WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTÉ

ET/SG/72.8

ORIGINAL: ENGLISH

STUDY GROUP ON THE TRAINING AND PREPARATION OF TEACHERS FOR SCHOOLS OF MEDICINE AND ALLIED HEALTH SCIENCES

Geneva, 2-6 October 1972

THE PURPOSE AND FUNCTION OF AN INTER-REGIONAL TEACHER-TRAINING CENTRE FOR THE HEALTH PROFESSIONS

by

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The purpose of this paper is to provide the reader with a description of training activities offered by the WHO inter-regional teacher-training centre at the Center for Educational Development, University of Illinois College of Medicine, Chicago, Illinois, United States of America. A further goal is to describe the rationale and educational philosophy which guide these training activities and to suggest directions and priorities for the future.

The ultimate goal of medical teacher-training is to improve health services by increasing the competence of teaching personnel who are responsible for educating health practitioners. Since the inter-regional teacher-training centre plays a role in carrying out this mission, any analysis of its purpose and organization must begin with an understanding of the nature of the institutional settings which provide training for health practitioners. Insight into the problems of this setting is essential to understand the strategy required to train educators for health personnel.

In general, schools for the health professions are characterized by a faculty of specialists and sub-specialists in a variety of disciplines. Students observe health care delivery under optimal conditions, utilizing sophisticated equipment and highly trained auxiliaries. The philosophy which guides the operation of these institutions is the pursuit of knowledge and excellence, and a commitment to providing the country with leadership in health affairs.

An individual who receives his training in this setting is soon confronted with a different reality when called upon to deliver care in a non-university setting. He encounters problems which rapidly consume his resources and remain unsolved unless he is competent in preventive rather than curative health care. He must be able to make difficult decisions with ambiguous data, choose from equally important alternatives, and create or train his own resources from available materials and personnel.

Training programmes which prepare individuals for this role must improve problem-solving skills, the aptitudes of creativity and decision-making, and enhance the ability to organize and motivate resources toward a common goal. The training setting must also provide role models who demonstrate willingness and competence in managing common health problems of the country, rather than the model of a sub-specialist who applies sophisticated expertise to complicated but infrequent illnesses.

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1. The problem

The situation described above is equally applicable to the inter-regional teacher-training centre. While the Center has resources for computer analysis of sophisticated data gathering instruments, the trainee must return to a setting in which there is ambiguity about what should be measured; the Center is staffed by 40 educational and health professionals whose common language allows them to be a resource to each other, but the trainee must return to a setting in which colleagues are unlikely to understand his new knowledge and will mistrust its use; and the Center has sophisticated facilities in instructional television while the trainee's colleagues need help in using correctly the blackboard. These examples illustrate that the issues which confront the Center are those which confront all training programmes for health personnel, i.e. to provide trainees with basic competencies that can be used in a setting where resources are minimal and expertise is unusual. It is to this challenge that the Center must respond by using its resources to help trainees identify what they need to learn to function most effectively in the back home situation.

2. Training programmes

2.1 Goals

The goals for training can be placed in the following categories:

(i) Educational planning. Trainees must be able to develop and implement several kinds of educational planning, including short-term training programmes for health personnel. They must acquire those competencies which are essential for such planning:

(a) Relating objectives to programme philosophy.

(b) Deriving objectives from multiple sources.

(c) Formulating objectives in terms of expected student outcomes.

(d) Using generally accepted principles of adult learning to develop instructional strategies.

(e) Designing manageable evaluation strategies.

(f) Articulating alternative techniques to achieving specified objectives.

(g) Facilitating active involvement of other educational specialists when appropriate.

(h) Analysing systematically the forces operating in the trainee's social system, identifying those which hinder educational progress and those which facilitate it.

(ii) Programme implementation. In addition to planning, trainees must acquire educational skills necessary for effective programme implementation. They must be expected to increase their competence in:

(a) Identifying and facilitating constructive resolution of inter-personal conflicts.

(b) Using teaching techniques such as lecture, small-group discussion, and media, in situations appropriate to their advantages and disadvantages.

(c) Facilitating the professional development of colleagues through the skilled use of feedback.

(d) Committing themselves to self-assessment.

(e) Experimenting systematically with both organizational and personal implementation strategies.

(iii) Programme research and evaluation. Trainees must also acquire those competencies that can aid them in conducting action research and evaluation in connexion with the educational programmes with which they will be associated. While it is unrealistic to expect them to become sophisticated investigators, it is necessary that they acquire sufficient skills to improve the quality of their respective programmes as well as to make it possible to record and report the results of innovative medical efforts. To this end, increased proficiency in the following areas is essential:

(a) Formulating a research problem in manageable terms.

(b) Utilizing formative and summative evaluation procedures.

(c) Selecting and/or constructing appropriate evaluation techniques which will measure competency in different domains.

(d) Helping colleagues define criteria of teaching effectiveness.

(e) Using and interpreting standardized evaluation instruments.

(f) Utilizing work reported in the literature to identify areas for study in medical education.

(g) Using basic statistical techniques (e.g. probabilities, parametric and non-parametric statistics).

(h) Writing reports which are understandable to colleagues who do not share the trainee's educational background.

These goals serve as guides for planning a one-year fellowship for individuals who seek in-depth expertise in educational science, in preparation of their role as leader of a WHO regional teacher-training centre. These goals also guide planning for shorter training programmes (in Chicago and on-site) for regional educators for health personnel who will form the initial support base for future training activities. The degree to which these goals are achieved varies with the basic aptitudes of each trainee, time available for training, and the trainee's ability to adapt to a learning situation in which he must assume major responsibility for identifying what he needs to learn and how he can achieve this goal with available resources. It is unlikely that a trainee who is unable to define and resolve his own educational problems in this supportive setting with maximum resources can be effective in dealing with these issues back home.

2.2 The fellowship

Those who come to the Center for one year have chosen a new career pathway and must return equipped to initiate an endeavour which is culturally foreign and, to a large extent, threatening to those it hopes to serve. It is essential that those who lead the development of a WHO regional teacher-training centre have more than a superficial knowledge of educational process. They must feel confident that they can make a contribution to their colleagues through the application of new knowledge and skills.

The key elements of a fellowship at the Center for Educational Development are: formal courses, seminars on topics related to current health care issues, special instructional units offered by staff (e.g. mini-workshops in group dynamics), a teaching practicum under staff supervision, and a limited research project. While each fellow has the option to design, with staff assistance, a year of individualized learning which focuses on addressing an educational problem of particular concern, to date most have elected a year of graduate study which culminates in a Master's Degree.

As a result, approximately 50% of each fellow's time is devoted to acquiring eight units credit in graduate course work which focuses on the areas of psychology of learning, curriculum and instruction, research design, data processing, and the construction of test instruments. Basic course work is provided by the College of Education faculty at the University of Illinois Circle Campus, Chicago, and the Center staff.

This leaves equal time for the pursuit of the independent study project which is required of all fellows and provides the opportunity to identify and achieve educational objectives which cannot be met through course work. Fellows, working with advisers, specify a topic of special interest and pursue it during the course of the year. The project can be of a descriptive, research, or development nature, but must culminate in a written report which is submitted to a Critique Committee composed of Center staff whose expertise relates to the subject of the project. Criteria used to evaluate project reports include: (a) the extent to which the problem is defined in manageable terms; and (b) the degree to which the strategy for problem-solution evidences knowledge of the appropriate areas of educational science.

Fellows and fellowship activities are evaluated in the following ways:

(i) The achievement of knowledge and skills acquired through formal course work is assessed at the end of each academic term by paper and pencil tests designed by the faculty for this purpose.

(ii) Faculty assesses each fellow's ability to apply educational theory and principles to particular problem areas by designing course projects which provide this opportunity.

(iii) Feedback data is collected regularly from fellows about problems and programme difficulties through weekly meetings with Training Section personnel.

(iv) Performance in the back home setting will be assessed by collecting descriptive data on each fellow's performance one year after completion of the programme.

2.3 Short-term training - Chicago

It is essential that a WHO regional teacher-training centre includes a cadre of individuals who are philosophically and attitudinally oriented toward the centre's goals and are available as an intermittent resource for training activities. It is to this end that activities in the four-week programme in Chicago are designed. Again, a key element is to engage trainees in the process of defining needs for dealing with the back home situation. These programmes are implemented in three phases.

The first phase has as its goal to establish the conditions and climate for learning. Specifically, the first week is devoted to small and large group activities which provide: interaction between participants to share goals and establish themselves as resources to each other; interaction with WHO fellows who can describe the Center's resources in terms of its applicability to the region's educational problems and establish the fellows as a resource to the trainee (in Chicago and also in anticipation of the fellow's role in the region); interaction with Center staff who will perform advisory or instructional roles in order that participants can share their expectations and goals with staff; and individual work (with an adviser's guidance) to define back home educational problems which are best addressed during the balance of the workshop. As a result of this interaction, participants define goals which guide decisions on the use of their time and energies; and staff have the information required to make scheduled training activities more relevant.

At the end of the first week, participants enter a second phase of presentations, demonstrations, and individual project work oriented around three major areas, educational planning, instructional strategies (including educational media), and evaluation. Structured sessions consume the morning hours, leaving the afternoon for independent study or project work. Formal sessions are sequenced so as to enable trainees to receive input (e.g. observe a demonstration on principles of learning), have the opportunity to apply this knowledge or skill toward their project, and receive feedback from peers and staff on the quality of this application.

The fourth week, phase three, begins with preparation for a presentation to a self-selected audience in which project activities are described. These presentations may be offered to one or two staff advisers, advisers and fellow participants, or the entire staff and workshop colleagues. The purpose of this activity is to provide a method for systematic

analysis of project activities in preparation for returning home. This phase is also designed to ensure definition of next steps for implementation in the back home setting. Participants have the option of practising application procedures through simulation or role playing situations. As a result of these activities, they are able to receive suggestions for modifying implementation plans.

Evaluation of the four week programme focuses on educational process and content. Staff meet weekly with participants to make comments on learning activities, discuss the following week's offerings, and collect written data regarding the least and most useful learning activities of that week and the reasons for making these judgements. This information is discussed at the staff meetings held at the beginning of the following week. Evaluation of the educational product is limited to project evaluation since it is this aspect of the programme which allows staff to assess the trainee's ability to apply knowledge and skill. Descriptive data will be collected at the conclusion of the four-week programme and again six months later to evaluate the degree to which plans have been fulfilled and to describe the forces which have either facilitated or hindered goal achievement.

2.4 On-site training programmes

The objectives outlined earlier also serve as guides for on-site training activities. While a workshop team of three people is limited in the amount of resources which it can make available, these two-week programmes share several characteristics of the Chicago-based workshops.

Each of the on-site workshops includes an initial series of activities designed to identify needs and/or problems. Another common characteristic is that of allocating approximately equal time to structured or formal learning experiences and individual projects which relate to the back home setting.

On-site training experiences differ from Chicago offerings primarily in terms of shorter duration, availability of on-site resources (e.g. local College of Education faculty, video-taping facilities), and the setting (e.g. residential in a remote area, or hotel accommodations in a metropolitan area).

3. Issues and directions

During the past year the Center has had the opportunity to work with fellows and faculty from the same region who will work together in support of the regional teacher-training centre. This experience has been helpful in identifying priorities and guidelines for future programmes.

Participants in the four-week programme have not had a clear perception of their role in the regional teacher-training centre. As a result, significant time and energy are devoted to orientation and goal definition, thereby decreasing the use of unique resources. Hopefully, this will improve as fellows return to their regions and begin to influence not only the selection of workshop participants, but also provide pre-workshop orientation for those travelling to Chicago.

The regional offices and schools should also give consideration to certain criteria in selecting personnel for the short-term workshops. It is the Center's experience that the following trainee characteristics increase the likelihood of influencing change upon their return home:

(i) Fluency in English is critical to the maximal use of Center resources both in planning and understanding feedback and suggestions for improvement.

(ii) Acknowledged status as a leader in the academic community increases the likelihood that the trainee's ideas will be given a fair hearing.

(iii) Teams of two or three participants from the same institution provide a more reliable analysis of the back home setting and a mutual support system for implementing plans conceived during the workshop.

A common concern among WHO fellows centres on their ability to independently provide training experiences in the home setting. This reaction is due in large part to the limited availability of opportunities to function in a major staff role in the ongoing training programme at the Center, and to develop a degree of confidence in their skills. Since most fellows begin their training in June, the Chicago-based workshops should be scheduled for November and March. This timing would allow fellows to play an active role in the November workshop and then assume major teaching responsibilities in the March workshop prior to returning home.

Another area of concern relates to the extent to which fellowship activities are influenced by degree requirements. There is no question that degrees are valued by the health profession. It is also possible that upon returning home some individuals may find greater receptivity to their suggestions and guidance if they have achieved this recognition. Another consideration is that some graduate students become inefficient when placed in a position of having to define their own directions. However, these factors should be measured against what is lost by requiring WHO fellows to pursue a degree.

In general, the structure provided by course requirements is advantageous in the first three to four months. It provides meaningful activities and a sense of accomplishment during a period of difficult adaptation and in the absence of professional activities which have provided satisfaction in the past (e.g. patient care). However, as other goals and options soon appear, fellows feel the tug to pursue activities (e.g. involvement in a Center workshop) which may conflict with scheduled course requirements. As the year progresses, conflicts in priorities occur more frequently, and eventually course work assumes the status of an obligation with minimal relevance to the problem which must be confronted in the regional teacher-training centre. The events described above occur with sufficient frequency that serious consideration should be given to making the degree optional. It is feasible to have fellows enrol in the graduate college, but postpone the final decision to seek a degree until the fourth or fifth month of the fellowship. This will allow sufficient time to define the goals which are relevant to the training centre and place the fellow in a position of making his decision with a clear picture of the alternatives. This alternative would be particularly appropriate as the regional centre sends a second or third fellow to Chicago with the charge to develop competence in a specific area.

A final issue relates to the negative reactions of some Center staff to a teaching mode which is facilitative rather than directive, a style which shares control with the learner. These reactions follow two themes. First is a concern of the staff about wasting time; thus they think that it is more efficient to tell trainees what they need to know. This reasoning is justified if priority is given to the acquisition of goals in the knowledge domain, particularly at the lower taxonomic levels. These priorities do not allow trainees to explore, make mistakes, and discover how to find solutions, because this takes time and is difficult to organize. The second negative reaction is one of frank disappointment in having to assume a facilitative teaching role which does not allow one to demonstrate expertise in educational science. The behaviours required of a facilitator are guidance and counselling skills and the ability to help the trainee discover his needs and necessary resources. It also means postponing a demonstration of hard earned knowledge until the student has a need for this information. This reaction is common among any faculty and is based upon the natural need for status. It is this need which consumes so much energy in curriculum committee meetings as faculty argues for its "fair share" of the students' time.

These reactions are described in this, already lengthy, report because they exist in the Center which considers itself to be student-centred and flexible. They are described because these reactions are based upon expectations and beliefs which are held by potential trainees,

individuals who must support regional teacher-training centres. They are also emphasized because they will continue to be part of each teacher-training centre and must be acknowledged as one of the difficulties associated with bringing about educational innovation.

The attitudes which are the basis of these reactions are major factors in determining the nature of institutional settings where health practitioners are trained. As described in the opening paragraphs, these settings are characterized by a concern for knowledge and research in specialties and sub-specialties, a concern for treatment of unusual illness with the sophisticated techniques and equipment, and concerns which are based upon meeting the faculty's interest and need for status. If the inter-regional and regional teacher-training centres are to change these priorities they must begin by providing an alternative model, one which focuses on problem-solving and student needs. This model must reward not only the acquisition of knowledge but its application.

Summary

The inter-regional teacher-training centre has the potential handicap inherent in any large health education institution in that it has abundant resources and expertise but creates a setting which differs from the situation to which trainees must return at the conclusion of their educational experience. If the Center is to influence educational practices and ultimately benefit health services, it must offer a teaching model which places priority on problem-solving skills and maximizes the student's responsibility for learning. Its training programmes must begin with a definition of student needs, rather than an outline of what the teacher knows.

This report describes the strategies used to accomplish these goals through one-year fellowships and short-term WHO workshops and illustrates the problems encountered in putting this educational philosophy into practice.