CALIFORNIA COMMUNITY COLLEGES
AND
MT. SAN ANTONIO
COMMUNITY COLLEGE DISTRICT

#90-0063
FISCAL YEAR | ID NUMBER | COLLEGE       | DISTRICT
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1990-91   | 90-0063   | Mt. San Antonio | Mt. San Antonio

PROJECT TITLE

Classroom Preparation and Study Skills Development for Brain-Injured Students

FUNDING CATEGORY & AWARD | ELIGIBLE PROGRAM | PROJECT CATEGORY
--------------------------|------------------|------------------
Grant = $24,804          | C --- Special Learning Needs of Ed/Dis | Implementation Model

PROJECT PRODUCT | PROJECT TOPIC #1 | PROJECT TOPIC #2 | ACADEMIC SUBJECT
---------------|------------------|------------------|------------------
Study Skills    | Brain Injury     | Inter-Disciplinary

PROJECT DIRECTOR | PROJECT SUPERVISOR
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Christine Tunstall, Speech Pathologist | Mayme Thornton, Dir Disabled Students Program

PROPOSAL DESCRIPTION

This project proposes a coordinated effort in classroom preparation between High Tech Centers and study skills classes. The primary, target population is brain-injured students referred by local rehabilitation programs and Disabled Student Services with a secondary target of faculty currently teaching study skills.

Skills to prepare the brain-injured students to cope with the pace and content of the larger classroom would be developed and this responsibility would then be handled by the High Tech Centers. This component would teach classroom preparation strategies, including development of a series of videotaped lectures on study skill topics which would progressively increase in speed of presentation and duration of lecture. Study skills found to be effective for brain-injured students would be identified, developed, and taught to a trial class, then taught to faculty for transition of this responsibility to study skills instructors.
For brain-injured students, withdrawing from an unsuccessful first semester in college is typical of their inability to cope with the transition from rehabilitation to the college environment. Their high attrition rate is often the result of insufficient or non-existent study skills.

This project proposes a coordinated effort in classroom preparation between High Tech Centers and study skills classes. Skills to prepare brain-injured students to cope with the pace and content of the larger classroom would be developed and this responsibility would then be handled by High Tech Centers. This component would teach classroom preparation strategies, including development of a series of videotaped lectures on study skill topics, which would progressively increase in speed of presentation and duration of lecture. Study skills found to be effective for brain-injured students would be identified, developed, and taught to a trial class, then taught to faculty for transition of this responsibility to study skills instructors.

Target population is brain-injured students referred by local rehabilitation programs and Disabled Student Services. A secondary target population is the faculty currently teaching study skills.

Evaluation of the project will include monitoring the transition of students from a trial class in study skills to other classes on campus with a successful completion of these classes with C grades or better.

The videotaped lectures and videotaped inservice to the faculty will be disseminated to High Tech Centers and study skills classes on other campuses. Results of the project are to be placed in ERIC and submitted to a state conference.
Classroom Preparation and Study Skills Development for Brain-Injured Students

1. Specific Educational Program Being Addressed

NEED:
According to the National Head and Spinal Cord Injury Survey of 1974, at least 400 of each 100,000 people in the United States each year suffer from head injuries, with the highest incidence occurring among those aged 15 to 25 years of age. The National Head Injury Foundation estimates that somewhere between 40% to 80% of those injured have residual physical, intellectual, or behavioral deficits. In the geographical area served by Mount San Antonio College (estimated to be 900,000), this can mean as many as 2,880 people have acquired brain injuries. Odds of surviving a severe brain injury have greatly increased in recent decades due to medical advances. The physical rehabilitation process after the injury has also shown significant progress. But successful remediation of cognitive and behavioral deficits remains a challenge. The percentages of successful return to prior activities at prior levels (in education or occupation) are extremely low. Despite the improved chances of survival, recovery from coma, and physical improvements following an injury, the impact on individual lives remains devastating.

Tim was a college freshman majoring in economics. He was driving home on his motorcycle when a van hit him while changing lanes on the freeway. He sustained a head injury and left leg fracture. After three weeks in a coma, he spent five months in inpatient rehabilitation relearning how to walk, to dress himself, and to remember daily events. He then returned home and spent another 6 months in outpatient rehabilitation, further improving his physical abilities and working on reasoning and writing skills with the goal of returning to his college studies. Over a year after the accident, he returned to his college program. But to his surprise, he failed his first quiz, he got a D on a paper he’d worked on for days, and quickly fell weeks behind on his reading assignments. After 8 weeks, he withdrew from his classes, with no clear idea of what he was going to do next.

For brain-injured students such as Tim, withdrawing from an unsuccessful first semester in college is typical of their inability to cope with the transition from rehabilitation to the college
environment. First semester attrition is not only common, it is the norm. Although there has been an increase in the number of programs for students with acquired brain injuries in the community college system, the transition from a rehabilitation program to a college environment is extremely difficult. Faced with cognitive impairments related to processing information rapidly, identifying key concepts, remembering new information, and organizing information and time, brain-injured students are inherently disadvantaged in a competitive classroom. Although many demonstrate adequate potential on standardized academic placement tests, it is impossible for them to cope with the pace and content of lectures and coursework in academic classrooms.

The high attrition rate of students with acquired brain injuries is often the result of insufficient or non-effective study skills. Approaches to deal with this issue fall into two categories: The first attempts to teach these individuals appropriate study skills while they are still in the rehabilitation program. This approach generally teaches techniques appropriate for brain-injured students, utilizing individualized or small group sessions. There tends to be ample opportunity for interaction between the rehabilitation team and these future students, with professional support being a concrete entity. The problem with this approach is in the transition to the college classroom. The student is often overwhelmed by the distractions and pace of a large classroom setting. As a result, few if any of the techniques are applied. In addition, the professional support disintegrates due to difficulties in coordinating between the rehabilitation team and the various teachers in the college classrooms.

The second approach (which may be in addition to the first) enrolls the brain-injured student in a study skills class at a local community college. This approach immediately places the students in the fast-paced classroom situation where they have difficulty processing information. Brain-injured students can't or don't apply many of the techniques taught in these classes. They can't apply those techniques which rely on adequate processing speeds, memory, or organizational skills, since these are often impaired following a brain injury. They don't apply other techniques because their impaired organizational skills lead to very impaired time management. For example, a common technique suggested for students who have difficulty rapidly processing and/or remembering information from lectures is to audiotape the information. This technique is rarely functional for brain-injured students, for several reasons: 1) they are rarely organized enough to actually listen to the tape after the lecture, 2) the speed of presentation cannot be slowed down sufficiently (these students often benefit from more frequent pausing than is functional from an audiotape), 3) they have just as much difficulty identifying key concepts from the audiotape as they did from the lecture, 4) they still miss most inferences because they take information at face value, and 5) brain-injured students benefit from multi-modality input, and the audiotape provides fewer modalities than the lecture.

One step in improving this difficult transition from the rehabilitation program to the community college was addressed by the development of High Tech Centers in the community colleges. Utilizing computer technology, High Tech Centers can teach study skills and interact with teachers on campus so that the students' progress and problems can be addressed. The structure of High Tech Center classes is often more individualized than a classroom lecture yet closer to a classroom environment than rehabilitation is. But there is not yet the pace or
distraction level of the mainstream classroom, outside reading and assignments are not required, and it is rare that there is a test for which a student must prepare. The student is better prepared than coming directly from a rehabilitation program, but not yet ready for the larger competitive classroom.
2. Specific Problems Being Addressed

RESPONSE TO NEED:

Addressing the study skills of brain-injured students to prevent their high attrition would be more effectively solved by a coordinated effort in classroom preparation between High Tech Centers and study skills classes. The High Tech Center would initiate classroom preparation through techniques such as a progression of videotaped lectures. These would begin with slow and short presentations, gradually increasing in speed of presentation, length, and distractions. Topics could include information about processing information, identifying key concepts, and beginning organization and note-taking skills. The issues of outside reading, assignments, and tests could be handled at a simple level. An inservice would need to be provided to teachers of study skills classes on studying techniques which have been found to be effective for brain-injured students. The study skills teachers could then complete the classroom preparation by incorporating these study skill techniques into their planned classes, requiring outside reading, assignments, and tests. The student is then ready for transition to other classes on campus.

Proper pacing and preparation for the competitive classroom can make the difference in retaining the student beginning or returning to college after an acquired brain injury. Better awareness of their impairments, proper preparation in areas of processing information and identifying key concepts, and the teaching of more effective techniques for organization and memory will improve these students' potential for success in the community college environment. Preventing their attrition will also improve their potential for success in achieving their career goals and returning to a productive life.

LOCATION

Mount San Antonio College, with its High Tech Center currently serving 25 head-injured students, and central accessibility to 3 rehabilitation programs locally (Rancho Los Amigos in Downey, Casa Colina in Pomona, and St. Jude's in Fullerton) would be the location for this project. Disabled Students Programs and Services at MSAC provides many services for brain-injured students, and most are referred to the High Tech Center. In addition, MSAC's Learning Assistance Program currently receives brain-injured students in their Study Skills classes. The trial class would be conducted in the High Tech Center, with viewing of the videotaped lectures taking place in the media center of the Learning Assistance Center.
3. Population To Be Served

TARGET POPULATIONS:

Target populations for this project would include:

1) Brain-injured clients from local rehabilitation centers (Casa Colina Hospital for Rehabilitative Medicine, Rancho Los Amigos Medical Center, Queen of the Valley Hospital, and St. Jude’s Medical Center). Although the trial class would be small (a size of 10 students is planned), future groups of 20 or more students per semester could receive classroom preparation in High Tech Centers and then integrate into study skills classes which serve 25-35 students per class.

2) Faculty will benefit from this program in expanding their array of study skills taught and in their awareness of the needs of students with acquired brain injuries. Mount San Antonio College’s Learning Assistance Center has 23 full and part-time faculty working with students’ study skills with 2 of them teaching specific study techniques.

3) This project will also indirectly serve other students working on study skills with Learning Assistance Center faculty, as some of the techniques found to be effective for brain-injured students will also benefit students with identified learning disabilities
4. Objectives

OBJECTIVES

1. Identify 10 strategies for processing, retaining, and/or organizing information that will be effective in improving classroom preparation and/or study skills of students with acquired brain injuries.

2. Plan and prepare a progression of 8 videotaped lectures, increasing in speed of presentation and length, on topics preparing the student for integration into a study skills classroom.

3. Conduct a trial class on study skills consisting of only 10 brain-injured students. This small-sized trial class allows for closer monitoring of individual student performance, to determine:
   1) the effectiveness of specific techniques for each student,
   2) which techniques can be integrated into the larger classroom, and
   3) which techniques are learned more effectively in the smaller classroom setting of the High Tech Center.

4. Successfully transition at least 8 of the 10 students into other academic classes on campus, with grades of C or better and with plans to continue beyond their first semester.

5. Prepare, conduct, and videotape an inservice for the 23 faculty of the Learning Assistance Center. This videotape will present those study skill techniques which are found to be effective for the brain-injured student and can be integrated into the larger classroom.

6. Facilitate replication of videotapes (both those for the students and those for the faculty) to other campuses and disseminate results of this project.
5. Workplan Narrative

WORKPLAN

ACTIVITIES:
Objective 1: Identify 10 strategies to improve classroom preparation and study skills for brain-injured students.

ACTIVITY 1.1)
Identify a data base for selection of 10 effective classroom preparation and study skill strategies for the brain-injured student, including:
   a) review of study skill techniques currently in use on this campus.
   b) review of techniques presented by Christine Tunstall and Pamela Pickering-Reed, "Test-taking and Study Skills for the Brain-Injured", Poster session at 1989 California Speech-Language-Hearing Association state conference.
   c) reports from rehabilitation teams.
   d) search of the literature.

PERSONNEL:
This activity will be conducted by the Project Director, assisted by an Instructional Aide.

EQUIPMENT/SUPPLIES:
Office supplies

BUDGET:
$1,628.00

Objective 2: Plan and prepare a progression of 8 videotaped lectures.

ACTIVITY 2.1)
Plan the progression process for rate of speech, number of input modalities, and overall duration of presentation for a series of videotapes to be developed by this project. Select topics for these videotaped lectures from research in Activity 1.1, so that each subject can be presented effectively in the style of presentation permitted by the progression and sequential in subject content. Videotape the lectures and prepare criteria through worksheets and activities to determine comprehension level.

PERSONNEL:
This activity will be conducted by the Project Director, assisted by the Instructional Aide.

EQUIPMENT/SUPPLIES:
Videotapes and office supplies

BUDGET:
$2,195.00
Objective 3: Conduct a trial class, closely monitoring student performance.

ACTIVITY 3.1) Prepare Fall semester trial class structure, including classroom preparation techniques, videotape progression, and study skill techniques. Prepare criteria to measure progress in classroom preparation and in learning and use of study skill techniques.

ACTIVITY 3.2) Assess potential student candidates for Fall semester trial class. A trial class of 10 students is anticipated. Process would include assessment of current academic abilities (Educational Specialist), new learning and memory potential (Neuropsychologist), and receptive/expressive language (Speech/language Pathologist).

ACTIVITY 3.3) Conduct class, including ongoing monitoring of students' progress with the pacing of classroom preparation techniques, videotape progression, and study skill techniques utilizing the criteria developed in activities 2.1 and 3.1.

PERSONNEL: Activity 3.1 will be conducted by the Project Director, Activity 3.2 will be conducted by the Neuropsychologist, Speech Pathologist, and an educational specialist, and Activity 3.3 will be conducted by the Project Director, assisted by an Instructional Aide.

EQUIPMENT/SUPPLIES: Software and instructional supplies

BUDGET: $12,418.00

Objective 4: Transition 8 students to other academic classes on campus.

ACTIVITY 4.1) Follow-up on progress of students in other classes during the Spring semester by:
   a) Meet twice monthly with students’ teachers to ascertain progress in class.
   b) Meet weekly with students to ascertain use of techniques in class and to provide additional support/strategies as needed.

PERSONNEL: This activity will be conducted by the Project Director, assisted by the Instructional Aide.
**OBJECTIVE 5:** Prepare, present and videotape inservice to Learning Assistance Center faculty.

**ACTIVITY 5.1**
Plan and conduct an inservice for Learning Assistance Center faculty on those study skill techniques which were found to:
- be effectively learned by the brain-injured students,
- be effectively utilized by the brain-injured students, and
- successfully integrate into the classroom setting.

**PERSONNEL:**
This activity is to be conducted by the Project Director, assisted by the Instructional Aide.

**EQUIPMENT/SUPPLIES:**
Instructional supplies and videotapes

**BUDGET:**
$1,401.00

**OBJECTIVE 6:** Facilitate replication of videotapes to other campuses.

**ACTIVITY 6.1**
Disseminate videotaped lectures and inservice to other campuses (and for future inservices at this campus). Submit results of project to ERIC and the assessment criteria, procedures and/or results of project for state conference presentation (California Association of Post-Secondary Educators, California Speech-Language-Hearing Association, and/or similar conference).

**PERSONNEL:**
This activity is to be conducted by the Project Director, assisted by the Instructional Aide.

**EQUIPMENT/SUPPLIES:**
Videotapes and office supplies

**BUDGET:**
$985.00

**PROJECT MANAGEMENT**

This project would be managed by the High Tech Center in Disabled Students Programs and Services (DSP&S) at Mount San Antonio College in Walnut, California. The Director of DSP&S, Mayme Thornton, would serve as Project Supervisor. Christine Tunstall, Speech Pathologist and ABI/LD Specialist, would serve as Project Director. Christine has worked with the High Tech Center for two years, with a prior 8 years of experience working with brain-injured individuals in rehabilitation programs.
Additional support would be identified in:

1) a student assistant as Instructional Aide for data collection, and

2) professionals to determine each brain-injured student's potential to participate in this program. This would include:
   
a) Neuropsychologist (outside consultant, Morris Powazek, Ph.D.) for assessment of learning potential,

b) Speech/Language Pathologist (Christopher Walker, Ph.D., currently Speech/Language Pathologist at MSAC) for assessment of receptive and expressive language abilities, and

c) educational specialist (James Andrews, Ph.D., Psychologist in DSP&S at MSAC) to determine current academic abilities.
6. Expected Outcomes

[NO "OUTCOMES" ACCOMPANIES THIS DOCUMENT.]
7. Evaluation Plan

EVALUATION

It is anticipated that the videotaped lectures, with their progressive increases in speed of presentation and duration, and the other classroom preparation and study skill techniques will have a significant impact on retention of brain-injured students beyond the first semester.

Evaluation of performance for each objective would be as follows:

Objective 1:
Objective is achieved if at least 10 strategies for classroom preparation and/or study skills are identified which:
1.1) are or have potential to be effective for brain-injured students, and
1.2) are not in use in current study skills classes at MSAC.

Objective 2:
Objective is achieved if at least 8 tapes are developed with:
2.1) progressive increases in speed of presentation and duration are documented,
2.2) topics correlated to duration of presentation and to classroom preparation and basic study skills, and
2.3) worksheets and/or measurable activities are developed which correlate to each topic and demonstrate level of comprehension and use of information presented.

Objective 3:
Objective is achieved if:
3.1) 10 students are identified by professionals separate from the instructor (Project Director),
3.2) worksheets, measurable activities, outside assignments, and/or simple tests correlated to each strategy demonstrate level of comprehension and use of the strategy by each student, and
3.3) student performance, student feedback, and instructor input (Project Director) differentiates effectiveness of each strategy to either the larger classroom or to the more individualized setting of the High Tech Center.

Objective 4:
Objective is achieved if at least 8 students:
4.1) enroll in at least one class on campus involving 25 or more students with lecture being one of the teaching methods utilized,
4.2) complete at least 75% of reading and outside assignments punctually, and
4.3) complete the class assignments, quizzes and tests with at least a C average.

Objective 5:
Objective is achieved if pre- and post-testing completed by Learning Assistance Instructors regarding the inservice reflects:

5.1) increased awareness of the educational needs of brain-injured students,
5.2) understanding of study skill techniques taught during inservice, and
5.3) willingness to incorporate the study skill techniques into their teaching process.

Objective 6:
Objective is achieved if:
6.1) videotaped lectures and videotaped inservice are shared with High Tech Centers and instructors of study skills classes on other campuses,
6.2) results of project are submitted to ERIC, and
6.3) assessment criteria, procedures, and/or results of project are submitted for presentation at state conference presentation.
8. Dissemination Plan

DISSEMINATION

The videotaped lectures and the videotaped inservice on specific strategies would be shared with the other community colleges serving head-injured students. The final report will be placed with ERIC, and the assessment criteria, procedures, and/or results will be submitted for presentation at state conference such as the California Association of Post-Secondary Educators, California Speech-Language-Hearing Association, and/or similar conference. Techniques and any updating of the assessment criteria, process, or strategies will be shared with MSAC faculty and processed through the High Tech Centers (communicating via their bulletin board) and ISAAC for dissemination to faculty on other campuses.
9. Budget Narrative

[NO “BUDGET NARRATIVE” ACCOMPANIES THIS DOCUMENT.]