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LEARNING/TEACHING

Learning by Doing: Teaching Qualitative Methods to Health Care Personnel

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ABSTRACT **Purpose:** *We describe and assess the teaching of qualitative methods to postgraduate students using a case study from the Centre of International Child Health, Institute of Child Health, London, which trains mainly health personnel with developing country experience. As the majority of these students are practitioners rather than academics, the teaching focuses on combining theory with practice. We then analyse the results of the assessment of students about this approach and examine lessons learned from this experience.*

Approach: *We present the format of a two-week course and the evaluation of this course by the students of the past four years. We describe the process of conducting a learning-by-doing course, giving the day-to-day details of how the course is conducted. We also give examples of how this teaching is done.*

Results: *One indicator of the value of this course is its increasing popularity over the past three years. In 1997–1998, 11 students out of 20 took the course. In 1998–1999, 16 students out of 21 opted for this qualitative module. In 1999–2000, 12 students out of 17 chose this module.*

Discussion: *The lessons learned from this experience include challenges in how to present the teaching within the available time and having realistic expectations concerning course outcomes. We argue that a learning-by-doing approach accomplishes the objectives of having students recognize the value of these methods for health systems research and giving them skills needed to use these methods.*

KEYWORDS *Qualitative research methods, experimental learning, developing countries, educating health professionals.*

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Introduction

Traditionally and historically medical schools have not taught their students qualitative research methodology. Quantitative methodology is presumed to be the basis of scientific research, as epitomized by 'randomized controlled trials' being consider the 'gold standard'. Qualitative methods for health systems research has been slow to develop. Only relatively recently have health care professionals begun recognizing the value of qualitative research procedures. This recognition was boosted considerably by a series of articles in the *British Medical Journal* (Britten,1995; Kitzinger, 1995; Mays & Pope, 1995a,b; Pope & Mays, 1995) on the value of data derived from qualitative research. These articles explore the importance such data can have on the development of appropriate health service structures and outline the criteria needed for qualitative methods to gain credibility in the scientific world. This series of articles point to the need to introduce the teaching of these methods in the curricula for health workers.

Our purpose in this article is to describe and analyse an approach to teaching qualitative methods based on the concepts of the Brazilian educator Paolo Friere (1972) and placed in the context of Action Research (Hart & Bond, 1995). This approach to training is used both to familiarize the students with the value of qualitative methods for health systems research and to provide them opportunities for gaining skills and experiences needed for carrying out this kind of research. A postgraduate accredited course provides an example of the application of these methods and a basis for discussion about more general concerns regarding the teaching of qualitative methods to health personnel.

Case Study

At the Centre for International Child Health (CICH), University College, London, we developed a programme to teach qualitative research in the context of health programmes to postgraduate students. We both have many years of experience in community health services in a wide range of development settings. One of us has expertise relating to community health programmes and participatory research, the other relating to community-based rehabilitation (CBR) programmes and communication skills. We developed the course to provide a wider range of research tools for students doing an MSc in Mother and Child Health or in Community Disability Studies and to introduce diploma students to tools for participatory learning and action. The module has run once a year in the UK for the past seven years and twice in 2000. During the past four years it has been offered as an elective module for all students. We offered one additional module in Uganda as part of a capacity development programme. Each year we've asked the students to give feedback on their

observations of the strengths and weakness of the course. We used these observations to guide adjustments and modifications in both the form and content of the course. The present course format developed from this ongoing monitoring and evaluation. Details and analysis of some of this feedback will be presented later.

The students attending these courses all have a 'developing country orientation'. They come from a variety of cultures and educational backgrounds with different experiences and expectations. Very few, however, are seeking an academic career. The majority are, or will become, managers of health care services or programmes.

In the first term, qualitative methods are introduced during the core research module. During the second term a two-week elective module, consisting of six classroom days, is offered. The remaining four days are devoted to self-learning in the form of data collection, analysis and preparation for class assignments.

The overall teaching objectives for the elective module in qualitative methods are as follows. Participants should:

- know when to use qualitative research methods and when to use quantitative research methods;
- gain experience in using a variety of qualitative methods including interviews, observations, documents and projective techniques (conceptual formats such as mapping, diagramming and ranking);
- analyse information collected by these methods;
- understand how to apply these methods in needs assessment and evaluation;
- feel confident to use some of the specific qualitative methods introduced during these weeks; and
- identify some skills, methods and approaches for involving community people in health care programmes through the information gathering and analysing process.

The module begins with an overview of the course. The first sessions are spent outlining the characteristics of qualitative research, comparing its use and value in relation to quantitative research (Pederson, 1992), reviewing the use of a research diary (logbook) as a research instrument and generally orienting students to module requirements. The outline of a research protocol is presented and discussed.

Several sessions focus on interviews, the main qualitative method, including developing interview skills. These sessions begin with exercises to illustrate the need for good communication and listening skills. For example, one exercise stresses the importance and skill of active listening in order to get to the correct meaning of a communication, rather than one biased by the interviewer's knowledge or preconceived ideas. Five people are chosen and asked to sit in a

line at the front of the classroom. The first person is asked to give an answer to a personal question. In this case, as most participants were not native to London, the question is 'What is your opinion of living in London?' The next person must repeat exactly what the neighbour has said and then give his/her opinion, and so on down the line. The experience shows that most people do not hear what the neighbour says but rather express their own ideas as the opinions of the neighbour. These experiences lay the basis for the development of interview skills. Other similar exercises can be found in *Health care together* (Johnston & Rifkin, 1987).

When these exercises to help students become aware of the importance of communication have been completed, interview exercises are undertaken. One is a role-play in which two students interview a family consisting of a mother, father and teenage child about their views of family planning. The exercise looks at how interviewers approach the family, how the topic is introduced and the interviewer creates a good interview environment. It also looks at the ways in which questions are posed and whether body language helps or hinders the interview.

Another exercise highlights interviewing skills centring on conducting focus group interviews. After examining the benefits and limitations of group interviews (Dawson *et al*., 1993) a discussion is held on the composition of focus groups. Then, the course facilitator conducts a focus group discussion with some of the students as participants. Each student is given the opportunity to lead a focus group discussion by handing over the interviewer role in a round-robin fashion. To conclude, all contribute to a critical analysis of how the exercise was conducted.

The final interview exercise allows students to work in groups of three each, taking turns at being the interviewer, being interviewed and observing and giving feedback on the interview, particularly to the interviewers. To allow for practice on the preparation of a semi-structured interview protocol, the interview question is given to the class at the end of the day so they can prepare to do the exercise as the first exercise of the following morning. An example of an interview question is: 'In a one-year Masters course should students be required to do field work for their dissertation or is an extensive literature desk review adequate?' At the end of this series of interview exercises, students are given a sheet of paper listing the important points of doing a good interview.

To introduce observation methods and skills the class is asked to make systematic observations over the lunch period to see what people are eating. They are given a tentative hypothesis that men eat more than women do. Their observations and conclusions are critically assessed when they report back after the lunch hour. These exercises complete the introduction to basic skills necessary for conducting qualitative research.

Participatory approaches in health and social improvements are becoming increasingly popular in developing country programmes. Within this context, based on their development in Rapid Rural Appraisal and Participatory

Learning Approaches (Chambers, 1994), visualization methods are of interest to health researchers seeking to investigate beliefs and practices in diverse cultural contexts. With mapping, ranking, and diagrams, researchers seek meaning in pictures rather than words (Rifkin, 1996). Using pictures created by informants, researchers then ask for verbal explanations as to what is presented. For this reason, time is spent examining these approaches as examples of qualitative methods. The facilitators introduce in some detail the use of visualizations to collect qualitative data and to promote participatory action research (Annett & Rifkin, 1995; de Koning & Martin, 1996; UNICEF, 1993). During this session, students, working in small groups, are asked to create their own visualizations—a map or diagram or ranking scale to explain a situation of their choice. Some of the more innovative mapping exercises have illustrated student views of London where banks, transportation including airports, and the post office are often the most dominant features.

To give students opportunities to practice their newly acquired skills in both developing research and using qualitative methods, they are asked to undertake a mini-research project. Working in groups, students identify a small question that they can investigate easily through observation and interviews and identify the people they will approach to get the information they seek. The students develop a protocol that they will use to collect data over the weekend and analyse the following week. An example of a mini-research question is, 'What do the users of the CICH's Resource Centre think about the material and services provided by the Centre?'

The course facilitators assist these groups in defining a 'doable' question and creating protocols for semi-structured interviews and observations. Their role is that of tutor asking critical questions to help students formulate a manageable project for the time allowed and to re-enforce a systematic approach to the entire exercise.

After the data have been collected and recorded in the logbook and interview transcripts have been written, students return for a lecture on how to analyse data. The approach is based on the analysis presented in the World Health Organization's (WHO's) book for conducting health systems research (Varkevisser *et al.*, 1991) and a framework developed by Richie and Spencer (1994). In their group, they analyse the data they have collected. Facilitators again provide tutorial support for this process by working with each group as required. During this part of the course, a session on using computers to analyse data is given. Nud.ist, one of the computer programmes provided for this purpose, is used. (Lewando-Hundt *et al.*, 1997). The use of computers illustrates the need for systematic and logical coding and provides a tool that will not depend merely on a whimsical decision to include or exclude data.

At the end of the week, the student research groups present their mini-research project in the form of a poster presentation to their peers and other interested staff members in the CICH. After the presentation, the class

reconvenes to have in-depth discussions about each project, stressing in particular what each person learned from the experience and how problems they encountered might be overcome.

The module assessment is based on the presentation of the mini-research projects, a review of the logbook and three-to-four-page protocol for future research the student could undertake using qualitative methods. Additional information concerning the contents of this course can be found in Rifkin and Hartley (1999).

Evaluation of Impact

On completion of the module, students are invited to fill in an evaluation form that asks for their feedback and comments on the module. Thematic analysis of the feedback from the two courses conducted in the year 2000 provides examples of this ongoing process and reveals a number of positive and negative observations. The data reported here come from evaluation by 24 students from the past two courses. They include people from diverse backgrounds, including a British nurse who worked in Papa New Guinea and a Ugandan administrator in Social Services.

The analysis is of two courses, 12 in each course, totalling 24 feedback forms, in which:

- 12 people commented that the course was too short;
- 15 people commented positively on the value of learning by doing;
- seven people said it would be valuable for future work;
- six people wanted more on data analysis;
- two people wanted more examples of a good model of practice; and
- two people wanted more academic sessions.

In response to which parts of the course they found most valuable (students could and did give more than one response to this), responses were:

- difference between qualitative and quantitative methodologies: 2
- developing research questions: 4
- development of a research project: 4
- different types of research studies: 1
- action research: 1
- interviews: 10
- focus groups: 8
- data analysis: 12
- interpretation of data: 1
- validating data: 1
- communication skills: 2

- participatory learning approaches: 2
- visualizations: 3
- observation techniques: 2

The following comments illustrate these views in more detail.
Positive categories include:

- appreciation of acquiring skills in interviewing and conducting focus group discussions:

> "It was interesting and very useful to learn how to conduct focus group discussions and produce semi-structured interview guidelines."

- appreciation of learning by doing:

> "I enjoyed learning by doing, and going through the frustrating process of making mistakes."

> "I liked the practical aspect where we were allowed to carry out the mini-research project. We worked in groups and it enabled us to assimilate the information..."

> "This practical experience was very valuable, I now know what I actually have to DO and that is very relieving to know!"

- realization that the skills learnt can be applied to their future work situation:

> " The training was an eye opener on another approach to collecting, analysing and understanding data from the community. It is very useful knowledge for my work in the ®eld."

> "...through discussions we were able to identify partners for possible future research."

The negative categories highlight:

- the present form of the module is too short to cover all the material students would like covered:

> " This module is just not long enough."

> "...need more time for covering data collection and analysis..."

> "I would have liked more on action research but there was no time."

- the need for good role models:

> "I recognize the value of experiential learning, but I felt some good role models of what was required would have been helpful ®rst."

> "It would have been helpful if we could have worked through a simple analysis of an old project ®rst."

- certain aspects need more time and attention:

> "We need more time to include more information on data analysis and some sessions on the theory which underpins the practice."

> "We need more structure on how to carry out data analysis."

> "How to collect data should be given more time."

Another indicator of the value of this module is the increasing popularity of the course. Over the past three years (the first year was experimental) the numbers show this appreciation:

- in 1997–1998, 11 students out of 20 took the course;
- in 1998–1999, 16 students out of 21 opted for the qualitative module;
- in 1999–2000, 12 students out of 17 chose this module; and
- in the last two years, well over half of the total number of students have chosen to do this module.

Discussion

The experience of teaching this module provides some very valuable lessons in teaching a course of this nature. Perhaps the greatest is the challenge to present the material and provide experience in the restricted time available, an observation often made by the participants. Such a situation demands a careful balance between lectures and practice. Time is too limited to go into sufficient detail to carry out in-depth research. For example, students need time to develop the skills necessary for interviewing. Another constraint of time is found when limitations of a research protocol have been defined, and little is devoted to exploring ways of overcoming these limitations. In teaching data analysis, time is needed to understand and use coding systems. Many students would like to learn how to manage data using a computer. However, it is not

possible nor is it the intention to provide opportunity for this within the course framework.

On a more conceptual level, a major lesson is to recognize the continual challenge to overcome the health professional's views about the lack of credibility attributed to these methods. One reason for this credibility problem is that there is concern that the findings from qualitative research are not generalizable. In other words, they only reflect the opinions of those who are interviewed. Such views reflect a misinterpretation of the use of qualitative research. As Patton (1990) discusses, qualitative research is designed to discover subjective meanings within a culture, group or society. It reflects logical or theoretical generalizations as opposed to the statistical or probabilistic generalizations of quantitative methods. This leap in the conceptualization and therefore the value of the research methods is often difficult for students to make.

The experience of teaching qualitative methods in the context of a postgraduate course in which students prioritize research as a means of improving health services or a specific health intervention provides other valuable lessons. These include the necessity of having realistic expectations about course outcomes. For example, it is unrealistic to expect students who are exposed to a short module on qualitative methods to be able to independently undertake a qualitative research project. It is also unrealistic to expect that most people who attend this course will pursue a research career in the health field.

Most students will return to programmes in which they will serve as managers, making decisions about service delivery. In this position, however, they will need to know where to access and how to assess information, in order that they can make well-informed systematic and carefully analysed decisions. Through exposure to qualitative methods, they have had the opportunity to discover the potential of these methods to add to their information base. Although they may not undertake such studies again in their professional life, they do know what information these types of studies can provide.

Conclusion

This approach to teaching qualitative methods is relatively new. With more time, a qualitative study that assesses the outcomes and impact could be undertaken. Such a study could consider how former students feel about this teaching approach and how they use this knowledge professionally. At present, further improvements are being made in response to the feedback evaluations of the students. However, the implications for teaching this module suggest the challenges and the expectations can best be met when teaching is interactive and experiential. This assessment argues for creating situations and tasks where students can learn with and from each other and where the lecturer becomes a

facilitator for this experience. While the lecturer might present information as to why and when qualitative methods are most useful, it is best understood in a context where students themselves discover opinions and views of a study population on a topic of the student's choice. Learning by doing has enabled students to be more confident about both the value and application of qualitative research. With this confidence they are more likely to appreciate and use this type of research to manage health care for the greater benefit of the general population.

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