HUMAN RESOURCES DEVELOPMENT RESEARCH

CONTENTS

Research on Classification of Productive Skills (3)
— Examination of Standard for Skill Classification —

Kazuo MORI

Yasuyuki KIKUCHI

We investigated skilled workers to determine skill patterns. The skill classification standard is being composed from the results of this invitation. In this report, we attempt to verify the validity of setting two axes (the intellectual management axis and the sensory motor axis assumed as a standard for the skill classification by processing the data by multi-variate analysis).
The variables used were from the following 3 zones.

A zone: nature of productive skills (4 groups and 40 variables)

B zone: functions and vocational ability necessary for work (9 groups and 60 variables)

C zone: work conditions (5 groups and 33 variables)

We further examined the results of factor analysis by cluster analysis.

As a result, 3 zones and 18 groups were structured into 3 clusters. These can be called "maintenance and repair cluster," "sensory motor cluster" and "intellectual management cluster." The following can be pointed out from the above-mentioned result. First, the idea of setting two axes (intellectual management and sensory motor) was verified. Second, the key word for sorting the composition of each zone was clarified. For instance, the "nature of productive skills" zone is composed of the content of preparation and maintenance, processing, assembly and information analysis and transmission. Third, in the skill, "information, judgment and technological understanding" and "motion with eyes and hands and judgment" are key words.

Integration of Technique and Skill
and Its Method of Evaluation

Kuniaki UNNO

The subject of this paper is the integration of technique and skill and its method of evaluation.

To begin, a definition of each is provided. Technique comes under the topic of linguistics and has form, while skill is non−linguistic and emerges as a process. Consequently, it is suggested that the integration of technique and skill be evaluated on 5 steps, and techniques at the primary steps be referred to as basic technique, proficient technique and creative technique.
Finally, conditions required for the integration of technique and skill are shown.

Computer Assisted Instruction
— Problems and future direction —

Masayuki SHIMADA

Based on my experiences with CAI, I have discussed my opinions about the problems and future direction of CAI. These problems were classified into four parts: (1) some problems about CAI courseware; (2) the difficulties in the usage of an authoring system; (3) the problems in the development of CAI courseware; and (4) the problems of the hardware.

In order to develop and use the CAI effectively, I think these problems must be solved first, but the standpoint of thinking is important. Taking a hint from the Steiner method of Education, I proposed to give priority to the instructor in utilizing and developing the CAI courseware.

In this papes the following five proposals were presented:

The first proposal concerns the CAI courseware modules which appear on the market. Most of them cannot be modified and revised by the instructors. In the near future they should develop CAI courseware that can easily be modified by the instructors.

Second, in order to make use by the instructors more simple, I proposed specialized authoring systems which can use the teaching materials data base, including various texts, references, dictionaries, and so forth, related to the subject concerned.

Third, I have proposed to systematize the lessons to be able to supplement the shortages of CAI courseware. This is an application of Bloom's concept of a Mastery Learning System. I have also introduced the concept of microprogramming as a

technique for sustaining the motivation of teachers in the area of program development.

Fourth, four concepts of the CAI courseware were presented: (1) study guide courseware; (2) evaluative and diagnostic courseware; (3) courseware enabling various methods of study; and (4) instructor courseware.

And fifth, I have proposed an idea of programs for lessons allowing for instructor guidance and interaction among students. A program for lessons can easily be put together at the stage preceding development of CAI courseware, and can also be designed to follow up and supplement CAI study.

The Probrem of Copyright about Make and Use of Self—made Materials for Teach

Kanji SUMIDA

Almost all of the teaching materials which have been used in the short—term courses for workers have been created by the instructors themselves in public institutions of vocational training.

However, I consider that these teaching materials include several problems of copyright in view of the existing copyright law.

In this essay, I introduce the articles which are concerned whith the teaching materials in the copyright law by a doctrine, a judical precedent, and published opinion.

When we use others' writings, it is necessary to acquire an agreement from the copyright holder except in the case when the copyright is restricted by the copyright law.

For using the writings legally.

We must ascertain the following matters:

(1) The protected writing under the copyright law in Japan.

(2) The writings during the protected term of the copyright.

(3) The writings capable of being used without on agreement of the copyright holder

We need to comprehend the copyright law correctly, and from now ascertain the copyright law before using others' writings.

A Note of the Vocational Training and General Education in Japan

Kazutoshi TANAKA

This paper is intended as an investigation of the problems in the relation between vocational training and general education (the education in the Ministry of Education) in Japan from a new point of view of their equality in the intrinsic value. The points of view to be discussed are as follows.

1. The education of individual is not only in schools.
2. The definition of vocational training in Japan is various.
3. The Japanese concept of education is not understood by Europeans and Americans.
4. Vocational training in Japan is separated from general education, but both of them seem to be united into one in Europe and in the United States of America.
5. To teach people started from the vocational training.
6. The reason why vocational training is treated lightly in Japan is because it started after the settling of "the view of the cult of success in Japan".
7. The slighting and despairing view of vocational training must be the inheritance of backward countries.
8. The combination of vocational training with general education was investigated for a certain period of time after World War II.
9. Future society must be a society of "life-long learning" which cannot disregard vocational training.
10. Vocational training must be more educational than general

education.
11. Even university graduates are receiving vocational training at present.