

「創造思考與發明」實驗課程對高工 學生創造發明能力之影響

饒 達 欽
吳 明 雄
張 甘 棠

Abstract

There have been a great deal of studies with regard to the relationship between creative instruction and student's creativity, however; relatively few research has investigated that how to enhance students' creativity and invention in Voc-tec schools.

The purposes of the study were (a) to explore the influence of creative-thinking curriculum for the ability of creativity and invention in Voc-tec students; and (2) to design on appropriate model of creative-thinking curriculum (CTC), which may be used as the basis for the dissemination of creative instruction in the Voc-tec schools.

The study was a pretest-posttest control-group experimental design. Experimental and control groups were used to evaluate the effect of the predesigned creative-thinking curriculum. Four classes of junior students were randomly selected from Soong-Sang Voc-Tec School, with two classes of 89 students majored in mechanics and two classes of 87 in electronics. For the mechanics-majored and electronics-majored classes, one class was randomly assigned as experimental group, and the other as the control group. The experimental group has received the treatment of creative-thinking curriculum for nine weeks with two hours per weeks.

At the beginning and the end of the study, both experimental and control groups took Torrance Test of Creative Thinking (TTCT), Williams' Creative Assessment Packet (CAP) and Inventive & Design Ability Test (IDAT) for Voc-tec student made by researchers to examine the effects. In addition, Army General Classification Test (AGCT) was taken in the pretest as covariate to the IDAT scores. The one way analysis of covariance were conducted to analyze the data.

The major findings of this study are as follows:

1. The creative-thinking curriculum improved some of the verbal creative thinking ability of the mechanics students.
2. The creative-thinking curriculum improved some of the figural creative thinking ability of the electronics students.
3. No significant difference was found on the scores of CAP between the experimental and control group.
4. No significant difference was found on the scores of IDAT, originality & useful between the experimental and control group of the mechanics students.