Approximately three years after a sample of vocational education teachers in Florida took the General Examinations, College-Level Examination Program (CLEP), the impact of the use of CLEP scores by teachers (392) in their professional development was assessed. Indicators of professional growth were teaching rank, salary, and degree status. Teachers who used CLEP for credit and/or admission to degree programs in vocational education advanced in rank and degrees held with greater frequency than teachers making no use of their scores. No difference in salary increases between the two groups was found. Subjects overwhelmingly endorsed the use of credit for prior off-campus learning in furthering their professional development. Conditions favorable to the study prevailed in Florida when the study was made: (1) The CLEP tests were given at no cost to the teachers, (2) State universities in Florida modified their admissions standards to allow subjects to enter degree programs of study with CLEP scores, and (3) a uniform cutoff score was used by the universities for granting credit for CLEP. Unless a generally similar set of circumstances prevailed elsewhere, the degree of association between the use of CLEP scores and indicators of professional growth reported in this study might not occur. (Author/HD)
Credit by Examination and the Professional Development of Vocational Education Teachers

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This paper reports a study that sought to determine the impact of credit by examination on the professional development of vocational education teachers in Florida. Begun in 1975 and completed 18 months later, the study was essentially a comparison of the professional growth of vocational education teachers who used their scores from the General Examinations of the College Level Examinations Program (CLEP) to pursue further college study with the professional growth of teachers who did not use their CLEP scores for such a purpose. Indicators of professional growth used in the study were changes in level of teaching certification, degrees earned, and salary increases received.

To give perspective to the design, procedure, and results of the impact study reported in this paper, a brief review of the special program of testing that provided vocational teachers in Florida with an opportunity to earn credit by examination must first be presented. This review will include a statement of the options open to the vocational teachers over a 30-month period to improve themselves professionally by using credit by examination test scores. The following summary of the administration of the CLEP tests to vocational education teachers is extracted from a report of the testing program (Tully, 1973).

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The 1972-73 Credit By Examination Testing Program

In 1972-73, the General Examinations of the College-Level Examination Program (CLEP) were administered to 730 vocational education teachers in Florida. The number of vocational education teachers tested approximated a 17 percent sample of the total population of vocational teachers in Florida. The sample was a stratified one, composed of teachers who did not have the baccalaureate, teachers with the baccalaureate, and teachers with degrees beyond the baccalaureate. Teachers who took the tests also completed a questionnaire which contained items requiring the teachers to report teaching rank (level of certification), highest degree earned, salary, and career expectations. The basic purpose of this testing was to gather information needed to explore the suitability of the CLEP General Examinations as an admissions battery for vocational education teachers to undergraduate and beginning graduate programs of study in vocational education in the public universities of Florida.

Specifically, the objectives of the 1972-73 administration of the CLEP General Examinations in Florida were twofold: (a) to determine the test performance of vocational education teachers with different levels of education (less than the baccalaureate, baccalaureate, and master's degree) on the General Examinations and to construct test norms according to the level of formal education attained, and (b) to assess the impact of taking the CLEP tests and the imparting of test performance to the examinees on their career expectations.

To encourage vocational education teachers selected in the sample to report for testing, teachers who did not have the baccalaureate degree were assured that they could use their scores to obtain undergraduate credit provided they met the cutoffs for earning credit by examination established by the institution of higher learning from which they were seeking the
baccalaureate degree and to use the CLEP as an undergraduate admissions battery. Vocational education teachers who held the baccalaureate at the time they were tested were advised that they could use their scores for admission to a master's level study in lieu of the Aptitude Test of the General Record Examinations (GRE) if they met a recommended cutoff to be established after CLEP norms for the teachers were developed. There were no similar rewards offered to vocational education teachers with degrees beyond the baccalaureate; these teachers were urged to take the tests as a means to assess their knowledge of the broad areas of the humanities covered by the CLEP General Examinations, and to identify possible refresher courses in which they might wish to enroll.

The questionnaire administered to the vocational education teachers when they took the CLEP tests in 1972-73 also included items relating to career expectations. An investigation of the changes in the educational and occupational aspirations of vocational education teachers associated with participation of the teachers in the testing program and also in the self-evaluations formed by the teachers after learning of their test performance was made by a researcher on the project staff. The results of this study, available in tentative form in 1975, indicated that there were no changes in aspiration level of the teachers associated either with participation in the testing program of the subjective estimations arrived at by the teachers after being given their test scores (McOuat, 1976). McOuat's findings that the occupational and educational aspirations of teachers were not affected either by the teachers' taking the CLEP tests or by learning of their test performance led him to emphasize the need for further inquiries into the dynamics of teacher behavior. The impact study being reported in this paper, by associating the use made of CLEP scores with selected indicators of professional development, was intended to contribute
to the needed pool of research information relating to teacher progress toward higher levels of preparation and growth.

The Impact Study

In 1975, two and one-half years after the administration of the CLEP tests, an impact study was undertaken to determine whether or not the use of CLEP scores had contributed to the professional development of the teachers who had been tested. The study was predicated on the assumption that this span of time provided the teachers who had taken the CLEP tests ample opportunity to use their scores to continue a program of study in vocational education either at the baccalaureate or master's level.

The CLEP tests were chosen as the credit by examination battery in an attempt to attract teachers who, because of the years intervening between formal study and the taking of an admissions battery designed to measure academic aptitude, may have had misgivings about enrolling in and pursuing further college study as a not-so-young adult unless reassured by good test performance on tests designed to measure out-of-class learning. The prospects offered to the teachers to use their prior off-campus learning as an index of their potential for further college study was meant to encourage the flow of teachers with relatively low certification rank into continued classroom study.

The initial administration of the CLEP General Examination to the sample of vocational education teachers in Florida, as well as the impact study which is being reported in this paper, occurred in an atmosphere of a growing acceptance in Florida of credit by examination as a proper strategy for the undergraduate student to use, especially in the first two years of college, in shortening the traditional four years of study leading to the baccalaureate degree.

Persons seeking to enter graduate study in the nine public universities of Florida are generally asked to present scores from the Aptitude Test of the
Graduate Record Examinations to support their applications. Although vocational teachers must pursue a program of graduate education to attain the higher levels of certification, many persons engaged in vocational education as a career do not enter graduate study until their middle or late 30's. Between 1972 and 1975 most of the public universities in Florida offering master's level work in vocational education agreed to accept a score on the General Examination of the CLEP instead of the GRE. This flexibility on the part of the graduate schools in the State University System of Florida, together with the willingness of the public universities in the state to award credit by examination on the basis of the CLEP General Examinations, set the stage for the impact study.

Nine percent of the 730 teachers who took the CLEP General Examination had a degree beyond the baccalaureate, 42 percent held the baccalaureate, and 49 percent had not yet earned the baccalaureate. The high proportion of teachers who took the CLEP test that stood to gain by using their scores to continue their professional development (the 91 percent who had not earned either the baccalaureate or the master's degree) contributed to the feasibility of conducting the impact study.

Procedure

In 1975, up-to-date addresses were obtained from 450 teachers out of a total sample of 730 who took the CLEP General Examination in 1972-73. Questionnaires were sent to the located teachers to ascertain if they used their CLEP scores for further college study. Teachers were asked to report changes in teaching rank, in salary, and in highest degree earned during the time that had passed since taking the CLEP tests.

Primary sources of data were (a) a questionnaire administered in 1972-73 calling for subjects to report their teaching rank, highest degree earned, and level of salary, and (b) a followup questionnaire administered nearly three years...
later with the same requests for rank, degree held, and salary as contained in the first questionnaire. Items asking the teachers to report the use they had made of their CLEP scores and to give their assessment of the program that linked professional development to credit by examination also appeared in the followup questionnaire.

Completed questionnaires were returned by 392 of the 450 vocational education teachers for whom up-to-date mailing addresses were available (an 87 percent return). Responses from all of the returned questionnaires were used to determine the degree of support expressed by the teachers for using CLEP scores to further the professional development of vocational education teachers and toward the changes in the admissions policies that the universities implemented to facilitate the admission of the teachers into degree programs of study in vocational education.

Once the survey aspect of the analysis was completed, questionnaires returned by the teachers in 1972-73 were paired with questionnaires obtained in the followup impact study. Only sets of questionnaires containing responses to all items relating to teaching rank, highest degree earned, and salary level were selected for analysis. Two hundred and eighty-nine pairs of questionnaires met this criterion of completeness of data.

Subjects who responded fell into two groups: (a) those who reported that they had used their CLEP scores to further their professional development, and (b) those who reported that they had not used their CLEP scores for such a purpose.

Chi-square ($X^2$) was applied to the frequencies with which teachers in the two groups reported changes in teaching rank, degree status, and salary.
Results

Fifty-four persons reported that the CLEF testing program had aided their professional development in that they used their test scores for college credit or for admission to an undergraduate or graduate program of study in vocational education. In addition to these 54 persons who reported that they had used their CLEP scores to continue their education, 56 persons said "yes" to the questionnaire item, "Did participation in the 1972 project aid in your professional development in any way whatsoever?" These additional 56 teachers, however, did not indicate that they had used their CLEF scores to enter further college study. Changes in the rank, degree status, and salaries of these 56 additional teachers were not a part of the chi-square analysis; only the responses of the 54 teachers who specifically stated that they had made use of their CLEP scores in returning to college study were counted in the frequencies for the "users" group (Table 1).

| TABLE 1 | OBSERVED FREQUENCIES OF TWO GROUPS AND OBTAINED X² VALUES |
|---|---|---|---|
| | Higher Degree | No Change In Degree | X² |
| Score Users | 18 | 36 | 54 | 4.478 |
| Non-Users | 47 | 188 | 235 |
| | 65 | 224 | 289 |
| Score Users | 29 | 25 | 54 | 12.08 |
| Non-Users | 68 | 167 | 235 |
| | 97 | 192 | 289 |
| Score Users | 51 | 3 | 54 | 0.102 |
| Non-Users | 219. | 16 | 235 |
| | 270 | 19 | 289 |
The 54 vocational teachers who sent their CLEF test scores to colleges and universities to obtain college-level credit or to support their applications for further study attained a higher teacher rank with significantly greater frequency ($\alpha = .05$) than the vocational teachers who did not make similar use of their test scores during the thirty-month span of time covered by the study. Also, the group of CLEF score users earned higher degrees with significantly greater frequency ($\alpha = .01$) than the non-users. There was no significant difference in the frequency with which the 54 CLEP score users and 235 non-users moved into higher salary brackets (Table 1).

Of the 392 vocational education teachers who returned questionnaires, 94 percent expressed support of the 1972-73 testing program and of the opportunity that this test administration gave to participants to use their CLEP scores in entering continued college-level study. Endorsements of this approach to professional development was expressed almost uniformly by teachers who had made use of their test scores as well as by teachers who were tested, but did not seek baccalaureate credit or to become a candidate for a higher degree.

Sixty-eight percent of the respondent teachers expressed agreement with the recommendations set forth in 1973 for admitting vocational education teachers into undergraduate and graduate programs of study in vocational education. These recommendations, submitted to the Vice Chancellor for Academic Programs, State University System of Florida, and implemented by five of the six public universities offering vocational education programs, specified a total score of 2000 on the CLEP General Examinations for admission to undergraduate study and 2250 for admission to graduate study. All applicants were required to have a minimum score of 400 on each of the five tests comprising the General Examinations to establish eligibility for admission.
Nineteen percent of the respondents thought these score cutoffs were too high and 12 percent had no opinion. Approximately one percent of the teachers who responded voiced the opinion that the cutoffs were too low.

Discussion

The finding that there was no significant difference in the frequencies with which the CLEP score users and non-users received salary raises stands in contrast to the findings that there were significant differences in the frequencies with which the two groups earned higher degrees and promotion in rank. Salary increases, however, are more likely to be given to teachers as a function of their continued tenure than promotions in teaching rank. As for the awarding of degrees, this development almost never occurs solely as a result of prolonged tenure. Almost every teacher, under today's personnel policies governing teacher salaries, is likely to receive an increment raise in salary over a period of two or three years, but will not be rewarded with a change in teaching rank or highest degree held without some concerted action on his own part.

Some vocational teachers in Florida elect to acquire competency in their vocational areas of specialty prior to completing either the baccalaureate or master's degree. Advancement in rank rarely comes to these teachers with limited post-high school formal education, despite their demonstrated competencies in their specialties.

Unless non-degree vocational education teachers are given some encouragement to enter into further professional development, the assumption is warranted that substantial numbers of vocational education teachers who acquired competency in their trade or shop specialty prior to completing degree requirements may continue indefinitely as non-degree teachers. The relatively large number of non-degree holders that appeared in the sample of teachers who took the CLEP tests in 1972-73 supports this assumption.
Although misgivings about the granting of large blocks of college credit on the basis of CLEP scores have been expressed (Stecher, 1977), the reaction of the vocational education teachers who were the subjects of this study suggests that they had no qualms about the CLEP having been used as a measure of their out-of-class learning as adults. Certainly, the choice of CLEP as a battery to administer to the vocational education teachers in 1972-73 was in keeping with the intended uses of the battery set forth in the CLEP descriptive brochure (College Board, 1973).

No systematic effort was made to analyze the comments made by the 56 teachers who said that participation in the professional development program was beneficial to them even though they did not submit their scores for credit or for admission to a degree program or study. Selected comments (favorable and not favorable) made by the teachers, however, merit review: "the tests improved my self-concept;" "occasional taking of tests is good for teachers--puts them on the same side as students;" "the tests caused me to continue my education though I didn't use the scores for admission;" "the tests made me realize how much more education I need outside of my trade;" "taking the CLEP was a discouragement rather than incentive, however, I did not study for it;" "I have been taking occasional courses all along but did not know CLEP credit was available before now;" "the tests pointed out my weakness in math and English, which I am now working on;" "I note that the tests were beneficial to some of my co-workers;" "the little push sent me on my way to a baccalaureate and to a master's;" "knowing my level of knowledge and my standing among my peers encouraged me to improve;" "the attitude of many teachers toward the tests was 'so what'--the benefits should have been explained more fully;" and "I didn't do well on tests but now I have my degree."

The support for the program of professional development reflected by these and other comments written by the respondents on the questionnaires undergirded
findings of significant differences in frequencies with which score users and non-score users advanced in rank and degree status.

A set of favorable conditions prevailed in Florida during the time covered by the impact study that undoubtedly contributed to obtaining positive findings: (a) the CLEP tests were made available to the vocational education teachers at no cost and were administered in or near the schools in which the teachers worked, (b) the State University System and the universities comprising the System were willing to modify their admissions standards to allow vocational education teachers who took the CLEP tests to enter undergraduate and graduate degree programs on the basis of the CLEP General Examinations, and (c) all institutions of higher learning in Florida offering degree programs in vocational education used a uniform cutoff for granting college-level credit for CLEP scores. Unless a generally similar set of circumstances prevailed elsewhere, there is no assurance that the high degree of association between the use of CLEP and the indicators of professional development reported in this paper will occur.

References


