

**CREATIVE APPROACHES TO TEACHING APPLIED BIOLOGICAL  
AND AGRICULTURAL OCCUPATIONS SHORT COURSES\***

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There is a need for new approaches in education. Creative efforts by instructors and students of applied biological and agricultural occupations are necessary if desired successes are to be achieved.

Research findings have shown that creative problem-solving is an exciting and effective way to teach and learn. If students' creative-productivity levels can be significantly increased by deliberate educational programs, as studies for the last 15 years would indicate, it would seem that 20 instructors of applied biological and agricultural occupations in Illinois would agree to attend a sequence of three short course meetings of six hours each.

It proved to be more difficult than anticipated to locate 20 high school instructors with a sufficient interest in creativity to attend the proposed Saturday short course sessions. More than one-half the 20 individuals who attended the first meeting, however, were high school instructors of applied biological and agricultural occupations. The same was true for the 14 who received certificates of completion.

A wider range of ages and educational backgrounds were represented than would have been the case had it been possible to follow the original plan for the selection of participants. This resulted in some additional insights which had not been considered previously.

When all the evidence was considered, the creative talent of those taking part in the study appeared to be somewhat above average -- when compared with others in their occupational fields.

A beginning was made at implementing the research in creative behavior completed since 1956. The results of the creative approaches to teaching employed by Illinois instructors during the

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Spring Semester 1971 (and other creative involvement with others) were evaluated. Despite the lack of time available for involving students in creative enrichment projects and other important responsibilities which competed for each individual's attention, participants (teachers and others) thought their creative efforts with others were quite successful. The evidence (both written and verbal) would tend to support their belief.

Further applied research projects which might be undertaken with profitable results, on a short-term and/or long-term basis, were identified. These are listed under the recommendation's section of this article.

Creative behavior was considered in a broad and inclusive way rather than in a narrow and restrictive way. It was enough that the individual considered the product of his or her effort to be unique and valuable for himself or herself.

### Major Conclusions and/or Results of the Study

1. It was possible to conduct a successful three-day short course sequence in Illinois titled "Creative Approaches to Teaching Applied Biological and Agricultural Occupations."
2. Participants who completed the sequence were unanimously favorable to the experiences which they had shared.
3. Teachers, (and student teachers in cooperating centers during the Spring 1971), who attended all three meetings, believed they had been helped to do a more effective job with students as a result of their participation in the study.
4. All who received short course certificates of completion seemed to feel their experiences in creativity might be quite helpful in many parts of their lives.
5. All who attended only the first short course meeting, and who responded to the researcher's questions, believed they had been helped in some way by their brief exposure to formal creativity activities.
6. All who participated in the study indicated (either orally or in writing) they had made, were making, or would make some constructive use of what they had learned.
7. There is good reason to believe that other segments of the vocational and technical educator group in Illinois would pro-

fit from similar short course efforts. Such efforts should have an appeal to a wide range of age groups, and a rather wide range of ages can be successfully accommodated in a single group at a given time.

8. There were indications that at least ten percent of Illinois high school students would respond favorably to one or more creativity short courses. The ones with greatest interest would not necessarily be the most academically talented, or even the most creative. There are many different reasons for high school students to be interested in such a course at any given time.

### Recommendations

1. Separate but similar creative short course studies should be made of each of the occupational classifications represented by this study:
  - a. Instructors: High School Applied Biological and Agricultural Occupations
  - b. Student Teachers: Agricultural Education
  - c. University Faculty:
    - (1) Agricultural Education
    - (2) Agricultural Mechanics
  - d. State Staff: Consultants of Applied Biological and Agricultural Occupations
  - e. Instructors: Agriculture -- Community College
  - f. Undergraduate Students: Agriculture
2. If possible, short course studies should be conducted with the cooperation of high school students of applied biological and agricultural occupations. The studies would emphasize creativity.
3. Creative problem-solving studies should be completed with the assistance and active involvement of other vocational and technical educator groups in Illinois.
4. Potential interest in creative thinking short courses should be determined for other Illinois teacher and student groups not previously mentioned here.

The studies recommended should provide valuable information on either a short-term or long-term basis. It is believed that more than a single semester and three Saturday meetings are required if instructors are to involve high school students in the creative problem-solving processes to any great extent.