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AUTHOR Helm, Phoebe; deAnda, Rosa  
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ABSTRACT

As a result of a study by the California Postsecondary Education Commission on the feasibility of extending secondary school-community college articulated career programs to the baccalaureate degree level, the 1988-89 state budget provided \$410,000 to support the development of a 3-year 2 + 2 + 2 pilot program. In November 1988, 18 projects were selected and funded, with a designated focus on program planning. During the second year, 27 projects were funded, with a focus on program implementation. In the final year of the pilot project, 24 of the 27 second-year projects received additional funding, with the goal of institutionalizing the projects and developing materials and resources for dissemination. A third-party evaluation of the project, utilizing site visits, annual reports, and annual debriefing meetings with project directors, revealed that the projects led to major advancements in articulation practices and policies across educational segments; improvement of curriculum and instruction; increased faculty communication; and an expressed sense of professional renewal among project faculty and staff. The evaluations also revealed difficulties in tracking student progress, and a lack of sufficient outcome data to measure the long-term impact of the pilot projects. Recommendations emerging from the evaluation included: (1) allocation of continued funding; (2) careful tracking of student participants; (3) use of social security numbers as universal student identifiers; and (4) funding for a study of the effectiveness of the 2 + 2 + 2 teacher education project. Recommendations for building on the work of the pilot projects in light of limited state resources are included. (PAA)

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Board of Governors  
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<b>2+2+2 EVALUATION AND REPORT</b>	<b>5</b>
Second Reading, Action Scheduled	

*Staff Presentation: Phoebe Helm, Vice Chancellor  
Economic Development and Vocational Education*

*Rosa deAnda, Specialist  
Tech-Prep Unit*

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Discussed as Agenda Item 5 at a Meeting of the Board of  
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## **2+2+2 EVALUATION AND REPORT**

**5**

Second Reading, Action Scheduled

### **Background**

Responding to Assembly Bill 3639 (Bradley, 1986), the California Postsecondary Education Commission (CPEC) studied the feasibility of extending secondary school-community college articulated career programs to the baccalaureate degree level. As a result of CPEC's study, the 1988-89 State Budget provided funds to support the development of a three-year 2+2+2 pilot program.

Articulated career education programs offer a series of learning experiences that are designed to allow students pursuing a particular career path to move from one level of education and employment to the next highest level of a career ladder, with a minimum amount of duplication or overlap in learning, loss of time in school, and disruption in employment. These programs provide consistent curriculum and career pathways through which students may proceed. They may enter, exit, and/or "stop out" throughout the combined six years of the 2+2+2 articulated programs.

The Rancho Santiago Research Center was selected to conduct an annual evaluation of the projects, beginning in 1988-89, through a Request for Proposal (RFP) process by the California Community Colleges Chancellor's Office. This evaluation was guided by an intersegmental advisory committee that included representatives from the University of California, California State University, independent colleges and universities, and the California Department of Education. The evaluation methods included site visits, annual reports, and annual debriefing meetings with project directors. In addition, a student participant identification and follow-up model was used for each project.

### **Analysis**

The first interim evaluation, January 1990, focused on the initial operations and implementation of the projects and delineated the extent to which the projects met their proposed objectives. The second interim evaluation, December 1990, reported on the progress of implementation, identified emerging functional components of a model 2+2+2 project, and the extent to which all projects met their proposed objectives. The final report summary, submitted in January 1991, described the overall progress

of the 2 + 2 + 2 projects and evaluated outcomes of the three-year pilot program. Some emerging issues from this report are discussed in this item, along with recommendations for future action.

## Recommended Action

That the Board of Governors accepts the report of the third party evaluator for transmission to the Legislature, with staff's conclusion as presented.

*Staff Presentation: Phoebe Helm, Vice Chancellor  
Economic Development and Vocational Education*

*Rosa deAnda, Specialist  
Tech-Prep Unit*

# **2 + 2 + 2 EVALUATION AND REPORT**

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## **Background**

In its 1986 session, the Legislature enacted Assembly Bill 3639 (Bradley), which directed the California Postsecondary Education Commission (CPEC) to study the feasibility of articulating and extending secondary school-community college career educational programs to the baccalaureate degree and to make recommendations about state funding for pilot, articulated career education programs by January 1, 1988.

CPEC concluded that many community colleges were involved in articulated career education programs, referred to as 2+2 programs, and many were engaged in general education articulation with the four-year campuses, but there was a need to promote continuity of programs across all three educational levels (2+2+2). Therefore, CPEC recommended that the Governor and the Legislature should provide funds in the 1988-89 State Budget to support the development of pilot 2+2+2 programs.

The 1988-89 State Budget contained \$410,000 for the establishment of a three-year pilot 2+2+2 program. An additional \$35,000 for the 2+2+2 program was provided by the California Community Colleges Chancellor's Office. In November 1988, 18 projects were selected through an RFP process, with individual grants ranging from \$15,000 to \$34,000. Year one activities focused on program planning. In July 1989, 27 projects, which included 10 new projects and 17 of the original 18 projects, were selected for continued funding; individual grants ranged from \$28,400 to \$51,714. Year two activities focused on program implementation. In July 1990, 24 of the 27 projects were chosen for the final year of funding. Year three activities emphasized efforts to institutionalize the projects and the development of materials and resources for dissemination (see Appendix for three-year funding breakdown). During each year of the pilot program, 2+2+2 projects were selected through an RFP process.

## **Analysis**

### ***Strengths***

The Rancho Santiago evaluation reported major advancements in the area of articulation practices and policies across educational segments as a result of the 2+2+2 pilot program. A cadre of staff with expertise in both the mechanics and politics of 2+2+2 articulation has emerged as a result of the pilot program.

The improvement of curriculum and instruction was noted throughout all projects as significant outcomes of the pilot program. Faculty participants repeatedly expressed that increased communication among their colleagues in all three segments was the

most rewarding outcome of the project. These exchanges resulted in substantial progress in the articulation of curriculum and the implementation of outreach strategies and materials. Additionally, faculty and staff expressed a sense of professional renewal and enthusiasm as a result of the opportunities for intersegmental communication and cooperation provided by the 2+2+2 projects. The faculty also noted increased student enrollment in secondary school vocational courses, particularly in technology and business courses.

### **Weaknesses**

A major finding in the evaluation pointed to a basic flaw in the underlying assumption of the 2+2+2 program. In 1986, the notion was to fund, develop, and implement 2+2+2 projects that linked the university segment to existing 2+2 career education programs. From the beginning, there was an assumption that the existing secondary school-community college 2+2s were complete and in place, required minimal attention for maintenance purposes, and served as a solid foundation to build the additional "2."

Instead, project staff discovered that the initial 2+2s required additional work to complete articulation agreements and time-consuming effort to maintain, nurture, and review previously established agreements. Significantly, the maintenance and strengthening of the initial 2+2 projects during years one and two of the pilot program played a critical role in building the third "2" of the projects.

The evaluators also noted difficulty in monitoring, or "tracking," student progress from one grade and segment to the next level. They attributed this to the lack of appropriate equipment for student tracking processes in many participating schools and the need for project staff with experience in this area. The problem could have been addressed with increased resources to support training and technical assistance for project staff regarding the student tracking component. The lack of a universal student identification number for use in all three educational segments presented a serious problem in identifying the program participants as they moved from one segment to the next.

Additionally, without the benefit of at least six years of outcome data, it is not possible to measure the number of students who ultimately earn a baccalaureate degree in career education programs. To measure the long-term impact of the pilot projects, tracking of student participants to fully determine the impact of the program on participating schools and students needs to be continued.

## Recommendations

The recommendations of the third party evaluator, the Rancho Santiago Research Center, are as follows:

### *2 + 2 + 2 Career Education Projects*

1. *This project has demonstrated the effectiveness and value of articulating both vocational and academic courses and academic programs among the three segments. However, these efforts require resources. It is recommended that such efforts be expanded and continue to be funded by the California Community Colleges Chancellor's Office.*
2. *Because of the prohibition of using federal funding to make the linkage with the baccalaureate-granting university, it is recommended that State resources be made available to the community colleges for continued development of the connection of the 2+2 with the third 2 (university level) since it is at the community college that the alignment is most critical.*
3. *It is recommended that the work of the 2+2+2 dissemination project be extended, perhaps in conjunction with the Tech-Prep Resource Centers . . . , to provide expertise in, and encouragement for, making the linkage to the baccalaureate degree.*
4. *To measure the long-term impact of the pilot 2+2+2 projects, tracking of student participants needs to be continued to fully determine the impact of the program on participating schools and students. It is recommended that the California Community College Chancellor's Office fund those projects with comprehensive, well-functioning student follow-up programs and evaluate the long-term impacts on students. Further, it is recommended that the project participants be surveyed annually to identify and evaluate the later effects and implementation status of the 2+2+2 programs.*
5. *To facilitate intersegmental follow-up, it is recommended that the State administrative offices of all three segments support the notion that social security numbers be phased in as universal student identifiers for all segments.*
6. *It has been found that the university systems are deliberate in making changes to curriculum. It is recommended that the Chancellor's Offices of the State University and University of California systems review the procedures for articulation and consider the possibilities for streamlining the process.*

### **Teacher Education Projects**

1. *It is recommended that the State of California authorize funding for a longitudinal study to evaluate the effectiveness of the 2+2+2 teacher education project in increasing the supply of underrepresented teachers.*
2. *It is recommended that funding be provided by the State to the community colleges to coordinate all programs addressing recruitment/outreach to the underrepresented for enrollment in teaching programs and that the 2+2+2 be integrated with them.*
3. *The universities should be encouraged to develop policies about how to handle 2+2+2 students applying for impacted programs. Issues such as filled classes and programs and preferential admittance require attention so that students can be informed of policies and procedures in a timely manner.*
4. *It is recommended that the courses which can be substituted for taking parts of the National Teacher Exam be standardized statewide since this list varies from school to school and a student who changes schools may find that a course they thought would be accepted is not.*

### **Conclusion**

In view of the budget limitations, it is unlikely that separate funding to support the recommendations of the third party evaluator will be forthcoming; however, a number of projects currently underway can build on the work begun by the 2+2+2 projects. These projects are as follows:

**Tech Prep Resource Centers and Local Consortia Projects**—Six resource centers have been established and 68 grants have been awarded to local consortia. A total of \$9.5 million from the Carl D. Perkins Vocational and Applied Technology Education Act was awarded to California schools and community colleges to enable them to work together to improve both the academic and technical preparation of their students.

**Transfer Centers**—Transfer centers have been established at community colleges statewide to increase the transfer rate of students, with particular emphasis on the transfer of underrepresented students. The articulation of courses and programs is at the core of transfer center activity. While traditionally aimed at liberal arts and sciences, these centers can address technical and career courses and programs. To date, a total of \$6.185 million has been dedicated to this funding of transfer centers.

**Student Follow-up Studies**—The lack of a student identifier (social security or other number) has inhibited efforts to track students through the various segments of public instruction in California. This issue is being addressed by



the California Postsecondary Education Commission (CPEC) as well as the California Community Colleges Management Information Systems project. The three segments of public higher education are now exchanging data to track students moving through the system.

**Intersegmental Transfer Follow-up Study**—A cohort of 67,000 students who completed six or more transfer units during the first year of enrollment has been identified for the first phase of this study. These students, enrolled at the 84 community colleges participating in the study, will be tracked for at least six years.