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TREATISE

- The Relationship between Vocational Interest and
Achievement in Training..... K. TODA
- Problems involved in the Preparation of
'Modular Units' in Japan.....K. ASAI
- 'Sensory Control' in Performance —An Analytical Study
of Skills in TIG Arc Welding of Aluminium—
..... K. YASUDA & T. TSUTSUI
- Employment Problem of Aged People from the
Viewpoint of the Labour Market Structure..... T. OBARA
- Historical Review of the Public Vocational Training
Institutions, 1938-1941..... T. SASAKI & K. TANAKA

RESEARCH NOTE

- The Mechanism of Skill Acquisition.....K. NANA O

RESEARCH AND DEVELOPMENT CENTRE

THE INSTITUTE OF VOCATIONAL TRAINING

1960 Aihara, Sagamihara., Kanagawa, Japan

The Relationship between Vocational Interest and Achievement in Training

Katsuya TODA

Following his previous study on the validity of vocational interest test the author tried to find out if there was any relationship between vocational interest of individual trainees and their achievement in training and for this purpose administered vocational interest test to 626 trainees (age 16-17) in 42 classes at 11 public vocational training centers. Major findings were as follows :

- a) The correlation coefficient of the training achievement and the trainees' interest in mechanical area varied considerably according to classes, and the correlations coefficients were distributed between $\gamma = .817$ and $\gamma = -.750$ with the median of $\gamma = .219$.
- b) Interest scores in mechanical area were related a little more closely to achievement in practical exercises than to theoretical study.
- c) The correlations coefficients between 'general intelligence' and interest scores in mechanical area were distributed between $\gamma = .929$ and $\gamma = -.455$, with the median of $\gamma = .384$.

The above findings show that vocational interest test will not be effective in predicting the trainees' achievement while it may help to forecast their involvement in training.

Problems involved in the Preparation of 'Modular Units' in Japan

Kiyomi ASAI

The system of training based on the concept of 'Modules of Employable Skills' originally developed by ILO was introduced by the Ministry of Labour in 1977 to be applied to the retraining of aged adults, and the staff of the R. & D. Centre, IVT, have been engaged in the drafting of the syllabi and the preparation of learning packages for this training.

At the early stage of this attempt, 'modular units' were comparatively small in size corresponding to a 'task', but during the course of trial at the public vocational training centres critical comments were made by the training staff of these VTCs that employability will not be attained by the training programmes consisting of such MUs.

The author considers that this is because of the difference in the concept of 'employability' between Japan and the developing countries where ILO sponsored programmes are in operation, and some modification will have to be made to the ILO system. Considering the job requirements in industry, the author feels that employability may not be attained by simply adding up the MUs each corresponding to a task and that some other elements will be needed to structure these into an employable whole. For this purpose, the author presents the concept of 'basic MU' and 'applied MU'. The former corresponds roughly to a task which will enable the trainees to acquire skills to perform each segment of a job while the latter will enable them to perform a whole job which includes programming and adjustment to the changing work situation.

‘Sensory Control’ in Performance
—An Analytical Study of Skills in
TIG Arc Welding of Aluminium—

Katushiko YASUDA & Toshio TSUTSUI

The authors have focused their attention to the general observation that an experienced craftsman always reacts to the changes occurring in work situations without conscious understanding of the causal relations between the observed phenomena and the actions taken to obtain the desired performance. The authors defined this behaviour as ‘sensory control’, and in an attempt at clarifying the laws governing this interaction have made a series of observations in various types of welding operations, the part of the results having been already reported.

In this article, the behavioural pattern of a skilled welder performing AC TIG Arc welding was observed and analysed. It was found out that the welder reacted to the changes observed in the melting conditions of the base metal by adjusting the welding speed, arc length and melting rate of the welding rod. This confirms the previous observations made of Semiautomatic CO² Arc welding.

Employment Problem of Aged People from the Viewpoint of the Labour Market Structure

Tetsuro OBARA

During and after the recession of 1974-75 unemployment especially among aged population showed a marked increase, and this phenomenon was generally regarded as resulting from the general aging of the labour force and accelerated by the recession. The author questioned this view and examined available statistical figures. Major findings were as follows;

- a) Increase in the number of unemployed was most remarkable among those aged 55 and over, while increase in labour force was most conspicuous among those in their late forties.
- b) Among those who left jobs during the period, largest proportion did so because they reached the compulsory retirement age. Also, increase of job-leavers was most conspicuous among undertakings employing 300 to 999 workers and major contributing factor to this increase was compulsory retirement by age.
- c) Majority of the private firms employing more than 30 workers have work rules or collective agreements providing for compulsory retirement by age, but the rules were not strictly applied in smaller scale firms according to a survey made in 1977.
- d) Throughout the recession period there were remarkable increase in the proportion of aged employees among undertakings with less than 100 employees and sharp decline among medium-size undertakings.

From these findings the author concludes that the increase in unemployment of aged population during the recession had little to do with the general aging of the labour force, but was due to the reduction of labour force among medium-size undertakings which presumably operated the so far dormant rules of compulsory retirement by age. The author comments that adequate labour market approach will have to be considered to understand the implications of the problems.

Historical Review of the Public Vocational Training Institutions, 1938–1941

Teruo SASAKI & Kazutoshi TANAKA

During the period of Sino-Japanese Conflict 1938–41, public institutions were newly established for the training for skills apart from technical education in schools and training in industry. In this article the authors tried to clarify the policy implications of these institutions by examining their objectives and curricula.

These public institutions were established by the Ministry of Commerce and Industry (MCI) and the Ministry of Welfare (MW) respectively, and the authors identified two functional types. The first type includes “Kikaiko-yoseisho” (Mechanics Training Center) maintained by the MCI and “Kanbukikaiko-yoseisho” (Leader-mechanic Training Center) maintained by the MW. These centers aimed primarily at assisting the development and promoting the rationalisation of smaller scale industries by offering training for foremanship and semi-skilled craftsmanship. The second type includes “Shokugyohodosho” (Vocational Guidance Centers) and “Kinrokunrensho” (Labour Training Centres) both established and operated by the MW, and these centers were intended to impart relatively simple skills and related knowledge to those masses who became redundant during the course of rationalisation of industry. The level of training in the latter type of institutions was inevitably lower, but the authors note that the training programmes there were designed to guarantee the trainees’ right ‘to live, to work and to learn.’ The authors consider that the ideal underlying the training there is still valid under the present-day situations.

The Mechanism of Skill Acquisition

Kazuyuki NANAŌ

In this paper the author reviews previous studies and research concerning the nature and process of skill acquisition, in an attempt at seeking an approach best suited to the training for occupational skills.

Most of the studies and research in skills have focused on the overt behaviour rather than on the covert aspects, but in recent years the importance of perceptual and central organising activities in sensory-motor skills has come to be increasingly recognised and progress has been made toward genuinely quantitative treatment. The author considers that the body of knowledge gained in this area of research will be effectively applied in the training for occupational skills in order to facilitate skill acquisition and to minimise the skill loss caused by aging and suggests that more experimental work will be needed to throw lights on those aspects of information processing system which have not yet been fully clarified.