MODERNIZING THE TRAINING OF TRAINERS IN PRIMARY HEALTH CARE

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INTRODUCTION

The World Health Organization at the 1978 International Conference on Primary Health Care at Alma Alta[1] set a worldwide goal of "Health for All by the Year 2000." Primary Health Care is the essential strategy to accomplish this ambitious goal. And training community-based health care workers in the "developing" countries to deliver the needed services is a vital component in this overall strategy. Taiwan, itself, although at a level of economic development beyond that of the "developing" countries, is now starting a new network of Primary Health Care (PHC) centers to serve 2,000-5,000 population clusters. These are expected to alleviate the shortage of physicians in rural remote areas and to provide health education and disease prevention programs.[2]

It is critical to the success of these PHC programs, both in Taiwan and elsewhere, that policy makers and implementors update themselves on the modern methods and philosophy of training that have distinguished effective programs from others.[3] Although health education at the community level is listed as the first of eight essential PHC components in the WHO world action plan, relatively little attention is paid to training, which is a major component of health education activities.[4] Too often it appears as if health officers who may or may not have some competency in classroom teaching can rely solely on formal education techniques to train the community-based health care worker. In reality, classroom techniques often have to give way to non-formal educational techniques in much of the training. These "non-formal" educational techniques are more than a methodology; they are part of a philosophic learning approach of learner-centered, field-oriented training.[5]

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This paper outlines a philosophy of training as well as the requisite objectives and educational methodologies to implement it. The setting used to illustrate how philosophy and methodology are interrelated is the training of village-based primary health care workers (PHW) by District-level officers (primarily medical). Such training usually takes place over a 1-2 month period. The place is somewhere in South/Southeast Asia. It is assumed that as usual there is a great social distance between the trainer and the trainee (often rural and less educated). It also is reluctantly accepted that no matter what attempts are made to recruit and select better trainees or trainers, this social distance gap will be present at the onset of training. The initial task is how to train the trainers of trainees.

PHILOSOPHY OF TRAINING

The philosophy of training espoused here is that self-initiated change has the firmest motivational base and that the "Trainee" is the richest source of learning. It is based on literature review, national and international agency handbooks and guidelines, and existing training curricula as well as drawn from many years of discussion with health education colleagues, trainers in Asia and elsewhere and the author's field experiences in Taiwan, India, Pakistan, Bangladesh and Nepal.

The present overly didactic, formal educational systems in most Asian countries and the huge social distance gap between community-based health workers and their more highly-educated and often upper class trainers often work together to impede effective training. Bridging the gap demands a participant-centered field-oriented approach which actively involves the learner (trainee) in the design, implementation, and evaluation of the training program. A description of a philosophic learning approach based on self-initiated change, educational objectives related to planning, organizing, conducting and evaluating training, and specific learning methodologies using participatory learning, non-formal educational techniques, field experience, continuing feedback are reviewed here. Included in methodologies are: role playing, story telling, case studies, self-learning and simulation exercises, visuals and the use of "Portapak" videotape.

Hereafter the kind of training appropriate for a session for these soon-to-be trainers of PHC workers is discussed, emphasizing clarifying for the trainers the learning approach, purpose and objective, as well as various methodologies, and evaluation.

LEARNING APPROACH

The major purpose of clarifying the learning approach will be to help the trainer develop as a role model for the trainees in their application of training in the field. Secondarily it will be to compensate for and correct the traditional medical orientation to using virtually only formal lecture approaches in the classroom. The alternative offered will be a participant-centered, action-oriented approach which attempts to actively involve the learner in every way in the educational process, including its design as well as imple-

mentation.[6]

Of particular importance in the learning approach will be group-oriented human relations types of structured learning experiences intended to open the trainers' mind to the value of participatory learning, non-formal educational approaches, field experience, continuing feedback, and learner participation in the learning process. Those approaches will be directed toward bridging the *social distance barrier* between the Medical Officer (M.O.) and the PHW trainees by involving the M.O. in educational experiences directed towards "learning how others (and self) learn."

Such a learning approach departs from the traditional passive recipient of learning patterns found in most educational systems. Trainers are involved in the course planning, implementation, and evaluation process as an educational method of itself to bring about change. Such learning theory assumes that learning occurs within the learner and is activated only by him or her, that learning is the discovery of the personal meaning and relevance of ideas, comes only from experience (not being "taught" in lectures), that it is a cooperative and collaborative process, and especially, that the richest resource for learning is the learner him/herself.

Change agents (trainers), to be able to help others learn, must be trained in and practice frequently techniques of *gearing into* how another person defines a particular situation, i.e., how it exists for that person in his or her own real world. They also must practice taking on *the role of the other* to better understand how others view an event or how he or she decides what action to take in any field or training situation. Carrying out these functions effectively requires an emphasis in training on information gathering, comparison of information from various sources, openness, reality testing and risk taking. Structured exercises in these realms help to reduce some of the social distance between the trainer and trainee (trainee and client) to enable the trainer to be able to communicate and work effectively in the trainee's real world.[7]

Underlying the philosophy, therefore, are the principles that self-initiated change has the firmest motivational basis and best prospects for long-term maintenance and that the trainer's job is to help the trainee take best advantage of his/her own internal resources. The trainer than takes on the role not of lecturer, boss or manipulator but of catalyst, consultant, collaborator or facilitator in the training process. The well-trained trainee will have increased his/her capacity for diagnosing situations and solving problems to the extent that he/she can make an important community contribution.

PURPOSE/OBJECTIVES

Essentially the training of the trainer involves a *resocialization*. To accomplish this resocialization (toward attuning himself to community and trainee needs) he needs to go through a training process that the PHW trainees themselves will be exposed to by him later. He, therefore, must come to understand the value of various group interaction and nonformal educational techniques since he will be socializing trainees into a similar

pattern.

The general educational objectives of training to be covered with such a philosophic direction include developing concrete skills in *planning*, *organizing*, *conducting* and *evaluating* training. To carry out these, the trainers must learn how to carry out specific functions (and how to involve trainees in) the following:

1. the planning, logistics, and management of training;
2. determining trainees' needs;
3. writing learning objectives matching community needs and trainee abilities;
4. involving trainees in curriculum development (and sequenced learning modules);
5. production of training manuals for trainers;
6. use of instructional methods and materials;
7. use of non-formal, participatory training methods;
8. an understanding of the dynamics of the learning/teaching process;
9. breaking down barriers to change through Group Dynamics interaction;
10. organizing field training; and
11. evaluating all phases of the training process.

With the first four of the specific functions above, the educational approach to be used is to demonstrate to the trainers by their own participation just how others come to learn. Trainers will be encouraged to treat trainees with the same respect they expect to be treated themselves and to view them as vital resources about the communities they will serve.

Functions 5 through 10 will incorporate the use of a variety of educational approaches. The emphasis of these will be on action-oriented, participative learning. A description of these ten educational technologies and how they will be used follows. Evaluation is treated later.

METHODOLOGIES

A description of some of the educational technologies to be incorporated into the training of trainers, their educational philosophy, and illustrations of how they might be used follow. These include, but are not limited, to the following:

a. *Human Relations* (Structured Experiences);
b. *Flow Charts* (to encourage problem solving capacities);
c. *Role Playing* (to see how others view a situation);
d. *Story Telling* (to develop problem solving skills);
e. *Case Studies* (to involve trainees in realistic situations);
f. *Self-Learning Exercises* (emphasize participatory situations);
g. *Simulations Exercises* (active involvement in defining a trainee's community role);
h. *Portapak Videotape* (create culture-specific examples);
i. *Visual Illustrations* (trainee involvement by making flip-charts); and

j. *Models/Teaching Aids* (hands on).

(a) Human Relations (Structured Experiences)

Trainers will need to learn that the way they would prefer to be treated by their administrative superiors (i.e., with respect and to be consulted as important resources of experience) is the best way to treat the trainees. In such a supportive atmosphere, the trainees will be able to contribute a great deal to the enrichment and reality-testing of their training.

A variety of structured group laboratory experiences will be used to help the trainers become aware of the wealth of learning experience which exists in their own group—and by implication in all groups. Trainers will experience for themselves the value of knowing about people (how they feel, how they relate to each other, and how they learn) in terms of building up trust in the community. Trainers also will learn about ways to build on what workers do right rather than only criticize what is wrong, to begin with the knowledge and skills the PHW's already have, how to involve the workers actively in the learning process, and how to encourage constructive feedback to continually evaluate and improve the training sessions. An ultimate goal will be to work toward the trainers taking over most or all of the instruction prior to course's completion—and having the primary Care (PC) trainees do the same.

(b) Flow Charts

Flow charts can help PHWs develop their problem solving abilities. When used effectively, PHW's can learn to diagnose an illness by being guided through a series of yes-no questions. When done well, the PC worker's critical thinking and problem-solving skills can be encouraged.

To *train the trainers* in the use of this technology, an understanding of how incorporating the PC workers in the flow chart design is valuable needs to be stressed. The trainers will be provided completed flow charts dealing with diagnosis of specific illnesses in a geographical/social context they know well. The flow charts will include clear-cut *mistakes* in terms of whether cases need to be referred to higher-level professionals or be dealt with by the PC worker. Discussion of these will follow and the trainers will revise the flow charts in terms of the standards being set for PHWs.

Trainers then will be encouraged to use similar techniques of involvement of the PHW trainees in flow chart design. Emphasis will be on the value of this educational technique in increasing the *involvement* of the workers and also in developing their critical thinking and *problem-solving* skills. Also emphasized will be the valuable *feedback* on local conditions which only the local PHW can provide. Such emphasis helps the PHW to feel that his/her critical assessment is meaningful—developing a sense of *competence* in his/her later community role.

Such an orientation should help lessen the likelihood that trainers and later trainees will view the flow charts as primarily a way to keep control and diagnosis more in the

hands of higher-trained professionals (i.e., the overemphasis on referral to higher authority which seems a syndrome related to algorithmic approaches in Less Developed Countries (LDC's). It also should decrease the likelihood the PHWs with limited formal education will find the use of the flow chart technology to be difficult, or confusing to them.

(c) Role Playing

Role playing will be practiced by the trainers. Trainers will act out real-life situations and learn how others view these situations. Such practice will help to reduce the social distance between the trainer and future PHW trainees. It also helps the trainers learn by doing just how role playing can help develop practical skills (diagnosis, treatment, prevention, step-by-step problem solving), social skills (home visiting, community organizing), teaching skills (practicing different teaching methods), and general social awareness (effects of *political/social* matters on health, alternative solutions to problems).

Trainers will be asked to assume the role of clients in the community and also PHW trainers. They will be taught warm-up exercises for role playing and ways it may be used. For example, it might be tied in with a problem-solving story-telling session (as mentioned above). One trainee might assume the role of a sick woman who would take on certain characteristics related to a specific disease. The step-by-step diagnosis procedure could then be practiced in a group by the other trainees. Simulated rapid breathing, painted pink spots across the chest of a person pretending to be sick, a simulated pain in the stomach can be used to try to diagnose severe dehydration, typhoid, or appendicitis. Multiple roles can be played in terms of how a traditional practitioner and clients will view the newly-trained PHW in a village.

(d) Story Telling

Trainers who must help PHW workers develop scientific problem-solving skills need to themselves have experienced the value of such approaches. Breaking them from the old habits of assuming that less well-trained, less professional workers can only be taught how to do (step-by-step) without understanding the whys is vital. Trainers will be shown how stories can be used as effective tools to teach, e.g., to better know about local customs, how to build on existing traditions, and to encourage questioning attitudes.

Trainers will be involved in group discussion of a familiar problem-solving situation. A kind of "detective story" is presented, perhaps in the form of drawings. A series of questions and answers between the instructor and students is used to solve the mystery. Then students are encouraged to analyze the various steps that were used to solve the mystery. After discussing the steps the students compare the steps with the diagnosis of a medical problem. The students are encouraged to follow the step by step method of diagnosing the illness.

In this process, trainers learn the value of group discussions to solve a problem (emphasizing the considerable creative thinking ability among the participants) and also how to design similar step by step problem-solving situations which they can use in the

same manner with the PHW trainees. Such stories may be used as parables (with lessons taught), or point out an existing local problem. Stories also may be acted out or told with pictures.

(e) Case Studies

PHW trainers will be involved both in design of case studies for use with PHW's and in case studies prepared for their own use in concert with their own training. Examples of case studies will be read and discussed in group sessions. These will focus on field experience: diagnosis, logistics, community relations, ethics, health education techniques, etc. The case studies will contain "Suggestions for Discussion" and some will have alternate endings and trainers will be asked to choose the outcome and discuss why. Trainers will be told what the educational objectives of the cases are. Trainers will then be asked to revise the cases to suit their training needs. They then will discuss the differences between their needs and the training objectives put forward by their trainers.

PHW trainers will be asked afterwards to design a case study for use with future PHW trainees and how best to develop the case. A major focus will be on the pros and cons of involving the PHW trainees in case construction. Their previous experience with case studies will be used as a guide.

(f) Self-Learning Exercises

Self-contained teaching packages designed to stimulate participatory learning will be used with trainers. These are similar to those used by the East West Communication Institute for integrating family planning with home economics educational programs in rural areas. They will be based on village problems and use low-cost visuals. These modules are directed toward two levels of learning: the trainers and the PHW fieldworkers. Each prototype lesson incorporates a specific participatory teaching method and uses visual aids. Lesson are standardized in organization: each with a problem, relevant content, clear objectives, activities to stimulate interest, participatory activities to share information, activities to review and summarize, post-lesson evaluation, and follow-up strategies. The training module accompanying the prototype lessons is intended to develop skills in using the lessons and to help workers integrate the preparation of low cost visual aides (stick figure sketches, etc.) with the lesson content.

(g) Simulation Exercises

Trainers will be involved actively in a variety of exercises simulating actual live in-the-field activities: dramatic skits ("Now you are the village leader and I am the PHW calling on you"), role playing storytelling, etc. These practice exercises should prepare the trainers to better understand how the future trainees view their jobs and what their community role is likely to be. For example, trainers may discuss the job description of the PC worker and compare it with the likely community realities.

These simulations also will involve situations drawn from the variety of social,

political, personal, logistical, bureaucratic and cultural factors which relate to providing and receiving curative and preventive health care. One overall objective will be to create an awareness of the interaction of a network of factors which have to be considered when training PHW's to return to their villages as "experts." The simulations also will attune the trainers to the many ways these exercises can be used with the PHW trainers: from simple diagnosis through how to introduce oneself to a local village leader. Just as the trainers will learn how to better gear into the way the trainees define their real world, so also will the trainees be better prepared to define the way their community is likely to view their own real world, its priorities, and the place of the PHW's in it.

(h) Portapak Videotape

Glossy centrally-produced high commercial quality films and videotapes may have considerable impact on trainees in various settings. This impact, however, can often be negative when the materials are not culturally specific to the real life field situation trainees are facing. They then often only reinforce the notion that the proposed actions are sensible only in a more technologically "advanced" society but clearly not applicable to this trainee's village.

Relatively inexpensive videotape portapak sets should be available for the PHW trainers who will learn how to use these to collect visual stories of how community actions take place at the village level, e.g., to whom one goes for a specific health problem. These may be set up in a story format or actually record ongoing activities that "tell it like it is." With stories, PHW trainees can be asked to discuss why a particular incident occurs, etc. With step-by-step procedural tapes, workers can be involved in seeing *how* a task is accomplished. Tapes may be stopped to ask whether a logical step was left out or why certain steps occur.

Such video equipment also will be useful in reviewing trainers' class presentations, roles in group discussion, interviewing techniques, as well as for teaching physical assessment techniques and identification of common medical problems of people in rural areas. The trainers would build on this review to learn how best to improve their lectures, discussion techniques, answering of questions, etc.

(i) Visual Illustrations

Trainers will learn how to use drawings as teaching aides and a way to involve the trainees in learning. For example, they will learn how to copy for their own teaching materials, do originals, etc. The use of photos to place a message in the concrete cultural context of a particular region also will be reviewed (with due attention to the problems of cost, difficulty in reproduction, and incorporating them in manuals or posters). The use of symbols, humor, positive messages, themes, perspective, etc., in pictures and drawings will be reviewed.

Flash cards, flipcharts, alternatives to flannel boards, games, jigsaw puzzles to teach basic health care in group settings also will be constructed, emphasizing their value to

the PHW trainees in the field and their potential for involving persons in the learning process.

Flipcharts will be emphasized. They are inexpensive, easy to produce, and simple to use. As trainers develop lesson plans, key points will be selected by them by group consensus. These key points will be illustrated with drawings, graphs and/or photos and placed on flipcharts. These can be in large enough lettering to be seen in a large classroom and then used in lectures and discussion. The PHW trainees also later will have access to them to review as often as needed. PHW trainees later can be involved in improving these and also in developing smaller-size and locally-set versions for their use in smaller group settings in their villages.

Trainers also will learn how to design and produce slides which will be culturally specific to their own area and be encouraged to involve each class in a similar process (with due recognition that the PHW will have limited logistical access to such equipment). Slides may focus on visual illustrations of specific diseases, sanitation problems, or step by step procedural curative or diagnostic procedures. A major emphasis will be on using these to involve the PC trainees in discussion and the learning process.

(j) Models/Teaching Aids

Trainers will be encouraged to illustrate basic concepts as well as step-by-step procedural hands-on practice by extensive use of models and teaching aids. The theoretical basis of the use of teaching aids is that trainees learn best by taking an active part in the learning process. Not only will trainers take part in discussions (rather than just sit in lectures) but see for themselves how things work (rather than just talk about them) as well as do and make things so that they become part of their learning experience. For example, a first trainer will be asked to illustrate how babies are delivered. A second will demonstrate through use of an expensive standard pelvic model. The third will be asked to do it once the model is gone. After discussing the advantages of the model, trainers will consider how the PC worker will have to demonstrate such matters in a village without such a model. The use of clay babies, cardboard babies, sticks for broken bone settings, simulation and role exercises, drawings, etc., will be constructed to show how simple methods that can be taken to the village can be prepared and how trainees can be involved in learning from the process of developments.

EVALUATION

Evaluation will be based on competency rather than gain in knowledge. It will comprise five phases:

a. *Pre-training:* a baseline measure of knowledge and attitude of trainees in terms of the educational objectives of the course;
b. *Built-in Continuing:* various feedback approaches integrated into daily session, to answer such questions as "how well does this activity prepare us to solve

a community problem?"

c. *Periodic:* conducted by the trainers in group sessions every several days or at the end of a curriculum bloc. Trainers must be able to solicit feedback on progress.

d. *Final:* conducted toward the end of the one-month course. An assessment of whether the course accomplished what was planned? What problems were encountered? The strengths and weaknesses of the overall approach? Of specific learning technologies used? Ways to improve future sessions? Trainers must construct and use relevant evaluation instruments to measure learning.

e. *Post-Course Follow-up:* measurement of how successful the trainers are in incorporating learning into their PC trainee courses (and ultimately how well the PC trainees carry out their job and meet the villagers' needs). Trainers must be able to design and supervise instruments and procedures for measuring performance by PC trainees on the job.

SUMMARY/CONCLUSION

Training community-based health care workers in "Developing" countries is essential to improving the quality of life in both rural and urban areas. Two major obstacles to such training are the social distance gap between these community workers and their more highly-educated and upper class trainers (often medical officers and also the influence of the almost universal overly didactic, formal educational system. Bridging this gap demands a participant-centered, field-oriented approach which actively involves the trainee in the design, implementation and evaluation of the training program. A philosophic learning approach based on self-initiated change, educational objectives related to planning, organizing, conducting and evaluating training and specific learning methodologies using participatory learning, non-formal educational techniques, field experience, continuing feedback are reviwed. Included are: structured experiences, flow charts, role playing, story telling, case studies, self-learning exercises, simulation exercises, Portapak videotape, visual illuatrations and models/teaching aids.

The educational objectives set forth in this planned course for trainers of trainers, however, can be achieved only if they are carried out in a setting similar to the one in which the primary health care worker will be in the future. This means that at least half the training ought to take place in the village or neighborhood setting and the training officer should spend his evenings as well as days, intermingling with local people, sleeping in similar housing, and eating local food. Such total immersion may violate some of the class orientations of the future trainers but should result in at least a minimal empathy with local conditions trainees will have to face. The means of providing sufficient creature comforts to keep the immersion approach from drowning the future trainers remains the job of the master trainer of trainers who will conduct this course.

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REFERENCE NOTE

A rich resource for training examples and how-to-do-it non-formal educational techniques specific to community-based primary health care is Werner and Bower's *Helping Health Workers Learn* (1982).

An earlier version of this article appeared in the *Intl. Quarterly of Community Health Education* (4:1).

以現代化訓練方式訓練基層保健工作人員

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目前在開發中國家，如要提高全民的生活素質，則有效的訓練基層保健工作人員，是不可或缺的工作。這類訓練工作常遭遇兩點困難：其一是訓練者（常為醫師等社會高階層人士）與受訓者（常為中下層人士）之社會差距遠大；其二是一般使用的傳統式說教教育方式效果不佳。如要解除此二缺點，需盡力採用以實地訓練為主，受訓者為中心的方式，使受訓者由訓練準備之始，即積極參與於其計畫、執行及評估各階段工作。本文即對以自發性改進為基礎的學習哲學，與計畫、組織、執行及評估有關之教育目標及利用非傳統教學技巧、實地經驗、連續回輸（回饋）及受訓者參與教學的學習方式加以探討。這些方法包括：角色扮演、講故事方式、個案研究、自我學習、模擬練習及使用輕便的視聽教材等。

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