the trainees themselves must possess some knowledge of the subject to be discussed before the class begins. Yet others favour presentation of a problem as the basis for teaching and no doubt there are other methods which could be applied to the teaching of trainee anaesthetists.

The Faculty of Anaesthetists has gone far in defining the aims and objectives which underlie its training activities and which incidentally are the basis of the FFA examination. Others must convert these aims and objectives into detailed training programmes.

A. R. Hunter

LEARNING OBJECTIVES AND EDUCATIONAL GOALS

The use of learning objectives as a means to improve learning was introduced over 40 years ago. A learning objective can be defined as a "... precise statement of what a student should be able to do in order to demonstrate that he has learned successfully" (Engel, 1975). It defines both what is to be learned and how learning is to be measured and may describe also the circumstances under which measurement will be done. For example, a reasonable learning objective might be: "The student will measure the respiratory minute volume in an anaesthetized patient and will describe which portion of that volume influences PaCO2 directly." This statement leaves no question as to what the student is expected to learn, nor as to how he will demonstrate that he has learned. It can direct his learning so that important or difficult aspects of a particular problem will be highlighted. It does not dictate how learning is to be done and leaves the teacher and student to select suitable techniques.

Learning objectives are a means to learning and are based upon the educational goals of a course of study. The goals are formed from a list of the skills and knowledge the student is expected to acquire during the course. If related goals are linked in a logical manner from the general to the progressively more specific the course of study will acquire a form from which the student can determine both the knowledge and skills that he is expected to learn and how each goal relates to others. The form can provide also a guide for the student's approach to his studies. A number of learning objectives can then be stated for each goal to help the student to attain it. There have been a number of attempts to assemble goals in a logical manner (Bergman, 1966; Hodgkin, 1966; Miller, 1968; Glaser, 1973; Korst, 1974; Burg, 1975) although none has been entirely successful.

Recently the Faculty of Anaesthetists held a seminar entitled "Learning Objectives in Medical Education". The conscious use of educational goals and learning objectives in medicine has been limited to a few specific departments in isolated medical schools and the seminar provided a forum for discussion among interested teachers. It became clear that the problems involved in constructing a medical course using this approach require much study before such a course would be acceptable generally.

In anaesthesia an investigation is continuing to identify and inter-relate the goals of postgraduate training so that it will be possible to state learning objectives in a useful way. While many advantages could result from this approach a great many pitfalls must be avoided—especially any tendency to produce, via an arbitrary selection of learning objectives, a packaged "qualified anaesthetist". If successful, however, it could provide a guide through which the student could be sure he has obtained the knowledge and skills needed for the independent practice of anaesthetics. The guide would be helpful in the District General Hospitals where the majority of postgraduates in the General Professional Training Schemes will work.

R. D. Jack

REFERENCES


