

EFFECTS OF TRAINING IN STUDY SKILLS FOR SPECIFIC CONTENT COURSES AS REFLECTED IN ACTUAL COURSE ENROLLMENT, GRADES AND WITHDRAWALS OF HIGH-RISK COLLEGE FRESHMEN

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The Developmental Year Program (DYP) at The Pennsylvania State University has been designed to develop the basic skills of selected college freshmen who qualify for admission to the University through the Educational Opportunity Program and the Veterans Program. DYP credit courses are offered in English, mathematics, reading and listening/study skills. After demonstrating competence in the DYP courses, the transition to regular University courses should be made smoothly and confidently by DYP students.

As an instructor in the Developmental Year Program, the author taught RCLED 005B, College Reading Skills Improvement, a required course of all DYP students who placed below the fortieth percentile on the Iowa Silent Reading Tests. Over the year, the course consistently included activities to develop student abilities in comprehension, vocabulary and rate. The instructor felt it was necessary to teach reading skills that would also transfer to the content areas and help students best survive in non-DYP courses.

The importance of instruction in reading for specific applications in the content areas has been noted in a number of studies evaluating the success of content/study skills programs. Pauk (1965) found that students enrolled in a content course taught in conjunction with a study skills course made greater gains in academic grades than another group who took the same courses along with rapid reading techniques. It seemed that students used the rapid reading techniques and neglected the study skills. Swenson (1942) reported earlier that scores on tests of ability to read science materials and on standardized reading tests were substantially correlated with achievement in science class. Thus, rather than rate, practices that taught students to select, organize and manipulate information were found to show significant gains in grade point averages (Tillman 1972-1973; Driskell & Kelly, 1980). Focus-type techniques, such as self-questioning and the use of organizers, affected student retention and significantly increased comprehension test scores (Schnell 1972-1973; Andre & Anderson, 1978-1979).

Recognizing that the same reading skills were not applied in all content areas, Guilford (1980) offered reading for prospective teachers, science and technology, social science and business. As a result of these courses, students felt extended performance capabilities in their fields. Shores (1943) found that good reading in science was related to power (level) in reading comprehension and to vocabulary knowledge but not to abilities in locating information or comprehending the general meaning of a passage. The advantage of direct application of study skills instruction was shown by Stoodt and Balbo (1979) in an economics class where students received higher grades than a control group.

All these applications of study skills in the content areas demonstrated the success of routines and strategies that could be performed to facilitate text learning. Brown, Campione and Day (1981) stressed that in considering learning from the text, any adopted strategy should be influenced by the inherent structure of the text, the compatibility with the learner and his or her existing knowledge, and the test to which the learner must be put—(critical task, gist recall, basic concepts, understanding instructions, etc.). This complex interplay could be further complicated by the professor or teacher who imposed another viewpoint which may or may not coordinate closely with the learner and text.

It was one of the goals of RCLED 005B to acquaint the

students with the expectations of non-DYP content area courses and present the opportunity to students to experience a small segment of an actual course in the most realistic manner. To accomplish this intent, four classes of RCLED 005B students were required to complete three contracts (assigned activities for general reading skills and for specific content courses taught at the University, with each contract taking two weeks for completion). The selection of contracts was made from (a) comprehension (general), (b) vocabulary (general), (c) Math 4, (d) Sociology 1, (e) Biology 11, (f) Psychology 2, and (g) Chemistry 11. These content courses were offered because they were most frequently selected as basic credit courses by DYP students in previous terms. The students worked independently on the contracts with some teacher assistance. The students taking the comprehension contract completed teacher-made and commercially prepared materials that included practice in finding the main idea, recognizing supporting details, drawing conclusions and retaining facts. The vocabulary contract students also completed teacher-made and commercially prepared materials that included practice in meanings of prefixes, suffixes, roots and words in context. The students selecting the content area contracts were "led by the hand" through a chapter of a course text using the SQ3R technique (Robinson, 1961) and stressing other factors (course syllabus, sample tests, author's aids, etc.) that would help pin-point important facts and aid retention.

Each content area contract contained (a) contract guidelines, (b) course syllabus, (c) sample test, (d) book survey, (e) reading and study guide for the chapter and (f) chapter to be studied. Following the two week time allotment for contract work, the students taking a content contract were given a ten-item test based on the format of the actual tests given in the course. As a result of the test, students could evaluate the effects of their study techniques.

Instructional Procedures

RCLED 005B is a 2-credit course that meets 75 minutes twice a week for a 10-week term. During the study, one period a week was devoted to lecture, demonstration, and practicing study skills. Also, a portion of this period was spent in discussing weekly homework assignments from the text, *Reading for Results* by Flemming. The second weekly class period consisted of a lab designated for contract work only.

Results and Interpretations

All RCLED 005B students were given a two term follow-up period for an assessment of actual course selections and performance in Math 4, Sociology 1, Biology 11, Psychology 2 and Chemistry 11.

Of the RCLED students who enrolled in Sociology 1, a comparison between the contract group with the no-contract group yielded a significant difference between the two groups, $t(30) = 2.3613$, $p < .05$. The RCLED contract group not only showed significantly more students passing, but exhibited only a 15% withdrawal rate as compared with a 38% withdrawal rate in the no-contract group. Unfortunately, not enough RCLED 005B students enrolled in Biology 11, Chemistry 11, or Psychology 2 to have a large enough sample for meaningful analysis.

The results of the Math 4 data appear to indicate that math study skills aren't necessary to succeed in Math 4. On the contrary, The DYP math coordinator designed a math study skills packet for all the DYP math students so that the no-contract math students were given special study aids within the actual content course. Thus, since the contract and no-contract Math 4 groups both received math study skills, the two groups could not be compared.

Discussion

It appears that the RCLED 005B Sociology 1 content contract had a positive effect not only in increasing the number of

passing high-risk students, but in lowering the course withdrawal rate. The advance preview of the actual course requirements and practice in strategies for successful accomplishments of these requirements are beneficial and perhaps necessary techniques for college survival of RCLED students. Most college study skills programs emphasize reading comprehension, vocabulary improvement and rate, or coordinated programs of study skills taught in conjunction with content courses. Specific course previews packaged into two-week mini-courses (or contracts) could establish successful strategies for high-risk students, give direction to undecided students, and acquaint advisors with a realistic overview of courses to aid in student scheduling. The concept of course previews representative of numerous higher level educational institutions could be extended to the high schools as a part of their college preparatory curriculum for better college preparation and more appropriate placements.

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