ALLIANCE FOR MINORITY PARTICIPATION
VIRTUAL INSTITUTE
EXECUTIVE SUMMARY

The National Science Foundation (NSF) has supported the Alliance for Minority Participation (AMP) program and the 27 Alliances since 1992. In that time, there have been substantial increases, nationwide, in under-represented minority student Science, Mathematics, Engineering, and Technology (SMET) college enrollment, degree completion, and overall academic achievement. The Alliances have demonstrated certifiable strengths in several key areas in this undergraduate SMET enterprise. At this stage of AMP's development, it is important that information on the achievements of the national AMP enterprise, which includes 27 Alliances, both in student outcomes and development of best educational practices be widely disseminated through documentation and training so that the broader academic community as well as government agencies and the private sector can reap the benefits of this national investment.

Overall Objective and Goals

The AMP Virtual Institute (AMP-VI) is an integrated network of six specialized Virtual Centers (VC) that are connected by a common set of objectives. Although independent entities, the Virtual Centers share a common set of goals and will interact with each other to exchange information, set policy and develop procedures. The AMP-VI will provide an important function in helping to realize the critical mission described above by setting the following goals:

- **Collecting, organizing and posting on the World Wide Web nationally important data on educational policy, practice and reform with free, easy, and user-friendly national and international access.** This will include AMP SMET enrollment and degree completion statistics as well as national SMET statistics, that are currently available to a very limited audience on AMP-MARS or from NSF in AMP printed materials.

- **Creation of a clearinghouse of best practices on the World Wide Web with each Virtual Center assuming primary responsibility for collecting, formatting and posting information on a specific area of AMP expertise and experience**, including how to access technical assistance by key experts at each Virtual Center and nationally, review of the literature and what is available in other programs, web sites and professional societies.

- **Organization and delivery of regional and national workshops on best practices,** including the use of technology in facilitating collaboration and data compilation within and between Alliances as well as non- AMP entities (governmental agencies, private corporations and academic institutions).

- **Continuing and expanding the recently established AMP-VI listserver.**

ADMINISTRATIVE STRUCTURE AND ORGANIZATION

One of the key features of the AMP-VI will be its ability to present an overall view of AMP accomplishments and expertise in an unprecedented collaborative fashion. The overarching concept is that we are one Virtual Institute with six Virtual Centers, each interconnected and linked electronically, functionally and conceptually. We share common objectives and goals as the AMP-VI. However, each Virtual Center, based on its unique expertise and experience, has defined its own content and scope and will define its procedures for disseminating information beyond the web site. In this rich diversity lies the true strength of the AMP-VI. While united in a common goal, each Alliance will draw upon widely different experience and expertise in creating its Virtual Center and in collegial collaboration to create the overall AMP-VI.

Building upon this collegiality and the commitment of AMP project directors to ending under-representation in SMET, each Alliance participating in the AMP-VI will undertake the collection, evaluation, and dissemination of nationally important trend and policy data along with best practices in the following designated areas: (1) **Technology in Education** (Western Alliance for Expanding Student Opportunities - WAESO); (2) **SMET Undergraduate Curriculum** (Puerto Rico Alliance); (3) **Data Analysis and Review** (Oklahoma Alliance); (4) **Transfer and Articulation between Community Colleges and Universities** (Texas Alliance); (5) **Urban Education** (CUNY Alliance); and (6) **Formative Evaluation** (The University of Texas System Alliance).

Each participating Virtual Center in turn will develop both electronic and non- electronic mechanisms to disseminate best practices in these respective areas which can be accessed by other Alliances, governmental agencies, institutions, private/corporate sector and individuals outside AMP. The data will include both AMP-based as well as nationally recognized best practices, a review of the literature, what is available in other programs as well as web sites and professional society activities. Each Centers will also provide individual and/or collective technical assistance to other Alliances as well as non-AMP entities in these general areas, including regional and national workshops on best practices and the use of technology in facilitating collaboration and data compilation.

A facilitator will be appointed to assist the AMP-VI in attaining its goals. The role of the facilitator will be 1) to assist the participating Virtual Centers achieve consensus & coherence in matters relating to policy; to coordinate meetings of the Virtual Centers; 2) to coordinate requests for data and information requested by the Virtual Centers to Alliances; 3) to interface with user groups to assess their needs; 4) to assist with regional and national workshops; 5) to compile and deliver project updates and reports as required by the NSF as well as the final report. The facilitator will be selected from either the Virtual Centers or an Alliance external to the AMP-VI.. In the interim, Pablo Arenaz, Program Director of the University of Texas System Alliance will assume the responsibilities of the facilitator. He will be assisted by an advisory committee consisting of one representative from each Virtual Center.

The Western Alliance to Expand Student Opportunities co-project director, Albert McHenry, Dean of the College of Technology and Applied Sciences at Arizona State University , will serve as the technical assistance facilitator. His responsibilities will include assisting the participating Virtual Centers in achieving consensus & coherence in both form and content of AMP-VI web site overall and within each Virtual Centers' respective web site.

An Advisory Committee, consisting of the directors of three of the Virtual Centers and directors of three Alliances not part of the AMP-VI, will work with the facilitator. The facilitator

will chair the committee. Ultimate responsibility for the content of each component of the AMP-VI, however, will rest with the individual participating Virtual Centers individually and/or collectively as appropriate.

The responsibilities and structure of the AMP-VI are shown schematically in the attached figure. The proceeding sections describe the main thrusts of the AMP-VI in more detail. An overview of the specific goals of the individual Virtual Centers are described below. Detailed descriptions of each Virtual Center, as well as the procedures proposed for gathering, evaluating and disseminating best practices are provided in the Virtual Center proposals submitted by individual alliances.

AMP-VI Web Site

The AMP-VI will be launched from a World Wide Web site. This site will be formulated to maximize the number of hits by individuals searching the web and to serve as a seamless link to the NSF, the participating AMP-VI Centers, other Alliances, the MORE Division of the National Institute of General Medical Sciences and national SMET societies such as the American Society of Engineering Educators, American Physical Society, American Chemical Society, AAAS, the American Society fort Cell Biology and the Mathematical Association of America. Attention to widespread dissemination will be a priority so that other higher education institutions and programs as well as industry, government, and private foundations will benefit from the data and best practices that have been **developed by the AMP nationally**. Of particular importance in this dissemination strategy is to provide easy-to-use, up-to-date information, in an intuitive, user-friendly, and aesthetically pleasing manner to successfully and cost-effectively reach a much wider audience than do current dissemination methods.

National SMET Database

To satisfy the goal of providing easily accessible, nationally important data relevant to minority SMET students, a number of data sets will be compiled, posted and linked through the individual Virtual Centers to the AMP-VI web site. **Among the data sets will be the aggregated summary of the national AMP enrollment and degree completion data.**

While reporting of AMP enrollment and degree production has been provided in print, these data are quickly rendered out of date, are expensive to print and disseminate, are severely limited by page restrictions, are by nature difficult to browse and compare across different topics and publications, and cannot reach all who might wish to view such data. AMP-VI will address this problem by obtaining aggregate AMP data on SMET student enrollment and degree completion within community colleges and universities involved in AMP from Quantum Research Corporation's reporting database developed for the NSF. Prior to posting the data on the web site, each Alliance will have the opportunity to verify the accuracy of the data for their Alliance. In addition, the AMP-VI will obtain national data from NSF for comparison purposes with AMP data. All data will be provided in an user-friendly, hierarchical format so that the web user can start by getting a holistic view through graphics and tabulations. Wherever possible, Alliance data will be presented along with national and regional reference statistics. Through menu choices, AMP and other SMET data can be requested by the user so that more specific levels of data such as by ethnicity, gender and major, for example, can be provided.

Only aggregate AMP data will be used so that trends can be compared to national trends. Each year of AMP data will provide a listing of the number of Alliances represented and their

geographic distribution. This new view of AMP data will prove to be a useful source of information for foundations and industry who are interested in national human resource issues. Providing this information on the World Wide Web offers the opportunity to periodically update the data without incurring additional printing or mailing costs and providing a ready reference that can be summoned with easy-to-use menu choices.

Best SMET Practices on the World Wide Web Site

The overall philosophy of the dissemination of best practices is to use the web as a starting point for providing information directly, directing interested individuals to other useful web sites, and identifying key contact people for follow-up information or assistance. Many web sites are simply dead-end home pages with scant information. In contrast, the AMP-VI site will provide information on best practices in brief form as well as in greater detail through reports and other material developed by Alliances. The viewer will be provided strategies that can be used to tailor programs of more specific use to a particular department or institution. Also, reviews of the literature and models outside of AMP will be provided. All Alliances will be contacted to assist in developing and compiling the best practices, with a Virtual Center designated for each general area as responsible for maintaining the information on their web site. Each Virtual Center web site will also maintain a list of AMP and non-AMP experts along with contact information.

Technical Assistance

Another feature of the AMP-VI will be to provide technical assistance to Alliances and institutions as well as non-AMP entities through a variety of mechanisms. These include regional and national workshops, direct interaction of Virtual Center personnel with other Alliances and non-AMP entities and access through the web site. The workshops will be scheduled to cover specific topics of interest to both Alliances and non-AMP entities. Publicity for the workshops will be done through the AMP-VI web site as well as through direct mailing and will be coordinated through the AMP-VI facilitator. A key focus of the workshops is to provide inter-alliance technical assistance and peer information dissemination. The AMP-VI workshops will be held in locations that permit wide participation from higher education institutions and the private sector and will not be limited solely to Alliances. For example, regional workshops will be held one year in a major city in a region and the next year, in a rural part of the region which has a high underrepresented minority college population. The workshop schedule will be drawn up to minimize conflicts with meetings attended by minority higher education administrators, staff, and faculty. Another important feature of these workshops is that individuals from more than one alliance will contribute to the planning and management of the particular workshop. Each Virtual Center will also provide consulting and on-site technical assistance to other Alliances on an as needed basis. This will include visiting AMP institutions to provide technical assistance and the use of the AMP-VI ListServ to answer questions of a technical nature. Cost of on-site visits will be covered by the institution requesting the service.

Goals of the Individual Virtual Centers

Technology in Education Center (Western Alliance for Expanding Student Opportunities)

- Develop Web capabilities through regional workshops and provide linkages to insure that all Alliances have the expertise to participate on the Web.
- Develop interactive collaborative learning groups for gatekeeping courses on the World Wide Web.
- Provide graduate school preparation and application forms over the World Wide Web.
- Provide links to SMET research web sites where students can participate in virtual collaborations.

SMET Undergraduate Curriculum Center (Puerto Rico Alliance)

- Collect and evaluate best practices and materials in SMET undergraduate curriculum
- Develop and update an electronic repository of best curricular practices.
- Develop and update an electronic annotated bibliography on SMET curriculum.
- Develop and update an electronic directory of human resources who can offer electronic and on-site technical assistance.
- Provide to AMP institutions, through regional and national workshops, hands-on experiences on best curricular practices.

Data Analysis and Review (Oklahoma Alliance)

- To make available benchmark data on minority participation in higher education through the development of key indicators to measure minority participation in higher education and in specific SMET disciplines and the development of trend statistics that enables evaluation of program/project effectiveness over time.
- To facilitate the web AMP data collection process.
- To maximize the usage of web AMP data when applicable

Transfer and Articulation between Two and Four Year Institutions (Texas Alliance)

- To gather and evaluate published, unpublished and anecdotal information on current and exemplary practices nationwide relating to transfer and articulation between Community Colleges and Universities with special attention given to issues and conditions affecting minority SMET students.
- To identify, explicate and project potential needs for the improvement of articulation and successful transfer, as well as the benefits thereof.
- To develop and maintain interactive resource repositories of information and human rescues which will be available through the WWW, e-mail, bulletin board, phone and snail mail.
- To provide Alliances and AMP partner institutions with both general and customized information and problem solving support through workshops and one-on-one consultation as requested.

Urban Alliances (CUNY Alliance)

- Internet dissemination of Urban AMP activities which have led to an increase in underrepresented SMET student enrollment, baccalaureate degrees and systemic change.

- Formulation, implementation and evaluation of faculty development conferences and urban alliance operations procedures.
- Provide strategies for developing collaborations with other institutions/agencies and for the preparation of grant proposals which will enhance opportunities for urban alliance students and faculty.

Formative Evaluation (The University of Texas System Alliance)

- Development of a web site on formative evaluation which is cost efficient, user friendly and has user-focused content
- To develop an inventory of resources and a repository for best practices which is available both electronically and *in situ*.
- To provide technical assistance through selected workshops and on site consulting.

Summary

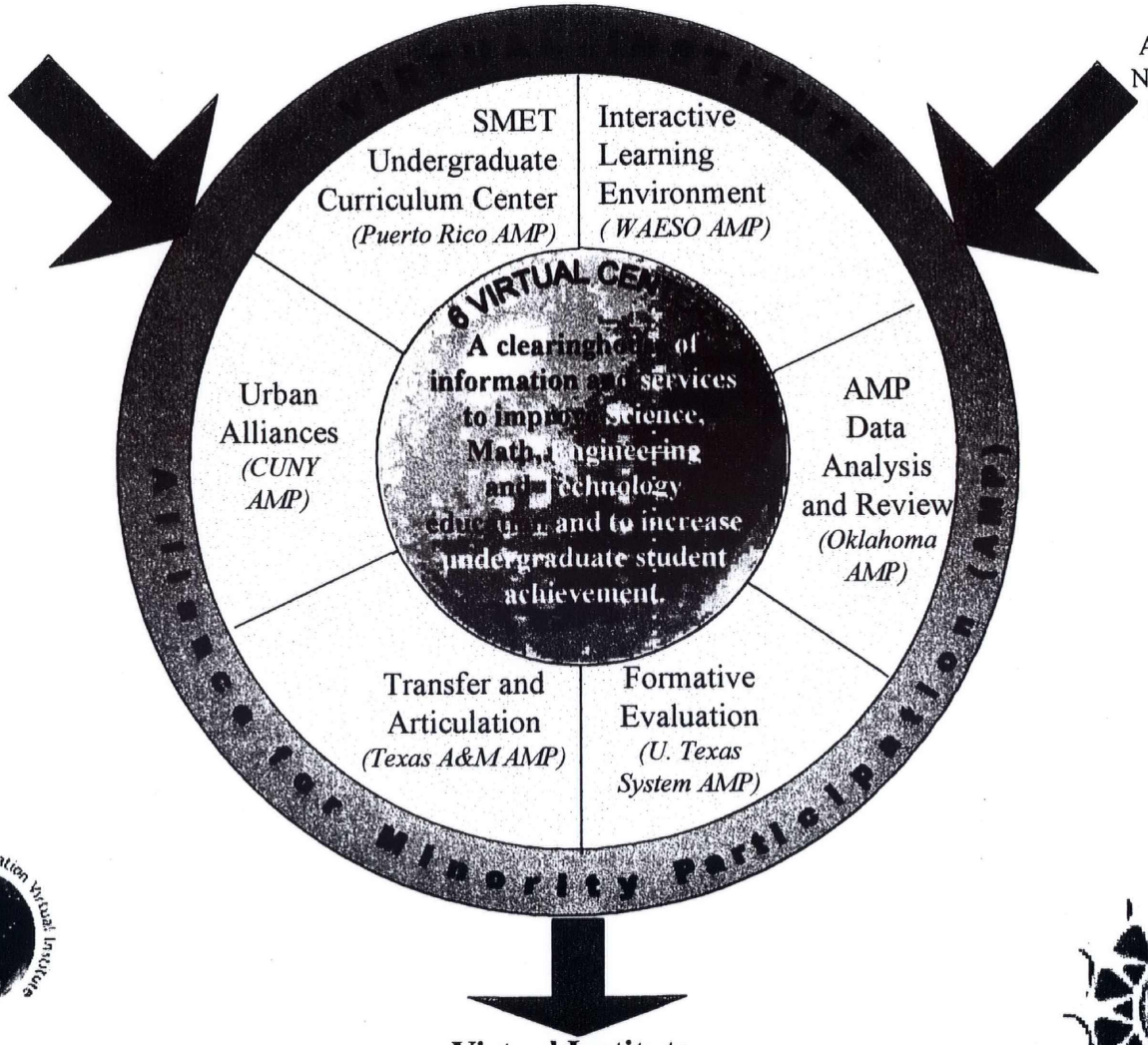
The AMP Virtual Institute represents a unique opportunity to greatly expand the range of institutions, agencies, and groups, as well as the number of individuals, positively impacted by the National AMP enterprise both directly and indirectly. Moreover, the VI provides a unique vehicle by which to exponentially increase communication and collaboration between the diverse Alliances within the AMP family. Perhaps most importantly, it will provide a strong tool with which newer Alliances can quickly reach parity of efficiency and success with more established Alliances and thus avoid having to "reinvent the wheel". In addition, the AMP-VI will set the stage for building a strong foundation toward institutionalizing the best practices of the AMP programs which were learned at great expenditure of time, money, and expertise.

Alliance Requests

Educator and student needs, information, and feedback

External Contacts and Suggestions

Alliances and member colleges, NSF, other government agencies, business and industry, higher education professional organizations & associations



Virtual Institute Information & Services

- On-going needs assessment
- Inventory of resources
- Identification of best practices
- Web page
- Telephone contact
- On-site technical assistance
- Workshops

http://mati.eas.asu.edu:8421/~ampvi/

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