

SHOKUGYO-KUNREN KENKYU

VOL. VI 1988

TREATISE

Study for a Systematic Implementation of Up-Grading Vocational
Training in Japan T. OBARA, Y. KIMURA

The Relationship between Vocational Interest and Personality
. L.P. SOON, H. YAMAMOTO, K. TODA

RESEARCH NOTE

The Meaning of "Discovery" by J.S. Bruner . . T. SHIMOYAMA

A Way of System Modeling on Control System Design Training
. Y. NISHIMI

A Guide for Structuring Simulation CAI - Introducing SIMULA-
TION CAI into the INSTRUCTION SYSTEM
. Y. TANIGUCHI

RESEARCH AND DEVELOPMENT CENTRE

THE INSTITUTE OF VOCATIONAL TRAINING

1960 Aihara, Sagamihara., Kanagawa, Japan

STUDY FOR A SYSTEMATIC IMPLEMENTATION OF
UP-GRADING VOCATIONAL TRAINING IN JAPAN

Tetsuro OBARA, Yoichi KIMURA

The great number of up-grading vocational training courses are implemented in Japan. The reason why demands are coming from industry workers who are affected by rapid technological changing. The up-grading training courses are designed and implemented by instructor's efforts in each vocational training centers. And also many papers are presented for systematic implementation of up-grading training courses.

This paper concentrates on actual worker's skill which has been mixed with many basic training factors taught in vocational training center. This paper stands on the view point of creation of the systematic matrix called "AMIME".

THE RELATIONSHIP BETWEEN VOCATIONAL INTEREST AND PERSONALITY

Lee Peng Soon, Hiroshi YAMAMOTO, Katsuya TODA

The purpose of this study is to investigate the relationship between vocational interest and personality. The authors review previous studies and research in the first stage, particularly in an attempt to determine a suitable approach for examining the relationship between vocational interest and personality. In the relationship studies with multivariate analysis, canonical correlational analysis is the best method for combining the two compared with other multivariate analysis.

In the second stage, a study on 55 male student subjects on the institute of vocational training was used to clarify whether canonical correlational analysis best combines the relationship between the two compared with principal component analysis and principal factor analysis. Canonical correlational analysis is the best method that finds the relationship between the two sets. In this study the measured vocational interest and personality have been taken as outlines of two separate sets. This is the reason why canonical correlational analysis best combines the two: the relationship between the vocational interest and personality compared with principal component analysis and principal factor analysis.

THE MEANING OF "DISCOVERY" IN "HEURISTIC"

BY J.S. BRUNER

Toshikazu SHIMOYAMA

For the purpose of making clearer the meaning of "re-grasp" which is main educational function in "the semi-automatic welding skill clinic", I examined a concept of "heuristic" in "The process of education" by J, S, Bruner. "Heuristic" is considered a teaching method to form autonomous learning attitude of student. Bruner attached importance to "the structure of the subject matter" for the content of education and "readiness" for learner, and he said that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. But necessity of "heuristic" is not found from the relation between "the structure of the subject matter" and "readiness". Although "heuristic" is advocated for method that impose attitude to learn that is "intellectual curiosity" by Bruner, I feel that Bruner didn't discuss the relationship "the structure of the subject matter" and "the structure of knowledge of student". From this point different character from Bruner should be given to "discovery". That is "discovery method" is leaning that needs "discovery" inevitably. Such kind of "discovery" is a process of producing new structure of knowledge of learners by meeting "the structure of the subject matter".

A WAY OF SYSTEM MODELING ON CONTROL SYSTEM DESIGN TRAINING

Yasunori NISHIMI

Automation for production system in factory has increased the needs of complexity and flexibility, the applications of programmable controllers have progressed. However, the designs of control systems are not always done systematically and theoretically, so that there are some problems on education and training in this field.

Therefore, the author studied a system modeling on control systems by a new kind of graph deduced from Petri net which is noticed in recent years, and was able to described by this graph control systems better than traditional one. The author confirmed an effectiveness as follows.

1. This graph was able to represented the systems more accurate expressions in graphically and mathematically than traditional ones such as time charts and ladder diagrams. And an unity form was able to adopt systematically from general to detail expressions by this graph.

2. Although this graph had a problem on expression of emergency stop of the control systems which have timer factor, the author schemed out a new method and solved this problem. As an control system experiment with conventional programmable controller, executing the program represented by this graph was achieved the aiming control, so that this method was proved to be able to adopted to the control system design training effectively.

A GUIDE FOR STRUCTURING SIMULATION CAI

– Introducing SIMULATION CAI into the INSTRUCTION SYSTEM –

Yuji TANIGUCHI

Although the SIMULATION CAI, as one mode of Computer Assisted Instruction, is assumed to be quite useful for higher and technical education, its basic principles and designing methods are, we might say, not well prepared yet up to the present.

This study describes the importance of differentiation between GENERAL SIMULATION and SIMULATION CAI. It is very important to point out that there are clear messages from the instructor's side concerning instructional objects when the SIMULATION CAI is used as one of the instructional strategies, which is not contained in the GENERAL SIMULATION.

Since instructor's messages, representing instructional objects and educational intentions, are expressed in the way of communication, SIMULATION CAI can be defined as one of the communications means. From this point of view, it may become an effective approach to structuring SIMULATION CAI to clear the mechanism of the instructor's messages and characterize the methods of communication.