

An individualised learning-system for interviewing techniques

L LODEWICK, R LULOFS, H SCHMIDT

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Abstract:

1. Introduction

In 1974 the new Medical School of Maastricht, the Netherlands, was founded. As a consequence there was a possibility to start a curriculum which was based on a rather new educational philosophy, that can be loosely summarised in four sentences:

- a consistently problem-oriented approach*
- individualised learning*
- emphasis on attitude development*
- formative evaluation.*

One of the more important elements of the curriculum is the skills laboratory, a place where students can learn to perform the skills of a general practitioner, such as: the measurement of blood pressure; inspection, palpation and percussion of the human body; the interviewing of patients; etc, etc.

The paper at issue is about this last element: the training of interviewing techniques.

2. Training of interviewing techniques in the Skills Laboratory

An important facet of the professional activities of doctors is talking with people. They talk with people not only to explain things, or to reassure them, but to get meaningful information from them. It is well-known that the nature and the quantity of information the patient supplies is dependent on the way the doctor talks with him.

We have tried to set up a rather structured individualised learning programme that consists of four elements:

- The students have to read a programmed instruction about the basic principles of interviewing before they get their training in the skills laboratory. These principles are, among others: 'Try to rephrase the responses of the interviewee in fresh words' and 'sit in your chair with your body bending forward'.*
- After they have read the programmed instruction they have to evaluate some good and bad interviews recorded on videotape by means of a scoring device that is based on the principles of interviewing.*
- The students then have to engage in a so called 'dummy-training' to practise the most important aspect of interviewing, the rephrasing of an interviewee's response. For that end we have developed an apparatus, which essentially consists of a box with two tape-recorders built-in (and which we have given the name of Avia: audio-visual-interaction-apparatus). The student who uses this apparatus first hears the voice of an interviewer asking a question, next he hears an interviewee answering that question, and then the student has to give his own response as if he were the interviewer. After he has done that, he hears the most adequate response from tape. So, the system is based on immediate feedback to the behaviour of students.*
- Finally the students engage in interviewing each other on the basis of role-playing. These interviews are recorded on tape and are evaluated by students and teachers with the help of the scoring-device.*

These last two elements are repeated twice.

Evaluation data on the effectivity of this training will be available at the time of the conference.

Main aspects covered: 1. *Teaches independence*; 2. *Time independence: students can come and train at any moment they wish*; 3. *Clearly-defined learning goals, which makes self-evaluation possible*.

INTRODUCTION

The State University of Limburg is a newly-founded institute of higher education in the Netherlands. At present it consists of only one faculty: the Medical School. The fact that it was newly-founded gave an opportunity to try out an experimental curriculum which is based on four educational principles: a consistently problem-oriented approach, emphasis on formative evaluation, special consideration for the attitudinal aspects of medical training and stress on self activity. A provisional descriptive analysis of the first results of this experimental curriculum can be found in Tiddens, et al (1975).

An important aspect of the curriculum is the innovation of a centre for skills training: the skills laboratory. In this laboratory students are instructed in basic medical skills, such as the measurement of blood pressure, neurological examinations, intramuscular injection, the determination of albumen in the urine, etc. All these training courses take place in a more or less artificial context, that is to say: without real patients, but with the help of manikins, simulated patients, etc. This approach is based on the following consideration:

With the growth of the number of medical students in the Netherlands it becomes more and more difficult to find enough patients to train on. Add to this that in most cases skills training by students is an inadmissible burden for patients, so it is clear that skills instructors have to search for patient-independent training.

Some other characteristics of the instructional programme of the skills laboratory are:

- teacher-independence
- intensive remedial teaching
- gradual increase of the complexity of the skills in the course of the curriculum.

For a more detailed description of the philosophy and contents of the skills laboratory programme, see Lodewick, et al (1976).

AN INDIVIDUALISED LEARNING SYSTEM FOR INTERVIEWING TECHNIQUES

An important facet of the professional activities of doctors is talking with people. Doctors talk with people not only to explain things or to reassure them, but also to get meaningful information from them. It is well known that both the nature and the quantity of the information the patient supplies is dependent on the way the doctor talks with him. In the skills laboratory students will get four training courses in this respect: a training in basic interviewing techniques, a training in gathering information from patients, a training in giving information and a training in counselling. This paper considers only the first course: the acquisition of a basic skill in interviewing.

We have tried to design a rather structured individualised learning programme that consists of four elements. We shall describe these elements below in some detail.

The students have to read a programmed instruction about the fundamental principles of interviewing before they come to the skills laboratory. This programmed instruction (Vrolijk, et al, 1972) is composed of items like this:

1.3. Only the opinions and ideas of the interviewee are important. The opinion of the interviewer is therefore — (see next page).	1.3. unimportant or irrelevant.	1.4. The interviewee plays an explorative role.
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When students have read this programmed instruction, they have knowledge of the following principles of good interviewing:

1. Try to rephrase the responses of the interviewee in fresh words. It gives the interviewee the feeling that you understand him and is therefore rewarding for him.
2. It is admissible to ask questions about the topic in question when opinions the interviewee is giving are not clear, but avoid questioning outside the domain of the topic.
3. Interjections such as ‘hm, hm’ and ‘yes’ are also rewarding.
4. Sitting in your chair leaning forward and nodding with your head stimulates the interviewee to talk.
5. Be careful not to make wrong interpretations and do not let your own values and opinions influence your reactions. So avoid presuppositions and value judgements.

The students also learn to use a scoring form which is based on the above-mentioned good and bad categories of interviewer responses. This enables them to judge the quality of interviewer behaviour. The categories are: Q-ex (questions outside the domain of the topic); Q-in (questions on the topic); Re (résumé of the things the interviewee has said); In (information giving); Pre (presuppositions); and Va (value judgements).

After they have read the programmed instruction they have to evaluate some good and bad verbatim interviews and interviews recorded on videotape by means of the scoring form.

The students then have to engage in a so-called ‘dummy-training’ to practise the most important aspect of interviewing: the rephrasing of the interviewee’s response. For that end we have developed a device which essentially consists of a small suitcase with two tape-recorders built-in (and which we have named Avia: audio-visual-interaction-apparatus). The student who uses this device first hears the voice of an interviewer asking a question, next he hears an interviewee answering that question, and then the student has to give, within 30 seconds, his own response *as if* he were the interviewer. After he has done that he hears the most adequate response from tape. For instance:

- | | |
|------------------------|--|
| Interviewer (on tape): | ‘What’s your opinion about old people’s homes?’ |
| Interviewee (on tape): | ‘Old people’s homes. I feel it’s a shame to put old people away in nursing homes. People just don’t want to be bothered with them, so they get rid of them. I think it would be much better both for the elderly and for young families to have more contact. The old people can do a lot for the younger, for instance look after the children when mother does the shopping and in that way they don’t feel useless and wouldn’t be as boring as a lot of younger people seem to think.’ |

Student (live):	'Eh — you think that old people should do more for the younger families to make themselves useful?'
Interviewer (on tape, after 30 seconds):	'You feel it's an injustice for the elderly to regard them as people who have nothing to offer and best be grouped together, so that they can be looked after more efficiently and you feel that by keeping the elderly within the society both parties would gain?'

So the dummy training enables you to give immediate feedback on the interviewing behaviour of the student.

Finally, the students engage in interviewing each other on the basis of prescribed topics. These interviews are recorded on tape and evaluated by students and teachers with the help of the scoring form.

The total time needed for this training is eight hours.

SOME NOTES ON THE STRUCTURE OF THE INTERVIEW TRAINING

1. One of the main features of the interview training is the gradual increase of complexity. Students first read only about how to interview and see how other people interview. Then they practise just one aspect of interviewing techniques and finally they engage in interviewing other people themselves. Not only are the elements of this training hierarchically arranged, the training itself is a hierarchically ordered element in a chain of courses in interviewing.
2. Most of the training shows characteristics of individualised learning; that is to say: students can train any moment they wish, and so long as they wish. They can always come back to see another videotape or to train with another dummy tape. There is no interaction needed between student and teacher because the teacher is replaced by programmed instruction, video-recorder and Avia. Only for the last element of training a student has to ask another student to come with him to the skills laboratory.
3. The scoring form makes possible a frequent evaluation of student-interviewing behaviour by himself or by a member of the staff.
4. The interview training is based on principles of learning as they find expression in programmed instruction, observational learning and learning under the influence of feedback.

However there can of course be doubt about the utility of this type of training. One can ask: Is this training effective? Do students really learn what they are supposed to learn? We have designed an experiment to answer that question.

REPORT ON THE EFFECTIVENESS OF THE INTERVIEW TRAINING

Experimental subjects

Experimental subjects were 25 first-year medical students and 25 second-year medical students. The first-year students were trained in the way described above. Our control group, the second-year students, had received a more 'laissez-faire' type of training which consisted of reading a rather extended summary of the programmed instruction and of interviewing some patients. These interviews were recorded on tape and discussed in their teacher group.

Operationalisation of variables

The independent variable was the type of training the students received. We used two dependent variables to measure the effect of the type of training. The first

index was based on the categories of the scoring form. Two independent judges rated the fifty interviews with the help of this form. The inter-judgement reliability was sufficiently high ($\phi=.82$). For each of the interviews we computed a performance-score PS, which expresses the relative frequency of 'good' interviewing behaviour of each student-interviewer. The formula for this performance-score was as follows (Vrolijk, et al 1972):

(index 1)

$$P \text{ score} = \frac{\text{frequency of Q-in} + \text{frequency of Re}}{\text{total frequency of interviewer responses}}$$

The reader will remember that responses of the Q-in and Re-type were the adequate responses.

The other index for the quality of an interview was based on a rather simple consideration: an interview will be better when the interviewee talks more and the interviewer talks less. The resulting index is a time-ratio which has the following shape:

(index 2)

$$T = \frac{\text{length of time the interviewer talks}}{\text{total length of time of the interview}}$$

Our expectations were that our interview training would result in a higher mean P score and a lower T.

RESULTS AND CONCLUDING REMARKS

In Table 1 the results of both groups on both dependent variables are summarised.

	experimental group	control group
P Score	.76	.41
T	.29	.35

Table 1: Mean ratio-scores on the two variables.

We performed an analysis of variance on both variables to test our hypotheses about the differences between the groups (Winer, 1971). The results are summarised in Tables 2 and 3.

	SS	df	MS	F
Treatment	1.52	1	1.52	50.66 ¹
Error	1.64	48	0.03	
Total	3.16	49		

Table 2: Results of an analysis of variance (fixed effect) on P Scores.

	SS	df	MS	F
Treatment	0.04	1	0.04	4.44 ²
Error	0.44	48	0.009	
Total	0.48	49		

Table 3: Results of an analysis of variance (fixed effect) on T scores.

¹ p = <0.01

² p = <0.05

The results are clear: on both dependent variables the experimental group does better than the control group. So we can conclude that the interview training described in this paper has 'proved its mettle'.

One remaining problem should be mentioned here. There are people who say that a skill like interviewing other people should not be trained in this segmented way; that it is ridiculous and senseless to break up the skill into constituent parts which are separately trained. They say that learning to interview people is like learning to drive a car: sit down behind the wheel and drive. This holistic comment still remains a problem for us.

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