, curriculum revision, and other aspects of the local programme. Subsequently, RETHP became national in scope as the value and importance of such research stimulated even wider interest and efforts across national boundaries. The Group believed it would therefore serve a useful purpose to list examples of RETHP that are especially important at both the institutional and the national level. The order in which the various areas of research are listed is purely arbitrary. Priorities will vary from country to country according to their particular interests or needs. The lists are not intended to be exhaustive and they are clearly not definitive.

National level

1. Studies of relationships between the community, its health services, and educational programmes:
 - (a) Planning of educational programmes in relation to the health situation, manpower requirements, and other needs.
 - (b) The allocation of tasks and responsibilities among health personnel.
 - (c) The recruitment, motivation, and training of all health workers, particularly auxiliaries.
2. The medical profession and other health workers in society:
 - (a) Post-graduate education and continuing training.
 - (b) The public and official images of health personnel and their effect on recruitment and motivation.
 - (c) The relationship between formal medicine (the legitimate sources of health services) and informal medicine (witchcraft, homeopathic medicine, faith healing and the like).
 - (d) Depersonalization of the medical profession.

Institutional level

1. Students and teachers:

- (a) The acculturation of students and the school viewed as a social system.
- (b) Unselected admission of students as opposed to selection.
- (c) The participation of students in the process of education and in educational research.
- (d) The selection of teachers and evaluation of their performance.
- (e) The efficient use of teacher time.
- (f) Patterns of teacher organization.
- (g) Examinations, examination policies, and their effect on student and teacher attitudes, motivation and performance.

2. Curriculum:

- (a) Methods of investigating and defining training objectives, including their relevance to health care needs.
- (b) Methods of integrating courses throughout the range of education and training of health personnel (medical, biomedical, nursing, etc.) to facilitate "end-on" and "side-ways" transfer between courses.
- (c) The balance between prescribed, core and elective curricula so as to provide for free time.
- (d) The substitution of new knowledge for existing curriculum content.
- (e) The place of the behavioural sciences and their integration into the curriculum.
- (f) The place of the new educational technology in the curriculum (audiovisual techniques, models, simulators, etc.).
- (g) The influence of course organization on student motivation.

3. Facilities:

- (a) The use of service institutions, hospitals, research units, field stations, and others for training health workers.
- (b) Objective requirements for starting new schools or expanding existing ones.
- (c) Physical plant: special requirements, types and proportion of laboratories and their efficient use.

4. Relationships between health science centres, health institutes, the university and the government (health agencies):

- (a) The relationships between programmes for the preparation of health personnel and the universities.

- (b) The adequacy of preparatory education for all levels of health personnel.
- (c) Administrative and financial relationships between main teaching hospitals and other hospitals.
- (d) The administration and administrative relationships of different schools of training for health workers of all types.
- (e) The use of the community as a laboratory for teaching.
- (f) The integration of training institutions and the health services of the community.
- (g) The responsibility of the medical centre for the service needs of its community.

4. RECOMMENDATIONS FOR RESEARCH

Having considered the scope of RETHP at the national and institutional levels, as well as the efforts of WHO in this field, the Group selected certain areas for particular emphasis. The order in which these are listed below does not imply specific priorities. While WHO might itself be able to conduct RETHP in some of the listed areas, in others it might merely provide advisory services or assist in co-ordinating the research. One useful service that WHO could provide would be the collection of information on RETHP from individuals, departments, institutions, organizations and associations, and its dissemination to interested workers.

The Group recommends that special emphasis should be given to the following areas of RETHP:

1. Areas of particular relevance to developing countries:
 - (a) Comparative studies of training programmes at professional, technical and aid levels;
 - (b) The relevance of education and training programmes to local and national needs;
 - (c) The economics of establishing new schools.
2. Studies to permit the establishment of bases for equivalence.
3. Comparative studies (including cost analyses) of methods of educating and training health personnel:
 - (a) Possibilities for shortening the existing methods of training teachers and the programmes for students;
 - (b) Career development, including early, late or new forms of specialization;
 - (c) Efficacy of joint or integrated training of different types of health personnel;
 - (d) Student drop-out, including student attitudes, motivations and economic aspects.
4. Methods of defining objectives of educational and training programmes for health personnel.

5. Student participation in institutional educational affairs.

6. The delivery of primary health services and their implications for education and training (the health care team).

5. GENERAL RECOMMENDATIONS

In order to assist Member States, and institutions and organizations within them, to initiate or strengthen research programmes in this field, the Group recommended that WHO consider the following:

1. Establishment of reference centres for RETHP.
2. Allocation of research training grants for RETHP.
3. Support of RETHP in regional or national associations of medical schools.
4. Promotion of departments or offices of research in education and training of health personnel at national and institutional levels.