RESEARCH EDUCATION BY PRODUCTION CONTROL

Authors : Rachada Kongkachandra, Kosin Chamnongthai

Since original products and basic knowledge play very crucial role for directly developing the industry and economy of the country. In some developing countries like Thailand etc., the researchers and developers have to work hard for researching and developing the new original knowledge and products. But the environment for researching and developing is not well provided yet, and the number of researchers is not big enough. In addition, the consciousness of the students and young people against the researching is not remarkable. The researching environment needs to be created, and the education for training young generation to be high performance researcher is required urgently. In this paper, the education for training researchers by production control is proposed in order to train the students to be researchers within finite time. To train the young generation as researchers according to production control, the trainees are assumed as material that is one of four factors of 4M consisting of Man, Method, Material and Machine. Then the Man means trainer, the Method should be the way and techniques to process, and the Machine may be the facilities for researching. The trainers as Man should analyze the problem for better training by mentioned 4M. And the trainers have to manage the researcher-production line in the same manner of work-piece processing, for instance, check sheet using, PDCA (Plan, Do, Check, Action), production scheduling etc., for the aim of quality, cost and delivery-time control. In the situation of trainee, KI method proposed by Isobe Kunio is applied to create the sense for defining and analyzing the problem without bias. This makes the trainee deeply think the exact problems and be able to create an idea to solve the problem. To evaluate the performance, the experiments with more than thirty bachelors and ten master students have been done at Computer Vision Research Laboratory of Electronic and Telecommunication Engineering Department, King Mongkut’s University of Technology Thonburi for more than five years. The results reveal that most of the students can define and concentrate upon the specific problems in short period, create the idea to solve the problems and complete the researching projects within the delivery time.