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EITB EDUCATION AND TRAINING OF TECHNICIAN ENGINEERS AND TECHNICIANS

AUTHORS NAME

J. Harris

AUTHORS COMPANY

ENGINEERING INDUSTRY TRAINING BOARD

The Board's first recommendations for the training of technicains *" The Training of Technician Engineers"* were published in 1969. Recommendations for *"The Training of Technicians"* were published in 1971.

When we started out on the task of preparing these recommendations we realised that there was a lot that we did not know about the technician population in engineering so we carried out a fairly substantial survey to find out the answers to questions such as:

Where do technicains work ?

Where do they come from ?

What are the characteristics of individual technicians ?

What sort of work do they do ?

The results of this survey entitled *"The Technician in Engineering"* was published in 1969 and the information which it provided was used by our Technician Training Policy Committee in the development of its training recommendations.

At this time Dr. Haslegrave and his committee were developing their recommendations about technician education which the Technician Education Council (TEC) is now seeking to implement. Our training recommendations were based on the system of education proposed in the Haslegrave report and provided a fully complementary pattern of education and training for technicains.

The survey revealed that despite the very wide range of technician activities there was a substantial degree of commonality in the skills and knowledge which they used. Thus the concept of one year's basic off the job training followed by a common core of general training for all technicians was developed.

In the first year, manual skills similar to those of an engineering craftsman would be developed. In the second and subsequent years such subjects as Manufacturing Practice, Design Appreciation, Control Techniques, Commercial Matters would be studied. The training would be integrated with a further education course at City and Guilds technician, O.N.C. or H.N.C. level. Communucation is important in technician matters and good written and spoken communications would be a constant theme throughout the course.

Whilst there is a common core of subjects throughout the technician's training the treatment of these subjects will be different for electrical, electronic, mechanical, production and aeronautical technicians and will reflect the discipline which they are following in their further education course. The level and pace of the training will be related to the level of the further education course, for example, it would be much more demanding if it were associated with an H.N.D. course than a City and Guilds technicians course.

That is a very brief summary of our findings but the nature of the person with whom we are dealing is beginning to emerge. We see a man who operates over a wide band of activities in his firm. His technical education will equip him with knowledge in some breadth and depth about his chosen discipline; to this will be added some general studies supplementing his general education. His training must show him how this knowledge can be applied so as to benifit the firms activities and this will require a fair understanding of its organisations and the business it is in.

All this is general stuff and prepares the technician to operate in any -ne of a number of areas with relatively little additional training which we call objective training. Objective training seeks to match the man to the needs of the job which he has been selected to do and this requires a job description to be written from which the particulat skills and knowledge required can be derived. When compared with the skills and knowledge which the trainee has at this stage certain deficiencies will be revealed which can be made good through the medium of an objective training programme. Here specific knowledge, skills and experience are acquired partly on the job, partly in training and partly in the form of short specialist courses which could include courses in aspects of acoustics if the need for this was indicated by the job analysis.

Obviously any technician engineer employed by a firm whose business was in acoustics e.g. designing and manufacturing equipment to vary the acoustic properties of concert halls would obviously need to know a great deal more about acoustics than the general run of technicians. On the other hand a

technician engineer in the production area, one of whose duties involved monitoring and reduction of noise levels would need only limited knowledge.

That is our philosophy about technician training - a general common core across the range of company activities with increasing specialisation at the objective training stage.

That rightly or wrongly is where I would see acoustics fitting in, in the majority of cases. That is not to say that there would not be some cases where some basic education in acoustics was required at an earlier stage but in the engineering industry at least I do not think that there would be many of these.