

Evaluation of structured and unstructured training for general practice

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SUMMARY. Twenty-four general-practice trainees were assessed at the beginning and end of their training year. They improved significantly in their factual recall and problem-solving ability. Sixteen young principals who had had an unstructured training for general practice were assessed at the same time and were initially of the same standard but their results showed no difference over the same year.

Introduction

THE first linked hospital and general-practice training scheme began in Inverness in 1952 and a further scheme started in Wessex in 1960 (Hasler, 1974). By 1969 21 centres were undertaking a vocational training programme and by 1973 this figure had grown to 102. There were 336 places approved for the MRCCGP examination at this time, nearly all of which were for three years' duration. Whitfield (1966) concluded that training practices were not adequately supervised and in many cases below an accepted standard. Donald (1975) felt that trainers were given inadequate guidance. Irvine's (1972) report on teaching practices has gone a long way to answering these criticisms.

Vocational training for general practice is soon to become compulsory and all intending principals will carry out a period of three years' postregistration training both in general practice and hospital posts. Despite this move towards compulsory training there is little objective evidence of its value. Probably the majority of general-practice teachers approve of vo-

ational training but the principle is still not universally accepted.

Freeman and Byrne (1976a) published the first objective evidence of the value of vocational training; this study took place over six years and involved 80 trainees undergoing a three-year training programme. An editorial in the *British Medical Journal* (1976) found it difficult to accept their claim in the absence of any control data from doctors entering general practice by less structured routes. The editorial also recognized that while a deficiency of knowledge existed it was difficult to answer with any confidence the case presented by Mason (1976) in favour of unstructured apprenticeship training. The editorial was followed by a vigorous correspondence giving both points of view.

Aim

This study sought to compare doctors entering general practice both by structured and unstructured routes. The first part had been completed when the editorial appeared in the *British Medical Journal*.

Method

A group of 24 trainee general practitioners, the majority of whom were completing vocational training, were assessed during their first month in post. A multiple choice (MCQ) paper of 100 questions and a modified essay question (MEQ) were used. MRCCGP examination standards were used in both.

Sixteen young principals who had qualified at the same time as the trainees but had entered general practice without a formal training were assessed in the same way. The names of the principals were obtained from the primary care administrators in the West of Scotland and of the 34 possibles, 16 agreed to take part. Anonymity was offered.

A second assessment was carried out nine months later. A different multiple choice questionnaire and

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Table 1. Trainee assessment (N = 24).

	Multiple choice questions	Modified essay questions
Beginning	43%* (Range 18-62)	69%* (Range 33-80)
End	52%* (Range 37-76)	75%* (Range 40-92)

*Significant difference $p < 0.005$.
(Paired 't' tests.)

modified essay question were used. To remove any bias from the relative standards of the papers one half of each group did paper A on the first occasion and the other half paper B. On the second occasion all did the alternative paper.

Groups of experienced trainers completed one of the two papers so that an adequate level of achievement could be monitored. This provided a yardstick against which trainee and principal performance could be measured.

Results

The papers were marked as in the MRCGP examination, a negative mark (-1) being given for each wrong answer in the MCQs.

The trainees showed a highly significant improvement in both the MCQ and the MEQ (Table 1). In the MCQ a mean of 23.6 per cent of the questions were unanswered on the first occasion, compared with 15.1 per cent at the second assessment.

The principals showed no change in their MCQ marks but a slight fall was evident in their MEQ (Table 2). In the MCQ a mean of 21.1 per cent of the questions were unanswered on the first occasion and 19.9 per cent on the second. A group of trainers completed either paper A or paper B and there was no statistical difference between the two papers (Table 3), suggesting that the standard of both papers was comparable. The trainers were unable to answer 14.9 per cent of the questions on paper A and 18.2 per cent on paper B.

Table 2. Assessment of 16 general-practitioner principals (N = 16).

	Multiple choice questions	Modified essay questions
Beginning	44% (Range 34-60)	69% (Range 53-80)
End	44% (Range 23-58)	65% (Range 53-82)

*No significant difference.
(Paired 't' tests.)

Table 3. Assessment of trainers.

	Paper A	Paper B
Multiple choice questions	50%* (Range 38-62)	47%* (Range 43-49)
Modified essay questions	77%* (Range 65-84) N = 10	83%* (Range 70-88) N = 6

*No significant difference.
(('t' test.)

Discussion

This study suggests that the trainee year of vocational training for general practice is of value. The trainees were not statistically different from the young principals in the first assessment but showed a distinct advantage when reassessed, thus illustrating the value of teaching over an unstructured approach. It is interesting to note that the trainees answered more questions in the MCQ in their second assessment, whereas the number answered by the principals remained the same. It is surprising that the principals did not score higher than the trainees in the initial test as most of them had been in practice for over a year and the examination was biased towards general practice knowledge, skills, and attitudes being based on the written part of the MRCGP examination.

One criticism of the study could be that the principals were self-selected, and not randomly selected and then matched with the trainees. However, both groups qualified at the same time, their ages and sex distribution being similar. A self-selected group of principals who were willing to be assessed is unlikely to have been found by the criteria used to be less able than a randomly selected group of their peers.

The number of principals who undertook the study was encouraging; they gave up six hours of their time, received no expenses, and two travelled over 40 miles for each assessment. They were given the option of being anonymous, but almost all asked for feedback on their performance. Of the original 18, only two did not take part in the second assessment.

Of the trainees in the West of Scotland starting their training on 1 August 1976 almost all participated in the assessment and, of the original 26, 24 took the second test. The trainees attended a half-day release programme as well as having tuition from their trainers. None of the teachers were aware of the content of the assessments.

The trainees improved over the year and in their second assessment scored higher than their trainers in factual knowledge, whereas the latter scored higher in the problem-solving exercise. These findings were similar to those reported by Freeman and Byrne (1976a). Subsequently the same authors reported that trainees' postcourse scores were not significantly



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different from those of their general-practitioner teachers (1976b).

One advantage of this type of assessment is that it identifies the less competent trainees early on and gives them a chance to improve. A trainee who was identified early on was thus discussed with his trainer who had been worried about his lack of knowledge. This trainee was given special tuition in his weak subjects and showed the biggest improvement in the second assessment, attaining a standard not far behind that of his colleagues.

This study has shown the value of training for general practice but it is surprising that a survey of this type had not been completed previously as vocational training has become widespread since the late 1960s. A study carried out in North Carolina (Peterson *et al.*, 1956) showed the advantage trained physicians had over untrained physicians. This marked difference however reduced with time.

The group of experienced trainers was used to determine a standard for each test: these tests were thought to be of a similar standard but were given in a crossover manner to reduce any bias towards an easier test being used in the latter part of the study. The trainers' scores would suggest that the standards of paper A and paper B were similar.

This is the first report in the UK of the advantages of a vocational training scheme over the traditional apprenticeship schemes. Further studies are required to define the content of vocational training and to determine the best methods of teaching.

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