CALIFORNIA COMMUNITY COLLEGES
AND
LOS RIOS
COMMUNITY COLLEGE DISTRICT

#87-0549
**California Community Colleges**  
Curriculum and Instructional Resources Division

<table>
<thead>
<tr>
<th>FISCAL YEAR</th>
<th>ID NUMBER</th>
<th>COLLEGE</th>
<th>DISTRICT</th>
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<tbody>
<tr>
<td>1987-88</td>
<td>87-0549</td>
<td>Consumnes River</td>
<td>Los Rios</td>
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**PROJECT TITLE**

**Reading/Critical Thinking Across the Curriculum Consortium**

<table>
<thead>
<tr>
<th>FUNDING CATEGORY &amp; AWARD</th>
<th>ELIGIBLE PROGRAM</th>
<th>PROJECT CATEGORY</th>
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<tbody>
<tr>
<td>Grant = $17,500</td>
<td>F --- Improvement of Fac/Staff</td>
<td>Developmental Model</td>
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<tr>
<th>PROJECT PRODUCT</th>
<th>PROJECT TOPIC #1</th>
<th>PROJECT TOPIC #2</th>
<th>ACADEMIC SUBJECT</th>
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<tr>
<td>Resource Materials</td>
<td>Critical Thinking</td>
<td>Curriculum Develop</td>
<td>Inter-Disciplinary</td>
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<tr>
<th>PROJECT DIRECTOR</th>
<th>PROJECT SUPERVISOR</th>
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<tbody>
<tr>
<td>Joan Naake, English &amp; Elizabeth Biggert, Couns</td>
<td>Dennis Edwards, Ass’t Dean Human/Soc Sci</td>
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**PROPOSAL DESCRIPTION**

This project proposes an innovative approach to reading and critical thinking deficiencies because it does not implement reading and critical thinking strategies in specific reading and critical thinking courses but in all content area courses. By providing students with techniques by which they can reach standards, the instructor raises students’ skill levels rather than lowers standards and thus promotes academic quality and overall excellence.
According to "Learning to Be Literate In America," published by ETS, "only 21% of 55,000 young adults studied had the advanced rending skills needed for college professional and technical rending material." This national statistic Is borne out by many California community colleges; in fact recent assessment statistics at Cosumnes River College reveal that only 50% of CRC students read at or above college level and only 35% solve mathematical problems at or above college level. Problem solving and reading deficiencies are clearly major problems confronting community colleges. In addition, these problems are compounded by the number of career changes mandated by the pace of contemporary society. According to Dr. Paul Director of the Critical Thinking Center a t Sonoma State University only one out of four people work In the field they majored in...and the average person experiences three to seven career changes In a lifetime." Thus It is Imperative that students not simply memorize the facts pertaining to one discipline but rather develop the reading and critical thinking skills that they can transfer from one career to another and that will empower them to be truly Independent learners truly educated Individuals. As John Newman over a century ago In his Idea of a University wrote: Educated men can do what illiterate cannot; and the man who has learned to think and to reason...and to analyze...will not Indeed be a lawyer ...a physician....or an engineer...but he will be placed In that state of Intellect In which he can take up any one of the sciences or callings I have referred to...with an ease and success to which another Is a stranger."

Wholeheartedly agreeing with Newman's definition of the educated person the Reading/ Critical Thinking Across the Curriculum Consortium addresses two major problems confronting community college educators: students Inadequate reading skills and poorly developed critical thinking skills--problems obviously recognized by the mandates of Title V. The purpose of the Reading/Critical Thinking Across the Curriculum Consortium Is to train content-area Instructors In reading and critical thinking strategies so that they can improve the discrepancy gap between student reading level and textbook reading levels and so that they can enhance their students critical thinking skills. Both of these skills--reading and critical thinking--are essential for students to successfully complete their community college education to successfully transfer to four-year university courses and to successfully enter the lob market.

The Reading/Critical Thinking Across the Curriculum Consortium Is an innovative approach to reading and critical thinking deficiencies because it does not implement reading and critical thinking strategies in specific reading and critical thinking courses but in all content area
courses. While Individual reading and critical thinking courses offer a solution it is a limited one because not all students especially those who are most deficient elect to take these courses. The consortium's solution to these problems pervades all disciplines and all levels by having Instructors Implementing reading and critical thinking strategies in all content area courses--a pervasive solution for a pervasive problem. An implicit goal of the consortium is excellence. By providing students with techniques by which they can reach standards tile Instructor raises students’ skill levels rather than lowers standards and thus promotes academic quality and overall excellence. In addition rather than flunking those who do not meet the standards instructors are able to provide the means by which students especially those with assessed skill deficiencies can be successful thus assuring not only access to but success In post-secondary education.

The methods by which tile content-area Instructors Improve students skills are the reading and critical thinking strategies researched designed and developed by the project directors. The consortium of 50 content-area Instructors who comprise a network already established by the present Reading Across the Curriculum project and who are already Implementing the original foul-teen reading strategies will be trained In both the new and revised reading strategies and in the newly developed critical thinking strategies In major fall and spring conferences. These 50 Instructors plus the other 350 conference participants will then implement the critical thinking strategies and new reading strategies which are most suited to their disciplines. Given instructors rejuvenation In the present project and their students success (see Addendum #1 and #2), the probability of these strategies becoming an integral part of the curriculum 15 quite high. In addition, formal control-groups will be established so that we can evaluate via standardized pre- and post-tests the effectiveness of the Implementation of both the reading and critical thinking strategies. Evaluation of the effectiveness of the strategies will also be ascertained by Instructor evaluations of students grades In relationship to the strategies implemented, student evaluations, project directors’ evaluations of pre- and post-test results and conference evaluations.

Given the viability of the present Reading Across the Curriculum network the mandates of Title V- and the student problems in reading and critical thinking it seems that the present network of 18 Northern California community colleges and 50 community college instructors representing over 26 different disciplines Is an Invaluable device for improving students reading and critical thinking skills and for continuing the renewal of Instructors. In fact the initial 50 instructors plus the additional 350 who will be trained in workshops seminars and/or conferences will have a rippling effect reaching approximately 100,000 (350 x 300) students--100 000 students whose reading and critically thinking skills and thus chances for success in community college education four-year universities and the job market will be markedly increased.
1. Specific Educational Program Being Addressed

EDUCATIONAL PROGRAM

1. Purpose

"Educated men can do what illiterate cannot; and the man who has learned to think: and to reason and to compare...and to analyze...and who has formed his judgment and sharpened his mental vision, will not indeed at once be a lawyer, or a statesman, or a physician, or a soldier, or an engineers or a chemist...but he will be placed in that state of intellect in which he can take up any one of the sciences or callings I have referred to...with an ease and success to which another is a stranger."

*The Idea of a University* by Newman

Although written over a century ago, the excellence and versatility inherent in Newman’s definition of the educated person reflect the central focus of the Reading/Critical Thinking Across the Curriculum Consortium. In fact, the versatility of the educated person required today is at least four times greater than it was in the nineteenth century. According to Dr. Paul, Director of the Critical Thinking Center at Sonoma State University, "only one out of four people work in the field they majored in...and the average person experiences three to seven career changes in a lifetime." This high probability of several career changes mandates that community college students be educated not just to know facts in a particular discipline but to read and think critically--skills applicable in and imperative to any career.

The Reading/Critical Thinking Across the Curriculum Consortium enables students to achieve these two essential educational goals--to read and to think critically. The project achieves these goals:

(1) by utilizing the existing fifteen proven Reading Across the Curriculum strategies
(2) by revising these strategies to incorporate critical thinking and by creating new critical thinking strategies that directly address Title V.

(3) by training the existing network of 50 participating content-area instructors from 18 community colleges in the new critical thinking strategies.

(4) by having the existing 50 participating instructors train approximately 350 additional content area instructors in reading/critical thinking strategies.

(5) by having the participating content-area instructors implement reading/critical thinking strategies in their classrooms, thus enabling students to have both access to and success in their community college education.

Through these activities and within the two major goals--to read and think critically--the consortium accomplishes six additional purposes:

(1) to facilitate instructors implementation of the critical thinking component of Title V, thereby improving instructor competencies.

(2) to enable students to read analytically and to think critically and thereby achieve success and excellence in their education and multiple career and life choices.

(3) to identify community college students with assessed skills deficiencies in reading critically and to teach these students to utilize their reading/ critical thinking strategies and thus assure access to and success in postsecondary education among all student groups, including ethnic minorities.

(4) to foster innovation and substantive change in instructional design by implementing reading and critical thinking strategies not in reading or critical thinking courses, but in content area courses--an innovation that not only enables the students to comprehend difficult textbooks in specific content areas but also to transfer these skills to other college courses so that community college students do not have just a surface understanding but a higher level of literacy--reasoning and reading skills.

(5) to improve instructor and program accountability at all levels from basic skills to honors by evaluating the results of pre- and post- standardized reading and critical thinking tests.

(6) to facilitate staff development by having faculty teaching faculty in a non-threatening environment and by improving competencies in two of the most imperative educational areas: reading and thinking critically.

2. Adaptation

The Reading/Critical Thinking Across the Curriculum Consortium is an adaptation of the 1986/87 Reading Across the Curriculum project. Because the Reading/Critical Thinking
project will be able to utilize the already established network of 50 content area instructors and 18 community colleges, the focus of the project can be on training the participating instructors in the new critical thinking strategies and in reaching out to approximately 350 additional content area instructors through conferences, the major workshops, and the Reading/Critical Thinking Across the Curriculum manual. (See Addendum #1, #2 & #3 for evaluation of Reading Across the Curriculum project and spring workshops.)

3. Consortium

This project is a consortium composed of 50 mentor content-area instructors from 18 mentor community colleges within 18 districts. Cosumnes River College will provide the project directors and administrators of the consortium. The mentor colleges in the consortium are as follow:

<table>
<thead>
<tr>
<th>Mentor Colleges</th>
<th>Number of Mentors</th>
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<tbody>
<tr>
<td>Cosumnes River College (Lead College)</td>
<td>8</td>
</tr>
<tr>
<td>Butte College</td>
<td>6</td>
</tr>
<tr>
<td>Yuba College</td>
<td>4</td>
</tr>
<tr>
<td>Sacramento City College</td>
<td>5</td>
</tr>
<tr>
<td>American River College</td>
<td>3</td>
</tr>
<tr>
<td>Santa Rosa Junior College</td>
<td>2</td>
</tr>
<tr>
<td>Marin Community College</td>
<td>2</td>
</tr>
<tr>
<td>Napa Valley College</td>
<td>2</td>
</tr>
<tr>
<td>Los Medanos College</td>
<td>2</td>
</tr>
<tr>
<td>Shasta College</td>
<td>2</td>
</tr>
<tr>
<td>College of the Redwoods</td>
<td>2</td>
</tr>
<tr>
<td>San Joaquin Delta College</td>
<td>1</td>
</tr>
<tr>
<td>Columbia College</td>
<td>2</td>
</tr>
<tr>
<td>Chabot College-Livermore</td>
<td>2</td>
</tr>
<tr>
<td>Mendocino College</td>
<td>2</td>
</tr>
<tr>
<td>Lake Tahoe Community College</td>
<td>2</td>
</tr>
<tr>
<td>Sierra College</td>
<td>1</td>
</tr>
<tr>
<td>Solano Community College</td>
<td>2</td>
</tr>
</tbody>
</table>

In addition to the mentor college faculty listed above, many other college and high school instructors will be trained through conferences, workshops, and the manual. This year alone faculty from approximately 50 additional institutions, both colleges and secondary school 5, have been trained in Reading Across the Curriculum strategies.

Each of the mentor colleges will be utilizing the reading and critical thinking strategies within their own courses and training other faculty and institutions in a variety of in-service training sessions: staff development seminars, flex calendar days, teacher-resource center workshops, and conferences.

4. Additional Sources
Other sources for this project include investigating and researching successful reading and critical thinking strategies through the Center for Critical Thinking at Sonoma State University, the Northern California Consortium on Critical Thinking and the National Institute for Staff and Organizational Development.

BASIC AGENDA ADDENDUM

As indicated in the purpose statement above, the Reading/Critical Thinking Across the Curriculum Consortium addresses four of the four goals of the Board of Governors Basic Agenda. Firsts the consortium promotes excellence by providing students with techniques by which they can reach standards. Since in using these techniques the instructor raises students' skill levels rather than lowers academic standards, the academic quality and overall excellence of community college education is promoted.

Second, the Reading/Critical Thinking Across the Curriculum Consortium clearly acts to assure access to and success in postsecondary education among all students. While the consortium's reading/critical thinking strategies enable all students to enhance these skills, these strategies are particularly helpful for those who enter community college with assessed skills deficiencies in reading and reasoning.

Third, the Reading/Critical Thinking Across the Curriculum Consortium addresses the goal of governance. If governance implies more active participation of faculty in determining and designing the major focus of the community college--the educational curriculum--then clearly the consortium meets this criteria. In the consortium, the focus is definitely on the educational curriculum--enhancing reading and critical thinking skills. In addition, the governing is not the top layer directing the bottom layer but faculty teaching faculty--clearly a demonstration of the positive power and strength of faculty in the role of education.

Fourth, the Reading/Critical Thinking Across the Curriculum Consortium addresses the goal of accountability for the effectiveness and efficiency of community colleges. In establishing both pre- and post- standardized tests in reading and critical thinking and in creating control groups in order to measure the effectiveness of the reading/critical thinking strategies, the consortium definitely enhances the accountability of community college education.
2. Specific Problems Being Addressed

SPECIFIC PROBLEMS

1. The two major problems that this consortium addresses are 1) students inability to read at a college level and 2) students inability to think critically--to analyze and apply ideas.

These problems pervade community college education. Recent assessment statistics, for example, at Cosumnes River College reveal that 50% of CRC students read below college level and 60% solve mathematical problems below college level. Thus, it is obvious that the majority of community college students, especially "Black and Hispanic students who enter community college with assessed skills deficiencies?" have problems in reading and critically thinking. In fact, according to "Learning to Be Literate in America," published by ETS, "97% of young adults demonstrated surface understanding of reading material. But only about half of these young adults could be considered "adept readers"--those able to deal with complex materials such as high school texts. Only 21% had the advanced reading skills needed for college, professional and technical reading material."

Many community colleges have attempted to solve students' reasoning and reading problems and to implement the mandates of Title V by individual reading and critical thinking courses. However, this is only a limited solution since not all students, especially those who are most deficient, elect to take these courses. The consortium's solution to the above problem pervades all disciplines and all levels by having instructors implementing reading and critical thinking strategies in all content area courses--a pervasive solution to a pervasive problem.

2. The desired outcome of this consortium is to improve students reading levels and their ability to think critically so that they have skills which enable them 1) to bridge the gap between their reading levels and the reading levels of their textbooks, 2) to successfully enroll in four-year university courses and 3) to successfully enter the job market.

3. The Reading/Critical Thinking Across the Curriculum Consortium will build upon the already established network of 18 colleges and 50 instructors involved in the Reading Across the Curriculum project. Given the viability of the present network, the mandates of Title v, and the student problems in reading and critical thinking, it seems that the present network is an invaluable device for continuing the renewal of instructors and the empowerment of students to achieve success.
3. Population To Be Served

POPULATION SERVED

1. The two major groups who will be served are students and instructors. The consortium helps instructors by renewing their focus on innovative methods to improve traditional instruction. In our present project many instructors have commented on how the strategies have rejuvenated them by providing them with new methods of teaching community college curriculum--a veritable cure with "a spoonful of sugar" for instructor burnout.

   The major group the consortium focuses on is students. Since the purpose of the strategies is to improve students' ability to read analytically and to think critically, the consortium especially addresses "the culturally distinctive needs and learning styles of Black and/or Hispanic students who enter community college with assessed skills deficiencies" in reading.

2. The number of faculty involved in the consortium will include the 50 mentor instructors presently participating in the project plus the additional 350 who will be trained in workshops, seminars, and/or conferences. The number of students whose reading and critical thinking skills will be enhanced in content-area classes ranges from a minimum of (50 X 300) 1,500 students to a possible (350 x 300) 100,000. These figures are only for one year and do not include the number of students and instructors involved in implementing these strategies in succeeding years.
OBJECTIVES

Objective 1.
To research and develop critical thinking strategies to aid participating instructors in implementing Title V.
Timeline: 6-15-87 - 6-2-88
Budget: F.I.I. $5,000
Local 7,500

Objective 2.
To refine and revise Reading Across the Curriculum strategies and their implementation with participating instructors.
Timeline: 7-15-87 - 5-15-88
Budget: F.I.I. $2,500
Local 4,000

Objective 3.
To demonstrate and disseminate new and revised reading strategies in a fall conference hosted by project directors and mentor instructors for all Northern California community college instructors and administrators.
Timeline: 8-15-87 - 10-30-87
Budget: F.I.I. $3,750
Local 8,325

Objective 4.
To demonstrate and disseminate critical thinking strategies in a spring conference hosted by project directors and mentor instructors for all Northern California community college instructors and administrators.
Timeline: 1-15-88 - 3-30-88
Budget: F.I.I. $3,750
Local 7,500

Objective 5.
To correlate and disseminate results of classroom control groups pre- and post-testing, and implementation of strategies.
Timeline: 3-30-87 - 6-30-87
Budget: F.I.I. $2,500
Local $5,225
5. Workplan Narrative

ACTIVITIES

Objective #1
To research and develop critical thinking strategies to aid participating instructors in implementing Title V.

Activities:
1. Research and develop critical thinking concepts to aid participating instructors in implementing Title V.

2. Adapt critical thinking implementations developed by Critical Thinking Center, Sonoma State, Northern California Critical Thinking Group, and Cosumnes River College Critical Thinking Symposium to meet the needs of community college students and share with 50 participating instructors.

3. Refine and edit successful reading strategies to incorporate critical thinking components as a result of classroom based research fostered by the original Reading Across the Curriculum project.

4. Administer nationally standardized pre- and post-critical thinking tests at Cosumnes River College for the purpose of evaluating effectiveness of critical thinking strategies.

Personnel
1. Two project directors
2. Supervising dean
3. Clerical assistance
4. Research statistician
5. Fifty participating instructors

Materials
1. Standardized critical thinking tests
2. Handouts on new and revised strategies

Evaluation
1. Comparison of pre- and post- critical thinking tests to ascertain the effectiveness of critical thinking strategies.
2. Student evaluations of critical thinking strategies employed in classroom
3. Instructor evaluations of critical thinking strategies employed in classroom.

Objective #2
To refine and revise Reading Across the Curriculum strategies and their implementations with participating instructors.

Activities
1. Edit and refine existing strategies and share new and revised reading strategies and hands-on activities with 50 participating instructors.

2. Using pre- and post-testing results, publish reading strategies which have proven most successful in enhancing students' learning.

Personnel
1. Two project directors
2. Supervising dean
3. Fifty participating instructors
4. Clerical assistance
5. Research statistician

Materials
1. Pre- and post-standardized reading tests
2. Handouts on new and revised strategies

Evaluation
1. Comparison of pre- and post-reading tests to ascertain which strategies are most effective in enhancing students' learning and skill levels.
2. Student evaluations of reading strategies employed in classrooms.
3. Instructor evaluations of reading strategies employed in classroom

Objective #3
To demonstrate and disseminate new and revised reading strategies in a fall conference hosted by project directors and mentor instructors for all Northern California community college instructors and administrators.

Activities
1. Publicize conference, make room arrangements, and finalize equipment and presentation needs.
2. Select presenters and arrange for duplication of handouts.
3. Prepare and distribute evaluation forms.
4. Select instructors to participate in control group studies for pre- and post-testing.

Personnel
1. Two project directors
2. Supervising dean
3. Fifty participating instructors
4. Ten control-group instructors
5. Research statistician
6. Clerical assistance

Materials
1. Conference flyers
2. Conference handouts
3. Conference brochures

Equipment
1. Video recorders
2. Video cameras
3. Television sets
Facilities
1. Local facilities for fall conference

Evaluation
Conference and workshop participant evaluations.

Objective #4
To demonstrate and disseminate critical thinking strategies in a spring conference hosted by project directors and mentor instructors for all Northern California community college instructors and administrators.

Activities
1. Publicize conference, make room arrangements, and finalize equipment and presentation needs.
2. Select presenters and arrange for duplication of handouts.
3. Prepare and distribute evaluation forms.

Personnel
1. Two project directors
2. Supervising dean
3. Fifty participating instructors
4. Research statistician
5. Clerical assistance

Materials
1. Conference flyers
2. Conference handouts
3. Conference brochures

Equipment
1. Video recorders
2. Video camera
3. Television sets

Facilities
1. Local facilities for spring conference

Evaluation
Conference and workshop participant evaluations.

Objective #5
To correlate and disseminate results of classroom control groups, pre- and post-testing, and implementation of strategies.

Activities
1. Evaluate and disseminate control group results.
2. Evaluate and disseminate pre- and post-testing results.
3. Evaluate implementation of strategies.

Personnel
1. Supervising dean
2. Two project directors
3. Research statistician
4. Clerical assistance
5. Ten control-group instructors

Materials
1. Computerized printouts
2. Evaluation forms for instructors
3. Evaluation forms for students

Equipment
1. Computer

Evaluation
1. Evaluate control/non-control groups
2. Evaluate pre- and post-testing of reading and critical thinking standardized test scores.
3. Evaluate implementation of reading/critical thinking strategies by students, instructors, directors and supervising dean.
6. Expected Outcomes

EXPECTED IMPACT AND TRANSFERABILITY

1. The impact of this project on other disciplines is inherent within the very purpose of the project. Since reading and critical thinking skills are universal and not unique to any one discipline, when students use these strategies in one discipline, they can readily transfer them to other disciplines. In evaluating the present project, many students have mentioned using the strategies in other courses; in facts one student who learned the mapping strategy in her nutrition class wrote that she not only successfully used mapping in her political science course but taught her instructor how to implement it.

2. The likelihood of the consortium strategies being implemented after the grant has expired is great because as our present project evaluations attest, the strategies not only enhance students’ skills but reinvigorate instructors thus, it is unlikely that instructors will stop using what empowers them to be renewed and what empowers students to become successful independent learners.

3. It is quite likely that other institutions will adopt this project, especially if our present project is a predictor. Presently two high schools have adopted the Reading Across the Curriculum project; in fact, one has successfully written a CAP grant modeled on our project. In addition, many other colleges not included in the grant have not only requested training but implemented many of the strategies as a part of their regular curriculum.
7. Evaluation Plan

EVALUATION PLAN

1. The procedures and outcomes of this project will be evaluated by project directors and participating mentor instructors. Project directors, together with participating mentor instructors, will compare pre- and post-test reading and critical thinking scores at completion of the project in order to ascertain whether or not students' reading levels and critical thinking skills have improved.

2. In addition, there will be control-groups to ascertain whether or not the reading/critical thinking strategies have been effective. While there will be variables outside of the project's control (student's health, family problems, other courses and instructors), the control groups and pre/post-testing should give an indication of the effectiveness of the strategies implemented. A research analyst will be employed specifically for the purpose of analyzing the data objectively. In addition to the pre- and post-testing, participating instructors will evaluate students' grades and the quality and quantity of their learning in relationship to the reading/critical thinking strategies implemented in their courses.

The conference and workshop participants will evaluate workshops and strategies for their effectiveness in improving reading/critical thinking skills in content area courses.

3. Since Title V is being mandated by the State and critical thinking is an essential component of Title v, critical thinking strategies adapted to community college students and content-area courses will be tools which the 50 instructors from the 18 community colleges in Northern California as well as other instructors will readily experiment with and adapt to their specific needs. The present project attests to the fact that strategies that work for the instructor and the student become an integral part of the curriculum and course work.
8. Dissemination Plan

INFORMATION FOR DISSEMINATION

1. The revised reading strategies and newly created critical thinking strategies will be demonstrated and disseminated through hands-on presentations and handouts at the fall and spring conferences. The number of instructors involved will be the 50 participating instructors representing 18 community colleges, plus approximately 350 additional community college instructors and administrators who will receive information at the conferences and/or at individual campus in-service training seminars or workshops.

2. The reading/critical thinking strategies and a report evaluating their effectiveness via pre/post- standardized testing, control groups, and instructor and student evaluations will be sent to the Chancellor’s Office.
9. Budget Narrative

[NO “BUDGET NARRATIVE” ACCOMPANIES THIS DOCUMENT.]