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**Consortium Project.**

This consortium will be composed of a group of colleges which represent California’s diversity. There will be a mix of big and small, north and south, and urban and rural colleges. The intent of the consortium is to "paint" a picture that represents the entire state and allows future decisions to be made based on a broad representation. The consortium approach allows for this broad base and makes the data more reliable.

Each member of the consortium will be required to collect the specific data called for and submit to the evaluation advisory team. The evaluation advisory team will be composed of a representative from each of the member colleges. That should be the college researcher or designee who is involved in the data collection. In July, 1994, a team will be established to determine the specific courses and procedures for the data collection. The team will communicate using either Infonet or Internet on a weekly basis to report progress on data collection, which should occur in the Fall 1994 term. The team will meet every three months in a central location to analyze the collected data and refine the evaluative research process.
Given the new matriculation plan and the institution of pre-or co-requisites and advisories, it becomes imperative to address the issue of pre-or co-requisites and advisories as it relates across disciplines. The Chancellor's office new policy requires a content review if the pre-or co-requisites and advisories are part of a series of courses within the discipline. However, if a pre- or co-requisite or advisory is one that crosses discipline lines (i.e. calculus for physics), a statistical validation study must be undertaken to validate the necessity for such a requisite. It is the intent of this grant to address the issue of pre-or co-requisites and advisories on a state level and to develop a model for individual colleges to use when they undertake statistical studies to validate pre-or co-requisites and advisories when they cross discipline lines.

This grant will look at critical courses that require cross discipline pre-or co-requisites and advisories and will gather and analyze the data to predict the relationship between student prerequisite skills and success in the class. The study will use an evaluative decision-making model to examine data from various disciplines and from a representative group of colleges across the state. These colleges will be developing a district model and procedures for validating communication and computational pre-or co-requisites and advisories to other disciplines. If statewide data were available, it could be used to guide local colleges in establishing their own pre-or co-requisites and advisories for specific courses. Furthermore, the data could be used to validate and support pre-or co-requisites and advisories if a legal challenge was posed for the local institutions.

The choice of an evaluative decision-making model is to facilitate the data collection and to use the data to make the necessary decisions about pre-or co-requisites and advisories. Evaluative decision-making models are defined as methods which gather data necessary to make an informed decision relative to the issue being studied.
PROGRAM DEVELOPMENT

This study will build a statewide model for schools to use as they develop the requisite studies for cross-discipline courses. The MALDF decision has resulted in the weakening of pre- or co-requisites and advisories due to the fact that there has been no data to support the imposition of requisites or for that matter, simple advisories. Schools, not wanting to be subject to a MALDF type suit, have in most instances done away with all requisites resulting in increased student failure.

To remedy the situation, the state has attempted to strengthen college degree courses, yet at the same time maintain open access for students to these courses. By implementing the new Matriculation process which calls for pre-or co-requisites and advisories to be developed, the emphasis, however, has shifted to ensuring that students have the prerequisite skills they need so that they can succeed in a specific course.

The Matriculation policy requires that pre-or co-requisites and advisories be developed for all courses in a series; and that classes requiring cross-discipline pre-or co-requisites and advisories have these requisites validated using statistical models. This grant will evaluate specific courses requiring cross-discipline communication and/or computational pre-or co-requisites and advisories, and will collect data to establish a state-wide model for use as a guide by individual campuses as they perform their own validation studies.
The proposed project will assist many colleges which do not have established data and longitudinal research to validate curricular requisites and advisories, particularly as they relate across disciplines in the areas of communication and computation as defined in the matriculation policy.

Historically, professional judgment was the criterion on which requisites were established. As the diversity of our students' proficiencies increases, more empirical data are needed to validate these pre-or co-requisites and advisories, especially when these pre-or co-requisites and advisories cross disciplines. Triesman has stated that the models we have traditionally used are oriented towards a "1950's type" student and that the student body today does not resemble the 1950's student body that we have used as our traditional model. He states that it is imperative that we become aware of the student body we are currently serving and build instructional models that meet these new learning needs.

Additionally, much of our curricular and advisory system has been based on an instructional perspective rather than a student outcomes perspective. The value of this project will be to shift that perspective which requires that we view student outcomes data and make decisions based on that data.

The proposed evaluation project will build a state-wide data model based on actual student outcomes that local campuses may use as they validate cross-discipline communication and/or computational pre-or co-requisites and advisories.
The project will serve local community colleges as they validate their own pre-or co-requisites and advisories. In addition, it will also serve the Chancellor’s Office should matriculation issues of open access to the system or to local institutions be legally challenged.

Perhaps most importantly, the students who now take college level classes prematurely and either drop out or fail the classes will benefit by having meaningful validated prerequisites to guide them in their selection of appropriate classes which will ensure their success.
Objective 1: By September 30, 1994, the evaluation advisory team will develop the specific work plan for collecting the data to include the specific courses and methodology and all sites will have agreed to collect the specific student numeric data in the approved manner.

Objective 2: By the end of Fall Semester, 1994, the first complete set of data will be sent to the Project Director.

Objective 3: By the end of Spring Semester, 1995, the second complete set of data will be sent to the Project Director.

Objective 4: By June 30, 1995, the analysis, findings and recommendations will be forwarded in a report to the Chancellor's Office.
Objective 1: By September 30, 1994, the evaluation advisory team will develop the specific work plan for collecting the data to include the specific courses and methodology and all sites will have agreed to collect the specific student numeric data in the approved manner.

An evaluation advisory team will be developed during July and August of 1994 consisting of the Researcher and/or designee from each of the consortium's members. The advisory team will then determine which courses would be the appropriate ones to study the effects of pre/co requisites and advisories on the subsequent student outcomes. Additionally, the team will decide the specific variables to be used to do the analyses which may include such student numeric data as gpa's for target classes; grade distributions; student retention in specifically designated courses; previous preparatory courses taken by students and grade point averages earned in preparatory courses prior to taking targeted classes; placement date relative to actual courses taken; and overall units earned at the college.

The plan will be disseminated to all schools participating in both a written format and an oral format. There will be a meeting of all participants in either the Los Angeles or the San Francisco vicinity in early October, 1994 to discuss the specifics of the plan and the implementation on local campuses.

Additionally, the President/Superintendent, Business Manager, Admissions and Records Dean and Researcher or Designee will sign an agreement by September, 1994, to participate in the study and to provide all data requested within the timeframes designated by this study.

Objective 2: By the end of Fall Semester, 1994, the first complete set of data will be sent to the Project Director.

By the end of the Fall, 1994 semester, the program director will collect all specified data from each of the participating schools, organized into an agreed upon reporting form, analyzed according to the agreed to methodology, and sent to the Project Director. The Project Director will compile the data from each school into one data base for analyses purposes. In the latter part of January -- early February of 1995, the data will be analyzed and the preliminary results will be looked at by the advisory team. The team will meet to assess the data; make whatever refinements are required; and make preliminary recommendations based on this first data set.
Objective 3  By the end of Spring Semester, 1995, the second complete set of data will be sent to the Project Director.

By the end of the Spring, 1995 semester all specified data will have been collected from each of the participating schools, organized into an agreed upon reporting form, analyzed according to the agreed to methodology, and sent to the Project Director. The Project Director will compile the data from each school into one data base for analysis purposes. The advisory team will meet to analyze the data, draw conclusions about the validity of pre/co and advisory requisite standards for the designated classes and make its recommendations to the Chancellor's office.

Objective 4: By June 30, 1995, the analysis, findings and recommendations will be forwarded in a report to the Chancellor's Office.

The report will summarize the data analyses from the representative schools participating in the study. Final report will include data that will describe the effects of pre/co and advisory requisites classes on student outcomes in target classes. The report will discuss how different pre/co and advisory requisite standards impact student outcomes. The report may make recommendations regarding the appropriateness of different requisite standards if the data substantiate a difference.

Additionally, the Project Director will conduct a meeting in early July with the Chancellor’s Office the Project Director and participating Researchers and/or designees and other interested parties to present and discuss the outcomes of the study.
OBJECTIVE 1: By September 30, 1994, the evaluation advisory team will develop the specific work plan for collecting the data to include the specific courses and methodology and all sites will have agreed to collect the specific student numeric data in the approved manner.

The expected outcome is a very specific research protocol which will enable the team to analyze data relative to pre/co and advisory requisites. The protocols include the specific courses where a cross-discipline pre/co or advisory requisite is desired; the specific student numeric variables to be collected (i.e. gpa's for specified course, pre-requisite course; retention; etc.); the time frames used to collect data and others as the evaluation advisory group deem necessary.

Impact of the project

This research protocol is one that will be used by the members of the consortium to analyze, evaluate and make recommendations about pre/co and advisory requisites in specific courses for the participating schools. In addition, it will establish a model for analysis which other community colleges in the state may use to do their own validation studies.

Potential for continued support after the expiration of the grant

The model that is generated may be used by all schools participating in the grant to analyze other course to establish valid pre/co and advisory requisites.

Potential for adaptation to other institutions or programs

This model has great potential for use at other institutions and programs to validate pre/co and advisory requisites for courses at their own institutions. In addition to a research protocol, the study’s recommendations will serve as a comparison point for the institution and/or programs attempting to validate pre/co and advisory requisites.

OBJECTIVE 2: By the end of Fall Semester, 1994, the first complete set of student numeric data will be sent to the Project Director.

OBJECTIVE 3: By the end of Spring Semester, 1995, the second complete set of student numeric data will be sent to the Project Director.
Due to the diverse nature of the specific members participating in the consortium, the data collection will represent the diversity of California's Community College students and the analyses which result as representative as possible of the possible effects of pre/co and advisory requisites on student outcomes.

Impact of the project

The representative data set will help answer the questions relevant to the appropriateness of pre/co and advisory requisites on the designated classes in the study and provide a model for others to use in their own studies.

Potential for continued support after the expiration of the grant

Data collection and analysis will continue at all schools after the completion of this study given that the new Matriculation policy requires all courses to be reviewed on a six year rotation. The research protocols may be used and modified to meet specific situations on each campus.

Potential for adaptation to other institutions or programs

The data collection models may be used and adapted by any school wishing to validate pre/co and advisory requisites in a similar fashion.

OBJECTIVE 4: By June 30, 1995, the analysis, findings and recommendations will be forwarded in a report to the Chancellor's Office.

Impact of the project: Once published, the findings and recommendations will be available for use by other colleges as benchmarks and/or comparison points for their own data. Additionally, as individual colleges do their own validation studies for each selected course in the study, the outcomes will either verify the validity of using pre/co and advisory requisites on positive student outcomes or suggest that student outcomes are not changed by using pre/co and advisory requisites.
Potential for continued support after the expiration of the grant

The new Matriculation Policy requires schools to review all courses on a six year rotation. These protocols and the findings and recommendations will serve the California Community Colleges as a model for these ongoing curriculum reviews and will provide a baseline measure to ascertain changes in terms of student outcomes and changing student demographics.

Potential for adaptation to other institutions or program

This model has great potential for use at other institutions and programs to validate pre/co and advisory requisites for courses at their own institutions due to the broad-based consortium representation (North-South, large-small, urban-rural). The decision-facilitation model is an established model to do this type of evaluative inquiry. In addition to a research protocol, the study's recommendations will serve as a comparison point for the institution and/or programs attempting to validate pre/co and advisory requisites.
The evaluation plan for this project will include both internal and external evaluations which are consistent with the sponsoring agency.

Program Evaluation:

This project will employ a system of continuous and periodic evaluations by each of the participating schools. This will provide both formative information so that the project may modify that which is not working during the life of the grant. Additionally, it will supply us summative information that will be included in the final report re: the effectiveness of the processes used.

The evaluation plan will include the following:

1. The project director will contact each participating school on a monthly basis to ascertain where they are in the collection process. Participating schools will be asked to complete short forms detailing their progress. The objectives listed in a prior portion of

2. Schools having difficulty collecting the data will be contacted and whatever assistance is necessary will be supplied by the project director.

3. The data gathered from each school will be compiled and used in the quarterly reports to the Chancellors office.

4. At the evaluation advisory board meeting (4 during the life of the grant), the group will evaluate the success of methodologies employed in the data gathering and will make recommendations to be included in the final report. These recommendations will include the variables that are the best predictors of student outcomes, the methodologies used, and the results of the studies done re: cross-discipline pre/co and advisory requisites and student outcomes.
The Project Dissemination Plan is included below.

1. Data presentation at all participating colleges by the local researcher or designee who worked on the project.

2. Prepare two page abstract outlining project and outcomes to send to all California Community Colleges Matriculation Officers.

3. Present to The Research Planning group at the March Meeting in 1995 preliminary data findings.

4. Present data findings to California Community College League at their annual convention in November, 1995.


7. Present findings at appropriate conferences both statewide and nationally.

8. Report sent to FII repository.
[No information provided in this document for this section.]