## C341509 : MAJOR SCIENCE EDUCATION
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OUPPAGARN JEERAPHANTHU : STATE AND PROBLEMS OF INDUSTRIAL SCIENCE
INSTRUCTION AT THE HIGHER CERTIFICATE OF VACATIONAL EDUCATION LEVEL,

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The purpose of this study was to identify the state and problems of industrial science instruction at Rajamangala Institute of Technology in the following aspects : contents, instructional activities, instructional materials, measurement and evaluation. Questionnaire were given to 50 instructors and 326 students. The obtained data were analyzed by means of percentage, arithmetic mean and standard deviation.

The findings were as follows :

1. Most students paid their attention especially towards science contents related to their fields of study. Most instructors taught by using lecture method and laboratory assignments. Students had the opportunity to use equipments during laboratory periods. The instuctors set the criteria for evaluation and informed to the students. Apart from mid-term and final examination, there were tests at the end of each unit. What hadn't been done were the invitation of resource persons or experts to give, the assignments given to students to do research for additional contents from other textbooks both prepared by the Liberal Arts Faculty and from foreign sources, the assignments for students to participate in producing instructional materials and in setting the evaluation criteria. Others than these, they were found that there had been done sometime.

2. There were instructional problems at the high level in the following aspects : too much contents for the time allotted for each unit, students were not interested in designing their own experiments, delayed purchasing of experimental equipments causing unadequate materials needed to be used, no written materials in the form of textbooks and laboratory manuals. Besides, they were found to be the problems at the moderate and low levels.