ABSTRACT

Brief descriptions of interdisciplinary developmental education programs are provided in this paper, along with a more extensive examination of the Personalized Approach to College Education (PACE) program at the College of the Finger Lakes (CFL) in Canandaigua, New York. Introductory material cites examples of developmental programs which involve mastery learning with competency-based courses and comprehensive support services, and indicates that these programs have shown success in terms of student retention. The next section focuses on programs where diagnosis and an eclectic approach to learning are directly coupled with interdisciplinary and integrated content area courses. Short descriptions are provided of examples of these programs at two- and four-year institutions. The final section describes CCFL's PACE program and its components: (1) advising—students with low reading and writing scores confer with an advisor about the PACE program, and a PACE counselor/advisor monitors student progress and assists in scheduling and goal setting; (2) feedback—periodic individual conferences are an integral part of the program; (3) integrated activities, such as journal writing and math applications; and (4) the use of college services—student personnel workers visit the class and participate in activities. (LAL)
The interaction among academic and developmental educators and their shared problem-solving is the fundamental dynamic in successful learning improvement programs, producing gains in GPA and retention that cannot be delivered by remedial/developmental personnel working alone in remedial settings. (Keimig, 1983, p. 6)

Much of the literature in developmental education points out the fact that interdisciplinary approaches have a more lasting effect on students. (Spann 1977, Hill 1978, Palmer 1983, Keimig 1983, Morante, Faskow & Nomejko-Menditto 1984) Keimig writes about four different levels of developmental education in their order of effectiveness: 1) developmental courses; 2) courses and learning center services; 3) mastery learning with competency-based courses and comprehensive support services; and 4) developmental programs that foster involvement of staff in all disciplines and at all levels. (Keimig 1983, p. 39)

Many programs are of Keimig's Level 3 variety. Memphis State University has diagnostic and counseling services, English and math study labs and courses and tutorial services. (Boone, Hampton and Jones 1975) In Illinois, the Loop College's program includes courses, labs, computer-assisted instruction, tutors, academic advising with a mid-semester warning system, counseling, and summer orientation programs. (Chausow and Barshis 1983) North Carolina Polytechnic University has set up a Self-Assessment Laboratory, the Life Planning Center, the Curriculum Planning Lab, the Human Development Curriculum, the Interdivisional Counseling Network and the Environment Assessment Laboratory. (Creamer and Clowes 1978) Miami-Dade Community College combines placement testing, Academic Alert Intervention, and competency-based courses.
Passaic County Community College in New Jersey pre-tests students and puts them into basic skills courses that integrate thinking, analytical skills, writing, reading and mathematics. (Mellander 1980) The SUNY colleges in New York have a program that offers stipends, counseling, tutoring, courses, and summer school called Project SEEK (Search for Education, Elevation and Knowledge). (Podell and Piesco 1978) Essex County Community College requires attendance in their learning center, career counseling, and course instruction. This came about when they found out in 1981 that over 90% of their students needed remediation. (Yamba 1981) At Lurleen B. Wallace State Junior College in Alabama, developmental educators trained a number of the faculty with counseling, study skills and library skills as they related to human development. Students were given instruction in these skills during freshman orientation. The retention rate with these students was 85% during the second quarter as compared to 70% for the control group. (Beck 1980)

These Level 3 types of programs with comprehensive services, diagnostic testing, competency-based education, and an eclectic approach to learning that utilizes different modes have shown success in terms of retention. (Hechinger 1979; Herrscher 1980)

INTEGRATED AND INTERDISCIPLINARY DEVELOPMENTAL EDUCATION PROGRAMS AS "SUCCESS"

The trend is now to include an interdisciplinary approach along with comprehensive student-help services. Keimig calls these Level 4 programs, where diagnosis and the eclectic approach is directly coupled with content area courses.

Examples of these programs at four-year institutions include the following:

1. Western Kentucky University pairs English, reading and history. Essays, study techniques, research papers and tests revolve around a history
An outside task force found gains of 90% on pre- and post-history tests, improved writing ability and a higher average grade than the regular history class. (Wallace, et al. 1980)

2. Northern Kentucky University uses pairing and blocking techniques with reading, English and the content courses of psychology, biology, sociology, anthropology, political science, or history. The block teams consist of a reading teacher, writing teacher, content teacher and student tutor. Students meet three hours each week for 15 weeks and attend a reading/writing lab for tutoring once a week. Testimonials and subjective evaluations point to success. (Smith 1980)

3. Porterville College in California initiated a Basic Skills Project with English, speech and math plus a lab requirement. Students get 3 credits towards a degree. The instructors have weekly meetings and a teaching assistant monitors the lab. After the first semester, 81% were still in college.

"Preliminary results indicate that an intensive comprehensive and integrated course of basic skills is superior to separate non-integrated courses."
(Rank 1979, p. 7)

4. Sacramento City College believed that reading at the college level was most effective when directly involved in the regular classroom. They found that most of the textbooks were above the 12th grade reading level while only 49.74% of the students read above that level. So they started the Higher Education Learning Package program (HELP) which used two teams to teach reading, writing and study skills with psychology or sociology. The students received 12 semester hours of work. HELP students attempted more units in subsequent semesters, had better grade point averages and had better retention rates than a control group. (Luvaas-Briggs 1983; Davis and Luvaas-Briggs 1983)
5. Florissant Valley College combined American Politics with a four-week adjunct reading course to reinforce study skills and reading. (Friedlander 1984)

6. The University of Missouri-Kansas City looked at high risk classes such as biology, physics, chemistry, history and economics and then included an instructor in these classes to present study skills (textbook reading, underlining, note-taking, test-taking, and writing essays). Results suggest that this approach results in higher course completion rates and improves student performance. (Blanc, Debuhr, and Martin 1983; Friedlander 1984)

7. The Loop College's Individual Needs Program in Illinois has a program director, program advisor, tutors and content area teachers. Students get six credits for reading and English and then add a content course such as psychology, social science, business math, music or speech to their schedule. There was a retention rate of 91% and over 90% of the students stayed off academic probation. (Barchis 1979)

8. Niagara University in Buffalo has basic skills courses designed to be feeders to English, math and biology. Content syllabi are used in designing the developmental courses. They use content material for their study skills instruction. (Crawford 1979)

9. The University of New Mexico has special sections of social studies and natural sciences along with reading and study skills. (Keimig 1983)

10. Southern Illinois University's Acceleration Program in Science and Technology includes counseling, tutoring and study skills instruction in its Level 4 program. (Keimig 1983)

At the community college level interdisciplinary programs are also showing success:

1. At Tacoma Community College in Washington almost every division
offers some developmental course or learning assistance service. All efforts are coordinated through the Developmental Studies Department and its advisory committee. (Spangler and Simonson 1983)

2. Norwalk Community College in Connecticut has reading, writing, and study skills coupled with psychology. They have spent a considerable amount of time developing integrated assignments and instructional techniques. (Solon 1979)

3. Lane Community College in Oregon used the Construction Technology Program with a special 5-credit addition of Industrial Orientation and basic skills classes. They set it up on a modular basis with math and reading skills exercises interwoven with class lab projects. The regular vocational teacher did the instruction. All students enrolled in the first term completed classes and enrolled the next term or transferred. (Rasor 1980)

4. At the Community College of Allegheny County writing assignments, study skills, and reading were integrated with history. Grades and retention were better than in the control group. (Holmberg 1979)

5. Miami-Dade Community College has four teams with a reading teacher/consultant paired with English, social science, natural science, and psychology. The reading person conducts mini-sessions within the confines of the content classroom. (Brittain 1982)

The state of New York has initiated a number of successful interdisciplinary programs:

1. Brooklyn College provides intensive developmental help with social science, literature, and history courses. One on one tutoring is also available. They report that reading has improved, students assimilate more information, and study skills are also transferred to other content areas. (Diamond 1979)
2. Baruch College-SUNY has a program where reading, speech, and writing teachers meet nine hours a week with 15-20 students for 7 credits after two semesters. The students who are in the bottom third after testing go through this program before enrolling into the regular English classroom. A counselor meets with the team and helps conduct mid-semester conferences. Retention for the second semester in fall 1973 was 82% and 23% in fall 1975 with a 2.33 grade point average. The control group had a 71% fall 1973 retention and a 40% retention rate in 1975 with a 1.97 grade point average. (Williams 1975)

3. In 1976 approximately 51% of the students in New York City's colleges needed remedial math and reading. Integrated remediation included a college media center, a reading lab, a tutor program, computer-assisted instruction and certain content area sections staffed with adjunct study skills instructors. (Schiavone 1973; 1976)

4. Project LINK was a block-programmed project sponsored by ESEA Title III and the Two-Year College Development Center. Reading, writing and math were linked with pre-nursing courses. An orientation seminar and counseling was part of the project. The program did little to reduce attrition, increase grade point average, writing or math skills. However, it did increase the reading ability of students. (Benenson 1974)

5. Two sections of reading and study skills were scheduled in conjunction with introductory courses in business at Queensborough Community College. The reading course was piggybacked with business courses. Business materials were used to teach the course. 73.5% received a "C" or better in the business courses whereas only 55.9% received a "C" or better in the regular course. (Hosey and Rapaport 1976)

6. LaGuardia Community College's mission is to "serve appropriately and effectively the needs of each segment of a diverse population..."
To this end they have set up a training program for faculty to reinforce reading, writing, oral skills, and listening skills. Called the Integrated Skills Reinforcement Program, one teacher per department is eligible to take the training each year. The first semester they spend working on a curriculum and the second semester they teach, using the new methods they have incorporated. The college found that attrition was actually less that with students that need no remediation. (Hoban 1985)

CCL's PERSONALIZED APPROACH TO COLLEGE EDUCATION

An Interdisciplinary Approach

The Community College of the Finger Lakes established a Developmental Studies Department in 1974 and initiated the Personalized Approach to College Education (PACE) program soon afterwards. The purpose was to provide basic academic skills development in reading, English and math for students with academic records in the bottom quartile of the entering freshman class. It emphasized student responsibility for learning and utilized team teaching. A counselor was an integral part of the program to provide academic advising for the students. All students were pre- and post-tested to ascertain the degree of their achievement. Faculty from the developmental studies, English and math departments made up the team. Students attended class in a two-hour block, 5 days a week for 9 hours of credit. They usually took 3 to 6 additional credit hours in their chosen career area. Teachers met twice a week to discuss student progress and prepare for the next lessons, integrating them when possible. A mid-semester conference gave students a chance to talk individually with the instructors as to their progress.

In 1976 second semester results showed test scores increased in English.
at 63%; 55% showed better math scores; 71% showed increased reading scores. The dropout rate was 3.2% for the year, (Carter 1976; Champaigne 1981). A study to replicate these figures is presently being conducted. Also included will be the percentage of students passing an exit English essay exam and grade point average compared to a control group with matched reading placement scores.

Some of the components that make P.A.C.E. successful is adequate advising, intermittent and frequent feedback, integrated activities, and the interfacing of the program with other college services.

1. **ADVISING** - Students who score between the 40th to the 25th percentile on a standardized reading test and who are borderline as determined by a holistically scored writing sample, confer with an advisor about the P.A.C.E. program. The Admissions Office, general advisors, faculty advisors, E.O.P. advisors and developmental studies advisors all have a role in identifying potential students who could benefit from the program. Lack of confidence in English and math is a factor that is considered.

The counselor-advisor for the P.A.C.E. program monitors student progress throughout and assists students in scheduling and setting future goals.

2. **FEEDBACK** - The P.A.C.E. team meets twice a week to plan and share concerns. A unified decision as to how to approach certain students results. Mid-semester and final-semester individual conferences are an integral part of the program.

3. **INTEGRATED ACTIVITIES** - Journal-writing is an excellent method to practice spelling, grammar and sentence structure. Each week a specific aspect of writing is in focus as it has related to the class instruction. The journals are not graded so they are non-punitive. Sometimes topics are assigned to learn more information about the students and how they are transferring
concepts from the class to their academic lives. Some of the topics include "Analyzing Your Learning Style", "Discussing Career Goals", "Opinion on a World Problem", "How I Use Study Skills to Get Better Grades", "How I Feel About Tests", or "The Most Important Person in My Life". These journals are read by different instructors each week and provide insight into the student's progress.

Math is integrated with writing when they utilize the microcomputer for composing and for math practice. Students see the applicability of technology in their education.

The math instructor sometimes assigns essays. "How Statistics Can Lie" was a paper assigned in conjunction with a unit on the research paper in English. Arthur Whimbey's book, Problem Solving and Reading Comprehension is the basis for activities in logic and problem-solving techniques that relate to study skills and mathematics.

4. UTILIZING COLLEGE SERVICES - Learning Center personnel, the Tutor Program Coordinator, the E.O.P. advisor, Library personnel, the Career and Placement director, and Counseling staff all visit the class and participate in activities. An example is when one of the counselors came in and had the students write a "Dear Ann Landers" letter. The letters were exchanged and answered. Some students shared their papers. This writing, listening and speaking activity led to some of the students going to see a counselor afterwards. They felt comfortable after meeting the counselor in a supportive atmosphere.

The P.A.C.E. program is dedicated to every student reaching his or her full potential. The belief is that an integrated approach using staff support from all levels is the key.
A developmental studies program which is integrated into the total curriculum of the institution and which assists in integrating its students into the mainstream of its student population is an appropriate long term response to pressures engendered by the equal access/academic standards dilemma. (Clowes and Creamer, 1979, p. 25)

For more information on the D.A.R.E. program, contact Gretchen Starks, Developmental Studies Department, Community College of the Finger Lakes, Canandaigua, New York 14424.
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