

# Archived Information

## Mathematics, Engineering, Science Achievement (MESA) Program Developing a Research Base

MESA understands that it is one thing to describe an academic enrichment program's outcomes, but it is quite another story to provide evidence that they exist. Being aware of this problem since early in its history, MESA acted proactively in the evaluation arena.

We are a data-driven culture. MESA has collected data on its demographics, activities and outcomes for decades. Databases have been created for each of the four program divisions, and a series of deliverables are part of every MESA center's contract. Those data are used not only to describe the program and its services, but also to provide feedback to staff on program performance and to make the case for MESA to funders, policy makers and the general public. Being a data driven culture, however, does not simply mean using quantitative approaches. MESA also employs qualitative approaches to create information such as site visits with the regional partners, interviews and focus groups with program constituents, and the use of external evaluation by third parties on projects and grant-supported programs.

We require annual strategic program plans with resource implications. Gathering data is not enough, even if those data are diverse in type and source. There must be a plan behind MESA's activity. Each center prepares an annual strategic planning document, including the budget required for implementation, and submits it to the statewide office. All distribution of MESA operating funds depends on statewide division directors' formal approval of the local plan and budget. Fundamentally, we are the stewards of state and private resources, and by requiring these annual plans MESA is making investment decisions that should provide the greatest return for our students, teachers and schools.

We have a focus beyond MESA. While our primary interest is in the successful operation of the MESA program, we understand that we are part of a larger community of outreach whose success can influence our own. This larger community is reflected in the intersegmental nature of MESA's centers and in the representation on MESA's Advisory Board, which brings together partners from education, industry, and private sector organizations. In an effort to contribute to the improvement of that larger outreach community, in partnership with USC, MESA has obtained funds from USDE to study the major components of outreach programs and design a generic evaluation rubric that could be adapted and used by other outreach programs across the country to understand the effectiveness of their operations. This study is not an evaluation of MESA per se, but rather a contribution to the on-going academic and practitioner research necessary to understanding more fully how outreach programs can be most successful.

We invest in research and development. MESA formalized its innovative spirit by creating its own research and development group charged with identifying opportunities and needs, creating programs and products to meet them and evaluating them for broad use by the MESA regional partnerships. This R&D effort has resulted in both programs and products, such as a business hybrid of the MESA model called *BETA* (Business, Economics, Technology Achievement) and *The Learning Loop*, a CD/Web-based mathematics diagnostic tool for use by teachers and students employing information referenced testing strategies in an environment that assesses both knowledge and confidence in content.