



U.S.-Brazil Partnership for the Improvement of Technical Education

FINAL REPORT
For August 31, 2007 – September 30, 2009

To The Embassy of the United States of America, Public Affairs
Section, Brasília, Brazil
And
The U.S. Agency for International Development

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U.S.-Brazil Partnership for the Improvement of Technical Education

FINAL REPORT



TABLE OF CONTENTS

Executive Summary 4

Introduction and Context 5

Summary of Activities 5

Institutional Strengthening, Human Capacity Building, and National Development..... 8

Conclusion 9

Appendix A: June 2008 Symposium 10

Appendix B: Results from June 2008 Community College Scans 30

Appendix C: September 2008 Visit to Brazil and Closing Meeting..... 70

Appendix D: October 2008 U.S. Community College Best Practices Reports 77

Appendix E: August 2009 Best Practices Summaries 127

Appendix F: Press and Success Stories 139

Executive Summary

At the request of the U.S. Embassy in Brazil and USAID/Brazil, the Brazilian and U.S. governments sponsored a series of exchanges between five U.S. community colleges and ten Brazilian vocational education institutions. Funding support for this initiative, managed by Higher Education for Development (HED), was provided by USAID/Washington, USAID/Brazil, the U.S. Embassy in Brazil, the Ford Motor Company, and the Brazilian Ministry of Education.

The goal of the U.S.-Brazil Partnership for the Improvement of Technical Education is to contribute to the development of management and teaching models appropriate for Brazil and the United States by strengthening the quality of technical education, improving business/technical education partnerships, and strengthening opportunities for inclusion of underserved populations in technical education.

In March 2008, five U.S. community colleges were selected and paired with 10 Brazilian technical colleges (CEFETs):

- Alamo Community College District/CEFET Pelotas/CEFET Santa;
- Houston Community College/CEFET Espírito Santo/CEFET Campos;
- Macomb Community College/CEFET Pará/CEFET Amazonas;
- Northern Virginia Community College/CEFET Mato Grosso/CEFET Goiás; and
- San Diego Miramar College/CEFET Paraíba/CEFET Pernambuco.

Specialists from the 10 Brazilian technical colleges traveled to the United States in June 2008 to meet with counterparts from the five U.S. community colleges for a “Bi-National Dialogue” in Washington, DC. After the meeting in Washington, DC, the Brazilians spent ten days at their U.S. partner institutions to consult on mutual themes of interest, begin work on community college summary scans (a systematic examination for the purposes of gathering data), and create “promising practices” guides.

In September 2008, senior administrators and faculty from the U.S. community colleges traveled to Brazil. After a one-day orientation in São Paulo, the U.S. community college participants spent ten days at their Brazilian counterpart institutions to consult on selected themes of interest and refine the “promising practices” guides. At the end of the visit, the U.S. and Brazilian community and technical college representatives met for a second “Bi-National Dialogue” in São Paulo.

As a result of these exchanges, the Brazilian technical colleges submitted “promising practices” summaries to the Brazilian Ministry of Education, and the U.S. colleges submitted “promising practices” summaries to HED, the U.S. Embassy in Brazil, and USAID.

Notable outcomes from the two exchanges include:

- **Establishment of on-going, sustainable partnerships at the institutional level** between the U.S. community colleges and Brazilian technical institutions;
- **Development of an informed, engaged, and connected network of high-level leaders in the United States and Brazil** who share a common basis of knowledge about each others’ systems, a commitment to mutually-beneficial learning, and plans for ongoing exchange;
- **Identification of exemplary practices that are used in the United States and Brazil** to expand opportunities for low income adults, strengthen partnerships between technical education and employers, and leverage the power of technical education to produce economic development gains in both countries; and
- **Creation of jointly-developed documents**, including community college scans and promising practice guides.

Introduction and Context

The Ministry of Education of Brazil (MEC) has prioritized improvement of the Vocational and Technical Education System as a way to promote the social and economic development of the country. Likewise, community colleges across the United States are prioritizing investments in programs that address the growing needs for skilled workers by expanding opportunities for underserved students to acquire the skills they need to compete.

In recognition of this common agenda, the MEC, the U.S. Department of State, and USAID/Brazil, with the support of Higher Education for Development (HED), established an exchange of experiences and promising practices among Brazilian vocational/technical education and U.S. community colleges.

The groundwork for this exchange was developed in 2007, with the completion of two activities. First, a group of Brazilian educators visited the United States in April 2007 to gain a better understanding of the community college system in the United States. Secondly, the MEC and the U.S. Embassy commissioned a comparative study of technical education in Brazil and the United States.

In August 2007, the Public Affairs Section of the Embassy of the United States in Brasilia, Brazil provided HED \$86,000 out of a total budget of \$272,000 to cover travel, visa, and per diem expenses for U.S. and Brazilian representatives from vocational/technical schools. USAID/Brazil and USAID/EGAT/ED funded the remainder of the budget. The following summary is a brief narrative report of accomplishments attributable to expenditures of the Embassy's \$86,000.

Summary of Activities

The purpose of the U.S.-Brazil Partnership for the Improvement of Technical Education was to launch and support the development of a network of leaders from ten institutions in Brazil and five community colleges in the United States with a long-term commitment to sustainable and productive exchange. The exchange addressed three critical goals:

1. Establish institutional level partnerships between five U.S. community colleges and ten Brazilian technical colleges. The partnerships established were:
 - San Diego Miramar College/CEFET Paraíba/CEFET Pernambuco
 - Macomb Community College/CEFET Pará/CEFET Amazonas
 - Northern Virginia Community College/CEFET Mato Grosso/CEFET Goiás
 - Houston Community College/CEFET Espírito Santo/CEFET Campos
 - Alamo Community College District/CEFET Pelotas/CEFET Santa
2. Develop a bi-national network that draws from senior leadership in U.S. community colleges and Brazilian technical institutes and is characterized by:
 - shared understanding of common challenges, solutions, and areas of interest;
 - shared knowledge of systems in each country; and
 - commitment to work together for mutual benefit.

3. Produce a “best practice guide” and recommendations to advance mutually-beneficial exchange.

The **role of HED** in this process included implementation of the following activities.

- assist with the selection process for U.S. community colleges;
- develop materials and an agenda for an orientation meeting in the United States and bi-lateral meetings in Brazil;
- facilitate orientation and bi-lateral meetings;
- conduct post-meeting follow-up;
- facilitate the development of a network of technical education/community college leaders from the United States and Brazil; and
- provide advisory services to U.S. and Brazilian institutions during the course of the meetings in support of preparing promising practice guides and recommendations to strengthen cooperation.

Planning meetings and conference calls. Planning meetings occurred throughout the project and occurred primarily via conference call. Participants included the project team consisting of an HED specialist and staff from HED, USAID, and the U.S. Embassy in Brazil. These planning meetings produced the following outcomes.

- Confirmed project goals and the process to select U.S. community colleges: HED staff and the HED specialist developed a process for college selection for review and approval by the project team. The project team reviewed the proposed process and discussed implementation in conference calls. Calls were also used to update the project team on progress.
- Provided information and guidance to U.S. community colleges: The HED specialist conducted a series of calls with U.S. community colleges selected for the program. These calls, together with written materials, helped to orient the U.S. colleges and ensure effective participation.
- Planned the June 2008 meeting in Washington, DC and the September 2008 meetings in Brazil. Calls were used to confirm outcomes, clarify participation and roles, and ensure the meetings were of high quality.

Orientation meeting in Washington, DC. June 2008. Ten leaders from the selected U.S. community colleges and ten leaders from the selected Brazilian CEFETS (federal technical institutes) attended this meeting. Additional participants included HED’s Director of Programs Jeanne-Marie Duval, HED board member Maureen Budetti from the National Association of Independent Colleges and Universities (NAICU), HED Senior Program Associate, Marilyn Crane, Director of International Programs of the American Association of Community Colleges (AACC) Judy Irwin as well as officials from the U.S. Agency for International Development (USAID) and the U.S. Department of State.

The meeting was conducted with simultaneous translation and produced the following outcomes.

- Established institutional level partnerships, including the development of relationships between the five selected U.S. community colleges and ten Brazilian partners.

- Established the bi-national level network. In addition to forming institutional level partnerships, this meeting set the stage to develop a bi-national network of leaders from the five U.S. colleges and the ten Brazilian institutes.
- Developed a common base of knowledge among U.S. and Brazilian participants to identify:
 - the purpose, goals, and expectations of the exchange;
 - the role each system plays in promoting economic opportunity and workforce competitiveness; and
 - the mission, structure, and funding of post-secondary career and technical education in both countries.
- Clarified the charge to produce summary institutional scans including:
 - Trends and observations about shared challenges
 - Solutions – identified 2-5 promising solutions/promising practices
 - Stakeholders– identified stakeholders and potential investors
 - Action Ideas – identified ideas for action.

Following this meeting, the Brazilian leaders spent ten days in site visits at their partner U.S. community colleges. Reports from the site visit phase indicate that the Brazilians were extremely pleased with the quality and productivity of these visits. Results showed:

- Brazilian participants developed specific knowledge regarding their U.S. partner institutions
- U.S. and Brazilian participants strengthened their relationships
- U.S. and Brazilian participants began work on summary institutional scans, including discussions of areas of best practice

Videconference with Brazilian partners, the U.S. Embassy, and USAID/Brazil, August 15, 2008. This teleconference, conducted entirely in Portuguese, included:

- (a) the ten Brazilian participants in the exchange;
- (b) U.S. Embassy staff;
- (c) leadership from the MEC; and
- (d) USAID/Brazil staff.

The call produced the following outcomes:

- Briefing of Leadership – Brazilian participants and the HED specialist briefed the MEC on outcomes of the visit to the United States in June 2008.
- Clarification regarding Best Practice Guides –Brazilian Ministry of Education officials and U.S. partners clarified expectations for the Best Practice Guide and identified roles expected of the Brazilian and participating U.S. community colleges.
- Planning for U.S. visits to Brazil: Brazilian participants shared plans to host the U.S. participants in September 2008.

Pre-visit meeting of U.S. Community College leaders. Sao Paulo, September 3, 2008. This meeting included the ten U.S. Community College leaders and leadership from MEC, the U.S. Embassy, USAID/Brazil, and one representative from the Brazilian exchange participants, the Sao Paulo CEFET, and Sao Paulo SENAI. The meeting was conducted with simultaneous translation and produced the following outcomes:

- U.S. College leaders and the Brazilian representative shared outcomes and lessons learned from the June visits and follow up planning.

- MEC and the U.S. government officials briefed U.S. participants on expectations for the development of a “best practice” document.

Site visits to the ten participating Brazilian CEFETS. September 4-14, 2008. The U.S. community college leaders reported that the visits were extremely informative, candid, and thoughtful. There was ample time for discussions of challenges and promising practices. As a result of these visits, each Brazil/U.S. partnership produced a report outlining the promising practices they planned to profile, as well as plans for continued collaboration. The HED specialist participated in site visits in Belem with Macomb Community College and in Campos with Houston Community College.

Closing meeting in Sao Paulo. September 14-15, 2008. The closing meeting included the ten leaders from the selected U.S. community colleges, ten leaders from the selected Brazilian CEFETS (federal technical institutes), leadership from MEC, the U.S. Embassy, USAID/Brazil, the Sao Paulo CEFET, and Sao Paulo SENAI, as well as a representative from HED. The meeting included a series of presentations from the five U.S./Brazil partnerships. Conference results included:

- Identification and discussion of lessons learned through the exchange from the perspective of U.S. and Brazilian partners.
- Confirmation of “best practices” to be profiled as models for publication.
- Discussion of focus areas for ongoing partnership and opportunities to advance work moving forward.
- Orientation on U.S. Embassy and USAID programs in Brazil.
- Recommendations to U.S. and Brazilian governmental sponsors.

Dissemination. Outcomes and lessons learned from U.S.-Brazil Bi-National Exchange were presented at the National Council for Workforce Education’s Annual Conference in October 2008 and the American Association of Community College’s Workforce Development Institute in January 2009. The Bi-National Exchange also was featured in a November 11, 2008 article in the Community College Times titled, “Similarities bring U.S., Brazilian colleges together.”

Institutional Strengthening, Human Capacity Building, and National Development

This partnership contributed to human and institutional capacity building and national development in the following ways.

1. **Developed a common agenda that brought together U.S. and Brazilian leaders in technical education,** advancing shared goals in economic development and workforce education. The agenda was embraced by participants from both countries and further clarified and elaborated.
2. **Developed an informed, engaged, and connected network of vocational and technical leaders in the United States and Brazil** who share a common basis of knowledge about each others’ systems, a commitment to mutually-beneficial learning, and plans for ongoing exchange. For the U.S. participants, this project presented a unique opportunity to understand emerging economies with a specific focus on Brazil. U.S. participants indicated that this learning is of great value in leading U.S. institutions and ensuring that their

community colleges prepare students for work in a global economy. Likewise, Brazilian participants noted that this exchange enabled them to learn more about the United States, including insights regarding economic, demographic, and social trends in the U.S. economy that have significant implications in Brazil.

3. **Developed sustainable partnerships at the institutional level** between U.S. community colleges and Brazilian technical institutions.
4. **Identified exemplary practices** that are used in the United States and Brazil to expand opportunities for low income adults, strengthen partnerships between technical education and employers, and leverage the power of technical education to produce economic development gains in both countries.
5. **Produced plans to use the network, developed through this project, to implement on-going joint projects.**

Conclusion

Brazilian and U.S. institutions face similar challenges to serve a diverse student population and build a skilled technical workforce. The U.S.-Brazil Partnership for the Improvement of Technical Education demonstrated the benefit of bringing leading educators from both countries together to examine common challenges, learn about each others' systems, identify best practices, and explore opportunities for ongoing, mutually-beneficial exchanges.

In contrast to typical faculty exchanges, which focus on the development of individual capacities, this partnership program explored the potential to use exchange as a vehicle for institutional learning and strengthening. This partnership engaged leaders of institutions in a process designed to build knowledge, share best practices, and explore opportunities for mutually-beneficial learning.

These outcomes imply that this level of engagement has produced a foundation of high-level support and strong institutional commitment for ongoing exchanges. It is expected that this foundation will continue to produce a series of mutually-beneficial activities.

Additionally, this partnership has demonstrated the benefits of conducting exchanges in the context of a bi-national "network". The network approach demonstrated how learning can be advanced through the engagement of a bi-national community of leaders who agree to continue to learn together.

**Appendix A:
June 2008 Symposium**



Launch of the Brazil/US Partnership to Strengthen Vocational/Technical Education

June 8-10, 2008
Washington, DC

Context

The Brazil/U.S. Network for Bi-National Exchange seeks to build a network of technical education/community college leaders that share a long-term interest in building sustainable and productive exchange between the United States and Brazil in the areas of vocational and career/technical education. This exchange brings together leaders and colleges that share:

- Interest and experience in the role of technical education in economic development and expansion of economic opportunity for underserved populations.
- Commitment to develop a deep and common understanding of the systems, challenges, and strengths of Brazil and the United States
- Track record of innovation and success.
- Commitment to dissemination and sharing knowledge acquired as a result of this exchange. Willingness to extend the benefit of this exchange to the broad fields of community colleges, technical education, partnership with employers, and workforce development.

The Partnering Institutions

The following colleges have been selected for this exchanged and partnered:

Alamo Community College District (Texas):	CEFET Pelotas
Houston Community College (Texas):	CEFET Espírito Santo
Macomb Community College (Michigan)	CEFET Pará
Northern Virginia Community College (Virginia):	CEFET Mato Grosso
San Diego Miramar Community College (California):	CEFET Paraíba

The Symposium: Purpose and Goals

- Lay the groundwork for a successful launch to the Brazil/U.S. Network to strengthen vocational/technical education through partnerships;
- Orient U.S. and Brazilian participants to the purpose, goals, and expectations of the exchange;
- Build a base of common understanding of the role each system plays in promoting economic opportunity and workforce competitiveness and develop shared knowledge

- regarding the mission, structure, and funding of post-secondary career and technical education in both countries; and
- Clarify the charge for the “promising practice” deliverable.

The Format

The interactive work sessions will be designed to facilitate dialogue, peer-learning and the establishment of relationships within the network. The sessions will include:

- Dialogue and small group discussions with your partner institutions
- Panel Discussions. Format will be a brief framing of the questions, followed by panel responses (7-10 minutes of prepared remarks) and open dialogue and discussion.



Launch Meeting
Brazil-United States Partnership to Strengthen Vocational/ Technical Education
A Brazil/United States Dialogue
June 8-10 2008

AGENDA

HOTEL:

Westin Washington, DC City Center Hotel
1400 M. St., N.W.
Washington, DC 20036
(202) 429-1700
www.westindc.com

Contact:

Marilyn Crane or Meena Nabavi
Higher Education for Development
(202) 262-9500 24-hour emergency contact (6/7 - 6/11)

Mary Gershwin
Consultant to the Exchange
(303) 884-1745 Cell

Sunday, June 8: Westin Hotel, Ashlawn North Room

1:00 pm

Welcome

Jeanne-Marie Duval, Higher Education for Development (HED)

Vision for the Exchange, Purpose and Goals

Paulo de Tarso Costa Henriques, CEFET Paraíba – Northeast Region
Mary Gershwin, Consultant to the Exchange

1:45

The Partners: Team Interviews and Discussion

- College location and community served
- Numbers of students served
- Major areas of excellence and strength
- Goals for the exchange

Introductions of participants and participating colleges

- 3:15** **Break**
- 3:30** **Overview and Understanding the Context in Brazil**
Brazil Overview: Current Conditions and Trends
(10-minute presentation by each panelist, followed by a debate)
- Skills Gap? Is Brazil facing a skills gap? What challenges or opportunities for post-secondary technical education have been created by:
- Current economic conditions
 - Current political conditions
 - Current social conditions
- Panelists/dialogue coordinators:*
Lia Pachalski, CEFET Pelotas – South Region
Romeu e Silva Neto, CEFET Campos – Southeast Region
- Overview and Understanding the Context in the United States**
Facilitated panel discussion and dialogue
- Panelist//dialogue coordinator:*
Mary Spangler, Houston Community College
Federico Zaragoza, Alamo Community College District
- 6:00** **Adjourn**
- 7:00** **Dinner Meeting at Westin Hotel, Fireplace Room**

**Monday, June 9: National Center for Higher Education
Kellogg Room, 8TH Floor
One Dupont Circle, NW**

- 7:00-8:30 am** **Breakfast (on your own)**
- 8:30** **Meet in Hotel Lobby**
- 8:40** **Shuttle Bus to One Dupont Circle, NW**
- 9:00** **Recap of Day One**
- 9:15** **Comments from Program Sponsors**
Maureen Budetti, National Association of Independent Colleges and Universities

Martin Hewitt, USAID/EGAT/ED (invited)
Judy Irwin, American Association of Community Colleges
Charlotte Peterson, the U.S. State Department
David Hodge, Cultural Affairs Officer, U.S. Embassy Brazil (via teleconference)

10:00 Promoting Economic Opportunity and Workforce Competitiveness. (Brazil Perspectives)

Mission, Structure, funding, policy tensions:

- Who are the primary providers of post-secondary technical education (public systems, private post-secondary systems, employer-paid systems, community based systems)
- Funding: What funding mechanisms support these systems?
- Policy Tensions: What are the policy tensions in your current system? For example, who is currently afforded access to quality education? What benefits do they enjoy from access? For whom is access limited? To what degree is the employer considered a primary customer of the system?
- Priorities: What top policy priorities is your system or institution currently pursuing?

Panelists/dialogue coordinators:

Elder Domingues, CEFET Goiás – Midwest Region

Telma Amorim, CEFET Santa Catarina – South Region

NOON Lunch

1:00 pm Promoting Economic Opportunity and Workforce Competitiveness. (U.S. Perspectives)

Mission, Structure, funding, policy tensions:

- Who are the primary providers of post-secondary technical education (public systems, private post-secondary systems, employer-paid systems, community based systems, etc.)
- Funding: What funding mechanisms support these systems?
- Policy Tensions: What are the policy tensions in your current system? For example, who is currently afforded access to quality education? What benefits do they enjoy from access? For whom is access limited? To what degree is the employer considered a primary customer of the system?
- Priorities: What top policy priorities is your system or institution currently pursuing?

Panelists/dialogue coordinators:

Patricia Hsieh, San Diego Miramar College
Donald Ritzenhein, Macomb Community College

3:00 **Adjourn**

3:15 **Shuttle Bus to Westin Hotel**

Evening **Free Time**

**Tuesday, June 10: National Center for Higher Education
Kellogg Room, 8TH Floor
One Dupont Circle, NW**

7:00-8:30 am **Breakfast (on your own)**

8:30 **Meet in Hotel Lobby**

8:40 **Shuttle Bus to One Dupont Circle, NW**

9:00 **Building the Network: Promising Practices Guides
Discussion and Planning**
Mary Gershwin, Consultant to the Exchange

10:00 **Partnering with the Business Sector: The Role and Practices of
Postsecondary Systems in Promoting Economic Development**
Panelists will address the following questions:

1. From your perspective, what do employers expect from the career and technical education system?
2. What policy-level barriers or challenges are you working to overcome to address needs?
3. What policies have been successful in promoting responsiveness to labor market demands?

Panelists/dialogue coordinators:
Rodrigo Rosa, CEFET Cariacica, Southeast Region
Kristin Stehouwer, Macomb Community College

NOON **Lunch**

1:00 pm **Expanding Access to Low Income, Underprepared Adults and Youth**
Panelists will address the following questions:

1. What barriers inhibit access to higher education and career training for low income adults and youth?

2. How are current economic conditions (state budgets/ national conditions) impacting your ability to expand access?
3. What policies at the national, state, or corporate level have been effective in overcoming barriers for low income populations?
4. What policy remedies should be considered to addressing barriers in your context?

Panelists/dialogue coordinators:

João Peralta, CEFET Pará – North Region

Ruy Oliveira, CEFET Mato Grosso – Midwest Region

Daniel Seymour, Houston Community College

3:00 Break

3:15 The International Exchange Connection

- Our current capacity
- Goals moving forward
- Vision for partnerships

Panelist:

Paul McVeigh, Northern Virginia Community College

4:15 Next Steps and Wrap Up:

Small Group discussion between partner colleges.
What will be core areas of our shared exploration over the next set of visits?

- Alamo Community College System
- South Region of Brazil, CEFET Pelotas

- Houston Community College
- Southeast Region of Brazil, CEFET Espírito

- Macomb Community College
- North Region of Brazil, CEFET Pará

- Northern Virginia Community College
- Midwest Region of Brazil, CEFET Mato Grosso

- San Diego Miramar College
- Northeast Region of Brazil, CEFET Paraíba

5:30 Adjourn

5:45 Shuttle Bus to Westin Hotel

Evening Free Time



Launch Meeting
Brazil-United States Partnership to Strengthen Vocational/ Technical
Education : A Brazil/United States Dialogue

June 8-10 2008

Contact List

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Launch Meeting
Partnership Brazil-United States to Strengthen Vocational/ Technical Education
A Brazil/United States Dialogue
June 8-10 2008

Participant Bios



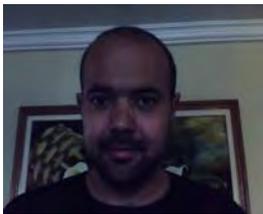
Telma Amorim is an English teacher at the Centro Federal de Educação Tecnológica de Santa Catarina (CEFETSC). Dr. Amorim has worked at the CEFETSC for 11 years teaching postsecondary professional courses, including electricity, environment, meteorology, and mechanics. During this time, she also worked as the coordinator for tourism and hospitality courses. In 2006, she began working as the head of the teaching development department in a new CEFETSC school that specializes in tourism, hospitality, and gastronomy. She is responsible for the planning and management of instructional processes and is a member of CEFETSC's

research group on student retention and success. Her priorities for the visit are relationship building between educational institutions and the private sector, best practices in identifying demands, student follow-up, and vocational/technical education in the working environment (tourism, hospitality, hotel, gastronomy).

Richard Bettendorf serves as the Dean for the School of Technical Careers and Workforce Initiatives at San Diego Miramar College. Mr. Bettendorf has provided consulting services to many auto manufacturers and government agencies and is a recognized forensic expert in the area of automotive technology. In his current role, Mr. Bettendorf provides leadership for Career and Technical programs in Aviation Maintenance, Aviation Flight and Operations, Diesel Technology, Automotive Technology, Advanced Transportation Technologies and Energy and Child Development. Mr. Bettendorf has received training in the Developing a Curriculum (DACUM) process developed by the University of Ohio, and has used the process to develop multiple instructional programs for the Orange County Transportation Authority, and the Southern California Air Quality Management District. Mr. Bettendorf also serves as Regional Vice President of San Diego Imperial Valley Regional Consortia and is President Elect of the California Community College Association of Occupational Educators. His Bachelor's Degree is in the area of Vocational Education, and his Master's Degree is in Industrial Technology with a specialty in Power, Energy, and Transportation.



Elder Geraldo Domingues is a professor at CEFET-GO (Federal Center of Technology and Education of Goiás). He received his D.Sc. degree in Electrical Engineering at the Federal University of Itajubá, Brazil, in 2004. His main areas of interest include analysis of power systems, electric power quality, risk analysis on electricity markets, and technology for sustainable processes. His priority for the visit is relationship building between educational institutions and the private sector in the areas of industrial processes, industrial automation, industrial mechatronics, environmental processes, metallurgic processes, chemical processes, and electrical systems.



Francisco Weydson Gusmão Ferraz works at the Federal Center for Technological Education (CEFET) in the city of Recife in the state of Pernambuco (PE). As a professor of graphic design, he teaches the theory of communication, scientific methodology, and interfaces for Web and games. He received a degree in visual programming and industrial design, a post-graduate degree in information technologies, and a master's of science degree in teaching science. Professor Ferraz also is an author of the Graphic Design Technology course at the CEFET, PE. His current research focuses on the application of virtual reality tools for possible use in the e-learning process. His priority for the visit is relationship building between educational institutions and the private sector in the areas of informational and communication analysis, analysis and development of systems, database, information technology management, telecommunications management, digital games, computer networks, telecommunication networks, information security, and telecommunications systems.



Mary Gershwin has been an advisor and consultant on higher education and technical training policy, and workforce development strategy for the U.S. Department of Labor, the U.S. Department of Education, the U.S. Embassy in Brazil, USAID in Albania, the Peace Corps, the National Association of Manufacturers, the Ford Foundation, a number of community colleges, and several national foundations including the Ford Foundation. Currently, she is leading the Business Champions Initiative of the National Association of Manufacturing. In the past, as principle investigator for a grant from USAID, she partnered with the Department of Education of Brazil, the Federation of Manufacturers and Industry of Brazil, and the U.S. Embassy to conduct a bi-national leadership exchange. She also led an international faculty exchange on economic development and emerging industries in Brazil that was funded by the U.S. Department of Education. Dr. Gershwin worked as a teacher, researcher, policy leader, and innovator for The Colorado Community College System for 14 years. She holds a B.A. in Economics and a Ph.D. in Communication Studies from the University of Denver. Fluent in Portuguese, Gershwin served as President of the Colorado Chapter of Partners of the Americas from 2000-2004.



Jonathan Gueverra is Provost for the Alexandria Campus of Northern Virginia Community College (NOVA). Prior to coming to NOVA, Dr. Gueverra served as Dean for the School of Business and Public Service at SUNY Canton. In addition to providing leadership for faculty in disciplines and programs that cover accounting, economics, business administration, criminal justice, criminal investigation, emergency management, financial services, law enforcement management, legal studies, management, office technology and technology management, Dr. Gueverra directed the activities of the Canton Center for Economic

Education, the Small Business Development Center, and the Canton Institute as part of his responsibilities. He has served as Faculty, Director of Program Development, Department Chair, Associate Dean and Dean and at 2-year and 4-year colleges and universities. Dr. Gueverra earned an Associate degree in Applied Science from Newbury College, a B.S. from Providence College, and a MBA and Ed.D. from the University of Massachusetts, Boston.

Mark Hagen is the Coordinator for the Office of International Programs for Alamo Community Colleges, where he manages a variety of projects including international workforce development projects in cooperation with *Universidades Tecnológicas* in Mexico. Mr. Hagen also oversees the study abroad program for the Alamo Community College District and is responsible for developing new programs for students, monitoring current programs, overseeing allocation of scholarship funds for study abroad, and assisting with visa, insurance, and other travel issues. Mr. Hagen is a member of the Texas Camino Real District Export Council, appointed by the Secretary of Commerce of the United States. He holds a B.A. in Economics and Spanish, with a certificate in Latin American Studies, from the University of Wisconsin at Milwaukee, and a M.A. in International Management from the Thunderbird School of International Management. Mr. Hagen is fluent in Spanish, is conversant in Portuguese, and is studying Japanese in his free time.



Paulo de Tarso Costa Henriques is a professor at Centro Federal de Educação Tecnológica da Paraíba (CEFET-PB), where he teaches undergraduate courses in management, chemistry, Internet systems, and public security. Dr. Henriques also teaches graduate courses in public administration, public security, management of educational technologies, and the strategic management of information technologies. He serves as program coordinator for the Executive Master's Program in Vocational and Technical/Technological Education. In the past, he has worked for several public and private

organizations in various positions, including general director for CEFET and chief of staff for the MEC Vocational and Technological Education Secretariat. Dr. Henriques graduated in Electrical Engineering from the Universidade Federal da Paraíba (UFPb), Campina Grande

campus, in 1982. He received a Masters' degree in Production Engineering at UFPb, João Pessoa campus, in 1987, and completed a doctoral degree in Education at Oklahoma State University in 1999. He is fluent in English and can read Spanish and German. His priorities for the visit are inclusion and retention of students in vocational/technical education, best practices in inclusion and retention of students, and distance education.



Patricia Hsieh is the President at San Diego Miramar College. Prior to assuming her current role, she was the Interim President at Sacramento City College. From 2000 to 2005, she was the Vice President of Student Services at that institution. In addition, she has faculty experience at Los Angeles City College, the University of Phoenix, and Ventura County Chinese Language School. She has chaired and served on several accreditation teams. Born in Taiwan, Patricia's education reflects an international background. She earned a B.A. in Western Languages and Literature at National Chengchi University in Taiwan. She received an M.A. in Guidance and Counseling from Wayne State University in Detroit, Michigan and earned an Ed.D. in Institutional Management in Higher Education from Pepperdine University. Dr. Hsieh is the recipient of the 2006 Asian Heritage Award and the 2008 San Diego Outstanding Educator Award.



Vicente Ferreira de Lucena Jr. is a professor at both the Paraíba Federal Center for Technological Education (CEFET-PB) and the Federal University of Amazonas, where he teaches courses in electrical and computer engineering. In addition to his teaching duties at CEFET-PB, he serves as the program coordinator at UFAM for the Computer Engineering Department. Dr. Lucena graduated in Electrical Engineering at the Federal University of Amazonas (UFAM), Manaus - AM in 1987, and received a Masters' degree in Electrical Engineering at UFPb, Campina Grande campus in 1993. In 2002, he completed a doctoral degree in Software Engineering and Industrial Automation at Stuttgart University in south Germany. He is fluent in English and German and can read both Spanish and French. His priorities for the visit are inclusion and retention of students in vocational/technical education, best practices in inclusion and retention of students, and distance education.



Paul McVeigh is Associate Vice President for Global Studies and Programs at Northern Virginia Community College (NVCC) with responsibility for the strategic leadership and operational coordination for all aspects of international programming. He is a member of the Advisory Council for the American Council on Education's Internationalization Collaborative. He has been a National Endowment for the Humanities Fellow at Johns Hopkins University, was named a Chancellor's Commonwealth Professor for the Virginia Community College System, and was awarded the Educational Foundation Award for Teaching Excellence. Prior to taking his present position, he was dean of Humanities and Social Sciences at the Alexandria Campus of NVCC. He has professional training from National Center for Higher Education Management Systems and from the

Management Development Program at the Harvard Graduate School of Education. His B.A. is from American University, his M.A. from the University of Virginia, and his Ph.D. from the University of Dublin, Ireland.



Adriana Nichols is the Vice President for Public Policy for the Michigan Community College Association (MCCA), where she works with the state's 28 community colleges to advance the MCCA's public policy agenda, with a special focus on strategic initiatives in workforce and economic development. Adriana came to the MCCA from the Corporation for a Skilled Workforce, a national policy research firm on workforce development. As a Senior Policy Associate at CSW, Dr. Nichols worked with state and federal agencies, and national foundations on research related to higher education and workforce policy. Her professional background also includes teaching at the University of Michigan and administrative positions in higher education in the area of institutional advancement. She has a Ph.D. in Higher Education/Public Policy from the University of Michigan, an M.A. in Higher Education from the University of South Carolina, and a B.A. in Philosophy from Alma College. She is a native of Rio Grande do Sul, Brazil and is fluent in Portuguese.



Ruy de Oliveira received a Master of Science degree from the University of Uberlandia in 2001, and a Ph.D. degree from the University of Bern, Switzerland, in 2005. From 2001 to 2002, he was involved in the European Union research project SEQUIN for QoS across multiple management domains. From 2002 to 2005, he served as a research fellow in the long term Swiss research project NCCR-MICS on self-organizing wireless networks. He also served as the local organizing committee chair for the third international workshop on Applications and Services in Wireless Networks (ASWN 2003). Currently, he is a full professor in the Department of Computer Science at CEFET-MT in Brazil and leads its research and post graduation department. His priority for the visit is inclusion and retention of students in vocational/technical education.



Lia Pachalski works at the Federal Center for Technological Education (CEFET) in the city of Pelotas, RS. She is a teacher of English as a foreign or a second language and is a professor of undergraduate courses on technologies and Internet systems; graduate course on verbal, visual, and technology languages; and technical/technological courses on construction, chemistry, and electronics. She also is the international relations coordinator for her institution. Her graduate work is in the field of discourse analysis in linguistics, and her current PhD research focuses on the analysis of materials for distance learning in ESL. Her priorities for the visit are inclusion and retention of students in vocational/technical education, best practices in partnership with the business sector in the areas of industrial processes, industrial automation, industrial electronic, industrial production management, industrial mechatronics, environmental processes, metallurgic processes, chemical processes, and electrical systems.



João Lobo Peralta is a professor at the Federal Technological Education Center in the city of Pará (CEFET-PA), where he teaches technical courses on metallurgy and materials engineering; coordinates technical training programs; and serves as a teacher trainer for technical instructors. He also works as a professor and coordinator of the Open University of Brazil. He has a Ph.D. in Mechanical Engineering in the area of Materials and Manufacturing Processes. His priority for the visit is relationship building between educational institutions and the private sector in the areas of industrial processes, industrial automation, industrial mechatronics, environmental processes, metallurgic processes, chemical processes, and electrical systems.



Sam Ricevuto is a Technical Trainer/Curriculum Developer for the Workforce Development Institute, which is part of Macomb Community Colleges (Michigan) Economic and Workforce division. Currently, he teaches courses on Global Common Controls Hardware Design (GCCH1), Global Electronic Request for Wiring Diagram (GeRWD), and C-Flex Systems. These courses are part of the customized training Macomb conducts for GM's Global Controls, Conveyors, Robotics and Welding (GCCRW) division. Mr. Ricevuto also has taught these courses in Korea, India, Mexico, and the United States as part of GM's (GCCRW) Global Training Certification Program.



Donald Ritzenhein is Provost & Chief Learning Officer, Macomb Community College, Warren, Michigan. Don earned his Ph.D. in Communication from Wayne State University in Detroit, Michigan, where he also earned Master's and Bachelor's degrees in speech and English. Don has coached debate and taught English at the high school level and is currently an adjunct instructor of public speaking at Macomb Community College and speechwriting at Wayne State. In addition to teaching, he has served in a variety of administrative positions in the public sector and higher education, including personnel and labor relations, development and alumni affairs, and academic administration. In his current position Dr. Ritzenhein leads an outstanding team of faculty and staff who work to advance the college's excellence in teaching and enhance student success in learning.



Rodrigo de Alvarenga Rosa has been teaching logistics and transport courses at Centro Federal de Educação Tecnológica do Espírito Santo - CEFETES since 2006. He also serves as course coordinator in charge of academic programs at CEFET Cariacica, one of CEFET Espírito Santo's branches. He is an invited professor at the Civil Engineering Master Program - Field of Transports at Universidade Federal do Espírito Santo-UFES, he is a coordinator of a research group register at MEC/CNPq/CEFETES called Transport and its impact on logistics, and

he is an adviser to the Industry Federation of Espírito Santo - FINDES on industrial policy and technological innovation. Dr. Rosa has a doctorate in Electrical Engineering, a Master's in Computer Science, and an undergraduate degree in Civil Engineering from the Universidade Federal do Espírito Santo-UFES. He also has a specialization in Maritime Transport and Systems Analysis. His priorities for the visit are inclusion and retention of students in vocational/technical education, relationship building between educational institutions and the private sector, and training of railway and airport professionals (business management, logistics, infrastructure, civil construction).



Romeu Silva Neto is an instructor of a technical course in construction, a professor of graduate degree courses on environmental engineering, and the coordinator of a graduate degree course on environmental engineering at the Federal Center of Technological Education, Campos, Rio de Janeiro. He currently is working on a project that monitors the level of professional and technological education in Brazil to determine whether the level of professional and technological education is adequate for the demands of the labor market. Dr. Silva Neto received his Ph.D. in Production

Engineering from Rio de Janeiro's Catholic University, and he wrote his thesis on strategies for local economic development. He also completed a postgraduate course in Local Economic Development at the International Labor Organization's Training Center in Turin. His priority for the visit is relationship building between educational institutions and the private sector, and he is interested in best practices in identifying demands, student follow-up, and vocational/technical education in the working environment. His area of interest is gas and petroleum.



Daniel Seymour is the Vice Chancellor for Planning and Institutional Effectiveness at Houston Community College. He has a BA from Gettysburg College and an MBA and PhD from the University of Oregon. Dr. Seymour received tenure as a business professor at the University of Rhode Island where he also served as Assistant to the President. He also was a faculty member at UCLA. The author of ten books in business and higher education, he is a Fulbright Scholar and a former senior examiner for the Malcolm Baldrige National Quality Award.



Mary Spangler became the seventh chancellor of the 58,000-student Houston Community College System (HCC) in March 2007, having spent 18 years in higher education administration. Before joining HCC, she was Chancellor of Oakland Community College (2003-2007), the largest community college in Michigan. She also served as President of Los Angeles City College (1997-2003). Prior to her executive roles, Dr. Spangler served as Vice President for Academic Affairs, Dean of Student Services, and Associate Dean of Admissions within the Los Angeles Community College District. After completing her M.A. degree in English from the University of California at Los Angeles, Dr. Spangler began her career as a professor of

English and co-authored four textbooks on writing. She later earned an Ed. D. in Higher Education from UCLA, specializing in community colleges.



Dr. Kristin Stehouwer joined Macomb Community College in 2006 as Executive Director of Research and Planning and assumed the duties of Vice Provost for Arts and Sciences in the spring of 2007. Prior to joining Macomb Community College, she served as Director of the Michigan Manufacturing Technology Center and Special Advisor to the President at Northwestern Michigan College. She also worked on special assignment to the U.S. Department of Commerce at the National Institute of Standards and Technology. Dr. Stehouwer has extensive experience in coaching leaders and facilitating and deploying strategy in many types of organizations including in the financial services, manufacturing, healthcare, education, and service industries. She is a senior examiner for the Malcolm Baldrige National Quality Award, the highest quality award conferred by the President of the United States. She earned her doctorate from Northwestern University in Political Science and International Relations, and she speaks five languages.

Higher Education for Development

Jeanne-Marie Duval is the Director of Programs at Higher Education for Development (HED). Before coming to HED, she served as vice president of higher education development and managing director of higher education at the American Councils for International Education: ACTR/ACCELS. She also served as associate executive director and senior director, Educational Programs Division, at NAFSA: Association of International Educators, where she managed NAFSA's international collaborations and directed federal training programs and grants, including the USAID-funded Education for International Development Program. Ms. Duval earned her master's degree at Temple University and her bachelor's degree from Bryn Mawr College.

Marilyn Crane is a Senior Program Associate at Higher Education for Development (HED). In addition to administering the Brazil-United States Exchanges and Partnership Program, she is responsible for managing HED's Technical and Advisory Services Program, the U.S.-Middle East University Partnerships program, the U.S.-Haiti Higher Education Partnership Program, the Civic Education Partnership Initiative, the HEPAD: East Africa long-term training initiative, and the U.S. - Japan Trilateral Program for Basic Education in Africa. Before coming to HED, Ms. Crane worked as associate director at the International Women's Forum and as program coordinator for the Aspen Institute's International Peace, Security, & Prosperity Program. Ms. Crane earned her bachelor's degree in international studies, with a correlate in French, from Vassar College and studied overseas at L'Institut d'Etudes Politiques de Paris. She is fluent in French and speaks basic Spanish and Arabic.

Appendix B:
Results from June 2008 Community College Scans

Brazil/US Bi-National Exchange

**Building a Brazil/US Network
for
Workforce Competitiveness and
Opportunity, Inclusion & Student Success**

**Results from Bi-National Scanning and Analysis
August 2008**

**Plans Prepared by: Participants in the Brazil/US Network
Executive Summary: Mary Gershwin**

Table of Contents

Executive Summary	2
Network Participants: June 2008	6
Scans from Partnerships:	
• Alamo Community College District & CEFET Rio Grande do Sul and Santa Catarina	7
• Houston Community College & CEFET Espirito Santo & CEFET Campos, RJ	16
• Macomb Community College & CEFET Para and Amazonas	19
• Northern Virginia Community College & CEFET Mato Grosso and Goias	22
• San Diego Miramar Community College & CEFET Paraiba and Pernambuco	25

EXECUTIVE SUMMARY

In June, 2008, leaders from the Brazilian CEFET System of vocational and technical education came together with leaders from US community colleges to explore common challenges and solutions around two key questions that shape economic opportunity, prosperity, security, and quality of life in both countries:

- **Inclusion, opportunity and student success:** What can leaders in US and Brazil learn from each other so more people get the technical and vocational skills they need to get ahead?
- **Workforce competitiveness and partnerships between business and technical education/community colleges:** What can we learn from each other to build the skilled workforce required for global competitiveness?

Participants spent two days in Washington DC, followed by visits to community colleges. Through bi-national dialogue, they produced analysis of common trends, emerging solutions, potential stakeholders, and options for action. As outlined in the attached reports, this partnership is producing:

- A growing understanding of our **common challenges** related to expanding opportunities for underserved populations and building a skilled workforce;
- A shared basis of **systems knowledge** about the Vocational/Technical Education System in Brazil and Community College Systems in the United States;
- An emerging body of knowledge about **solutions from the ground** that are producing results in the United States and Brazil;
- **A network of leaders** who are working in their communities to expand opportunity and advance workforce competitiveness and who share an interest in collaborating for mutual benefit; and
- Development of **opportunities for mutual benefit**- options for collaborative projects that address shared goals and engage key stakeholders.

The US/Brazil partnership will continue examination of promising solutions and opportunities for mutually-beneficial exchange in September 2008, when U.S. community college participants travel to Brazil.

Areas of Productive Exchange and Promising Practice

Equity and Underserved Populations:

Both in Brazil and the United States, underserved students must overcome financial, academic, and cultural barriers to succeed. While the U.S. has a tradition of open access, we face new challenges driven by high drop out rates, under-prepared students, and increasing costs. Brazil has the challenge of competing in a global economy with the average worker having six years of schooling.

Initiatives that show promise are noted in the attached reports. Some of these include:

Models for financial support for low-income students

Student tracking, data collection methods, and development and use of longitudinal data to monitor and promote student success.

Remediation and skill development models, including tutoring services and supplemental instruction

“Early alert” programs that identify students who are falling behind and remedy the problem before they drop out.

Student support services: proven practices that address barriers to success such as transportation, housing, and child-care.

Learning communities that improve retention and persistence rates.

Interactive technologies that keep students connected and informed.

Solutions for dealing with the challenges of career pathways and competitive/selective admission programs (CEFETs use competitive examinations, community colleges use selective admission for certain programs such as health sciences)

Examples of opportunities for mutual benefit

- Faculty pairings or groups working on common problems of retention/inclusion. Resulting synergies can stimulate new ideas.
- Exchange students in order to provide them international experience.
- Build and maintain a mechanism for ongoing collaboration, fund-seeking,

Program Development, Business/Education Partnerships and Economic Development

In both countries, a shortage of skilled workers for emerging labor market demands is a major barrier to economic development. The summaries confirm that educators cannot address the skilled workforce challenge by working alone. Participants identified successful examples of how partnerships between employers and community colleges in the U.S. and technical institutions in Brazil can be a major force for positive change.

Additionally, leaders face common bureaucratic barriers that slow needed changes in curriculum and program offerings.

Promising solutions produce relevant and up-to-date curriculum and program offerings while controlling for costs. From preparing the workforce for renewable energy-related jobs, to leveraging the power of distance learning, to developing mechanisms to make education more responsive to emerging labor market opportunities, the attached summaries note emerging solutions. They include:

Development of new curriculum and programs to meet future workforce needs.

Models for working with business and industry to develop curriculum.

Using data, such as labor market analysis, environmental scans, enrollment projections, and input from advisory committees to identify, plan and prioritize development of new programs.

Sunsetting or ending courses and programs – becoming proactive

Dealing with cost issues: Occupational programs are costly to offer

Transferability of credits within the system and from institution to institution (issues between CEFETs, issues between community colleges and universities)

Use of distance learning methodologies

Examples of opportunities for mutual benefit

Developing and sharing state-of-the-art curriculum. Engaging industry-specific faculty in exchange. Some areas identified for potential sharing include:

CEFET strengths include Environmental Sciences/Studies, Global Information Systems, Arts/Music/Video

US community college strengths include: mechatronics and auto-industry related course/program development, , oil and gas, renewable energy, GIS studies, and hospitality/tourism.

Partnering with international businesses that have common workforce needs in Brazil and the U.S. This includes employers in automotive, oil and gas, renewable energy, and hospitality

Using Distance Learning Mechanisms to develop programs that address

Realities of the global economy

Entrepreneurship and global opportunities

Rural access, course and program development

Leadership, Governance and Professional Development

To implement large scale ideas, innovative leaders in Brazil and the U.S. are using the levers of policy governance, leadership development and professional development.

Areas of best practice include:

Recruiting and developing new leaders who work at the policy level in community colleges and CEFET systems. Key areas of common focus for leaders in both systems include:

Development of stakeholders and coalitions for change- how institutions build and sustain communities of support which include elected officials, business, and community leadership.

Results, Resources and Accountability: how leaders promote performance.

Faculty and leadership development programs

Examples of opportunities for mutual benefit:

“Compare our governance systems. How are we organized in U.S. community colleges and why? What are we trying to address when we develop positions? As new formats develop in Brazil, what do they need to consider?”

Consider exchange of U.S. Trustees/ Brazilian policy leaders to explore global competitiveness challenges, impact on local communities, and emerging solutions. Goal would be to build policy level knowledge of challenges, identify and support innovation, and lay a foundation of support for ongoing Brazil/US exchange.

Bi-National Leadership Academy: Based on best practices developed to advance community college leaders in the US and leaders in Brazil, this program would focus on development of emerging leaders.

Brazil/US Network Participants: June 2008

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Strengthening Vocational-Technical Education Brazil-United States Exchanges and Partnerships

Centro Federal de Educação Tecnológica–Rio Grande do Sul
Centro Federal de Educação Tecnológica–Santa Catarina
Northeast Lakeview College • Northwest Vista College
Palo Alto College • St. Philip’s College • San Antonio College

The administration, staff, and faculty of the Alamo Community Colleges (ACCD) are pleased to be a part of this new network of institutions of higher education from Brazil and the United States. Our participation in the Symposium in Washington, D.C., and the subsequent meetings with our colleagues from CEFET-Rio Grande do Sul (CEFET-RS) and CEFET-Santa Catarina (CEFET-SC) at our own colleges, proved successful and insightful.

Through our meetings with administrators, staff, faculty, industry representatives, and community leaders, we gained a greater understanding of the similarities and differences between both of our types of institutions (“system”). We identified common themes, strengths and challenges. We also identified areas of strength in one system over another that we hope to share as best practices for strengthening our partnership as it grows.

Following are our thoughts and reflections on our time together, areas of potential collaboration and promising solutions, and the stakeholders we have identified for this exchange relationship.

Program Specifics

Professoras Lia Nelson Pachalski (CEFET-RS) and Telma Pacheco de Amorim (CEFET-SC) represented their institutions well, covering topics of interest to their administrators, staff, and faculty, not simply their own areas of expertise. Both women are English as a Foreign Language professors and have various other duties. Profa. Pachalski is coordinator of international relations, a position very similar to that of Mark Hagen at the ACCD.

Profas. Pachalski and Pacheco met with representatives of three of our five colleges during the first two days of visits. We toured the campuses of San Antonio College, St. Philip’s College and Northwest Vista College. Unfortunately, time didn’t permit visits to Northeast Lakeview College and Palo Alto College, although we did meet with faculty from both locations.

Profas. Pachalski and Pacheco made a number of presentations to faculty and administrators. On Monday, June 16, they were the guests of Chancellor Bruce Leslie’s executive committee meeting, attended by the presidents or vice presidents of each college, vice chancellors, department heads of District offices, the District staff council president, and executive assistants to the chancellor and vice chancellors. They had an opportunity to give a brief overview of Brazil and the educational system to the group.

In the afternoon, we organized a presentation and discussion forum open to all District and college faculty and staff. Given the timing during the summer when many faculty take vacations, we were very pleasantly surprised at the excellent turnout. Nearly 50 faculty, staff, and administrators attended, representing such diverse areas as business, nursing, hospitality, languages, history, humanities, biology, and distance learning. Profas. Pachalski and Pacheco presented an overview of Brazil and discussed their educational system, highlighting the similarities and differences to our system. The conversation that resulted from the discussion was lively and provocative.

The remainder of the week was occupied with visits to industry (Rackspace, a dedicated server hosting company; and Avanzar, an OEM supplier to Toyota), visits with community leaders (the Greater Chamber's Economic Development Committee, city and county officials, the director of the San Antonio Area Tourism Council, and other non-ACCD educators), and small meetings with ACCD department chairs, faculty and directors about specific areas of interest.

Most evenings, Profas. Pachalski and Pacheco were hosted for dinner by volunteers from the colleges and District. We were overwhelmed by the response from employees and had to turn away many potential hosts. The hosts were asked to take our guests to dinner either at their homes or a favorite local restaurant. This gave Profas. Pachalski and Pacheco an opportunity to experience more of San Antonio and to talk to faculty from other areas of the colleges.

Thoughts and Reflections

Our visit with Profas. Pachalski and Pacheco was productive and insightful. As a result of the visit, we are eager to travel to Brazil to meet with our counterparts in-country and further our efforts to develop a long-term exchange.

We were gratified to receive a strong response from faculty, staff, and administrators who expressed a genuine interest in learning about the Brazilian educational system and exploring possibilities for future exchanges. Summer is a particularly difficult time to find educators in their offices or classrooms, but we had no shortage of people to talk to. Our challenge, ironically, was finding the time to meet with everyone.

Profas. Pachalski and Pacheco found our meetings with educators, industry representatives, and government officials to be most beneficial. Our original program included tours of each of the five colleges, two satellite campuses, and industry tours. We found, however, that meeting with individuals and departments was much more productive than touring facilities. We modified our schedule periodically to maximize our time with key community leaders and educators.

Through our meetings we identified numerous areas of mutual interest and similar challenges. Student access, student success and retention are common themes for our institutions. Globalization and a skilled workforce are key to the success in our respective communities, and serving as a customized training provider is a common goal.

As we visited with department chairs, we learned that the CEFET system provides a well-rounded approach to many areas of specialization. For example, instead of a separate business department and course of study ("major" or "certificate"), the CEFETs weave business modules

into other categories of study such as hospitality and nursing. A nursing student, for example, also learns business concepts useful in managing a medical clinic.

Distance learning is of great interest to all of our institutions. Unfortunately we didn't have enough time to explore this topic more in-depth, but we made contact with the Director of Distance Education at San Antonio College. Like many colleges, the ACCD has a strong distance learning program. However, unlike many other colleges, the ACCD is actively developing systems to provide distance learning on vocational/technical topics, especially outside of the U.S.

Student access, student success and retention are important to our institutions. We had an opportunity to meet with key educators dedicated to finding solutions to these challenges at the innovative Westside Education and Training Center (WETC) where the ACCD provides academic, technical and workforce training classes, including GED, English as a Second Language, water treatment, community health, certified nursing assistant, production worker and financial customer service.

One interesting coincidence between the ACCD and the CEFET-RS and CEFET-SC came out in our discussions. The states of Rio Grande do Sul and Santa Catarina, like Texas, share an international border. Rio Grande do Sul borders Uruguay to the south and Argentina to the west. Santa Catarina borders Argentina to the west. Texas shares a frontier with Mexico to the south. Border issues such as immigration and the mixing of two languages to form a hybrid language are present in both places. This coincidence, perhaps not considered when pairing the southern CEFETs with Texas, provides unique opportunities for further study and exploration.

Our greatest challenge in programming the visit to San Antonio was finding the time to meet with a large number of key educators and community leaders. Another challenge was programming appropriate meetings for Profas. Pachalski and Pacheco that closely matched their institutional needs and areas of expertise, given the relatively short amount of time between receiving their personal profiles and departing for Washington, D.C. However, we remained flexible and periodically modified our schedules to better fit the goals and objectives of our partnership.

Promising Solutions

The CEFET-RS, CEFET-SC, and the ACCD are committed to developing a long-term relationship and exchanges of faculty, students, programs, and best practices. Through our meetings, we have identified several areas of immediate interest that hold promise for initial collaboration. We intend to build upon these initial projects to develop a deeper relationship among our institutions.

Promising Solution 1: English as a Second Language and Portuguese

Key to the success of a student or faculty exchange program is sufficient language acquisition. This is true for both Brazilians learning English and North Americans learning Portuguese.

During our visits, we met with two English as a Second Language professors from Palo Alto College and San Antonio College. One of the most immediate opportunities for our institutions is to develop a virtual exchange of English as a Second (or “Foreign”) Language students, or “e-friends” (a high-tech sort of “pen pal”). Students would be encouraged to write and publish newsletters to share with each other, to make blog entries, and to participate in faculty-led group discussions using services like Yahoo or Google. The use of audio exchanges in the future through technologies such as Skype and Elluminate offer the opportunity for no-cost or low-cost communications among ESL/EFL students.

We would also like to explore exchanges of ESL/EFL faculty and students in the long-term. The ACCD offers the CEFETs the possibility of creating customized Vocational ESL programs for technical students and the opportunity to study intensive English. Brazilian faculty could participate in EFL courses in the U.S. or could benefit from ACCD faculty providing VESL or EFL workshops in Brazil. In the short-term, ACCD faculty can assist in the development of new courses, sharing best practices and teaching methodologies with our partners.

For North Americans, it is important to learn Portuguese. In the past, the ACCD has offered Portuguese courses, but demand has been low. One area for potential collaboration is in the development of courses aimed at teaching Portuguese to Spanish speakers. A significant portion of the population in South Texas is functionally fluent in Spanish. Courses in Portuguese capitalizing on the similarities between the two languages can result in accelerated acquisition of new language skills.

Both southern Brazilian states have educators who speak Spanish and Portuguese fluently. These educators could participate in development of Portuguese for Spanish speakers courses. In the long-term, our institutions may opt to exchange faculty—Brazilians teaching Portuguese at the ACCD and Americans teaching English (or even Spanish) at the CEFETs.

Promising Solution 2: Border Studies

The location of our partner institutions on the border with Uruguay and Argentina, and the location of Texas on the border with Mexico, offers educators from both the U.S. and Brazil the opportunity to explore more deeply the issues that face border states. Illegal immigration is a concern to both of our countries, and raises issues related to education. Language is also affected by the proximity to our neighbors, resulting in “portanhol” in southern Brazil and “Spanglish” in the southern United States.

Besides the study of immigration and language on the border, our partnership can benefit from international cooperation among institutions of higher education. The CEFET-RS has a good relationship with the Universidad del Trabajo del Uruguay (UTU), a technical-professional school in Montevideo. Likewise, the ACCD has relationships with the *Universidades Tecnológicas* in Mexico and has developed workforce development programs for a number of their schools. While in Brazil, we hope to visit the UTU and explore further opportunities for multi-lateral exchanges.

Promising Solution 3: Distance Learning

The ACCD offers hundreds of courses online to students around the world. While here, Profas. Pachalski and Pacheco met with the Director of Distance Education at San Antonio College. Distance learning is an area of great interest to both the U.S. and Brazilian partners to develop courses for students in rural areas, as well as to develop courses for each other's students without the need to travel. The potential for collaboration is practically limitless.

The ACCD is working with a local high-tech firm to develop distance learning modules including video and audio that can be delivered to students using minimally-configured computer workstations and dial-up Internet. This technology has been proposed for technical training of employees of *maquiladoras* (twin-plant manufacturing plants on the U.S.-Mexico border). This technology allows institutions to move beyond the simpler academic subjects traditionally taught via distance education, to more technical subjects such as Computer-Numerical Controls (CNC) and Programmable Logic Controllers (PLC). Courses can easily be translated into Portuguese and access to those courses granted through the CEFETs and a low cost to the partnership and no incremental cost to participants beside tuition.

Promising Solution 4: Vocational and Technical Studies

The ACCD maintains strong relationships with industry and has developed numerous customized programs to meet the specific needs of employers. We have already translated some of the materials into Spanish (e.g., ISO 9001, Total Quality Management, Blueprints, CNC, PLC, etc.). We have already explored the possibility of offering these vocational and technical courses through wider networks of international institutions, as well as through distance learning. Translation of the materials into Portuguese can easily be accomplished through our partnership, thus sharing programs and best practices.

Promising Solution 5: Hospitality

St. Philip's College (one of the five ACCD schools) and CEFET-SC have strong hospitality programs. Both schools offer a cafeteria where students prepare meals for the public. This is a discipline where we can share best practices immediately, and consider faculty and student exchanges in the future. The ACCD has a good relationship with the hoteliers and restaurateurs in the area which may open opportunities for internships for Brazilian students.

Stakeholders

The Alamo Community Colleges are comprised of five public institutions serving an 8-county area with a population in excess of 2,000,000 residents. Our stakeholders are, first and foremost, our students, whose success is at the core of our mission. Likewise, our stakeholders include the students of the CEFETs in Brazil.

San Antonio is home to many large employers such as manufacturers Toyota and Boeing, financial services call centers like Citibank and Wachovia, researchers such as Southwest Research,

and high-tech companies like Rackspace and Microsoft. Hospitality companies, medical facilities, and the military round out the list of top employers. Each of these employers has unique needs for a skilled workforce. The ACCD meets regularly with these stakeholders to maintain strong relationships and provide timely and relevant training.

Our stakeholders include our community, which benefits from a strong economy and a skilled workforce. Additionally, our stakeholders are the local, state and U.S. taxpayers who fund our programs and institutions.

Brazil represents the largest economy in Latin America and the sixth largest economy in the world. Brazil is of strategic importance to this hemisphere and the United States. A strong relationship politically and economically is important, hence our stakeholders also include the citizens of Brazil, local industry, and government agencies, such as the *Ministério da Educação*.

Finally, our stakeholders include the faculty, staff, and administrators from both countries. These are the people who will carry out our exchange and ensure a successful long-term relationship.

**BRAZIL – US EXCHANGE
STRENGTHENING VOCATIONAL – TECHNICAL EDUCATION
CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA RS/SC
ALAMO COMMUNITY COLLEGE DISTRICT**

The following report intends to provide information and insights obtained during the visit of CEFETs' representatives Lia Nelson Pachalski and Telma Amorim to The Alamo Community College, as well as to outline some possibilities of projects and exchange studies.

This visit is part of a network plan between five US Community Colleges and Brazilian CEFETs and its goal is to strengthen the vocational/ technical education in both countries.

The first part of the visit was a meeting in Washington DC with representatives of both countries hosted by the Higher Education Development/USAID. During this meeting, the discussion in the roundtables provided information regarding similarities/differences between the vocational/technical education systems in Brazil and the US.

After the group meeting, as CEFETs were divided in Brazilian regions, each pair of educators was assigned a partner/college to visit. The two southern representatives were paired with the Alamo Community College District System and started visiting this institution on June 12th 2008.

Alamo Community College is located in the region of San Antonio, in the south of Texas. The region's cluster is composed of Tourism, Air Force Bases, Industry/Manufacturing, Information Technology, Biomedics.

It is heavily influenced by the Mexican culture due to its proximity to the country and the historical background. The Spanish language and Mexican heritage are an important component of socio/economic activities.

These factors demonstrate similarities between the south of Brazil and the San Antonio region. The south of Brazil borders with Uruguay, Paraguay and Argentina, which are all Spanish speaking countries.

Vocational Education Institutions from both countries face nowadays many similar challenges due to the impact of globalization and new demands of the labor market. The lack of skilled professionals to supply labor demand has been a concern of the San Antonio community, ACCD and its partners, and this is a common theme with Brazil.

According to the facts pointed above, the visits and observations during the period in San Antonio, the following observations and possibilities have been outlined:

- **Regional and Policy Level:**

Access, retention/ student success; inclusion; distance education; region to region exchange.

- Access: the institutions have different access systems. The American colleges have open access, but students need to take assessment tests in order to be placed correctly and be prepared to follow classes. The CEFETs are not able to open access due to its condition of being a public and federally governed institution.

Constitution regulates and guarantees equal access rights., but due to the limited number of openings, candidates must take an entrance exam.

- Retention/student success- Both institutions have high drop out rates and are establishing actions to address this issue. The American institutions treat this problem in an individual basis (student/advisor). The Brazilian institutions are in the process of establishing actions to deal with the problem of drop out.

Brazilian experience: The National Observatory. Specific data will be made available for each region, with statistics related to the profile of the beginning student in the institution until the follow up in a job. This information, among many objectives, has the goal of helping staff/faculty make informed decisions as to adapting programs, innovating curriculum, aligning market needs with programs etc.

Brazilian institutions have had experiences involving families, such as orientation meetings, specific training courses for teachers, regular faculty meetings with supervisors to discuss the matter.

USA experience: Community colleges have more staff specifically responsible for developing strategies to work on this issue.

Suggestion: Short term exchange workshops between staff (Brazil x USA) regarding actions each country is taking to address this matter.
Presentation and outline of good practices.

- Inclusion: the concern related to inclusion is similar in both institutions. In the US, open access does not mean natural inclusion and retention. Many American students do not have college aspirations or are first generation college students. In Brazil, besides the challenge of the entrance exam, many students consider studying at a CEFET a distant reaching goal.

Brazilian experience: studies have been done to propose a percentage of openings for students with lower socioeconomic backgrounds/coming from public schools; draws

USA experience: Community colleges are more affordable educational institutions in the US and underprivileged people would have more access to education through this system.

- Distance education: both countries are using this learning/teaching approach. Both institutions consider distance learning a very good tool to start the exchange programs.
- Region to region exchange: the socioeconomic cultural context of the two regions favors the development of exchanges concerning the local and regional governments.

Proposal: Exchanging existing projects; partnerships ideas between ACCD/Mexico and CEFET RS/Uruguay. CEFET SC/MERCOSUL Project: for working in the development of a tourism and hospitality harmonized technical profile at Mercosul. HEMISFERICO Project: for certification of professionals.

- Business partnerships: In the US, community colleges have a strong relationship with companies, in an understanding that this is the way to connect with community and provide training or assure employment/practice to students. In Brazil, relationship with employers/companies is also strong and CEFET is a reference center for training. Being a federally governed institution demands specific management of these issues when it comes to signing agreements and contracts. There is interest in learning more about partnerships from both countries.

Programmatic and Institutional Level:

Student exchange; faculty exchange; short term training; discipline/industry specific exchange of learning; internationalization of the curriculum; organizational and administrative exchange of learning(integrated learning); global citizenship issues; delivery of instruction.

All of the issues above are of interest to CEFET.

Next step: Establishment of committees to work with each aspect and pilot initial projects.

Partners//stakeholders/financial support

CEFETs depend heavily on the Education Ministry's decisions and support. After MEC/SETEC, we consider our faculty/staff the first people who can be our partners to help start exchange programs, proposing projects to our Boards/Ministry. Our students are the following potential partners in this mission, but also need guiding support from faculty and other committees involved so as to be able to take part in this program. Brazilian institutions, generally speaking, are not yet prepared to host international students in terms of logistics. CEFETs need to work on this in order to be ready to receive people. US institutions are far better prepared for this. This aspect can be worked internally between CEFETs to have a national network for support and training to host international visitors.

In accordance with ACCD's report, the promising solutions which were discussed together during our visit in San Antonio are the initial ideas, but we are also expecting their visit so as to outline more objective planning to advance in this network.

Houston Community College

Brazil US Exchange Summary Scan

Shared Challenges

Equity and Under-Served Populations—Creating social equity by providing equal opportunity to all is a common theme. Low-income populations can have greater access to improved quality of life through public, higher education institutions. While the U.S. has had a history of greater access, we have new challenges associated with increased high school drop-out rates (50 percent among minorities in Houston), under-prepared students, and increasing costs associated with tuition, fees and books. Brazil has the challenge of competing in a global economy with the average worker having six years of schooling.

Student Success—CEFETs have relatively few openings for students because of limited capacity. It is essential, therefore, that students who are able to pass the entrance exams and are admitted complete their course of study. The focus at HCC and other U.S. community colleges has historically been on access. It has only been more recently that attention has shifted to retention and completion rates and other metrics that are more associated with student success (Achieving the Dream, a Lumina Foundation grant, has focused HCC on these success measures).

Economic Development—HCC has a new vision that speaks directly to being the most relevant community college in the U.S. It understands the need to be a major force in helping the economic development of its region by providing a well-training workforce. It is placing renewed emphasis on advisory boards and using labor market data to drive programmatic and instructional changes. Brazil is projecting a period of sustained growth, with the gross domestic product increasing 5 percent a year through 2010 and 3 to 4 percent annually for the next decade. A lack of a trained workforce, in both countries, is a major impediment to economic development.

Access, success and economic development are the key design requirements of a robust educational/technical pipeline that provides (1) strong linkages from Ensino Medio (K-12) through Mercado de Trabalho (employers) and (2) an increased capacity for developing skilled workers and global citizenship.

Solutions

There is some agreement to begin by limiting the scope of what is possible to a few things that are more probable. Attached are two visual models produced by Romeu w Silva Neto with a few meager English translations produced by Daniel Seymour. They show a flow of professors and students. Rather than producing a competing document, HCC can use the model to suggest some initial ideas:

Engage industry-specific professors—There is an obvious connection between Houston and the Southeast Region of Brazil in the area of energy. HCC has a new Energy Institute with three degree programs—Petroleum Engineering Technology, Process Technology and Chemical Engineering Technology—while Brazilian companies are facing a severe shortage of engineers and tradesmen. In the model, this would suggest that “criacao de um grupo de professors para estudar as disciplinas” (or create a group of professors to study disciplines) that we begin by looking at the courses, certificates, degrees and learning outcomes associated with our Energy Institute and a similar entity in the Southeast Region of Brazil. This strategy, looking at the vertical markets, is one that may increase the chances that the Brazil/US Exchange yields concrete results.

Research global companies—Meeting workforce needs to advance our economies is a key part of this collaboration. By identifying international companies in the energy industry that have concerns in the both Brazil and the U.S. (Houston) we should be able to narrow the broad range of “Mercado de Trabalho” to ones such as Petrobras that is a private/public company in Brazil with an office in Houston. Once identified, a joint team from CEFET Espirito Santo and HCC can approach the companies regarding workforce issues in a global economy. U.S. firms that have offices in Brazil would also be approached to identify similar needs. While this idea of immediately including industry in the discussion addresses the shared workforce challenge, it also presents funding opportunities.

Initial faculty exchange—While spending a week or two in Brazil and the U.S. can help frame the issues for moving forward, it would probably be necessary for a faculty exchange of one semester to drive the agenda and provide specific feedback to the many questions that will arise. A complete review of the curriculum and learning outcomes would be necessary such that joint instructional opportunities could be identified and clarified. Moreover, the presence of a faculty member from the other country will enhance the opportunity to engage in serious discussions with industry.

The individual could engage in some guest lectures but the main focus of the exchange would be observational with the key deliverable being a series of joint action items.

Instructional opportunities—There are several instructional opportunities that are obvious. First, internships could be made available through the companies (HCC students at Petrobras for example). Second, the entire area of Ensino a Distancia (distance education) can be explored. In order to increase capacity, hybrid courses could be developed with the lecture/theory portion being done on-line through HCC and on-site lab work being done at CEFET. Clearly, there is also the opportunity to embed some aspects of global citizenship (Cidadania Global) within individual courses by sharing cultural and/or business case studies as part of the technical program of study.

Other Opportunities

Sustainability and Alternative Energy—There has been a significant paradigm shift in this country regarding global warming and the development of alternative sources of energy that lead to a more sustainable quality of life. The City of Houston, Houston Community College, and many other public and private organizations are intensely interested in developing a relationship with Brazil on a broad range of more “globalized” initiatives that parallel the vertical energy market and its labor requirements.

Governance—The issues of policy governance and decision-making are critical in making large-scale ideas able to be implemented. In the absence of trustees and CEO’s who are the decision-makers, ideas and strategies may not reach their full potential. There is an opportunity in this exchange to explore the governance structures for both the US and Brazil—How are they similar?; How are they different?; How are decisions made?; Who makes the decisions?; How do the decision makers ensure their decisions are acted on?; What are the outcomes and the unintended consequences?; Are the decisions and their outcomes assessed and valued?

Several US trustees might explore how the governance relationships work separately and how they might work together, then large scale ideas might be able to be implemented. These could focus on the areas of energy and oil production, conservation and sustainability to provide greater focus and synergy.

SUMMARY SCAN – JULY 2008

MACOMB COMMUNITY COLLEGE CEFET-AMAZONAS & CEFET-PARA

Brazil-United States Partnership to Strengthen Vocational Technical Education

Exchange Participants

Vicente Ferreira de Lucena Junior, Professor, CEFET Amazonas

João Lobo Peralta, Professor, CEFET Pará

Sam Ricevuto, Technical Trainer & Curriculum Developer, Workforce Development Institute,
Macomb Community College

Kristin Stehouwer, Vice Provost for Arts & Sciences, Macomb Community College

Other Macomb Community College participants

Don Ritzenhein, Provost & Chief Learning Officer

Jim Sawyer, Vice Provost for Career Programs

Victoria Corriveau, Director, Workforce Development Institute

Trends/Observations on Shared Challenges

During the time we spent together, we were struck by the similarity of issues that we wish to address at our institutions. The issues can be grouped into several categories:

Ensuring curriculum currency and relevance

- Development of new curriculum to meet future workforce needs

- Sunsetting or ending courses and programs – becoming proactive

- Sometimes have to offer programs with low demand to serve community needs

- Faculty sometimes want to offer courses/programs with low demand

- Occupational programs are costly to offer

- Transferability of credits within the system and from institution to institution (issues between CEFETs, issues between community colleges and universities)

- Macomb and CEFET-AM are buying the same equipment for mechatronics labs and used similar decision making criteria. Macomb's is on a larger scale but the subjects and tools are the same.

Ensuring Access

- Financial support

- Serving lower socio-economic status groups, inclusion

- Equal opportunity

Fostering Student Success

- Retention

- Serving under-prepared students

- Student tracking and longitudinal data on student success

- Dealing with the challenges of career pathways and competitive/selective admission programs (CEFETs use competitive examinations, community colleges use selective admission for certain programs such as health sciences)

Developing Partnerships

- Industry

- High Schools

- Universities

Stakeholders and Potential Investors

We noted that the term “stakeholder” cannot easily be translated into Portuguese. We identified numerous organizations and funding agencies whose aims would potentially align with the purposes of this exchange.

- ♦ CAPES Agency (student exchange) (Brazil)
 - Postgraduate
 - Undergraduate (more recently)
- ♦ SETEC and CAPES should discuss reciprocity (Brazil)
 - Currently only foster international exchanges for universities (Germany, France and Britain were mentioned), perhaps a dialog should be started to expand the reach beyond universities to CEFETs and community colleges
- ♦ FIPSE (US)
- ♦ Fulbright
- ♦ USAID
- ♦ Midwest Institute for International/Intercultural Education
 - Curriculum development
 - Faculty exchanges
- ♦ Our own institutions, possible examples:
 - Reciprocal tuition-forgiveness (Because CEFETs do not charge tuition)
 - Scholarships – possibly Macomb Foundation
 - Possible donors could be companies who have operations in both US and Brazil
- ♦ Work-study exchanges could be used as models, such as the Congress-Bundestag Youth Exchange for Young Professionals
- ♦ Industry Partners
 - Major employers in both countries: i.e. General Motors and Ford
 - Equipment suppliers: i.e. Amatrol and HAAS
 - Learning Management System companies (may be interested in developing ways to disseminate curriculum in different languages)
 - Internships
- ♦ Rotary International Foundation
 - Group Study Exchanges
 - Ambassadorial Fellowships
- ♦ Ford Motor Company Fund (underwriting expenses of Macomb’s provost to travel to Brazil for the exchange)

Resources and Links

In our discussions, we had rich exchanges about educational resources and links. We are going to continue to build a list of useful sources. The following are some of the resources we shared with each other:

- ♦ MEC – ministry, curriculum
 - Catalog of approved courses, accreditation information, INEP
- ♦ www.cnpq.br/lattes (also available in English) curriculum
- ♦ Partners’ websites
- ♦ MACRAO (US) – transfer information
- ♦ NCES IPEDS (US) – institutional information
- ♦ www.suframa.gov.br
- ♦ Brazil National Repository

Promising Ideas and Focus Areas

Alignment between Educational Institutions

- ◆ CEFETs have aligned secondary and post-secondary curricula in ways that may be innovative and that community colleges could incorporate into dual-enrollment or early/middle college models
- ◆ CEFETs could learn from joint admission concurrent enrollment models such as Macomb's partnerships with Oakland University and Wayne State University
- ◆ Examine how technical training could be better incorporated in the high schools

Partnering with Industry

- ◆ Community colleges could share best practices in using industry/program-specific advisory groups
- ◆ CEFETs could look to the US models to examine ways that industry might invest in CEFETs
- ◆ Both CEFETs and community colleges can look for ways to partner with international business – there are pockets of opportunity for exchange and internships.

Curriculum Alignment and Co-development

- ◆ Syllabus exchange to gain familiarity and identify similarities
- ◆ Curriculum Pilot – Mechatronics
 - Given the fact that Macomb and CEFET-AM have both recently invested in the same mechatronics equipment (provided by Amatrol), we believe that this could be a fruitful area for curricular collaboration.
 - Pick a core course and align the curriculum between CEFETs and community college (parallel curriculum)
 - Amatrol course materials will be the same – with same course content covered in Portuguese and in English
 - Since we would assume that Macomb students would have no or very limited proficiency in Portuguese, Macomb students could go to Brazil after they have taken mechatronics here as they would already know the content
 - Distance learning could be a means of reinforcing the concepts in the students' first language.
- ◆ For courses that are offered at both CEFET and community college instructors could collaborate to design lessons around international teams working jointly on some course assignments via distance learning tools. Teams comprised of US and Brazilian students could work on course assignments or team projects together.
- ◆ Students in parallel programs could finish capstone projects or do internships in each others' countries
- ◆ Selective standards for participation in an exchange could be an incentive to perform at high levels for both students and faculty. This could raise achievement levels overall.
- ◆ If these initial steps are successful, this could eventually to joint development of curriculum

Distance Learning

- ◆ Realities of global economy
- ◆ Entrepreneurship courses offered jointly to students of both institutions

Summary
U.S.–Brazil Partnership to Strengthen Technical-Vocational Education
Northern Virginia Community College and CEFETs Mato Grosso and Goias
18 June 08

Requirements

What? *A Summary Scan: This will provide the basis for developing action plans in September.*

Who is the audience for our scan?

Your partner college. Document your reflections for your partner This Network. Share your thinking with this network.

What questions should you address?

- *Trends/observations about our shared challenges*
- *Solutions: 2-5 promising solutions. You may want to include solutions that are working on the national level, together with solutions that are specific to your region or institution.*
- *Stakeholders: who might invest in our success?*
- *Resources and Links: please note the websites for any resources that you think will be useful to your or to this network partnership (websites for reports, curriculum, etc)*
- *Action Ideas: Ideas you may want to consider when you move to action planning in the September visit*

Response

Trends/observations about our shared challenges

The CEFETs ambitious expansion plans run ahead of regional industrial trends; our planning may therefore allow for curricular development in areas they wish to go (that will help lead the regional economies) alongside their capital expansion.

This can be in a number of areas new for CEFETs but common for U.S. community colleges, such as International Business

We must take advantage of technology trends – this will make our plans more attractive to corporations, funding sources, etc.

Staff shortages at CEFETs and community colleges, which contribute to the inadequate address to persistent problems of retention and stifle movement in new/useful directions.

However, CEFET faculty culture and contracts are different from that at U.S. community colleges. There isn't the expectation that faculty will do more than just teach their courses, e.g., help develop curriculum, advise students, etc. In addition, there are no counselors or other student services specialists on staff.

Data collection and dissemination issues.

Research emphasis at CEFETs must be balanced with research on student support/services.

Retention is a common issue, though students leave school for somewhat different reasons. Community college students often have poor preparation; CEFETS have urgent income needs that force students to leave early.

More community engagement needs to be built into the culture of the CEFET system (note success of the S-System in this respect); the identification of CEFETs as removed from community can work against them down the road.

Solutions: 2-5 promising solutions. You may want to include solutions that are working on the national level, together with solutions that are specific to your region or institution.

- (for US) U.S. environmental consciousness is just beginning to emerge, realized in community colleges in new and developing curricular plans. Brazil offers a rich platform for curricular development in this area, and our partners are in a particularly good location to do this.
 - Environmental Sciences/Studies
 - Global Information Systems
- Faculty pairings or groups working on common problems of retention/inclusion cross-border. Resulting synergies can stimulate new ideas.
- Expansion of CEFETs allows for an opportunity to start new kind of assumptions about the work and purpose of teaching faculty as well as to introduce staff positions to support and counsel students.
- For CEFETs, the NVCC's Pathways to Baccalaureate program, Faculty Advising initiatives, Student development courses (SDV 100), and Achieving the Dream all present examples of approaches that may address retention and success issues (e.g., through the creation of learning communities).
- Faculty "Center for Teaching Excellence", i.e. professional development programs instituted to address range of teaching and learning issues.

Stakeholders: who might invest in our success?

What workforce / corporate entities would be interested in this partnership and be willing to help, in exchange for _____?

What entities are in both N. Va. and Brazil?

Lumina Foundation (can't be opposed to going international with their idea)

Fulbright

Telecom, energy, Cisco, Dell (IT), IBM, Sun Technology

<http://www.campustechnology.com/articles/64629>

Community organizations (needs outreach however)

Resources and Links: please note the websites for any resources that you think will be useful to your or to this network partnership (websites for reports, curriculum, etc)

- Stand-off approach of CEFETs at a disadvantage compared to S-System, which is more entrepreneurial and community-engaged.
 - NVCC Office of Institutional Research: <http://www.nvcc.edu/oir/>
 - Achieving the Dream: <http://www.achievingthedream.org/default.tp>
 - National Center for Education Statistics: <http://nces.ed.gov/>
 - Integrated Postsecondary Education Data System): <http://nces.ed.gov/ipeds/>
 - Virginia Community College System: <http://www.vccs.edu/>
 - NVCC's Strategic Plan: http://www.nvcc.edu/oir/strategic_vision.pdf
 - League for Innovations in Community Colleges: <http://www.league.org/index.cfm>
 - Service Learning
- Action Ideas: Ideas you may want to consider when you move to action planning in the September visit
- Compare our governance systems. How are we organized in U.S. community colleges and why? What are we trying to address when we develop positions? As new formats develop in Brazil, what do they need to consider?
 - English language skills need development – Brazil identifies this as huge barrier and a primary requirement for advancing the economy.
 - Presently, corporations in Brazil dedicate about .3%--.5% of profit to education, etc., but this money tends not to be used. Where is it? How can it be accessed?
 - Link CEFETs with NOVA's partnership under Governor's career and Technical Academy (at NOVA's Arlington Center) for IT and video; drives dual enrollment and admissions in STEM fields (all strategies to improve success of the underprepared). Governor's Model offers opportunity to study how CEFETs merge/integrate HS (what's content of 11-12th grade for transition to college work, or 8-9th grade?).
 - Areas of CEFET interest for curricular development and faculty exchange:
 - IT
 - Arts/Music/Video
 - Environment
 - GIS
 - Electrical Engineering
 - Business
 - Tourism
 - Health programs (for S-System)
 - Design/Gaming (for S-System)
 - Vet Tech (for universities)
 - Chemistry

Brazil/US Bi-National Exchange

Summary Report:

Building a Network between CEFET-PB, CEFET-PE and San Diego Miramar College

Prepared by:

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July 7, 2008

1. A Summary Scan :

As the representatives from the vocational/technical educational systems in Brazil and the USA identify differences between their respective systems' missions, authority, governance structure, funding mechanisms, expectations, and outcomes, the representatives also recognize that both countries face very similar challenges in serving diverse student populations, promoting student access, addressing student success, and preparing a skilled workforce to meet the needs of a global economy.

The differences and similarities between the two systems form the bases for developing future action plans to meet the common challenges. The goal of the bi-national exchange between Brazil and the USA in vocational/technical education is to enhance both nations' efforts, efficiency, and policy development in inclusion, equity, accountability, partnership with the business sector, workforce competitiveness, and global citizenship.

2. The Audience for Our Scan :

A. Facts on Partner Colleges

(1) CEFETS:

Centro Federal de Educação Tecnológica da Paraíba (CEFET-PB), the lead institution, and Centro Federal de Educação Tecnológica de Pernambuco (CEFET-PE) represent the 10 CEFETs from the northeast region of Brazil (9 states: Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco/Petrolina, Piauí, Rio Grande do Norte, and Sergipe). The CEFETs are federal educational institutions that offer programs and courses typically provided by high schools, vocational schools, community colleges and four-year and graduate colleges in the USA. Most of them were founded in 1909 as primary/vocational schools. Each of their urban campuses occupies an average area of 12.5 acres (5.1 hectares or 51 thousand square meters) with an average of 10,000 students enrolled in diploma-bound programs, per CEFET data reports.

In the northeast region of Brazil, only Pernambuco state has two CEFETs: CEFET Pernambuco (two campuses: Recife (main); and Petrolina) and CEFET Petrolina (one agriculture campus: Petrolina county rural area).

In the other states of the northeast, there is one CEFET per state:

- CEFET Alagoas (two campuses one each in: Maceió (main); and Marechal Deodoro);
- CEFET Bahia (six campuses in six cities: Salvador (main), Barreiras, Eunápolis, Santo Amaro, Valença, and Vitória da Conquista);
- CEFET Ceará (three campuses in three cities: Fortaleza (main), Cedro, and Juazeiro do Norte);
- CEFET Maranhão (two campuses in two cities: São Luís (main); and Imperatriz);
- CEFET Paraíba (five campuses in three cities: three in João Pessoa (main), one in Cajazeiras, and one in Campina Grande);
- CEFET Piauí (three campuses in three cities: Teresina (main), Floriano, and Picos).

- CEFET Rio Grande do Norte (four campuses in three cities: two in Natal (main), one in Mossoró, and one in Currais Novos).
- CEFET Sergipe (two campuses in two cities: Aracaju (main), and Lagarto).

Besides operating a high school and offering vocational degrees in a large number of technological areas, CEFET-PB also includes associate degrees of applied sciences programs in Building Construction, Computer Networking, Environmental Management, Industrial Automation, Interior design, Geoprocessing, Real Estate Business, System Development and Analysis, and Telecommunications Systems. In addition to that, CEFET-PB also graduates students in Management, and Electrical Engineering Bachelor's and Chemistry teaching degrees. Additionally, there is a partnership with the State Police Military Academy through which are offered Bachelor and Executive Master degrees in Public Safety and E.Md. in Educational Management and Technology. Presently we are offering an Executive Master's degree in Public Administration and concluding a E.Md. in Vocational and Technological Education. Overall, CEFET-PB programs of study include: civil construction; chemistry; computer science; design; education; electronics; electrotechnics; environmental sciences; geoprocessing; health; management; mechanics; music; real estate; telecommunications; and law enforcement.

The population of Paraíba in 2005 was 3,598,025, and approximately 600,000 of those live in the capital of João Pessoa. In 2000, approximately 2,447,212 people lived in urban areas of the State, while approximately 996,613 lived in rural areas of the State. In 2007, CEFET-PB admitted 2,039 new students, and had an enrollment of 10,471 students, and generated 672 graduates.

Besides operating a high school and offering vocational programs in a large number of technological areas, CEFET-PE has associate degrees of applied sciences programs in Graphic Design, Environmental Management, Industrial Automation, Radiology, and Information Systems. In addition to that, CEFET-PE also graduates students in Nursing.

Presently in Brazil, in addition to the 10 CEFETs located in the northeast of Brazil, there are an additional 24 CEFETs located in other regions of the country. Together these 24 CEFETs have 70 campuses.

The CEFET system offers a range of educational opportunities including: vocational programs, or cursos técnicos, of 800 hours or more, or 2800 hours when combined with secondary education; vocational programs above 800 hours combined with GED (GED is Proeja in Brazil); vocational programs less than 800 hours; and; higher education programs including Associate of Applied Sciences (technólogos), teaching degrees, bachelor's degrees, and executive and regular graduate programs. CEFET is free of cost to participants, but admission is very competitive and only one out of every 25 applicants is admitted.

Vocational programs of 800 hours or more are offered from a pool of 155 federally-authorized types grouped in 11 technological areas. Associate degrees of applied sciences programs are offered from a pool of 98 federally-authorized types grouped in 10 technological areas.

Article 2 of the Federal Decree number 5,224/2004 states that CEFETs have as aim to educate and train professionals in the scope of technological education, in the different levels and modalities of instruction, for the various sectors of the economy, as well as for performing applied research, and to promote technological development of new processes,

products and services, in close articulation with productive sectors and society, specially of local and regional range, offering pathways for continuing education.

The most popular educational objective of students attending the CEFETs is to receive a high school diploma, attend a vocational program (or both) or to earn an associate degree of applied science. Over 80% of CEFETs students are under 24 years old. Over 95% of CEFETs students are Brazilians. Most of the foreign students come from South America or Africa.

It is anticipated that by 2010, the number of CEFETs campuses will double or triple due to the expansion program presently under way.

(2) San Diego Miramar College

There are 72 community college districts and 110 community college campuses in the State of California. California Community Colleges (CCC) are supported through tax dollars. Therefore, students currently only need to pay a fee of \$20 per credit hour. San Diego Miramar Community College (SDMCC) is one of the 110 community colleges and is one of the three colleges in the San Diego Community College District. The San Diego Community College District is the second-largest college district in the State of California with a student enrollment of approximately 100,000. In this Exchange Program between Brazil and USA, San Diego Miramar Community College (SDMCC) represents the San Diego Community College District, California Community Colleges and community colleges in the western region of the United States. San Diego Miramar College will build several new buildings over the next several years and anticipates student enrollment to grow to 25,000 by 2025.

The College is located on 125 acres (50.6 hectares or 506 thousand square meters) in the Mira Mesa/Scripps Ranch area of San Diego County and was founded in 1969 with an average enrollment of 12,000 students. Initially, the College offered vocational training courses in the areas of law enforcement and fire science technology. Since that time, the College has expanded the curriculum, offering a full range of vocational and academic programs that lead to the associate degrees, certificate of achievements, or completion of the first two years' requirements of bachelor degrees.

San Diego Miramar College is the site of the San Diego County Regional Law Enforcement Training Center as well as the regional site for the FAA certified Aviation Maintenance Technology program. Other vocational training programs offered include: administration of Justice, Accounting, Automotive Technology, Biotechnology, Business, Computer and Information Sciences, Child Development, Diesel Technology, Digital Media, Fire Protection Technology, Paralegal, and Office Information Systems. The academic course offerings include: anthropology, biology, chemistry, English, fine arts, foreign languages, humanities, journalism, liberal arts, mathematics, physical education, physical sciences, psychology, selected liberal arts, social studies, sociology, and speech communications.

As a provider of associate degrees, transfer preparation, vocational certificates, and lifelong learning, San Diego Miramar College emphasizes its overarching commitment to diverse students and their educational achievements. The College's mission states: "Our mission is to prepare students to success in a changing world within an environment that values excellence in learning, teaching, innovation and diversity."

The most popular educational objective of students attending the College is to receive an associate degree and transfer to a four-year institution to obtain a baccalaureate degree. This may be due to the fact that the 47% of the students at the College are under 24 years old. The average student age at the college is 27 years old. Over 44% of the College students are Caucasian, 14% are Asian/Pacific Islanders, 12.5% are Hispanics, and over 11% are Filipinos. 86% students attending the College are part time students and the average units attempted per semester is 6.5.

A cornerstone of career technical programs at San Diego Miramar College is partnerships. Industry partners include Toyota, Honda, Nissan, and Caterpillar. Another strength of Miramar College has been grant-funded Economic and Workforce Development Centers in the fields of Biotechnology and Advanced Transportation and Energy.

B. Californian and Brazilian Partners' Reflections on Each Other's Institution -- Similarities and Differences:

CEFET	SDMCC
<p><u>Admissions and Students</u></p> <p>Number of admissions dependent on budget limitations.</p> <p>Entrance exams (vocational programs above 800 hours, grades 9-12, higher education) -- no tuition.</p> <p>Lottery being tested in few institutions.</p> <p>Entrance exams are very competitive due to limited availability of slots and to the quality of the programs offered.</p> <p>Some slots reserved for students from public schools or belonging to African-Brazilian communities (this is being disputed in court).</p> <p>Open admission - whoever comes first (vocational programs below 800 hours) -- perhaps there may be a tuition.</p>	<p><u>Admissions and Students</u></p> <p>Number of admissions dependent on budget limitations.</p> <p>Individuals who are 18 and older and can benefit from community college education are eligible to attend community colleges.</p> <p>Open admission - whoever comes first; low tuition.</p>
<p><u>Funding Sources</u></p> <p>Funding comes from the federal government based on projected enrollment. CEFETs are under the jurisdiction of the federal government.</p> <p>Federal government provides funding for facilities; the land for new facilities has to be donated by the city (county).</p> <p>Federal government is committed to expanding access by building new CEFETs and new campuses to the existing CEFETs over the next few years.</p>	<p><u>Funding Sources</u></p> <p>Funding is from the State government and fees collected from the students.</p> <p>Funding formula results in a lack of dependable, consistent funding.</p> <p>Lack of funds to support inherently-expensive programs in Career Technical Education (only source of differential funding comes from federal Perkins funds and Special legislative funding, such as SB70).</p> <p>Adding centers or additional campuses or colleges within a district is subject to Accreditation Commission's approval and regulations; the funding formula is dictated by state regulations.</p> <p>There is State funding for new buildings and retrofit of existing buildings; however, the trend has been to rely on bond measure</p>

<p><u>Personnel & Governance</u></p> <p>General director (president) is elected for a four-year term by faculty, technical-administrative personnel and students; other administrators (vary from CEFET to CEFET) -- may be elected among the faculty and by faculty.</p> <p>CEFETs are governed by a 10-member council consisting of the general director, a director responsible for instruction, one elected faculty, one elected technical-administrative personnel, one elected student, three representatives from the business, manufacturing and agriculture each, one alumnus, and one member from the Ministry of Education.</p> <p><u>Student Access and Outreach</u></p> <p>On-line education is being stimulated to be provided and the technology and methodology for the delivery and support of distance education is improving rapidly. It is clear that this trend will continue in the near future and that there will be a need to expand on-line course offerings to meet the demand.</p> <p>Limited outreach services done in a non-systematic way – CEFETs always have more candidates than they can take at their programs.</p> <p><u>Student Success</u></p> <p>No systematic approach to address student retention and persistence issues.</p> <p>The need to retain best-qualified faculty and technical administrative personnel for</p>	<p>dollars for building and retrofitting facilities.</p> <p>The College is responsible for obtaining additional land for new facilities.</p> <p><u>Personnel & Governance</u></p> <p>Administrators are hired through application and interview process.</p> <p>The college is governed by a locally elected 5-member board.</p> <p><u>Student Access and Outreach</u></p> <p>There is a need to recruit more individuals from diverse populations, including lower socioeconomic groups and first-time college goers.</p> <p>Outreach services work all year along to market SDMCC to potential students, partners, and other stakeholders.</p> <p>On-line education is increasingly popular and the technology and methodology for the delivery and support of distance education is improving rapidly. It is clear that this trend will continue in the near future and that there will be a need to expand on-line course offerings to meet the demand.</p> <p><u>Student Success</u></p> <p>Many students come to the community colleges under-prepared and the college must devote scarce resources to developmental and remedial courses.</p>
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<p>CEFETs</p> <p>Some groups, particularly those identified as members of special populations, receive special support and accommodations designed to increase their success and retention in programs of study.</p> <p>Examples of this are:</p> <ul style="list-style-type: none"> • students with special needs (hearing, vision, mobility, and other problems) are entitled request to support services. • students over 18 who have not completed high school may join GED and vocational training (they get more support than regular students). • 10-12th grade students who come from city schools get additional support to stay in school (bus tickets, meals, and others). <p>All students are entitled to educational and psychological counseling, dental and medical care (the latter on a more limited basis than the former), and meals</p> <p>Some students may get internships or social service support</p> <p>Student support services report to each campus director (both CEFETs have more than one campus)</p> <p><u>Student Transfer</u></p> <p>Transfer among different higher education programs done mainly through entrance exams</p> <p><u>Curriculum Development</u></p> <p>Curriculum development is regulated by federal legislation, except for vocational programs under 800 hours; there is a need to develop a more systematic process in identifying which programs to offer.</p>	<p>Student retention and persistence rates need to be addressed and improved.</p> <p>State- and/or Federal-funded categorical programs provide the mechanism and funding to address retention and persistence issues for target student population, but there is no institutional-wide comprehensive approach to address these issues for all students.</p> <p>Some groups, particularly those identified as members of special populations, receive special support and accommodations designed to increase their success and retention in programs of study.</p> <p>One excellent example is EOPS (Extended Opportunities Programs and Services). Participation in EOPS programs and services is based on income status, but is not automatic; students must ask for assistance.</p> <p>Student Support Services operates under the supervision of the Vice President of Student Services, which is roughly equivalent to a CEFET Director.</p> <p>Mesa College has a program named Minorities in Engineering and Sciences. This program supports a broad range of activities that address specific barriers that reduce participation by minorities in science and technology fields.</p> <p><u>Student Transfer</u></p> <p>Students can transfer from CC to four-year institutions using established articulation agreements</p> <p><u>Curriculum Development</u></p> <p>Lack flexibility in curriculum development to meet industry rapidly-changing workforce needs.</p>
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C. Reflections on the Network

The Network represents government (Ministry of Education of Brazil and United States Department of Education), United States Agency for International Development (USAID), American Association for Community Colleges (AACC), American Council on Education (ACE), Higher Education for Development, ten CEFETs from Brazil representing the five different regions of the Country (North, Northeast, Centerwest, Southeast, South), and five USA community colleges representing five different regions (West, Central, Midwest, Southeast and New England areas).

This kind of representation is not only comprehensive in terms of breadth and depth, but is very powerful and influential in the potential impact it might have on the vocational/technical education in both countries. The CEFETs and community colleges selected offer a wide range of vocational/technical programs and curricula. While these institutions are different in many ways, they have arrived at the conclusion that both countries have similar workforce needs; but there is a gap between what is expected of the workforces prepared by both systems.

It is the expectation that by forming the Network, it will enrich the dialogues between the representatives from the two nations and all the individuals involved in the Network to identify common concerns, create strategies, identify potential resources, and form the action plans to address the challenges faced by both nations in terms of economic and workforce development in a global context.

3. Questions should be addressed:

A. Trends and Observations Regarding Shared Challenges:

- **Inclusion & Equity**

- The higher education systems of both countries need to reach more of their citizenry. Each country has a unique set of circumstances that have led to the exclusion of a percentage of the population. In theory, both countries have open access, and in the case of Brazil, free higher education, and in the case of California Community Colleges, a low-cost tuition and financial aid to support the most needy students. However, in reality, both countries limit access and the breadth of programs based on budgetary restraints.
- Brazil limits access to the CEFET system by requiring potential students to apply for open positions in specific programs, and then qualifying students based on an exam. This process tends to disproportionately deny access to the poorest people who have relied on the public K-12 system for their basic education. To offset this impact, ethnic minorities are provided some special consideration in order to increase their access. However, since only one out of every 25 prospective students who compete for a slot in a CEFET is admitted, many prospective students are denied access, including special populations and ethnic minorities.
- Remedial, developmental and reinforcement classes and services need to be in place to help the less-prepared students succeed. In the United States, there is a Basic Skills movement aimed at providing programs and services designed to improve student success and retention.
- In California, there is no competition for open space at the community college; however, the funding formula determines both the total number of courses and

sections that can be offered, and the breadth of programs of study. A prime example is in the area of Health Care, where there is a demand for skilled workers and a ready supply of students waiting to get into impacted programs. Despite the apparent need for health care programs, colleges are reluctant to expand or implement these programs due to their inherently high cost; and with a finite budget, the addition of any courses or programs would require that a college reduce or eliminate other courses or programs.

- As a result of the budgetary constraints, neither system is able to meet the higher education needs of the students, and subsequently cannot meet the skilled-workforce demands of the industry and business.
- **Student Success:**
 - Both countries can benefit by improving the retention and persistence rates of students. These improvements will lead to more effective use of resources and improved benefits to individuals/students, the community, and economic development of the region, state, and country.
 - To some degree, retention is also a budgetary issue due to the limited resources available to implement student support programs and services aimed at improving student success.
- **Program Development**
 - It is to the advantage of both countries to improve the processes for identifying and implementing the programs to be offered at each community college or CEFET, thus ensuring that students possess marketable skills upon completion of their programs of study.
 - It is important to continually evaluate existing programs for relevance to the workplace and currency of technical materials.
 - It is important for institutions to have a systematic process for producing and analyzing environmental scans that will allow them to respond by creating programs of study that are aligned with new and emerging technical fields.
 - Graduate follow-up is not well developed and does not generate information or data that can be used to drive program improvement.
- **Professional Development:**
 - It is critical for both countries to pay special attention to professional development activities, particularly for instructional staff engaged in highly dynamic career and technical education fields. Technology is expanding exponentially and many faculty members are struggling to maintain relevance in their classrooms. We must ensure that programs are delivering the knowledge and skills needed, and demanded, by business and industry.
 - Institutions in both countries suffer from inadequate professional development funds to support the systematic improvement of faculty, technical-administrative staff, and programs. Currently, the community colleges rely primarily on federal Perkins career and technical education funds to support professional development

activities, and although these funds are helpful, they are inadequate to meet all the competing priorities.

- **Leadership and Governance:**

- A close examination is needed to assess and evaluate the effectiveness and efficiency of the governance structure at the CEFETs and community colleges. Each country has unique challenges due to different governance structures. These challenges should be addressed in order to provide well-designed structures aimed at facilitating and supporting teaching and learning.
- A critical issue in the community college and CEFET systems is the lack of qualified, motivated, and capable people entering the administrative area. Many senior faculty members are reluctant to move into administration because of the long hours, 12-month assignments, and salary schedules that do not provide sufficient motivation. Another issue is the lack of any professional development system for new administrators. The only systemic support for would-be administrators is offered through the doctorates of education in both countries, or executive or regular masters' programs in Brazil.

- **Accountability**

- To ensure that public funds are used for their intended purposes, in the proper way, and in an effective manner. In Brazil, this is especially critical in the case of instructors or technical-administrative staff who are elected or appointed to administrative positions, but who lack the necessary skills to perform their functions.
- In terms of workforce development, this means that students will be skilled workers who can meet the expectations of industry and business.

B. Promising Solutions:

- **Inclusion & Equity**

- In order to go over present budgetary restraints, it is imperative to make the most out of the present budgets and to find other sources of funding.
- Education needs to be a priority for the government. Legislation must be initiated and established with funding support for implementation to support the priority.
- Expansion of access can be achieved by
 1. Using variety of delivery mode of instruction and student services, such as distance education and online degree offerings.
 2. Increasing the number of CEFETs to accommodate the number of students who are eligible for CEFETs.
 3. Identifying various outreach strategies to targeted and underserved

populations.

- **Student Success**

- The first step will be to quantify the reasons for students dropping out.
- It is important to address retention and persistence issues before students start their college education. This means that students need to be prepared, have the requisite skills, and be ready for the education provided by CEFETs or the community colleges.
- The transition to CEFETs and community colleges must be seamless in terms of academic preparation and student support services. The USA has attempted to create seamless career paths with such models as 2+2, and Career Ladders; however due to poor coordination between the K-12 system and community colleges, these programs have provided limited benefits. Strategies need to be identified in order to ensure that these models will be made to work more effectively.
- Student retention might be improved if students participate in mandatory assessment, counseling, and orientation services.
- Student support services might be able to mitigate the circumstances that result in students dropping out.
- Development and implementation of “early alert” programs that will identify students who are falling behind at an early date and remedy the problem before it results in them dropping out.
- Tutoring services and supplemental instruction need to be available and accessible to more students, and in a broader range of subjects. In the USA, it is common to have limited, or no, tutoring available to students in technical subject courses.
- Learning communities are a good learning/teaching model for improving retention and persistence rates.
- Conducting student focus groups and using data collected to increase course completion rates.
- Using interactive technologies to keep students connected 24 hours per day, and seven days per week.
- Maximizing the college and CEFET website to keep students informed.

- **Program Development**

- A mechanism such as program review/evaluation needs to be developed, implemented, and enforced to address the rigor and relevance of the curriculum and program development.

- Using data such as labor market analysis, environmental scan, enrollment projection and input from advisory committees composed of industry and business partners, to assist in identifying new programs.
- **Professional Development**
 - A well-coordinated plan for professional development needs to be identified, using existing internal talents within the institution, and the talents provided by industry and business and academic partners, to support professional development activities.
 - Professional development needs to be mandatory for staff, faculty, and administrators in order to ensure rigor and relevance of the instruction, services, and leadership provided.
 - Work with foundations to identify and secure alternative funding sources to support professional development.
- **Governance & Leadership**
 - Through appropriate legislations to reform the existing system by involving the representatives from education, business and industry, and government officials.
 - A systematic approach can be developed by higher-education institutions and professional organizations to recruit, mentor, and train potential administrators to work in the community college and CEFET systems. Colleges and CEFETs need to diligently work on succession plans to ensure stability of the institutions. Salary surveys and job-market analysis need to be conducted regularly in order to set the benchmarks for adjusting compensation packages for administrators.
- **Accountability**
 - In the CEFET system, instructors, administrators, and staff should be trained in how to use public funds properly in order to improve the services provided and to avoid future problems with the auditing offices.
 - Data from program review/evaluation will be used for determining the needs of program development, reengineering of the programs, expansion of the programs, program elimination, and professional training of faculty and staff.

C. Stakeholders/Partners:

- MEC, USDE, USDS, HED, ACE, and USAID
- Industry and Business
- CONCEFET (CEFETs) and AACC (Community Colleges)

MEC – Ministério da Educação (Ministry (Department) of Education of Brazil)

USDE – United States Department of Education (Departamento (Ministério) da Educação dos EUA)

USDS – United States Department of State (Departamento (Ministério) de Estado (Relações Exteriores) dos EUA)

HED – Higher Education for Development (Educação Superior para o Desenvolvimento)

ACE - American Council on Education;

USAID – United States Agency for International Development (Agência dos EUA para o Desenvolvimento Internacional)

CONCEFET - Conselho dos Dirigentes dos Centros Federais de Educação Tecnológica – Council of the General Directors (Presidents) of the Federal Centers for Technological Education

AACC – American Association for Community Colleges – Associação Americana para Faculdades Comunitárias

D. Resources: (websites, links to assist)

- Bill and Melinda Gates Foundation
- Toyota
- Honda
- Ford
- Petrobras/Brazil
- CAPES/Brazil (Fundação Coordenação de Aperfeiçoamento de Pessoal de Nível Superior)
- Fulbright Foundation
- BNDES/Brasil (Banco Nacional de Desenvolvimento Econômico e Social)
- IDB (Interamerican Development Bank)
- Ministério da Educação/Brazil (MEC)
- United States Department of Education (USDE)
- Community Colleges for International Development (CCID)

E. Action ideas

- Review the executive summary prepared by Mary (pay special attention to equivalent terminology in Education in USA and Brazil)
- Identify strategies to contact potential funding sources
- Follow through on identified solutions at different levels (exchange instructors, administrators, technical-administrative staff for specific purposes: training, researching, writing best practices, etc.)
- Exchange students in order to grant them with international experience, education and training (associate degree students, and four/five-year degree students, transfer students, and graduate students); in the case of graduate studies, work on special agreements with the public universities in each CEFET state and in the California public university system to accommodate such situations.
- Develop special projects of common interest by meeting in person, virtually, or a combination of both ways.
- Maintain a permanent mechanism of management, fund-seeking, communication and cooperation in order to keep the partnership going.

Appendix C:
September 2008 Visit to Brazil and Closing Meeting



PARCERIA BRASIL-ESTADOS UNIDOS PARA O FORTALECIMENTO DA EDUCAÇÃO PROFISSIONAL

3 de setembro de 2008

São Paulo, SP

HOTEL:

Caesar Business Paulista

Av. Paulista, 2181 – Bela Vista

Fone: (55-11) 2184-1630/2184-1627

Diária: R\$173,00 + 5% + R\$1,20

Website: <http://www.sao-paulohotels.com/hotels/caesar-business-paulista-vsjpgtf.html>

CONTATOS:

Márcia Mizuno

Seção de Imprensa, Educação e Cultura – Embaixada dos Estados Unidos da América no Brasil

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E-mail: mizunoms@state.gov

Gabriela Goulart

USAID – Embaixada dos Estados Unidos da América

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Márcia Moreschi

SETEC – Ministério da Educação

Fones: (55-61) 2104-9615; 2104-7872

E-mail: marciamoreschi@mec.gov.br

AGENDA:

Terça-feira, 2 de setembro:

Manhã: Chegada do grupo em São Paulo (translado aeroporto/hotel a ser fornecido pelo HED).

19hs: Jantar ‘por adesão’ no L’Osteria do Piero (restaurante italiano).
Alameda Franca, 1509 – Jardins

Quarta-feira, 3 de setembro:

Café-da-manhã no hotel.

Check-out (deixar bagagens no hotel).

08h15: Saída do hotel rumo ao CEFET-São Paulo.
Rua Pedro Vicente, 625 – Canindé

09hs: **Reunião bilateral Brasil-Estados Unidos**

- Boas-vindas:

- **Getulio Marques Ferreira**, Diretor de Desenvolvimento da Rede Federal de Educação Tecnológica - Secretaria de Educação Profissional e Tecnológica do Ministério da Educação –SETEC/ MEC
- **Garabed Kenchian**, Diretor-Geral do Centro Federal de Educação Tecnológica de São Paulo – CEFET-SP
- Representante da Assessoria Internacional do Gabinete do Ministro – AI/GM
- **Laura Gould**, Consulado Geral dos Estados Unidos da América em São Paulo
- **Adriane Rocha**, Ford Motors Brasil

09h15: Panorama da educação profissional no Brasil e a visão do Ministério da Educação sobre a Parceria Brasil-Estados Unidos para o Fortalecimento da Educação Profissional

- **Márcia Moreschi**, Secretaria de Educação Tecnológica, Ministério da Educação – MEC

10h00: Relatos da primeira fase do intercâmbio: Visita de especialistas brasileiros aos Estados Unidos em junho de 2008:

- **Paulo de Tarso Costa Henriques**, CEFET Paraíba
- Representantes dos 5 colleges americanos (5-7 minutos para cada representante)
 - San Diego Miramar College
 - Macomb Community College
 - Northern Virginia Community College
 - Houston Community College
 - Alamo Community College System

11h00: Intervalo.

11h15: Discussão sobre os objetivos a serem atingidos nessa etapa da Parceria:

- **Márcia Moreschi**, Secretaria de Educação Tecnológica, Ministério da Educação
- **Mary Gershwin**, Consultora do Intercâmbio, Higher Education for Development

12h30: Final da reunião. Retorno para o hotel.

13h15: Chegada ao hotel. Almoço livre.

À tarde: Partidas para os aeroportos de Guarulhos e Congonhas.

Embarque para os estados-anfitriões.

- San Diego Miramar College para João Pessoa, Paraíba
- Macomb Community College para Belém, Pará
- Northern Virginia Community College para Cuiabá, Mato Grosso
- Houston Community College para Vitória, Espírito Santo
- Alamo Community College System para Porto Alegre, Rio Grande do Sul



U.S.-Brazil Partnership for the Strengthening of Vocational-Technical Education

Sept. 2-3, 2008
São Paulo, SP

HOTEL:

Caesar Business Paulista

Av. Paulista, 2181 – Bela Vista

Phone: (55-11) 2184-1630/2184-1627

Hotel rate: R\$173,00 + 5% + R\$1,20

Website: <http://www.sao-paulohotels.com/hotels/caesar-business-paulista-vsjpgtf.html>

CONTACTS:

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USAID – U.S. Embassy Brasília, Brazil

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E-mail: ggoulart@usaid.gov

Márcia Moreschi

SETEC – Ministério da Educação

Phones: (55-61) 2104-9615; 2104-7872

E-mail: marciamoreschi@mec.gov.br

AGENDA:

Tuesday, Sept. 2:

Morning: Arrival of U.S. participants (HED will provide airport/hotel transfer).

7:00pm: ‘No-host’ dinner at L’Osteria do Piero (Italian restaurant).
Alameda Franca, 1509 – Jardins

Tuesday, Sept. 3:

Breakfast at hotel.

Check-out. (leave luggage at hotel for later pick-up).

- 08:15am: Depart hotel for CEFET-São Paulo.
Rua Pedro Vicente, 625 – Canindé
- 09:00am: U.S.-Brazil Bilateral Meeting
- Official welcome:
- **Getulio Marques Ferreira**, Director for the Development of the Federal Technological Education Network - Secretariat of Technological Education, Ministry of Education – SETEC/ MEC
 - **Garabed Kenchian**, General Director, São Paulo Federal Center for Technological Education – CEFET-SP
 - **Representative**, International Affairs Office, Ministry of Education –
 - **Laura Gould**, Cultural Affairs Officer, U.S. Consulate General – São Paulo
 - **Adriane Rocha**, Ford Motors Brazil
- 09:30am: Panorama of Brazilian voc-tech education and the Ministry of Education’s vision of the U.S.-Brazil Partnership for the Strengthening of Voc-Tech Education”
- **Getulio Marques Ferreira**, Director for the Development of the Federal Technological Education Network - Secretariat of Technological Education, Ministry of Education – SETEC/ MEC
- 10:00am: Sharing results of June visit to the U.S. by Brazilian Specialists:
- **Paulo de Tarso Costa Henriques**, CEFET Paraíba
 - Representative from the U.S. colleges (5-7 minutes for each college):
 - San Diego Miramar College
 - Macomb Community College
 - Northern Virginia Community College
 - Houston Community College
 - Alamo Community College System
- 11:00am: Break.
- 11:15am: Discussion of ‘deliverables’ for this stage of the Partnership:
- **Márcia Moreschi**, Secretariat of Technological Education, Ministry of Education
 - **Mary Gershwin**, Exchange Consultant, Higher Education for Development
- 12:30pm: End of meeting. Group returns to hotel.

13:15pm: Group arrives at hotel.

1:30pm: Lunch on your own.

Aft/eve: Groups depart for airport (make taxi arrangements according to departure times).

Groups depart São Paulo for the first host-CEFET.

- San Diego Miramar College to João Pessoa, Paraíba
- Macomb Community College to Belém, Pará
- NOVA to Cuiabá, Mato Grosso
- Houston Community College to Vitória, Espírito Santo
- Alamo Community College System to Porto Alegre, Rio Grande do Sul

Appendix D:
October 2008 U.S. Community College Best Practices Reports

Alamo Area Academies

Time Frame: 2002-2008

Focus Area: Public/Private Partnerships, Improving Student Success

Alamo Community Colleges
201 W. Sheridan
San Antonio, Texas 78204
www.accd.edu/academies
www.accd.edu/ewd

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Summary

The Alamo Area Academies, an innovative training and educational partnership, provide education, experience and job opportunities for high school students seeking to jump-start their futures and make a seamless transition from high school to college and/or to the workplace. Qualified students receive training in high-wage demand occupations during their junior and senior years of high school. They earn one year of college credits and enjoy paid internships introducing them to careers in key local industries. Participating employers benefit through access to a continuous pipeline of skilled entry-level workers trained to their specifications.

Mission

The mission of the Academies is twofold:

- to spur the transformation of the San Antonio economy into one dominated by industries that emphasize high-skill, well-paid employment.
- to increase opportunities for young San Antonians to have rewarding, well-paid professional careers in San Antonio. The Academies will provide the talent pipelines that high-skill, high-wage industries need to thrive in San Antonio. They will do this by providing industry-driven dual-credit programs for high school juniors and seniors that prepare these students for higher education and for skilled employment in the participating industries.

Vision

The Academies' vision for succeeding in its mission is built on several basic principles:

- The Academies are a community partnership of businesses, the City of San Antonio, the Alamo Community College District, local universities, Alamo Worksource, the San Antonio Manufacturers Association, Port San Antonio, the Greater San Antonio Chamber of Commerce, and many other interested parties. The essence of the partnership is that each partner contributes to it and gains from it.
- The Academies are industry-driven workforce development initiatives designed to function as potent tools for economic development by training a workforce with the skills the participating industries need.
- The Academies aim to increase opportunities for young San Antonians to hold rewarding, well-paid jobs.
- The Academies also aim to increase the share of San Antonio high school students who graduate and go on to earn college degrees by providing college credits and exposure to occupations that demand a college education.
- The Academies are inclusive. All employers in the participating industries are welcome to join as participants. Students from across the San Antonio metropolitan area and surrounding communities are encouraged to enroll.
- The Academies combine rigorous academic instruction with real-world applications, including the summer internships that are part of the design of Alamo Area Aerospace Academy (AAAA), Information Technology & Security Academy (ITSA) and Manufacturing Technology Academy (MTA).

Challenges and Needs

This part-time program was designed so that all students remain enrolled in their home high schools. During their junior and senior years (second last and last years of high school) these students take half of their classes at their high school and the other half at the community college. The academy program provides enough flexibility to offer its programs in the morning or afternoon according to the needs of the home high school.

Graduates from the two-year program earn 27-31 college semester hours at no personal cost. They earn a Level I Certificate of Completion through a community college along with their high school diploma. Sophomore students from all the Independent School Districts, charter schools and private high schools in the Bexar County area are eligible to apply to the program.

The one-of-a-kind, nationally recognized, award-winning Academies program is an innovative training and educational partnership of:

- The cities of San Antonio, New Braunfels and Seguin
- Alamo Community Colleges (ACC)
- All greater San Antonio area school districts and many private and charter schools
- Aerospace companies
- Information technology firms
- Manufacturing companies, the San Antonio Manufacturers Association, the New Braunfels Manufacturers Association and the Seguin Economic Development Council
- Port San Antonio
- The Greater San Antonio Chamber of Commerce and the Chambers of Commerce of New Braunfels and Seguin, and
- Workforce Solutions – Alamo.

Each partner brings a unique contribution to the Academy. ACC provides facilities, equipment and instruction; the school districts provide textbooks and round trip transportation from students' home campuses to the college sites; employers pay the salaries of their summer interns; and the City funds staff salaries and operating costs. The Academies are also supported by Workforce Solutions - Alamo, and have received grants from the U. S. Department of Labor and the Texas Governor's Office. Students from the Academies use community college instructors, classrooms, equipment and laboratories to prepare for careers in the aerospace, information technology and security, and manufacturing industries. These careers match three of the six industry clusters identified by Workforce Solutions - Alamo as high-wage, high-skill growth industries essential to the prosperity of San Antonio and surrounding region.

Conceptual Model and Implementation

The Academies provide a bridge between the Kindergarten and 12th Grade (*jardim de infância até o ensino médio*) and post-secondary systems, creating a path to life-long learning for the participating students. The Bureau of Labor Statistics states that “80% of the fastest growing jobs in the United States require some education past high school.” The Academies pipeline supports

the graduation initiatives outlined in the Texas Higher Education Coordinating Board “Closing the Gaps” higher education plans. Moreover, the Academies support the San Antonio region’s economic development efforts by helping to recruit, train and retain qualified employees in the Aerospace, Manufacturing, and Information Technology sectors. The successful Academy model is ready to respond to new industry demands for education pipelines in such fields as biotechnology, nursing, and other allied health occupations.

The Academies are evolving into a regional workforce development system, starting with a new Manufacturing Technology Academy that opened in August 2007 at the Central Texas Technology Center (CTTC) in New Braunfels, about 39 miles (63 km) from San Antonio. In August of 2008 we opened an Information Technology and Security Academy at the CTTC and a new Manufacturing Technology Academy at Sam Houston High School on the East Side of San Antonio. Further regional expansion is expected in the fall of 2009.

Industry-paid Internships

The Alamo Academies offer students an industry-paid internship in the summer between their junior and senior years. Students work full time for 8 weeks for a participating employer, earning more than \$2,560 for the summer. Local industries have agreed to provide hiring preference to successful interns after they graduate. The industry partners providing summer internships in recent years have included Lockheed Martin, Boeing, Rackspace, HEB, Karta, AT&T, Broadway Bank, Chromalloy, UTSA, Pratt & Whitney, KLN Steel, Cox Manufacturing and Kinetic Concepts Inc.

Results

- 425 graduates (96% continued higher education [community college/4-year institution], obtained jobs with the Aerospace, Manufacturing or IT Industries, or joined the Military)
- Last three graduating classes (181) awarded over \$387,000 in Scholarships
- Gender: Males: 83%, Females: 17%
- Ethnicity: Hispanic: 62%, Caucasian: 33%, African-American: 3%, Asian: 2%
- Average starting hourly wage all graduates: \$10.52 per hour
- Average starting pay \$28,446: Salary: \$21,882 (\$10.52 x 2080 hrs) plus ~ \$6,564 in benefits

Lessons Learned

From the Academies, the ACC learned the following lessons:

- Industry or demand-driven curriculum promotes relevance.
- Dual-credit design promotes academic rigor.
- Connection to industry mentors and internships ensures availability of jobs and enhances graduation rates.
- Parental involvement helps motivate students to achieve.

- College transition services facilitate enrollment in ACCD after graduation from the Academies.
- Community Partners help to finance program which brings relevance to students, faculty, and partnerships.

Financing and Resource Commitments

Financial resources for the Academies come directly from the partners involved which includes the Cities of San Antonio, New Braunfels and Seguin; the Alamo Community Colleges; each of the greater San Antonio area school districts and many private and charter schools; industry; Workforce Solutions – Alamo; economic development councils and chambers of commerce; and the Port of San Antonio.

Evaluation and Data

GRADUATION PLACEMENTS (2002-2008)

Academies	Graduates	Targeted Industry Jobs	Other Jobs	Military	Higher Ed	Moved/Unknown
AAAA 2002-2008	222	165	7	5	42	3
ITSA 2004-2008	163	6	0	7	145	5
MTA 2005-2008	40	24	4	0	11	1
Total	425	195	11	12	198	9
Percentage		46%	2%	3%	47%	2%

ETHNIC BACKGROUND (2002-2008)

Academies	Hispanic	Caucasian	African-American	Asian
Aerospace	122	93	7	0
Info Technology and Security	106	43	6	8
Manufacturing Technology	34	6	0	0
Total	262	142	13	8
Percentage	62%	33%	3%	2%

The Academy students' ethnic background mirrors that of San Antonio as a whole, with the majority of the student population in all Academies coming from minority groups and a large proportion of Hispanic students. We are excelling at reaching the under-served portion of our population.

GENDER (2002-2008)

	Male	Female
Aerospace	195	27
Info Technology and Security	123	40
Manufacturing	33	7
Total	351	74
Percentage	83%	17%

Contrary to the stereotype that these are predominantly male occupations, a significant percentage of the Academies' students are young women and increasing yearly.

Achieving the Dream at Houston Community College October 2008

There have been three major strategies used at Houston Community College (HCC) to improve student success, especially for students of color and students of low income:

(1) Freshman Success Courses, (2) Learning Communities, and (3) Bridge Courses in Developmental Math. The following offers a brief explanation of each with results obtained thus far.

Freshman Success Courses

Many if not most first time in college students who enroll at HCC have only a general understanding of what they want to accomplish with their educational studies. They have not been fully informed of many career possibilities and the ways in which they can obtain the requisite knowledge and skills for those careers through educational programs at HCC.

HCC had a "study skills course" that was required of students who tested into developmental education, but we decided this course was insufficient to truly prepare students for success. We upgraded and broadened the course into the current GUST 1270: College and Career Exploration. This course is designed to ensure not only a thorough introduction and orientation to the college experience and expectations for students, but also to require them to complete interest inventories and career exploration so that they will commit to a major and file a degree plan by the end of the course (their first semester in college).

Beginning with a limited introduction at one of the six HCC colleges in Fall 2005, positive results in terms of increased student persistence and completion by students who took the course led to a gradual expansion of the strategy to the point where we are now requiring this course (Fall 2008) for ALL first time students at HCC who have obtained less than 12 semester credit hours (SCH) of college credit.

Students who know of a particular career interest may opt instead for one of the other subject specific freshman success courses: ENGR 1201: Introduction to Engineering; EDUC 1201 – Careers in Education; or HPRS 1201: Introduction to the Health Professions. We are currently working on development of additional subject specific success courses.

Overall, there was a significant improvement in term-to-term persistence rates for students who took GUST 1270 in Fall 2006 over baseline students from Fall 2003. The Fall 2006 students persisted at rates of 78.9 percent from first fall to next spring, 59.3 percent from first fall to next fall, and 49.8 percent from first fall to second year spring. This is in contrast to "baseline" students from Fall 2003 (those assessed as needing remediation but who did not take a GUST 1270 or similar course) who persisted at much lower rates: 70.7 percent from first fall to next

spring, 52.8 percent from first fall to next fall, and only 29 percent from first fall to second year spring.

All GUST 1270 students made gains, but those by African-American and Hispanic students were most dramatic. Hispanic students gained 15.4 percent in their first fall to next spring persistence rates; 14.4 percent in their first fall to next fall persistence rates, and 26 percent in their first fall to second year spring persistence rates. African-American students gained 5.3 percent in their first fall to next spring and 13.1 percent in their first fall to second year spring persistence rates.

Learning Communities

A “learning community” is the purposeful linking of two or more courses at a campus in which students are co-enrolled. The faculty of the courses meet to coordinate their syllabi, including reading, learning activities, and learning objectives. The main rationale for the learning community is to provide students with greater opportunities for social and academic engagement – the factors identified in the research literature as most significant in terms of increasing student persistence and success. The students have more opportunity to know and interact, not only with each other, but with the faculty members, who incorporate active and collaborative learning activities.

The initiation of Learning Communities began at HCC-NE College in Fall 2005, expanded to HCC-Southeast in Fall 2006, to HCC-SW College in Fall 2007, to HCC-Central in Fall 2008 and are now being planned by all of the HCC Colleges.

Significant gains in persistence rates have been documented for students in HCC Learning Communities compared with peer students in similar non-linked courses. Especially noteworthy is the persistence rate from Fall 06 to Spring 07, where the Learning Community students persisted at a rate nearly 20 percent higher than the control group students (87.8 percent compared to 68.3 percent).

Learning Community students also continued to persist at higher rates compared to the control group students in subsequent semesters (53.7 percent compared to 45.1 percent in Fall 2007, and 43.9 percent compared to 37.2 percent in Spring 08). African-American students in Learning Community courses had the highest gains in course completion rates – 14.1 percent higher than other African-American students in similar non-linked courses (66.7 percent to 52.6 percent.) This significant improvement in persistence of students completing college courses mirrors results from several other research efforts across the nation.

HCC was selected by one of the national ATD partners, MDRC, to participate in a nation-wide study of Learning Communities in five major community colleges. Beginning in Fall 2007 and continuing through Spring 2009, MDRC is working with three HCC Colleges (NE, Central, and SE) to conduct a random sample study. Students are recruited and informed about Learning Communities during registration. They receive a \$25 book voucher to listen to the Learning Communities orientation and elect to participate or not. Of those electing to participate, half are assigned to Learning Communities and half are not. The results will then be studied in terms of student persistence and achievement rates to determine the impact of the Learning Community design.

Development Math Bridge Courses

Student progress in developmental education, especially math, is often slow and discouraging. Developmental math at HCC consists of three courses: MATH 0306: Fundamentals of Math, MATH 0308: Introduction to Algebra, and MATH 0312: Intermediate Algebra. Students are assessed on the ACT COMPASS exam prior to registration and course placement. According to their scores, they are either placed into one of the three levels of developmental math or the first college level course, College Algebra: MATH 1314.

Each of the three developmental math courses administers a standardized final exam and requires students to pass the exam and the course with a grade of C prior to advancing to the next level. The courses, as most HCC courses, are offered in the traditional format of 16 weeks. Such a long semester allows for “life to get in the way” of many developmental students – problems with jobs, child care, other family issues, etc.

The idea of the bridge courses is to provide shorter, modular courses that may be taken in a condensed time – 4 weeks – and in a flexible format with the student having access to a computer lab with software exercises individually “prescribed” to address the students’ needs.

Beginning in Fall 2005, students in developmental math courses at HCC-NW College who made D grades in the traditional 16 week courses were recruited to enroll instead in the shorter 4 week “bridge” courses rather than repeat the 16 week course. The four week courses are 1-SCH courses as opposed to the longer 3-SCH courses.

The experimentation with Math “bridge courses” expanded from its home base at HCC-Northwest College to include HCC-Central and HCC-Southeast Colleges. Overall, 88 percent of MATH 0108 bridge course students successfully completed their course compared to “baseline” students from the Fall 2005 cohort who successfully completed MATH 0308 after a prior unsuccessful attempt at a rate of only 52.2 percent. Students in the MATH 0108 bridge course also had far less attrition (only 6 percent) compared to the baseline students who had a 34.4 percent attrition rate.

The expansion of the course redesign strategy to MATH 0112 produced similar results, with the bridge course students succeeding at a 47 percent rate compared to a 39 percent rate of the MATH 0312 baseline students. The attrition rate for the MATH 0112 students was zero percent compared to a 49 percent attrition rate for the MATH 0312 baseline students.

The bridge course strategy will be expanded to develop MATH 0106 this year and used with increased numbers of students to verify prior successful results.

Two-page summaries of the research data for each of the strategies above are included in an appendix below

APPENDIX: STRATEGY REPORTS: GUST 1270, LEARNING COMMUNITIES, MATH BRIDGE COURSES



Term-to-Term Persistence Rates for Southwest College Student Success Course Fall 2006



Research Question: Is there improvement in term-to-term persistence of developmentally-assessed students who took the new Student Success Course in Fall 2006 compared to developmentally-assessed students from the Baseline Fall 2003 AtD cohort who did not take any orientation or student success course?

Results: Overall there was a significant improvement in term-to-term persistence rates for Student Success Course students in Fall 2006 over the selected baseline students from Fall 2003. Student Success Course students' gains were 8.2% for the first Fall to Spring, 6.5% for the first Fall to Fall, and 20.8% for the first Fall to the second Spring semester.

All student success course students made gains, but those by developmentally-assessed African-American and Hispanic students were most dramatic. Hispanic success course students gained 16.4% in their first Fall to Spring, 14.4% in their first Fall to Fall, and 26% in their first Fall to second Spring semester. African-American success course students gained 5.3% in their first Fall to Spring and 13.1% in their first Fall to second Spring semester. (See graphs on page 4.)

Although no significant improvements in grades were found for developmentally-assessed students, the impressive gains in persistence over their first four long semesters is clear justification of the efficacy of the new Student Success Course.



Sources: HCCS Academic History Files (HCOIR1446_d & _f) to determine Course Success Rates for Southwest College GUST 1270 FTIC Dev-Assessed Students for Fall 2006 and AtD FTIC Dev-Assessed Students for Cohort Term 2003.

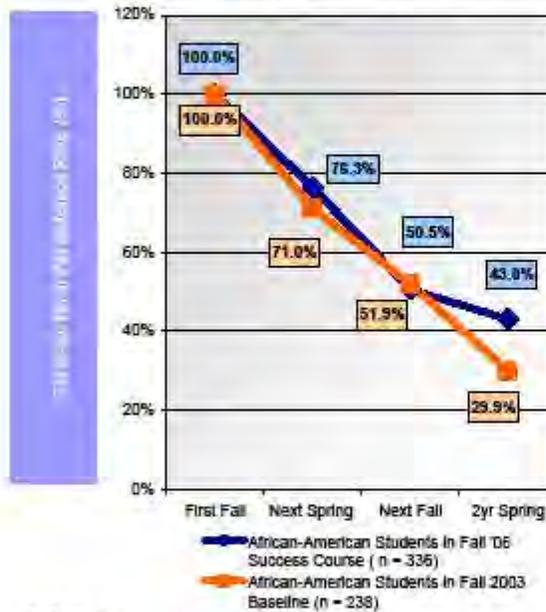


Term-to-Term Persistence Rates for Southwest College Student Success Course Fall 2006

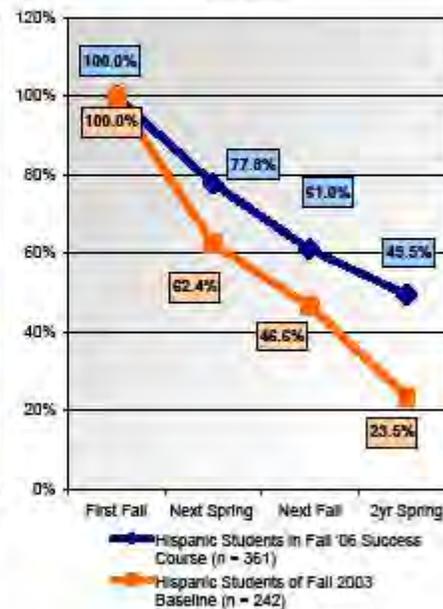


Research Question: Is there improvement in term-to-term persistence of developmentally-assessed minority students who took the new Student Success Course in Fall 2006 compared to developmentally-assessed minority students from the Baseline Fall 2003 AtD cohort who did not take any orientation or student success course?

**Term-to-Term Persistence Rates
African-American Success Course
Students versus Fall 2003 African-
American Baseline Students**



**Term-to-Term Persistence Rates
Hispanic Success Course Students
versus Fall 2003 Hispanic Baseline
Students**



Definitions:

Student Success Course: The new Student Success Course, GUST1270, provides information beyond a standard orientation course, which includes study skills and test taking training, career exploration, time management techniques, registration assistance, financial aid advising, and academic advising.

Baseline Fall 2003 AtD Cohort: The Fall 2003 first-time-at-HCC cohort extracted as the Achieving the Dream (AtD) cohort.

Developmentally-Assessed Students: Students were considered developmentally assessed solely from their test placement scores.

Minority Students: As defined by AtD, African-American and Hispanic students are classified as minority students.

Term-to-Term Persistence Rate: Percentage of students enrolled in one semester that enroll in subsequent semester.

Sources: HCCS Academic History Files (HCOIR1446_d & _f) to determine Course Success Rates for Southwest College GUST 1270 FTIC Dev-Assessed Students for Fall 2006 and AtD FTIC Dev-Assessed Students for Cohort Term 2003.



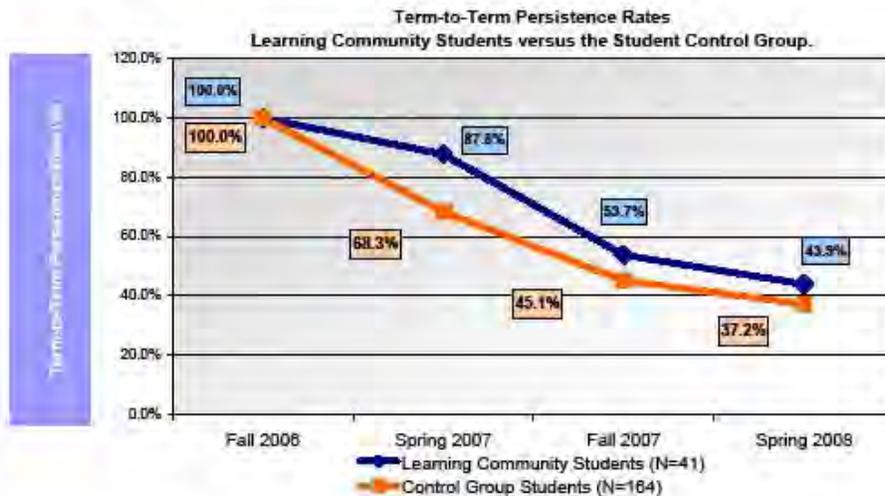
Term-to-Term Persistence Rates for Northeast College Learning Communities Fall 2006



Research Question: Is there improvement in term-to-term persistence of students in learning community linked classes in Fall 2006 compared to their student peers in similar non-linked classes?

Results: Students in Learning Community linked classes persisted at substantially higher rates than peer students in similar non-linked classes. Especially noteworthy is the persistence rate from Fall 2006 to Spring 2007, where the Learning Community students persisted at a rate nearly 20% higher than the control group students (87.8% compared to 68.3%). Learning Community students also continued to persist at higher rates compared to the control group students in subsequent semesters (53.7% compared to 45.1% in Fall 2007, and 43.9% compared to 37.2% in Spring 2008).

This significant improvement in the persistence of students in learning communities mirrors results from several other research efforts across the nation. The gains are partially due to the increase in course success rates, and partially due to increased student engagement with instructors, counselors and other students.



Definitions:

HCC Learning Community: Learning communities consist of two classes of different disciplines linked at registration and providing shared content by a team of instructors and a counselor during adjointed class periods.

Control Group: A matched group of peer students in similar classes, but not in linked classes.

Term-to-Term Persistence Rate: Percentage of students enrolled in one semester that enroll in subsequent semester.

Source: HCCS Academic History Files (HCOIR1446_d & _a) to determine Persistence Rates for Northeast College Learning Community students and the non-Learning Community Control group, both enrolled in Fall 2006.



Successful Course Completion for Northeast College Learning Communities Fall 2006

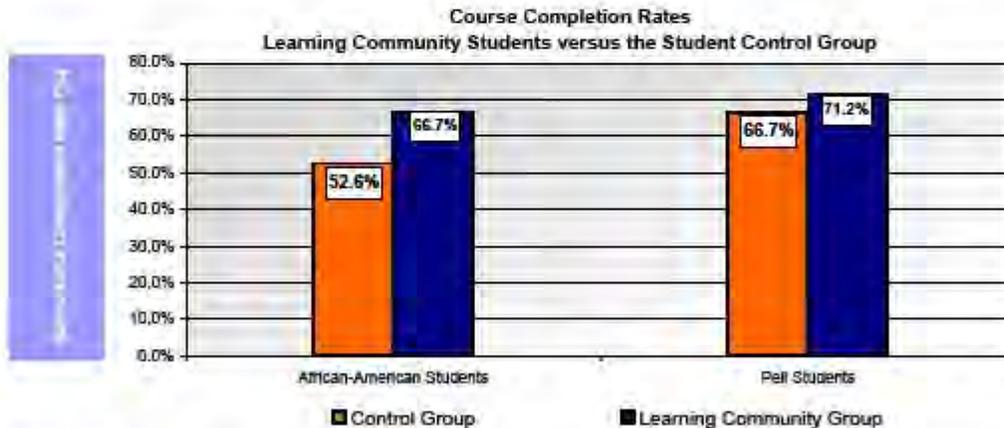


Research Question: Is there improvement in successful course completion rates of students in learning community linked classes compared to their peer students in similar non-linked classes?

Results: Overall, students in Learning Communities successfully completed their Learning Community classes at a 72.8% rate, and all their first Fall semester classes at a 68.8% rate. The entire Achieving the Dream Fall 2006 Cohort successfully completed their first semester classes at 69.8%.

African-American students in Learning Community linked classes had the highest gains in course completion rates – 14.1% higher than other African-American students in similar non-linked classes (66.7% to 52.6%). And for students receiving Pell Grants, the Learning Community course completion rate is 4.5% higher than other Pell students enrolled in similar non-linked classes (71.2% to 66.7%). African-American students in Learning Communities also had a course completion rate of 83.0% for all of their courses taken in their first Fall semester, compared to similar African-American students in non-linked classes, who had a course completion rate of 68.5%.

This significant improvement in the course completion rates of students in learning communities also mirrors results from several other research efforts across the nation. The gains are partially due to the shared course content, and partially due to increased student engagement with instructors, counselors and other students.



Definitions:

HCC Learning Community: Learning communities consist of two classes of different disciplines linked at registration and providing shared content by a team of instructors and a counselor during adjourned class periods.

Control Group: A matched group of peer students in similar classes, but not in linked classes.

Successful course completion rate: A primary outcome indicator of student success is the rate at which students complete their courses with a "C" or better grade. Such successful completion of coursework is required to accumulate credits desired for transfer or to earn an award or degree.

Source: HCCS Academic History Files (HCOIR1446_d & _a) to determine Persistence Rates for Northeast College Learning Community students and the non-Learning Community Control group, both enrolled in Fall 2006.



Successful Course Completion for Northwest College MATH 0108 Bridge Course Spring 2006 through Spring 2008

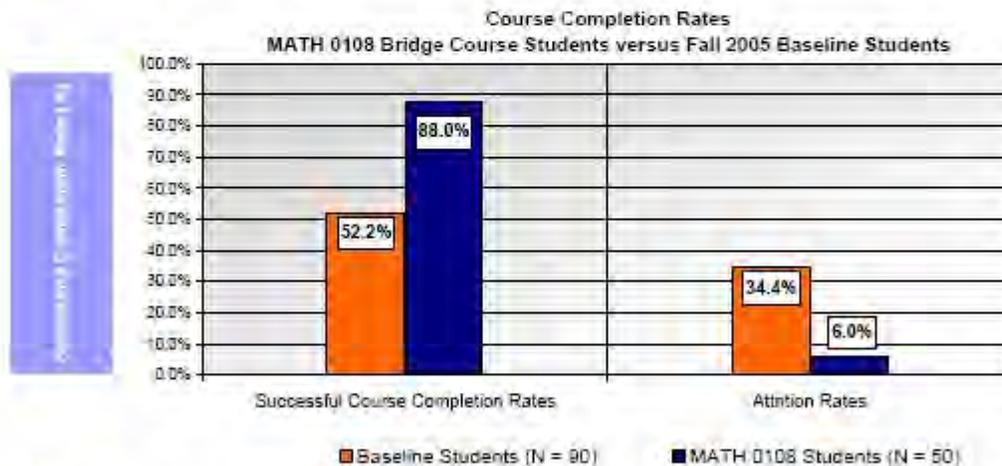


Research Question: Is there improvement in successful course completion rates of at-risk students (those who made a D grade in a prior attempt of Math 0308) taking the Math 0108 Bridge Course compared to their peer students re-taking the regular Math 0308 developmental course?

Results: Overall, 88% of MATH 0108 Bridge course students successfully completed their classes. The percentage of baseline students from the Fall 2005 AtD cohort who successfully completed their class after a previous unsuccessful attempt was 52.2%. In excess of 35% more of the Bridge students successfully completed their classes compared to the baseline students.

The rate at which Bridge students failed to complete the course (their attrition rate of 6%) is almost six times less than the baseline students (attrition rate of 34.4%).

This significant improvement in successful course completion and significantly deflated attrition rates sets optimistic expectations for future Bridge classes.



Definitions:

Math Bridge Courses: An intensive 1-credit 4-week developmental Math course modularly designed to remediate students lacking skills in just a few math areas, so that successful completers can enroll in the next level 12-week Math course within the same semester.

Baseline Students: A matched group of peer students selected from the Fall 2005 AtD Cohort, who were required to retake their developmental Math course in a future 16-week semester, but who would have qualified to retake as a bridge course.

Successful course completion rate: A primary outcome indicator of student success is the rate at which students complete their courses with a "C" or better grade.

Attrition Rate: The rate at which students fail to complete a course after official day, categorized as percent of withdrawals and incompletes of those enrolled.

Source: HCCS Academic History Files (HCCOIR1446e_2005_d&a&GR_NWMath0308.sav) to determine Baseline rates



Successful Course Completion for MATH 0112 Bridge Course Summer 2006 and Spring 2008

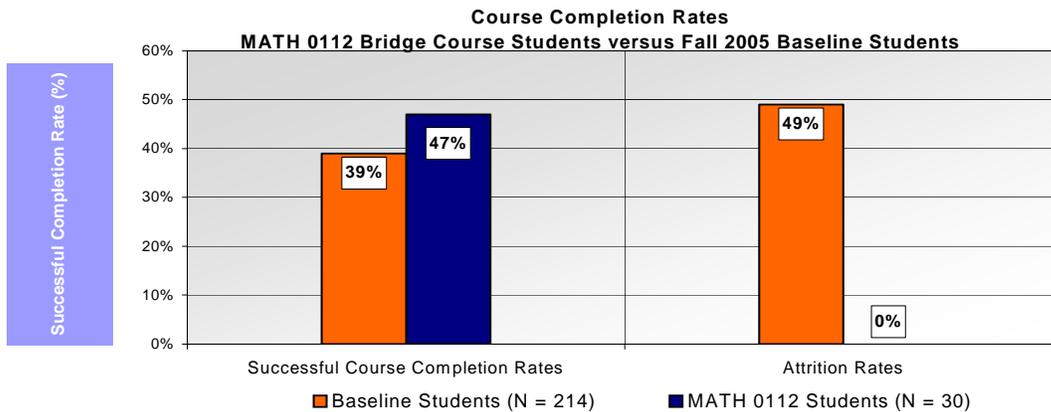


Research Question: Is there improvement in **successful course completion rates** of at-risk students (those who made a D grade in a prior attempt of Math 0312) taking the **Math 0112 Bridge Course** compared to their peer students re-taking the regular Math 0312 developmental course?

Results: Overall, 47% of those students enrolled in the Intermediate Algebra **Bridge Courses** (Math 0112) **successfully completed** the 4-week course, compared to 39% of **baseline students**. While the **attrition rate** for the baseline students is 49%, all students completed the course work in the 0112 Bridge course.

In order to be admitted to the Bridge course these students were enrolled and must have obtained a D grade (60-69%) in three pilot Math 0312 (Intermediate Algebra) courses during a prior term. Those students who completed successfully the Math 0112 Bridge course are ready to enroll in the 12-week second start term of College Algebra, with the possibility to have completed within the same regular 16-week term, the last requirement for developmental math and college algebra.

The net result is an acceleration of the students through the developmental sequence which sets optimistic expectations for future Bridge courses.



Definitions:

Math Bridge Courses: An intensive 1-credit 4-week developmental Math course modularly designed to remediate students lacking skills in just a few math areas, so that successful completers can enroll in the next level 12-week Math course within the same semester.

Baseline Students: A matched group of peer students selected from the Fall 2005 AtD Cohort, who were required to retake their developmental Math course in a future 16-week semester, but who would have qualified to retake as a bridge course.

Successful course completion rate: A primary outcome indicator of student success is the rate at which students complete their courses with a "C" or better grade.

Attrition Rate: The rate at which students fail to complete a course after official day, categorized as percent of withdrawals and incompletes of those enrolled.

Source: HCCS Academic History Files (HCOIR1446e_2005_d&a&GR_NWMath0308.sav) to determine Baseline rates at Northwest College; NWC Math Department files on Bridge course students, Spring 2006 through Spring 2008.

Distance Education at Houston Community College

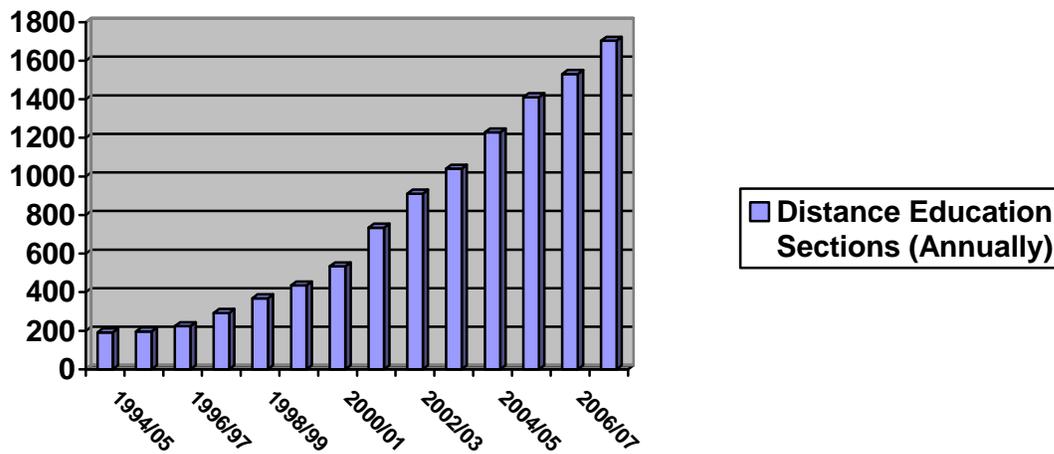
Visit the Distance Education website at: <http://de.hccs.edu>

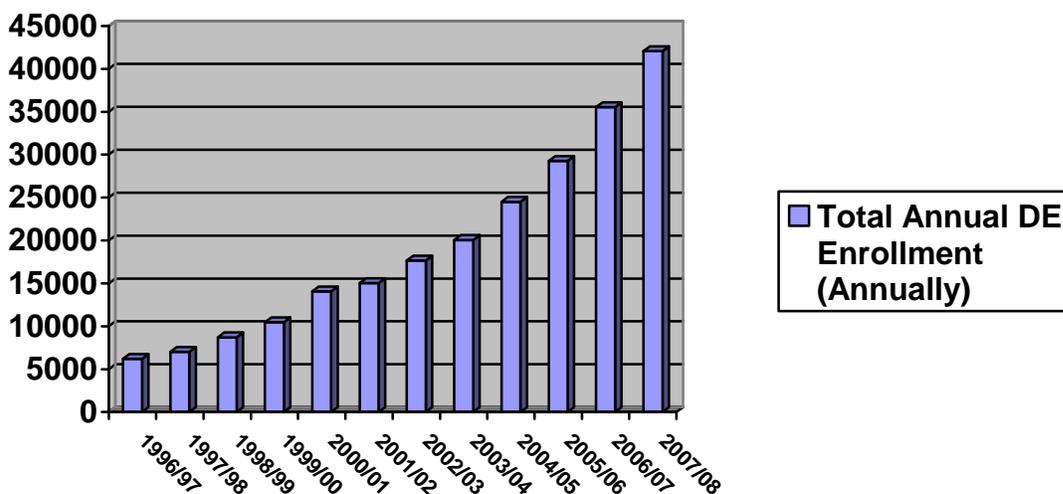
How big is Distance Education (DE) at HCC?

DE enrollment at HCC has grown at an average of over 20% per year for the past 8 years. During the past two semesters (summer and fall 08), enrollment growth has been greater than 30% over the same semester of the previous year.

Faculty participation in DE has also grown rapidly as demonstrated by the number of DE sections offered to students. Over 350 HCC faculty (full-time and part-time) now participate in the DE program.

The following two charts demonstrate the growth in enrollment and faculty participation:





What is the range of classes HCC offers?

Classes are offered in nearly 50 disciplines or subjects in both academic and career and technical education (workforce) areas.

For a complete listing of fall/08 classes, go to:

<http://de2.hccs.edu/courses/index.php?sem=6091>

What is our educational philosophy?

The mission of the Distance Education Department of Houston Community College is to collaborate with and support the colleges and district offices to provide students with a comprehensive array of credit and non-credit courses, programs, training, and associated services. Courses are delivered via technology; maximizing accessibility by removing the barriers of location and time. Distance Education courses and services of the highest quality must be delivered in a timely, customer-oriented, and cost-efficient manner.

What services are provided--registration, counseling and so on?

A full array of student services is available to DE students.

One of the great strengths of the DE department, which separates and distinguishes it from nearly all other programs of its kind around the country, is its DE-specific counseling and student services staff. HCC is the only community college in the country, that I am aware of, that provides specialized counseling and student services for distance learning students. This is a

tremendous asset and advantage as frequently described to the department by HCC students as well as colleagues and peers from other colleges.

See the DE home page at <http://de.hccs.edu> for additional student service links and information.

What software is utilized/provided?

HCC uses the Blackboard Vista learning management system exclusively. In addition, HCC has possesses institutional site licenses for a variety of other support applications that interface with Blackboard Vista are used. These include, but not limited to:

- AskOnline – HCC is the nation’s leader and standard-setter for the implementation and use of AskOnline, a self-hosted online tutoring service provided not only to DE but all HCC students as well. Writing critiques across all disciplines are provided by online HCC tutors as well as discipline specific tutoring in approximately 10 academic and workforce areas. Six new disciplines are planned to be added in academic year 08/09.
- Respondus – a tool for creating and managing online exams and quizzes that can be used within the Blackboard application and printed to paper.
- Respondus LockDown Browser – a custom browser that locks down the testing environment within Blackboard. Students are locked into the assessment and are unable to print, copy, go to another URL, or access other applications
- LessonBuilder – a powerful web lesson editor that lets you easily create interactive web lessons for e-learning classrooms. Faculty can create professional-looking, interactive content without having to be familiar with HTML or programming.
- Impatica – converts PowerPoint presentations for online delivery. These files can be included in the Blackboard classes.

How many types of online classes are offered?

In addition to the DE classes described earlier in this document, more than 350 additional HCC faculty teach *hybrid* and *web-enhanced* classes using this same software. Hybrid classes are taught 50% online and 50% in the physical classroom. Web-enhanced classes always meet in the classroom but present a significant amount of additional information and supplement their classes utilizing Blackboard Vista. Some faculty teach both DE and hybrid classes.

Do we have any certificate programs or entire degrees?

Yes. Entire A.A., A.S. and A.A.S. degree programs are available online as well as the entire core curriculum. (See the accompanying HCC Online flyer.)

What is the training for professors and stipends?

Faculty training to teach DE classes is one of the most extensive of any community college in the country.

All faculty teaching DE for the first time at HCC are required to have completed the minimum training requirements before teaching their first class. These include the following six, 4-hour classes offered through HCC's Certification in Instructional Technology program:

- Orientation to Distance Education at HCC
- Library Technology and Copyright Literacy
- Blackboard Vista I: Interface and Organization
- Blackboard Vista II: Content and Communication
- Blackboard Vista III: Assignments and Grading
- Blackboard Vista IV: Assessments and Reporting

In addition, a process also exists for faculty that have experience teaching DE classes at other colleges to "place out" of some of the above classes.

Stipends vary according to the contribution faculty make to the development of new DE classes. Categories include:

- a new online course developed "from scratch" by the faculty.
- a course using an e-pack for major part of instruction. E-packs are ready-made content produced by publishing companies to assist instructors with online content.
- a new section of a master course (see the description of HCC Online Master Courses in the section below).
- an existing course in which faculty replace the instructor who originally developed the course.

What are the lessons learned and other features of the DE program at HCC?

- It is estimated that community colleges enroll nearly two thirds of all online students while also enrolling nearly half of all post-secondary students in the U.S. Allen and Seaman (2004) also found that, within postsecondary education, community colleges have the largest number of students taking at least one online course. Online education and DE in particular will continue to play a larger and larger role in educating community college students.
- As students continue to ask for more and more online courses and programs, they are also requesting them in more flexible times to fit their busy schedules. DE and HCC faculty have responded by not only offering a wide variety of 16-week classes, but "flex entry" classes in the form of second start (12-week), 10-, 8-, 7-, 6-, and 5-week versions as well as now offering mini-term DE classes. DE now offers over 300 flex entry classes to students. We will continue to expand this component of our service.
- The 2007 Distance Education Survey Results study states that "70% of respondents indicated their college not offering enough distance education courses to meet the student demand." (Lokker, Women, and Mullins, 2008, p.6).
- Readily available, up-to-date, and quality faculty training is critical for faculty to begin teaching online. DE instruction requires a different pedagogical approach than on-campus classes. Continued and improved training must be provided so faculty can be aware of new technologies and techniques and then implement them in their teaching.

- A distance education survey was recently conducted through the Instructional Technology Council (ITC), an affiliated council of the AACC. The ITC represents and provides networking and support for distance education efforts throughout the U.S. and Canada. According to their *2007 Distance Education Survey Results: Tracking the Impact of e-Learning at Community Colleges* (Lokken, Womer, & Mullins, 2007):

“Respondents reported comparative enrollment trends in distance education for Fall 2005 to Fall 2006 (the most recent full year of data available for most colleges in November 2007). Campuses reported a 15 percent increase from fall-to-fall for distance education enrollments for the 2006 survey, substantially ahead of overall campus enrollments which averaged two percent nationally. For the 2007 survey, respondents reported an increase of 18 percent increase in e-learning enrollments from Fall 2005 to Fall 2006, which reflected a recurring robust pace for enrollment growth.”

A total of 154 colleges responded to the survey. “The respondents identified themselves as Associate's colleges (95.45 percent) or Associate's dominant colleges (3.25 percent)” (Lokken, Womer, & Mullins, 2007). *HCC's DE enrollment is increasing at a rate significantly greater than the percentages indicated in this study.*

Some of the colleges reporting include hybrid class enrollments in their statistics and count them as distance learning. HCC does not.

- DE has undergone a successful re-accreditation and substantive change process through the Southern Association of Colleges and Schools (SACS).
- In many ways, DE at HCC is similar to operating a medium-sized virtual college. Through the participation of faculty from throughout HCC, DE operates and supports its own IT (technical support) department, student services specifically for online students, instructional support, faculty training, continuing education and contract training classes, help desk, comprehensive web pages, and other services.
- DE has developed online systems for student evaluation of instruction, early alert referral systems for at-risk students, mandatory student orientations, and others that are currently implemented. Data are provided to deans and department chairs for evaluation.
- DE has led in the development and continued growth of HCC Online Master Courses. Master courses are complete, fully-developed courses for online delivery in DE, hybrid, and web-enhanced environments. They satisfy the curriculum requirements as set forth by disciplines and meet the criteria of a standardized rubric. Once a master course is developed it will be available for use by all HCC faculty teaching the course. HCC Online Master Courses have a variety of benefits, some of which are:
 - They impact large numbers of students. Master courses are chosen based on their popularity with students in both the distance education and hybrid delivery modes.
 - They generate substantial development cost savings. A master course should only be developed once with periodic updates. Although all faculty can personalize any master course when they use it to teach, there will be little need for individual faculty to develop entirely new versions of that course in the future.
 - They set a high standard of quality. Since these courses are developed by a team of HCC faculty, they undergo quality reviews by department chairs, peers, and instructional specialists. High quality is assured and maintained through a periodic revision process.

To date, 16 HCC Online Master Courses have been developed, primarily in the core curriculum area.

- DE uses the READI (the Readiness for Education At a Distance Indicator) assessment for HCC student use. READI is the most comprehensive solution for assessing the varying levels of student aptitude and readiness for online learning. Go to: <http://de.hccs.edu/portal/site/de/menuitem.2e0a9b61f5a0dfa9759b8e10507401ca/?vgnextoid=8dc793cd88ed9110VgnVCM100000054710acRCRD&vgnnextchannel=932a3041704c9110VgnVCM100000054710acRCRD&vgnnextfmt=default> to review READI.
- DE utilizes a free sample Blackboard Vista course for students. It is called the Successful Online Students (SOS) course. It is designed to accomplish two primary goals:
 - To offer visitors a look into a free, sample Blackboard course and learn the interface.
 - To provide prospective and/or current students with an introduction to the DE department and online learning at HCC.

The course can be found at:

<http://de.hccs.edu/portal/site/de/menuitem.2e0a9b61f5a0dfa9759b8e10507401ca/?vgnextoid=e28cd03177fc9110VgnVCM100000054710acRCRD&vgnnextchannel=ab1a3041704c9110VgnVCM100000054710acRCRD&vgnnextfmt=default>

- DE now uses the “team approach” in the development of instructional modules to improve course quality. This includes instructional design and web-based media specialist input into the development of all new distance education classes as well as in the development of all HCC Online Master Courses.
- For the past year and a half, DE has been providing online dual credit courses for high school students in the Houston area.

Additionally, a variety of distance education-related student and technology support services offered by community colleges around the country were surveyed by the ITC. Their *2007 Distance Education Survey Results: Tracking the Impact of e-Learning at Community Colleges* (Lokken, Womer, & Mullins, 2007) revealed the following results of these other colleges compared to the DE services offered by HCC.

STUDENT SERVICES AND TECHNOLOGY SUPPORT

Service/Technology currently offered or planned to offer within one to two years

Service/Technology	Currently Offered	Plan to Offer	DE/HCC Offers
Audio/video streaming	62%	38%	Yes
Campus testing center for DE students	73%	27%	Yes
Dedicated web site for DE program	86%	14%	Yes
DE-specific faculty training	96%	4%	Yes
Help desk and tech. support for DE faculty	94%	6%	Yes
Help desk and technical support for DE students	91%	9%	Yes
Online admission to institution	84%	16%	Yes
Online counseling and advising services	51%	49%	Yes
Online information and application for financial aid	86%	14%	Yes
Online library services and resources	96%	4%	Yes

Online payment of tuition and fees	86%	14%	Yes
Online plagiarism evaluation	54%	46%	Yes
Online registration for classes	89%	11%	Yes
Online student course evaluation	84%	16%	Yes
Online student orientation for DE classes	75%	25%	Yes
Online textbook sales	72%	28%	Yes ¹

Bibliography

Allen, I. E., & Seaman, J. (2004). *Entering the mainstream: The quality and extent of online education in the United States, 2003 and 2004*. Retrieved January 27, 2005, from The Sloan Consortium Web site: <http://www.sloan-c.org/resources/resources/survey.asp>

Lokken, F., Womer, L., & Mullins, C. (2008). 2007 Distance education survey results. Tracking the impact of e-learning at community colleges. Instructional Technology Council. Retrieved June 19, 2008, from http://www.immagic.com/eLibrary/ARCHIVES/GENERAL/AACC_US/I080318L.pdf

1. Basic Data about the Best Practice

1.1 Title of the "best practice"

Partnering with industry to provide workforce training

1.2 Time period of the initiative

Continuous, Annual cycle with industry partners

1.3 Focus Area of Best Practice (such as inclusion or business partnerships)

Business partnerships

2. Background about the Institution

2.1 Name of Institution

Macomb Community College

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3. Overview of the Best Practice

This best practice addresses the college's challenge to prepare the regional workforce with necessary skills as well as to serve businesses in the region. Through these processes, the college assists businesses in identifying organizational performance goals and how to address the corresponding workforce skills gaps through education and training.

The goal of this practice is for the college to develop industry relationships to become the preferred partner for education and customized training. This is accomplished through the college's ability to systematically identify and address workforce skills gaps through customized training in order to improve a business's overall performance.

Community College results:

- Workforce development for the community
- Economic development in strengthening the region's workforce and businesses and subsequently the regional economy
- Training contracts and revenue
- Increased educational capacity and a way to keep faculty members' skills up to date
- State of the art equipment provided by industry partners

Industry partner results (examples):

- Improved production capacity
- Improved employee productivity
- Standardized work processes
- Increased workforce skills and knowledge
- Decreased cost

Developing relationships with the business community

Macomb Community College uses a variety of strategies to develop relationships with the business community. These strategies include conducting surveys of businesses' workforce training needs, convening Advisory Board meetings, and participating in regional economic development groups and initiatives.

Surveys. The college regularly conducts a survey of regional businesses regarding their workforce training needs. The web-based survey includes businesses that are clients and non-clients of the college's Workforce Development Institute. The sample includes approximately 5000 regional businesses in a variety of sectors. Because it is web-based, the survey is not as costly to conduct as other survey methods such as telephone surveys, mail surveys, or focus groups. The survey includes questions about specific training areas like computer skills, technical skills, and leadership and supervisory skills.

Advisory Boards. The college builds trust with business leaders and enhances their awareness of the college's offerings through multiple advisory boards. Advisory boards exist for nearly all of the college's degree programs in technical fields such as information technology, health occupations, automotive technology, and engineering technology, to name a few.

In addition to the advisory boards mentioned above, the college's Workforce Development Institute has an advisory board that consists of over 30 executives from businesses and other community organizations. The college invites these executives and upper-level managers to become members of the college's advisory board. The members of the advisory board include key decision makers from multinational corporations that have headquarters or operations in the region. The college hosts the meetings six times per year at its training facilities and provides lunch for the participants. The advisory board members value the opportunity to network with each other, to discuss current business issues, and to provide input to the college. The meetings focus on workforce training programs, curricula, facilities, equipment, faculty preparation, and college workforce outreach activities. The advisory board input gives the college relevant information on industry challenges and changing needs.

Participation in regional initiatives. There are numerous local, regional, and national initiatives for the purpose of strengthening the regional economy. The college is a valued participant in many of these economic development groups and initiatives. This participation has the added benefit of keeping the college connected with regional leaders and informed about what is happening in the region.

Partnering with individual businesses to provide workforce training

Macomb Community College develops partnerships with regional businesses through its relationship management and sales processes.

Needs assessments and curriculum development. College staff members meet with businesses (clients and potential clients) to conduct needs assessments to identify skills gaps within their workforces. Once the skills gaps are identified, the college then develops the corresponding training curriculum. Training curricula may be standardized or customized to the specific needs of an individual employer. The training uses a competency-based approach and includes component to assess learning to ensure that participants can demonstrate the requisite skills in the workplace.

Training plans. The college works with employers to determine the best means to deliver the training and uses a variety of innovative methods. Traditionally, the trainees have come to the college's training facility for training. Additionally the college's trainers have gone to locations around the world to deliver training.

Train-the-Technical-Trainer. One of the college's most innovative ways to

ensuring the consistent delivery of high-quality and cost-effective training for its multinational clients has been through its Train-The-Technical-Trainer (T4) approach. With this model for training delivery, an employer sends trainees from around the world to the Workforce Development Institute (WDI) at Macomb Community College. Some examples of areas for which WDI provides T4 are conveyors, controls, welding, and robotics. The trainees learn how to deliver technical training while they are at the college. After successful completion of the T4 program, they are qualified to deliver the technical training in their home country. This is a cost-effective model for the employers because it minimizes the travel expenses of sending all trainees to WDI or bringing the WDI technical trainers on-site.

In order to ensure consistency and quality, WDI serves as the global hub for the employer's training. The technical training experts at WDI manage courses, curriculum, and the employers' technical trainers. This is made possible through the use of distance learning tools and software. For example, before training begins WDI technical experts administer online pre-tests for the trainees. Then, the technical trainer (an employee of the client company who has been trained through T4 at WDI) delivers the training at the employer's operations that may be in another country. Through the learning management system, the WDI technical experts administer the online post-tests. The WDI technical experts grade the post-tests and post the results on the learning management system for the on-site technical trainer as well as the trainees.

Evaluation of training and measurement of client satisfaction. WDI systematically gathers information to improve training by conducting satisfaction surveys with training participants. This often results in improvements to the ways in which the training is delivered. Additionally WDI routinely conducts follow-up interviews with the decision makers who have contracted with WDI for the training to ensure that the training has met their expectations.

Distance learning. While certain aspects of technical training must happen in-person with hands-on application of the skills. However, WDI has used distance learning technology to complement the hands-on aspects of training to ensure consistency, quality, and client satisfaction. Some examples include:

- Global web meetings are conducted once or twice a year to discuss changes in curriculum and to identify course updates.
- Online Assessments through the learning management system allow for consistent pre-testing and post-testing of trainees.
- Online Evaluations allow WDI to consistently gather trainee satisfaction information through the learning management system.

Continuous improvement and innovation

As effective and cost-effective as the above methods are, WDI works with employers to continuously improve the technical training that it delivers. The following are some of the innovations that are being implemented

- Consolidation of courses – By applying lean principles WDI has consolidated courses and curriculum to meet customer training and needs to reduce cost, time, and resources to improve employee learning outcomes.
- Interactive video training is being considered to make training even more cost-effective for clients and to lower travel expenses.
- Modularized training – WDI is modularizing curriculum to meet the industry needs in multiple areas of advanced manufacturing and mechatronics:
 - Mechanical/Electrical
 - Process Control
 - Fluid Power
 - Thermal
 - Quality Assurance
 - Automation Systems
 - Workplace Skills

Financing and resource commitments

Buildings. The college has extensive infrastructure for the delivery of its career programs and technical training. The college has received funding from the State of Michigan to subsidize the cost of construction of many of its major facilities as well as the initial funding for the Michigan Technical Education Center (M-TECSM) where the Workforce Development Institute (WDI) is located.

The WDI is housed in a 40,000-square foot facility that provides a dynamic learning environment. This building includes a high-bay area that contains large industrial equipment, manufacturing training cells, six general purpose classrooms, a distance learning classroom, four computer lab classrooms. The entire building has WiFi wireless internet connectivity.

Training equipment. Much of the high technology training equipment has been donated by industry partners. For example, General Motors Corporation has provided a maintenance training cell worth \$1.3 million. This training cell replicates the actual conditions in the GM manufacturing facilities around the world. Comau Corporation has provided robots and equipment worth \$800,000. The college has been able to gain such support from industry partners because they benefit from having their employees trained with the exact equipment they will be using in the workplace.

Haas Automation Inc. provides the latest CNC equipment to the college at no charge in order to support training and education. Additionally, Lincoln Welding Corporation partners with the college to provide the latest welding equipment and replaces it with new equipment every several months.

Staffing. Staffing at the WDI includes administrators, project managers, support staff and full-time faculty/trainers.

Budget and training revenues. The annual budget of the WDI is approximately \$1.6 million and the goal is for net revenue from industry training meet or slightly exceed budgeted amount to result in neutral cost to college.

There are multiple means by which the college receives payment for training.

- Industry revenue – Some clients pay for the full cost of the training while others are subsidized by training grants from the state or federal government.
- Federal Grants – These grants cover short-term programs with multiple businesses where WDI provides training to incumbent and newly hired workers on specific technologies.
- State Grants – The State of Michigan provides Economic Development Job Training grants which are similar to the federal grants, except they are granted to single businesses rather than multiple businesses. For these grants, the business pay a portion of the training costs and the State of Michigan pays the rest.

Evaluation and Data

Continuous improvement processes are integrated into the processes the college uses to create, maintain, and improve its business partnerships. We believe that it is necessary to ensure the continuous improvement of our offerings for our industry partners. An example is how we update our technical training curricula every six months and implement major updates on an annual basis in consultation with industry clients.

Brazil/US Bi-National Exchange

Best Practice Report:

Building a Network between CEFET-PB, CEFET-PE and San Diego Miramar College

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October 24, 2008

1. Basic Data about the Best Practice

The CEFET partners from the northeast Brazil states of Paraiba and Pernambuco identified two programs of great interest that are currently offered by *San Diego Miramar College*. CEFET-PB identified the biotechnology program has been of great interest to them. CEFET-PB posed several questions to *San Diego Miramar College* regarding the Biotech Center. These questions included why, how, what services does the center provide, what are the successes of the center and what are the strategies for developing a demand driven response? In a broader discussion with leaders of the CEFET system an interest in the area of Aviation Maintenance emerged with CEFET –PE and CEFET San Paulo.

In the following best practice discussion, we will use the examples of Biotechnology and Aviation Maintenance at San Diego Miramar College as case studies in developing strategies for a demand driven response system. In this discussion of the Biotechnology and Aviation Maintenance programs at *San Diego Miramar College* will identify several key components which have led to program success, and therefore can be considered as “best practices”. This, in fact, is not a single “practice” but several “practices” that when combined form the basis for a strong, successful, and sustainable program in Biotechnology, Aviation Maintenance, or a variety of other programs when and where the practices are applied and used. Although this discussion will draw heavily on the experiences of San Diego Miramar College it is believed that many of the practices identified here are fully transportable to a number of educational programs both in the United States and in Brazil.

1. 1 Title of the “best practice”

A Comprehensive Model in Developing Cutting Edge Programs in Response to Future Global Workforce and Economic Development Needs in Brazil: The Cases of Biotechnology and Aviation Maintenance at San Diego Miramar College.

1.2 Time period of the initiative

From June, 2008 to June 2010

1.3 Focus Area of Best Practice

Strategies and ‘Best Practices’ for Developing Demand Driven Response Systems for the Biotechnology, and Aviation Maintenance Industries.

2. Background about the Institution

2.1 Name of institutions

Centro Federal de Educação Tecnológica da Paraíba (CEFET-PB), Centro Federal de Educação Tecnológica de Pernambuco (CEFET-PE), and San Diego Miramar College.

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3. Overview of the Best Practice

Context and Need: What challenge/need does this best practice address?

This best practice will expand CEFET's existing partnerships with the federal government, industry, and 4-year institutions and develop new partnerships with all the entities mentioned; enhance CEFETs' role in fulfilling their social responsibilities to address employability of community residents; provide opportunity to develop/refine distance learning education supported by the federal government.

The challenge can most easily be described in general as the need to prepare and educate a world-class workforce. This overview will identify the key elements, or “best practices” of exemplary programs that when implemented will lead to relevant programs that in fact do meet the challenge of preparing a world-class workforce.

Implementation: Plans for action

Biotechnology at *San Diego Miramar College*:

The Biotechnology Program at San Diego Miramar College has been featured as a case study in “Best Practices in Biotechnology Education” published by Logos Press, Washington D.C., copyright 2008. This publication describes the Biotechnology Center at San Diego Miramar College as “A Model for Connecting Students and Teachers to the Biotechnology Industry Cluster in San Diego County”. The case study for this chapter of the publication was co-authored by Dr. Sandra Slivka who also serves as director of the Southern California Biotechnology Center at San Diego Miramar College. As the title of the case study suggests there are three equally important components of the model: students; teachers; and industry. To address the varied needs of these three stakeholder groups the model developed and employed several strategies that when used properly can be considered “Best Practices”.

The Biotechnology case study addresses the history of how each of the stakeholder’s needs were identified, and once they were identified the strategies that were implemented to address the needs of each group. In the process of developing this demand driven response one of the challenges was how to fund and sustain the activities that were being planned. So it is probably important to note up front that a “Best Practice” is to identify and tap into a funding stream capable of sustaining the program’s activities.

Teacher Preparation: During the program design phase one of the identified needs was to provide teacher training for both high school instructors and community college faculty. Using funding provided by a grant from the Amgen Foundation the college trains instructors on the Amgen-Bruce Wallace Biotechnology Laboratory Program thus addressing the critical need to keep faculty up to date in new and emerging methods and technologies.

The Amgen-Bruce Wallace Laboratory Program consists of 8 laboratory exercises which can be conducted at the high school level. These 8 exercises are built around the areas of: recombinant DNA technology; gene expression; protein purification; and, polymerase chain reaction (PCR).

There are several additional activities that are part of teacher preparation program. Teachers are provided with a series of half-day externship experiences that allow them to see industry in motion and observe how student learning outcomes relate to job performance expectations. The program also provides a network and opportunities for curriculum sharing, and lateral support.

Another component of the teacher preparation program is the on-going support of curriculum implementation for participants in the program thus removing another critical barrier. It was found that many high schools in particular lacked the necessary equipment to implement

curriculum after the faculty had been trained. To overcome this barrier Miramar College, using grant funding from Amgen, provides equipment on loan, supplies, and laboratory staff support to participating high schools. The benefit is two fold: better prepared and equipped high school laboratories, and teachers; and, better prepared students entering the community college.

Partnerships: This will not be the first or last time that partnerships will be identified as a “best practice”, but the Biotechnology Center at San Diego Miramar College is certainly one of the outstanding examples. We have already identified the CCCCCO, EWD, and Amgen as financial partners, but there are many other important contributors to this project.

In the beginning two major stakeholders came together to partner with the college to realize the goal of preparing a world class workforce in Biotechnology. These partners are Biocom and the San Diego Workforce Partnership. Biocom is the industry trade organization that represents more than 500 Biotechnology companies, and The San Diego Workforce Partnership provides employment related services to local businesses and jobseekers through a countywide network of One Stop career Centers. Together these partners provide funding for the Life Sciences Summer Institute (LSSI). The goal of this project is to expose high school, community college, and university students to the life sciences.

Partners provide internship, and externship opportunities, curriculum development input involving hard skill competencies as well as soft skill job requirements. This input ensures the relevancy of the instructional programs and provides invaluable advice and support to the college and students.

Aviation Maintenance at *San Diego Miramar College*:

The Brazilian partners identified Aviation Maintenance as a program they would like to investigate further in hopes that “Best Practices of the U.S. program might be implemented in Brazil to meet the rising demand for a skilled workforce in aviation. While *San Diego Miramar College* has an excellent Aviation Maintenance program it has also been faced with some significant challenges particularly in the area of student participation. Therefore, this review will identify both the “Best Practices” and the challenges faced in the U.S.

The Aviation Maintenance program at San Diego Miramar College operates under the regulations and authority granted by the Federal Aviation Administration (FAA). The certification is referred to as a “FAA Part 147” school. The FAA requirements are very structured and outline not only the subject matter to be taught, and specific skill competencies expectations, but also includes the minimum number of student hours to be completed in each area of instruction. FAA Part 147 schools are divided into two major areas and each area leads to FAA licensure in one, or both, of the areas. The two areas are Airframe and Powerplant. Students must complete 47 units of instruction to earn the Airframe Certificate, and 52 units to earn the Powerplant Certificate, or students may earn both an Airframe and Powerplant Certificate by completing 78 units of study. Students may also earn an Associate of Science Degree by completing an additional 18 units of study in General Education Courses.

Certified FAA School:

It is difficult to characterize FAA certification as a best practice because without certification the students coursework would not be recognized towards licensure. However, it is important to recognize that aviation maintenance training programs are highly regulated and must comply with all applicable regulations.

Partnerships:

The Aviation Maintenance program at San Diego Miramar College has a long history of partnering with industry. Some of these partnerships have spanned a long period of time and some are created to serve a specific industry training need and dissolve when the need has been satisfied. One of the lasting organizational partnerships has been with the Aviation Technician Education Consortia (ATEC). ATEC is a conduit for sharing curriculum, strategies, job placement opportunities, and the acquiring and distribution of instructional training aid donations. Other corporate entities that often work with the college are Solar Turbine and Hamilton Sundstrand. These corporations send apprentices to the college, request specific on-site training, and provide the college with instructional equipment donations. These companies also provide assistance to the college by serving on Industry Advisory Committees.

The Aviation Maintenance program has also partnered with NAVAIR, a civilian contractor providing aviation maintenance services to the Navy in San Diego. This partnership is based on an apprenticeship program wherein NAVAIR allows employees release time from their job assignment to attend classes at *San Diego* Miramar College. In addition to the release time employees participating in the apprenticeship program receive tuition and book support funding.

Faculty:

Another strong element of the *aviation* program is the faculty. The college has been fortunate to recruit, hire and retain a highly qualified faculty. This is problematic for several reasons: first, in addition to meeting the minimum qualification to be hired as a community college instructor in California the instructors must also be licensed by the FAA; another factor is that potential faculty members generally have to take a substantial reduction in salary to join the college.

Goals: What is the goal of the practice?

Results achieved:

Evaluation and data: As useful, include information on evaluation/data

Three areas have been identified to serve as pilot projects between CEFET PE, CEFTE PB, and San Diego Miramar College.

The inclusive model San Diego Miramar College implemented to develop its industry driven biotechnology program has produced significant results benefitting local industry, students, local high schools, and the college. Some of the outcomes include:

The Life Sciences Summer Institute has now completed four years of summer programs. The summer institute was developed in response to two identified needs: first, was the need for improved coordination between the business community and higher education regarding the

creation and delivery of biotechnology and science education; and second, the lack of interest and achievement in science education within San Diego’s K-12 student population.

The Life Sciences Summer Institute has both a Student Internship Program, and a teacher Externship Program. The Student Internship Program includes a one week Biotech Boot-Camp Training, an 8-10 week Industry Internship, and a Capstone activity consisting of a poster development and display project. This activity has resulted in more than 50% of the student participants being retained in the jobs that they interned in.

The Teacher Externship Program consists of the Biotech Boot-Camp Training, industry worksite visits, curriculum connection and integration, and ongoing curriculum implementation support. Key components include: student and teacher outreach and recruitment; internship and externship planning and organization; curriculum identification/development, course scheduling and facilitation; on-site workplace support; planning and development of culminating activities and events; evaluation, documentation and continuous improvement; and, ongoing teacher support center.

The Teacher Externship Program has resulted in the training of 96 teachers from San Diego County thus provided county schools with well trained teachers.

The following table provides some of the outcomes from the Life Sciences Summer Institute:

	2005	2006	2007	2008
Student Internship Program				
Number of Applicants	38	127	198	304
Number of Attendees	23	34	50	72
Number of internships	13	44	61	50
Teacher Externships				
Number of Teachers Enrolled	9	18	24	18
Number of Students Influenced	1,701	3,402	4,347	3,402

The impact of the Summer Institute and the college’s outreach efforts are clearly reflected at the college as measured and reported in the “Trends and Relative Data” report generated each year in preparation for the Annual Program Review. The data is disaggregated into General Biology, Biology for Transfer, and Biology for Applied Health. Biology for Applied Health has an average class fill rate of 105% of class seat capacity, a completion rate of 70% and a retention rate of 82%. General Biology shows a fill rate average of 93%, a success rate of 70% and a retention rate of 82%. Finally, the Biology for Transfer track has an average fill rate of 102%, a success rate of 71%, and a retention rate of 80%. The college serves approximately 500 students per semester in the three biology tracks.

Aviation Maintenance Results:

In approximately 2004 student enrollments began to drop in the Aviation Maintenance program, in part due to a number of apprentices cycling out of the program and a reduced number of new apprentices entering the program. In response to this drop in enrollments the department reduced the number of course sections offered in a semester from 39 to 35 in the fall semester 2007.

In the fall semester 2007 the Aviation department offered 35 course sections. These classes were offered between 7:00 am and 10:00 pm Monday through Friday in a 16 week semester. The fall data indicates that 498 seats were filled which translates to 61% of the seat capacity. The data also indicates a student success rate of 80% and a student retention rate of 85%. The three year average class fill rate was 73% while the average success rate was 82.5%, and the average retention rate was 90.9%. So while the department has struggled to reach out to new students the students entering the program are retained and succeed at a very high rate.

Lessons learned in implementation:

The biotechnology case study shows that

- Each of the stakeholder's needs had to be identified;
- Once the needs were identified, strategies were implemented to address the needs of each group;
- In the process of developing this demand driven response, one of the challenges was how to fund and sustain the activities that were being planned;
- Identification and tapping into a funding stream capable of sustaining the program's activities was critical to the success of the biotech initiative at San Diego Miramar College.

The Aviation program identified the following challenges:

- While the rigid FAA standards are legitimate and necessary, they impose burdens on the program requirements
- The extended hour needed to complete the program is very demanding and limit the number of students who can enroll in the program.

Financing and resources commitments:

To address the financial needs of the biotechnology program at San Diego Miramar College, the college worked with business, industry, private foundations, and the California Community Colleges Chancellor's Office (CCCCO). In approximately 1995 the CCCCCO created a unit called EDNET, or Economic Development Network. This unit subsequently changed its name to Economic Workforce Development (EWD). The EWD created 10 strategic initiatives designed to keep California competitive in a global economy and one of those initiatives was in the area of Biotechnology. The initiative called for the creation of Centers in geographically important regions of the state, and asked interested college to apply for grant funding. San Diego Miramar College was a successful bidder and has been funded continuously. In 2008 San Diego Miramar College was named the statewide Career Technical Education (CTE) Liaison Hub for

Biotechnology. Together the Biotechnology Center and CTE Liaison Hub provide approximately \$400,000 U.S. Dollars to the college each year.

Another source of external funding has been the Amgen Foundation. The Biotechnology Center has applied for and received grant funding from the foundation to operate a teacher training program. This train-the-trainer component addresses another need and is the basis of another “best practice”.

The Aviation Maintenance program at San Diego Miramar College is inherently expensive due to the large laboratory space requirements, expensive equipment and supplies, and small class size requirements. Therefore, seeking and acquiring external funding is essential to building a strong, relevant, and productive program. The Aviation Maintenance program writes a proposal each year, and is funded at varying levels each, under the Perkins federal vocational education grant. In addition, Miramar College had received grant funds from the California Community College Chancellor’s Office as part of the Economic and Workforce Development unit.

**BRAZIL-U.S. PARTNERSHIP TO STRENGTHEN VOCATIONAL/TECHNICAL
EDUCATION
CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA - CENTRO OESTE REGION
Mato Grosso and Goiás
and
NORTHERN VIRGINIA COMMUNITY COLLEGE (NOVA)**

SUMMARY

The Best Practices selected by CEFETs MT and GO and NOVA, as well as their joint plans for future inter-institutional activity, center on issues of access and retention for those typically excluded from higher education. Both the Brazilian and U.S. institutions draw students from low-income and underprepared populations, and both have begun programs in the recent past which attempt to introduce them to opportunities to succeed both in work and in life. Programs aimed at student inclusion and educational success, such as Achieving the Dream and Pathway to the Baccalaureate on the U.S. side, and PROEJA on the Brazilian side, will grow richer and deeper as we learn more from each other through our continuing relationship. Both the United States and Brazil are tested by the evolving and challenging global economy. Perhaps nowhere is the challenge more critical than in education and training where the future of the modern workforce is being developed. For progressive economies, the “world of work” will demand competence in cross-border abilities, such as working collaboratively with people from different backgrounds and cultures, evaluating critically the quality of information, combining entrepreneurial creativity and technological know-how with humanistic values and vision, all in addition to their technical skills. This is no less important for the technician than for the engineer or business professional. Change and innovation are constants in the new global economy, affecting people at all levels, and we do our students an injustice if we fail to prepare them. Students with a restricted scope of their futures have the talent, intelligence and ambition to help in their way to answer these broad, national challenges, but because of their backgrounds they need initial or transitional assistance in adapting to the educational environment and in believing in themselves. The programs we have found most compelling among us help to bridge these gaps.

OUTLINE

Best Practices: from CEFETs to NOVA

I. Integration of Career and Technical Education

Focus: Inclusion
Period: Present through 2012

II. Learning from PROEJA

Focus: Inclusion
Period: Present through 2012

Best Practices: from NOVA to CEFETs

I. Implementation of Program Advisory Councils

Focus: Quality assurance and program relevance

Period: Continuing

II. Student Success Programs

Focus: Student support

Period: Continuing

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BEST PRACTICES: From CEFETs to NOVA

I. Best Practice: Integrating Career and Technical Education

The Purpose and Need for the Governor's Academy

Northern Virginia Community College (NOVA) and Arlington Public Schools (APS) were awarded grants in January and June 2008 to plan and implement a jointly operated Governor's Career and Technical Academy in Arlington. While satisfying the Virginia Department of Education requirements, the implementation proposal was written with a larger strategic objective of integrating the Career and Technical Education (CTE) offerings of NOVA and APS through dual enrolled courses and preparing for the comprehensive development of a new institution. Both institutions hope to develop a comprehensive five-year program through which students will earn the high-school diploma and the associate degree. The project focuses on improving outcomes related to student access, student success, graduation and overall improvement in the numbers of students choosing careers in the science, technology, engineering and mathematics areas (STEM). This project has significant implications for the future of the region of Northern Virginia.

CEFET Integrated Program

CEFET-MT and CEFET-GO began offering the "integrated" model in 2006. The program prepares the student for the world of work, but if the student so chooses, he can continue his studies at CEFET or at a university. The first integrated program in CEFET-MT was in a secretarial assistants program and today there are seven programs on this model at CEFET-MT – Informatics, Environment, Civil Constructions, Refrigeration and Air Conditioning, Electricity, Tourism, and Secretarial Assistance.

The first program implemented in CEFET-GO was Food Services within the framework of PROEJA. There are now twenty-three programs in CEFET-GO, nine in the city of Goiânia, five in the city of Jataí, three in the city of Inhumas, three in the city of Uruaçu and two in the city of Itumbiara. In Goiânia the programs are Environmental Control, Building, Electronics, Eletrotechnics, Information Technology, Mining, Transit, Music, and Food Services (in PROEJA). In Jataí the programs are Surveying, Eletrotechnics, Informatics, Construction and Construction within PROEJA. In Inhumas the programs are Informatics, Food Services, Chemistry, and Maintenance and Support in Informatics. In Uruaçu they are Buildings, Informatics, and Maintenance and Support in Informatics. And in Itumbiara they offer Eletrotechnics, and Industrial Automation.

The integrated model is directed at those who have completed K-8 and who want to obtain a technical education along with a regular secondary education. Students normally enrolled in this program are therefore younger than traditional college age. The program is part-time and lasts four years. The technical degree achieved after the four years allows the graduates either to go into the workforce or to pursue a university degree.

The integrated model was developed to improve basic knowledge in technical fields. Students in this model usually have fewer problems with math, languages, physics and chemistry than the students in purely technical programs. One important challenge this model presents is that within some of the programs a low number of students complete the coursework because they are more interested in continuing their education at a university, after which they would work as technicians. A more comprehensive selection process for entrance into the program seems to be needed.

The CEFET-MT will work with NOVA to create a model for the Governor's Academy by developing common curricula or adapting programs to local realities and needs, as well as by exchanging faculties. This will allow a smooth implementation of the program at NOVA and a good practice of exchange of experience between the two institutions.

Plans for the Governor's Academy

The strength of the proposed Academy and its uniqueness in Virginia education is the proposed integration and joint administration. Initially, the plan calls for increasing academic rigor and learning opportunities across five basic career pathways starting in the fall semester 2008:

- Engineering and Technology
- Audio and Video Technology and Film
- (Health Science) Support Services
- Information Support and Services
- Facility and Mobile Equipment Maintenance

However, the broader vision is to expand this opportunity across all 16 federally recognized career clusters and more including foreign service, foreign language, liberal arts, some for which no college credit at NOVA presently exists. Degree opportunities in Business Management will likely be extended to these students. The potential is for the Governor's Academy to offer a comprehensive full-day program to CTE students when the program is fully implemented at the start of the 2012-13 academic year, complete with the in-house academic support necessary for students to graduate from high school and college in five years.

Four different constituencies are presently under consideration for the developing Career, Technical, and Adult Education complex in Arlington. Adolescent CTE students will be served in the Governor's Career and Technical Academy; young adults will be served in the a similar partnership with Arlington Mill High School (AMHSC); young and older adults will be served through NOVA's day and evening credit programs, and others can seek Workforce and Continuing Education programs. In fall 2008 the Governor's Academy may offer dual-enrollment to as many as 150 students. This project will be phased in adding new elements each year. When the transitions are complete, approximately 713 full-time equivalent students may be expected to study at the proposed Arlington complex at full implementation in 2012-13. In addition, it is expected that many of the faculty may be appointed by NOVA.

II. Best Practice: Learning from PROEJA - Adult and Youth Education

Integrated technical courses from the Adult and Youth Education Program (PROEJA) have as the main goal social inclusion. The working citizen has the possibility to develop his/her natural skills, through independent thinking as well as by belonging to a caring and supportive group. Most of all, it is the first time in Brazilian educational history that vocational education is linked with adult and youth education.

Integrated technical courses give student the opportunity to concurrently receive both theory and practice. As a result, the process of learning, thinking and building knowledge is integrated in a manner that allows students to the possibilities to do, think, and feel. This breaks with the traditional model by encouraging multi-subject interchanges. In addition, both adults and youths need the knowledge of their cultural specifics as well as to set up different and non-traditional ways to teach and learn since these practices are not yet established as formal structures in

regular education. It needs a new institutional organization, new financial resources, new research fields, and new forms to present education for adults and youths, allowing them to believe in education while being educated.

Based on this model, the Brazilian Ministry of Education, through the Board of Literacy and Continuing Education and Diversity, set up the Department of Education for Adult and Youth. The concept of Adult and Youth Education moved beyond the old understanding of compensatory education and became a law and a right. The new model recognizes equal access to knowledge and culture and qualifies citizens in and out of school to pursue better educational opportunities.

Plans for *Great Expectations*

Great Expectations is a transitional education program to help teenagers in the foster-care system. Virginia has the highest percentage of teens in the U.S. “aging out” of the foster-care system without a permanent home – over 500 annually. Research suggests that the typical youth aging out of the foster care system has no social or family support and is unsuccessful at employment and educational pursuits. Lacking the support of a family and without the education and skills needed for an independent life, these young people are twice as likely to see the inside of a prison cell or live on the streets as to spend time inside a college classroom.

As part of a project led by the Chancellor of the Virginia Community College System, the *Great Expectations* program aims to do the following:

- Help youth complete high school and transition into higher education.
- Increase awareness about the value of a community college education.
- Increase enrollment in Independent Living Programs.
- Increase the number of foster youth who gain employment in desirable jobs.

Pilot after school programs at all community colleges for younger foster care youth
The Alexandria Campus was chosen as a site for Northern Virginia for a variety of reasons, among them its proximity to major public transportation lines and its prominence as the most urban campus of the NOVA campuses. Working with educators, business leaders, social service agencies and national leaders, college and campus leaders are developing plans to create a sustainable model to change these conditions and to reverse the failure rates of both high-school age and college-age foster youth. Since the program will involve teenagers and young adults and our goals include education and workplace pursuits, NOVA is interested in the success of PROEJA and its underlying principles. PROEJA offers a model that could assist with social integration as well as the integration of academic skills to assist our foster youth in becoming more successful.

BEST PRACTICES: From NOVA to CEFETs

I. Best Practice: Implementation of Program Advisory Councils

CEFET-MT and CEFET-GO have no formalized advisory councils like NOVA has. In general, the CEFET programs count on a board of faculty members which is responsible for writing the program projects as well for making decisions on problems involving the students. A more representative Program Advisory Council, involving partners of the private sector, can improve the way the CEFETs meet the requirements of the workforce.

II. Best Practice: Student Success Programs

- Programs for Students with Disabilities– These kinds of programs have not yet been developed in Brazil as a whole. However, the CEFETs have already started to adapt their infrastructure to accommodate these students. The expertise as well as software and lab facilities at NOVA can surely be fundamental to bringing such programs to the CEFETs.
- Developmental courses – CEFETs do not have developmental courses; however, NOVA’s courses in Math and English were seen as a great opportunity to reduce the typically high dropout rate, especially in the first semesters of CEFET programs. The main difficult here is the limited number of faculty and staff available to offer such courses. CEFETs expressed interest in developing such courses with additional funding to support the hiring of specially trained staff.
- Pathway to the Baccalaureate – This is a highly successful cooperative program between the high schools, NOVA and George Mason University in the northern Virginia area aimed at raising student (and parent) educational goals and motivation by forming a supportive alliance of the three institutions starting in the mid-high-school years and continuing through to university transfer. CEFETs felt they could improve the access from Primary School to “Integrated” programs and then to the Associate of Applied Sciences. The program could help the students during the transition period, including the choice of the program, career, and other important aspects taken into account in NOVA’s program. For further information, see <http://www.nvcc.edu/academics/pathway/index.html>
- Achieving the Dream Initiative – ATD is a multiyear *national* initiative to help more community college students succeed. The initiative is particularly concerned about student groups that traditionally have faced significant barriers to success, including students of color and low-income students. It pays particular attention to better data analysis. This kind of program – focused on inclusion – could help CEFET students become more successful in their studies and career choices, especially those that encounter barriers to success. For more information on ATD, see <http://www.achievingthedream.org/default.tp>

- Counseling Staff – The CEFETs identified the need for qualified professionals who, as they do at U.S. community colleges, support students by assisting them with course and program choices as well as life and career decisions.
- Student Orientation – The function of student orientation sessions at NOVA is to help students adjust to life and work as a college student before they begin classes. While some of this is done at CEFETs, it was felt that formalizing the program would have many benefits.

MOVING FORWARD SHORT-TERM PLANS

I. Communication via videoconferencing and other means

NVCC is currently under state-wide budget restrictions which specifically include travel. Not until November will we have any indication whether this situation will improve or worsen. In light of this, we will emphasize videoconference, phone and email conversations as the principal means of moving our relationship forward. Above all, NVCC faculty in the following areas need to introduction to and regular communication with their Brazilian counterparts, and vice versa.

We will begin with:

- Student-to-student interaction: International Café (month)
- Simulcast conference: scientific production conference-technological education at MT with GO and NOVA linked in (Oct 29)
- NOVA's Alexandria Campus will focus on Brazil for International Week (March optimal time for CEFETs)
- Formal invitation to CEFETs to become AACC International Partners, and to form panel for presentation at the annual convention (April).

We will also “bring to the table” faculty in the following program areas:

- Environmental Science/Studies

Environmental consciousness is high at NOVA and programs in the sciences and social sciences have beginning to emerge at all its campuses. Brazil's (and the CEFETs') focus on “green technology” opens a rich opportunity to collaborate. Even in program areas that do not have equivalents at the U.S. institutions, such topics as the conversion process from sugar cane to ethanol are useful focal points.

- Portuguese

NOVA began teaching Portuguese this fall. Via Skype and other means, NVCC intends to link students with counterparts in the CEFETs studying English (see English as a Second Language).

- Ecotourism

As with Environmental Studies, the proximity of Mato Grosso and Goias to some of the world's most attractive ecotourism locations (e.g., The Pantanal, Chapadas, Cerrado). NOVA has an emerging Ecotourism program which can benefit from partners in close proximity to these sites.

- Global Information Systems (GIS)

Because the curricula of CEFET-GO and NOVA in this area are very similar, GIS could as a ground upon which to develop common research projects and to exchange of faculty.

- Hospitality & Tourism

NOVA and the CEFETs have Tourism and Hospitality programs, and it is felt that they can mutually benefit one another by comparing curricula and perhaps exchanging faculty and students on occasion.

- Business

One of the strongest sectors of the economy of the Center West region of Brazil is that of the Agribusiness. The CEFETs do not have programs in business, and NOVA has long experience in this area that could help them to develop and implement Business programs in the areas of management, entrepreneurship, accounting, productivity, and human resource management, to name just a few.

- Engineering

Engineering is a more robust concentration than it is at NOVA; however, NOVA is developing a Sustainable Engineering program, which could benefit from the leadership already taken by CEFET-GO in its trans-national alliance, Brazilian-European Center for Sustainability. CEFET-GO will offer a master's level program in Technology of Sustainable Process starting in 2009 that could serve as a development platform on which to exchange students and professors with NOVA.

- English as a Second Language

Across all other program interests, training for students and faculty at the CEFETs in the English language was seen as an important underpinning to the attainment of success in the “world of work.” NOVA’s long experience and extensive programs in English as a Second Language will no doubt be useful.

MID- and LONGER-TERM PLANS

II. Faculty and administrator exchange

Recognizing a variety of differences in conditions, assumptions, approaches, etc., out of which CEFET-GO and CEFET-MT and NOVA plan for building capacity alongside developing curricula and services, it is clear that providing each other opportunities for first-hand experience is both practical and critical. This builds on the momentum developed via Internet communication and enables faculty and administrators to give access to front-line people, open up discussion, compare resources, and explore further how we can find mutual benefits. While technology will no doubt play a role in facilitating our collaborations, such exchanges are vital to mutual understanding and to moving forward together.

Among the topics we see gaining from administrator exchange are the following:

- Distance communication and learning
- Integration of vocational/technical programs
- Environmental scanning and needs assessment
- Private sector partnership

- Contract services management
- Business incubators
- Student support services, e.g., disability services, sign language, retention, etc.
- Technology development
- Advisory Board functions
- Foundation functions

Appendix E:
August 2009 Best Practices Summaries

U.S.-Brazil Partnership: Best Practices Alamo Colleges

1) Info on the best practice experience -- The Alamo Area Academies, an innovative training and educational partnership, provide education, experience and job opportunities for high school students seeking to jump-start their futures and make a seamless transition from high school to college and/or to the workplace. Qualified students receive training in high-wage demand occupations during their junior and senior years of high school. They earn one year of college credits and enjoy paid internships introducing them to careers in key local industries. Participating employers benefit through access to a continuous pipeline of skilled entry-level workers trained to their specifications.

2. Information on the institution -- The Alamo Colleges is the second largest community college in the state of Texas with annual enrollment of over 54,000 degree seeking students. The Alamo Colleges serve the Bexar County community through their programs and services that help students succeed in acquiring the knowledge and skills needed in today's world. Students are taught by highly qualified faculty with Master's and doctorate degrees dedicated to creating a learning centered environment. Student services include counseling, computer labs, tutoring, financial services, services for the disabled, developmental instruction, veteran's services, and job placement.

The five colleges - San Antonio, St. Philip's, Palo Alto, Northeast Lakeview, and Northwest Vista - offer associate degrees, certificates and licensures in occupational programs that prepare students for jobs, as well as arts and science courses that transfer to four-year colleges and universities and lead to AA and AS degrees.

The Alamo Colleges nine-member board of trustees are elected locally to six-year terms by Bexar County voters. The Chancellor, the district's chief executive officer, guides and implements the programs and policies of the Alamo Colleges. Northwest Vista College, Palo Alto College, St. Philip's College and San Antonio College are accredited by the Southern Association of Colleges and Schools, 1866 Southern Lane, Decatur Georgia 30033-4097, (404) 679-4501.

2.1 Name of the institution -- Alamo Colleges

2.2 Mission -- The mission of the Academies is twofold: 1) to spur the transformation of the San Antonio economy into one dominated by industries that emphasize high-skill, well-paid employment by creating a world class skilled workforce in growth industry clusters; and 2) to increase opportunities for young San Antonians to have rewarding, well-paid professional careers in San Antonio. The Academies provide the talent pipelines that high-skill, high-wage industries need to thrive in San Antonio. They do this by providing industry-driven dual-credit programs for high school juniors and seniors that prepare these students for higher education and for skilled employment in the participating industries.

2.3 President : Dr. Bruce H. Leslie, Chancellor

2.4 Address : 201 W. Sheridan, San Antonio, Texas 78204

2.5 Name, title, e-mail address and phone number of the person in charge of the experience:

Dr. Federico Zaragoza, Vice Chancellor for Workforce and Economic Development
fzaragoza@alamo.edu, +1 210 485-0015

2.6 Project Members: Ms. Carol Fimmen, Director, Office of International Programs, cfimmen@alamo.edu, +1 210 485-0076, Mark Hagen, Coordinator, Office of International Programs mhagen1@alamo.edu, +1 210 485-0082

3. Report on the experience

3.1 Contextualization of the situation prior to the implementation of the best practice -- The Alamo Region had experienced the loss of over 15,000 jobs due to the closing of the Kelly Air Force Base (AFB) in San Antonio. The Kelly AFB was converted into an aviation specialty industrial park designed to attract aerospace companies to the Alamo region. However, leading companies such as Boeing, Standard Aero, and Lockheed Martin voiced a concern over the lack of qualified FAA A&P technicians. With industry support and direction, the Alamo Academies were established as a direct response to the need for Aerospace workers. Between 2002 and 2003 San Antonio added Manufacturing and Information Technology components to address similar employer concerns. In Fall 2009, The Alamo Academies will be adding Nursing to the program mix. As such, the Alamo Academies are providing skilled technicians in the four largest driver industries in Alamo Region: Health, Aerospace, Manufacturing, and Information Technology.

3.2 Description of the experience, focusing on objectives and results -- Conceptual Model and Implementation: The Academies provide a bridge between the Kindergarten and 12th Grade and post-secondary systems, creating a path to life-long learning for the participating students. The Academies pipeline supports the graduation initiatives outlined in the Texas Higher Education Coordinating Board "Closing the Gaps" higher education plans. The Alamo Academies offer students an industry-paid internship in the summer between their junior and senior years. Results expected:

3.3 Total cost to implement -- The Alamo Academies operate with an annual budget of approximately \$500,000.

3.4 Description of the situation after the implementation of the best practice -- The Alamo Area Academies have increased the pool of skilled technicians in the key driver industries. Annually, over 150 graduates connect directly to employment or higher education. The Alamo Academies are the only dual credit (high school and college credit) that produce high school graduates that are certified technicians ready for high skill-high wage employment and/or access to higher education.

3.5 Why is it considered a best practice? -- 1) Industry or demand-driven curriculum promotes relevance. 2) Dual-credit design promotes academic rigor. 3) Connection to industry mentors and internships ensures availability of jobs and enhances graduation rates. 4) Parental involvement helps motivate students to achieve. 5) College transition services facilitate enrollment in ACCD after graduation from the Academies. 6) Community Partners help to finance program which brings relevance to students, faculty, and partnerships.

3.6 Quantitative & qualitative results -- Results: 425 graduates (96% continued higher education [community college/4-year institution], obtained jobs with the Aerospace, Manufacturing or IT Industries, or joined the Military); last three graduating classes (181) awarded over \$387,000 in Scholarships; average starting pay \$28,446: Salary: \$21,882 (\$10.52 x 2080 hrs) plus ~ \$6,564 in benefits

3.7 Mechanisms measured

Graduation rates, average starting salaries and benefits.

U.S.-Brazil Partnership: Best Practices Macomb Community College

1. Information on the best practice experience

Title of the “best practice”: *Partnering with industry to provide workforce training*

Time period of the initiative: Continuous, annual cycle with industry partners

Focus Area of Best Practice (such as inclusion or business partnerships): Business partnerships

2. Information on the institution

2.1 Name of Institution: Macomb Community College

2.2 Mission

As a publicly funded and community-based institution of higher education, Macomb Community College provides a comprehensive program of high-quality educational, enrichment, and economic development experiences designed to promote individual growth and social improvement.

2.3 President, Chancellor, or General Director

President James Jacobs, Ph.D.

2.4 Address

Macomb Community College; 14500 E. 12 Mile Road; Warren, MI 48088 USA

2.5 Name, title, e-mail address and phone number of the person in charge of the experience

Donald Ritzenhein, Ph.D., Provost and Chief Learning Officer

Macomb Community College; 14500 E. 12 Mile Road; Warren, MI 48088 USA

586-445-7596 ritzenheind@macomb.edu

2.6 Project Members

Kristin Stehouwer, Vice Provost; Sam Ricevuto, Trainer and Curriculum Developer

3. Report on the experience

3.1 Contextualization of the situation prior to the implementation of the best practice

This best practice addresses the college’s challenge to prepare the regional workforce with necessary skills as well as to serve businesses in the region. Through these processes, the college assists businesses in identifying organizational performance goals and how to address the corresponding workforce skills gaps through education and training.

3.2 Description of the experience, focusing on objectives and results

This practice is the means by which the college develops industry relationships to become the preferred partner for education and customized training. The college accomplishes this through systematically identifying and addressing workforce skills gaps through customized training in order to improve a business’s overall performance. This, in turn, strengthens the regional economy. The college conducts needs assessments for businesses and creates customized curricula for those needs.

One of the college’s most innovative ways to ensuring the consistent delivery of high-quality and cost-effective training for its multinational clients has been through its Train-The-Technical-Trainer (T4) approach. With this model, employers send trainees from around the world to the Workforce Development Institute (WDI) at Macomb Community College. WDI T4 training includes conveyors, controls, welding, and robotics. Trainees learn how to deliver technical training while they are at the college. After successful completion of the T4 program, they are

qualified to deliver the technical training in their home country. This is a cost-effective model for the employers because it minimizes the travel expenses of sending all trainees to WDI or bringing the WDI technical trainers on-site.

In order to ensure consistency and quality, WDI serves as the global hub for the employer's training. The technical training experts at WDI manage courses, curriculum, and the employers' technical trainers. This is made possible through the use of distance learning tools and software. For example, before training begins WDI technical experts administer online pre-tests for the trainees. Then, the technical trainer (an employee of the client company who has been trained through T4 at WDI) delivers the training at the employer's operations that may be in another country. Through the learning management system, the WDI technical experts administer the online post-tests. The WDI technical experts grade the post-tests and post the results on the learning management system for the on-site technical trainer as well as the trainees.

3.3 Total cost to implement

The annual budget of the Macomb Workforce Development Institute is approximately \$1.6 million USD and the goal is for net revenue from industry training meet or slightly exceed budgeted amount to result in neutral cost to college. Staffing at the WDI includes administrators, project managers, support staff and full-time faculty/trainers.

3.4 Description of the situation after the implementation of the best practice

Macomb Community College has developed strong relationships with the business community. This positions the college as the preferred partner for many businesses in addressing workforce training needs. As a result, these strategies include conducting surveys of businesses' workforce training needs, convening Advisory Board meetings, delivering education and training, and participating in regional economic development groups and initiatives.

The college builds trust with business leaders and enhances their awareness of the college's offerings through multiple advisory boards. Advisory boards exist for nearly all of the college's degree programs in technical fields such as information technology, health occupations, automotive technology, and engineering technology, to name a few. In addition to the advisory boards mentioned above, the college's Workforce Development Institute has an advisory board that consists of over 30 executives from businesses and other community organizations. Equipment manufacturers donate state-of-the-art equipment to the college so that students can learn skills on the most recent equipment.

3.5 Why is it considered a best practice?

These are considered best practices because they represent an integrated approach for the college to better serve individual students, businesses, and strengthen the regional economy. Because the college charges businesses for training, it is a revenue stream for the college.

3.6 Quantitative & qualitative results

College results include (examples): workforce development for the community and region; economic development to strengthen the workforce, businesses, and the regional economy; training contracts and revenue; increased educational capacity and a way to keep faculty members' skills up to date; state-of-the-art equipment donated by industry partners. Industry partner results include (examples): improved production capacity; improved employee

productivity; standardized work processes; increased workforce skills and knowledge; decreased cost for keeping workforce skills up-to-date

3.7 Mechanisms measured

Continuous improvement processes are integrated into the processes the college uses to create, maintain, and improve its business partnerships. We believe that it is necessary to ensure the continuous improvement of our offerings for our industry partners. For example we update our technical training curricula every six months and implement major updates annually in consultation with industry clients. The college also conducts regular surveys of business workforce skills needs.

U.S. – Brazil Partnership: Best Practice Summary

Miramar College

1. Information on the Best Practice: Life Science Summer Institute is an intensive 12 day instructor training program based on the Amgen-Bruce Wallace Biotechnology Laboratory Program. The training program consists of 8 laboratory exercises built around the four core areas of: 1) recombinant DNA technology; 2) gene expression; 3) protein purification; and 4) the polymerase chain reaction (PCR).

2. Information on the institution:

Name of institution: San Diego Miramar College

Mission: Our Mission is to prepare students to succeed in a changing world within an environment that values excellence in learning, teaching, innovation and diversity

President: Dr. Patricia Hsieh, Ed. D.

Address: 10440 Black Mountain Rd. San Diego, CA 92126 U.S.

Project coordinator: Richard Bettendorf, Dean Technical Careers and Workforce initiatives, San Diego Miramar College, 10440 Black Mountain Road, San Diego, CA 92126 U.S. (619) 388-7524

Project Members: Dr. Patricia Hsieh, Richard Bettendorf, Dr. Sandra Slivka, Silvana Correia de Mendonca, Jonas Luiz de Almada da Silva, Maria Christina Mадiera da Silva, Umberto Gomez da Silva Junior

3. Report on the Experience:

3.1 Contextualization of conditions prior to implementation of best practice: The existing condition of biotechnology education in Brazil is generally not a lot different than what is found in many U.S. community colleges and high schools. The Life Science Summer Institute (LSSI) was originally created to address the need for a different biotechnology education model in the United States which would close the gap between what was being taught and skills demanded by biotechnology laboratories. Based on the success of the LSSI in closing the educational gaps where the model has been implemented in the U.S. it is reasonable to assume that if properly replicated in Brazil the LSSI model would produce similar outcomes.

3.2 Description of experience: The Life Science Summer Institute has been described as "...a breakthrough in that we now have a mechanism and process in place to help teachers implement new lab curriculum covered during the LSSI into their classroom". (Martin Ikkanda, professor of Biology and instructor for the Amgen-Bruce Wallace Biotechnology Lab Program) The train-the-trainer program consists of curriculum training, externships, and curriculum sharing and peer networking. During the externship portion of the program the participants were exposed to one large manufacturing site, a large research and development site, a small start-up environment as well as a research institution. During the LSSI the participants learned, and practiced the pedagogy and methodology known as the Amgen-Bruce Wallace Biotechnology Lab Program. Participants were active participants in hands-on activities designed to develop proficiency in the four core areas of the curriculum.

It is intended that the project will not end with the culmination of the LSSI, but rather the participating faculty members from Brazil will be able to take the things they have learned during the LSSI home with them where they will implement the teaching and learning model at their home campuses. Another desired outcome is the replication of the LSSI concept in Brazil.

3.3 Total cost to implement: The total cost to implement this project was \$20,000 US. Approximately 60% or \$12,000 US of the project funds were for transportation to and from Brazil, and housing in the US for the four Brazilian participants. The remaining 40% of the project budget, or approximately \$8,000 US was for the LSSI tuition cost.

3.4 Description of the situation after the implementation of the best practice: Four Brazilian educators have participated in the intensive 12 Life Science Summer Institute. Each of the participating educators have gained new skills in biotechnology laboratory procedures as well as the supporting curriculum and teaching methodology to implement the laboratory exercises in their home country. In addition, the participants have forged new friendships with U.S. biotechnology faculty who form a network of peer experts for future collaborations.

3.5 Why is this considered a best practice? The LSSI has received significant attention in the United States and has been replicated and repeated in various regions of the United States. Through this experience and the resulting improvements in biotechnology education at the secondary and postsecondary level where this approach has been used the LSSI has already been identified as a best practice in the U.S. Based on the experience of the four Brazilian educators and their assessment of the LSSI program it is anticipated that the project will have the same impact and outcomes in Brazil as it has had in the U.S. and therefore will become known as a best practice in Brazil just as it has in the U.S.

3.6 Quantitative and Qualitative results: This is an on-going project and therefore all of the results are not yet known. However, what we know is that four Brazilian educators have completed 12 days of intensive training and masters the competencies of the four core instructional areas and the eight laboratory exercises within the core instructional areas. The less tangible result is the network of peers from the United States and Brazil that have come together as a result of this project. It is anticipated that this network of peers will continue to communicate, dialogue and assist each other in the future.

3.7 Mechanisms measured:

U.S. – Brazil Partnership: Best Practice Summary

Houston Community College

1 *Information on best practice experience*—Recognizing that the oil and gas companies are a vital sector to the Houston economy with vested interests in a trained work force in both the U.S. and Brazil, HCC conceived of a certificate program in Vocational English/Portuguese as a Second Language (VESL/VPSL). In an industry where safety is a high priority, HCC understood that effective communication was an absolute necessity. The VESL/VPSL certificate program would be designed to provide not only basic communication skills, as most language programs do, but also add a vocational/technical component that would provide a workforce trained in the appropriate technical details of the language, thereby enhancing safety.

2 *Information on the institution*—Houston Community College is a large, urban community college serving 65,000 (unduplicated headcount for fall, 2008).

2.1 *Name of institution*—Houston Community College

2.2 *Mission*—Houston Community College is an open-admission, public institution of higher education offering a high-quality, affordable education for academic advancement, workforce training, career development, and lifelong learning to prepare individuals in our diverse communities for life and work in a global and technological society.

2.3 *Chief Executive Officer*—Chancellor Mary Spangler

2.4 *Address*—3100 Main Street, Houston, TX 77002

2.5 *Name and contact information*—Daniel Seymour, Vice Chancellor, Planning & Institutional Effectiveness, daniel.seymour@hccs.edu, 713.718.5502

2.6 *Project members*—Daniel Seymour, Mary Spangler

3 *Report on the experience*

3.1 *Contextualization of situation prior to best practice*—Creating social equity by providing equal opportunity to all is a common theme. Low-income populations can have greater access to improved quality of life through public, higher education institutions. While the U.S. has had a history of greater access, we have new challenges associated with increased high school drop-out rates (50 percent among minorities in Houston), under-prepared students, and increasing costs associated with tuition, fees and books. Brazil has the challenge of competing in a global economy with the average worker having six years of schooling.

CEFETs have relatively few openings for students because of limited capacity. It is essential, therefore, that students who are able to pass the entrance exams and are admitted complete their course of study. The focus at HCC and other U.S. community colleges has historically been on access. It has only been more recently that attention has shifted to retention and completion rates and other metrics that are more associated with student success (Achieving the Dream, a Lumina Foundation grant, has focused HCC on these success measures).

HCC has a new vision that speaks directly to being the most relevant community college in the U.S. It understands the need to be a major force in helping the economic development of its region by providing a well-training workforce. It is placing renewed emphasis on advisory boards and using labor market data to drive programmatic and instructional changes. Brazil is projecting a period of sustained growth, with the gross domestic product increasing 5 percent a year through 2010 and 3 to 4 percent annually for the next decade. A lack of a trained workforce, in both countries, is a major impediment to economic development. Access, success and economic development are the key design requirements of a robust educational/technical pipeline that provides (1) strong linkages from Ensino Medio (K-12) through Mercado de Trabalho (employers) and (2) an increased capacity for developing skilled workers and global citizenship.

3.2 Description of the experience—The International Center for Education, Language and Technology.

3.3 Total cost to implement—The stipends being provided by USAID/HED (\$8,000) and the U.S.

Embassy through the Fulbright Commission in Brazil (\$10,000) will enable us to research the development and delivery of the curriculum. The plan is to then approach the major industries for start-up costs and to provide scholarships for students.

3.4 Description of the situation after implementation—The International Center for Education, Language and Technology will provide language skills to entry-level technicians into the oil and gas industry through a combination of on-line and laboratory learning that is grounded in industry practice.

3.5 Why is it considered a best practice—Our best industry contact (Anadarko) to date states: “The proposal has a good concept, but it is not deep enough so we can better visualize what impact it could make on our work force or training/development of our employees. Right now, Brazilians go, by their own, to foreign countries (US, UK, Australia) to develop this skill. Several courses are on the ground, providing training on English (with US accent, British accent, mnemonic training, immersion, etc.). Problem remains on ‘How much does it cost?’ Brazilians would like to have second language training, and that is even offered as a benefit not only on Oil & Gas industry, but also in several other industries (Pharmaceutical, Mining, etc.). But companies cannot dispose of having an employee away for a long term, and that is the fact that is hard to avoid. So, short term courses, with biweekly classes, are the most common way companies try to develop its workforce.”

3.6 Quantitative and qualitative results—The quantitative results we would be seeking are job placements with feedback from industry as to the value the language training is adding.

3.7 Mechanisms measured—Graduation and placement rates.

U.S. – Brazil Partnership: Best Practice Summary *Northern Virginia Community College (NOVA)*

1) **Information on the best practice experience**

During this past year NOVA and IF faculty and staff have been communicating regularly via videoconference to build the foundations for a sustained relationship. While there are several levels of interaction on future plans, in regard to the two (then CEFET, now IF) programs selected as best practices, NOVA has used both the models (Integrated Model and PROEJA) to develop its conception and planning for overlapping high-school and college programs and for services to under prepared or disadvantaged students.

2. **Information on the institution**

2.1 Northern Virginia Community College

2.2 NOVA's mission is to respond to the educational needs of its dynamic and diverse community through an array of comprehensive programs and services that facilitate learning and workforce development in an environment of open access and through lifelong educational opportunities.

2.3 Dr. Robert G. Templin, President

2.4 Brault Building 4001 Wakefield Chapel Road Annandale, Virginia 22003

2.5 Dr. Paul J. McVeigh Associate Vice President Global Studies and Programs pmcveigh@nvcc.edu 703-323-4224

2.6 Dr. Paul McVeigh and Dr. Jonathan Gueverra, Former Provost, Alexandria Campus

3. **Report on the experience**

3.1 Contextualization of the situation prior to the implementation of the best practice

The Best Practices selected by CEFETs MT and GO and NOVA, as well as their joint plans for future inter-institutional activity, center on issues of access and retention for those typically excluded from higher education. Both the Brazilian and U.S. institutions draw students from low-income and underprepared populations, and both have begun programs in the recent past which attempt to introduce them to opportunities to succeed both in work and in life.

3.2 Description of the experience, focusing on objectives and results

Best Practices: from CEFETs to NOVA

III. Integration of Career and Technical Education

IV. Learning from PROEJA

In both activities the focus is inclusion of low-income or otherwise marginalized populations that need access to technical training and/or higher education.

3.3 Total cost to implement

None up to the present time

3.4 Description of the situation after the implementation of the best practice

Several NOVA programs are aimed at student inclusion and educational success, such as Achieving the Dream and Pathway to the Baccalaureate on the U.S. side, and PROEJA on the Brazilian side. In that the goal was and still is that these will grow richer and deeper as more is learned through our continuing relationship, the emphasis during the past year has been on planning how faculty and staff will exchange information most effectively on selected program areas. The influence of the integrated model will take some time to take hold

3.5 Why is it considered a best practice?

The integrated model (high-school and college/vocational courses overlapping) enables students most likely to abandon plans for higher education or post-high-school training to stay in school, to gain college-level credit while still in high-school, overcoming the “senior-year syndrome.”

3.6 Quantitative & qualitative results

Over the past academic year faculty on both sides (i.e., NOVA and the IF’s) have held numerous videoconferences to work out those plans, focusing on Environmental Studies, English and Eco-Tourism. The continuation of USAID and Embassy funding, though very small for the scale of the work, has helped make this possible. These discipline areas are of mutual interest and form

Regarding the impact on the Governor’s School and the social integration derived from the example of PROEJA, it is still too early for results. However, the integrated programs have gained dramatically in popularity.

3.7 Mechanisms measured

Growth of the number of students enrolled in integrated programs (e.g., Pathway to the Baccalaureate, Governor’s School).

Appendix F:
Press and Success Stories



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U.S. Specialists Visiting Brazilian Professional Education Centers

São Paulo, Sept. 8, 2008 -- Twelve U.S. specialists in Vocational Education arrived in Brazil on September 3 for the second phase of the Brazil-U.S. Partnership to Strengthen Vocational Education. They are directors of community colleges from five U.S. States who will meet with representatives from the Ministry of Education in São Paulo to better understand the structure of vocational education in Brazil. Then, they will be divided into groups to make technical visits to Federal Technological Education Centers (CEFETs) in five Brazilian States.



Twelve U.S. specialists in Vocational Education discuss Brazil-U.S. Partnership to Strengthen Vocational Education. (Photo: U.S. Embassy)

On September 14-16, Brazilian and U.S. specialists will meet in São Paulo again to discuss possible dissemination of best practices in vocational education in both countries. The first phase of this program was held in June, when professors from Brazilian CEFETs visited the community colleges in the U.S. The Brazil-U.S. Partnership to Strengthen Vocational Education is a program implemented through a partnership between the U.S. Agency for International Development (USAID) and the U.S. Embassy Public Affairs Section with the support of Ford Motor Company.

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Home > News

HED Brings Together U.S. And Brazilian Educators To Strengthen Vocational And Technical Education

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HED in the News

["Georgia State Helps West African University Build Programs"](#)
Global Atlanta
 April 29, 2009

["GSU to develop programs at a West African university"](#)
The Financial
 April 24, 2009

["OSU involved in sweeping Africa initiative"](#)
 Oklahoma State University
 April 23, 2009

["Calvin Prof Gets Federal Grant"](#)
 Christian Reformed Church Communications
 April 20, 2009

["OSU wins grant"](#)
Stillwater News-Press
 April 18, 2009

["Georgia State gets \\$2.1M for international projects"](#)
Atlanta Business Chronicle
 12.16.08

["Thunderbird School expanding partnership with Zayed University"](#)
Phoenix Business Journal
 11.24.08

["Similarities bring U.S., Brazilian colleges together"](#)
Community College Times
 11.11.08

["UMass works to boost businesses in Haiti"](#)
Boston Business Journal
 06.30.08

["HCC to participate in technical education exchange with Brazil"](#)
Bizjournals.com
 06.09.08

["Moroccan delegation visits ISU"](#)
TribStar.com
 05.17.08

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 Website: www.HEDprogram.org



*Participants at the launch meeting of the Brazil–U.S. Partnership to Strengthen Vocational and Technical Education
 (Photos by Jeanne-Marie Duval, HED)*

WASHINGTON, D.C. (June 17, 2008)—On June 9–11, 2008, Higher Education for Development (HED) convened a roundtable to launch a Brazil–U.S. Partnership to Strengthen Vocational and Technical Education. Educators from U.S. community colleges and Brazilian technical education centers met at the American Council on Education to learn from each other and create a sustainable and productive collaboration between the two countries. Following

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the discussion, Brazilian educators are visiting U.S. community colleges. As part of a bi-national exchange, U.S. community college representatives will visit Brazilian counterparts in early September 2008 to share respective experiences.

During the roundtable, participants described the context of vocational and technical education in each country and explored the role each educational system plays in workforce development and collaboration with the local business community. Program hosts and sponsors welcoming participants included HED's Director of Programs Jeanne-Marie Duval, Board member Maureen Budetti of the National Association of Independent Colleges and Universities (NAICU), Director of International Programs of the American Association of Community Colleges (AACC) Judy Irwin as well as officials from the U.S. Agency for International Development (USAID) and the U.S. Department of State.

Roundtable participants included representatives from five U.S. community colleges and Brazilian technical education centers, known as Centro Federal de Educação Tecnológica (CEFET) from five regions of Brazil. These leaders share a common interest in the role of vocational and technical education in economic development and the expansion of economic opportunity for underserved populations. CEFET leaders are currently visiting a number of community colleges in the U.S.:

- o CEFET Pelotas, from the South Region of Brazil, is visiting the Alamo Community College District in San Antonio, TX.
- o CEFET Espírito Santo, from the Southeast Region of Brazil, is visiting Houston Community College in Houston, TX.
- o CEFET Pará, from the North Region of Brazil, is visiting Macomb Community College in Warren, MI.
- o CEFET Mato Grosso, from the Midwest Region of Brazil, is visiting Northern Virginia Community College in Alexandria, VA.
- o CEFET Paraíba, in the Northeast Region of Brazil, is visiting San Diego Miramar College in San Diego, CA.

The educators from Brazil will explore best practices at each U.S. community college, including collaboration between the colleges and the private sector. They will tour the college campuses, view their facilities, and meet with public and private industry leaders.

The genesis of the community college network began in April 2007 when a group of Brazilian educators visited community colleges in the United States. Two American higher education consultants visited Brazil in September and October 2007 to learn about their public federal and state systems. These visits resulted in a comparative study of "American Community Colleges and Brazilian Vocational and Technological Education" written by two U.S. and two Brazilians specialists in vocational and technological education and in community colleges.

Funded by the U.S. Agency for International Development, the U.S. Embassy in Brazil, and the Ford Motor Company with support by the American Association of Community Colleges (AACC) and HED, the roundtable convened a network of U.S. and Brazilian community college and technical education leaders with a track record of innovation that have a long-term interest in building sustainable, productive relationships between countries.

Higher Education for Development (HED) engages the higher education community in the U.S. and abroad for social and economic development through human and institutional capacity building. HED was established in 1992 by the six major U.S. higher education associations to expand U.S. colleges and universities' role in global development. In support of that aim, HED manages a major program of international partnerships between U.S. higher education and overseas tertiary institutions funded primarily by the U.S. Agency

for International Development (USAID). Since 1997, HED has managed more than 300 higher education partnerships in 60 countries. For more information about USAID, visit www.usaid.gov and for HED please visit <http://www.HEDprogram.org>.

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Monday, June 9, 2008

HCC to participate in technical education exchange with Brazil

Houston Business Journal

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Houston Community College is one of five schools in the United States chosen to participate in a technical education program with Brazil.

Two representatives from Brazil will visit HCC June 15 - 20 as part of the Brazil-U.S. Network for Exchange to Strengthen Vocational and Technical Education programs.

The visit is designed to provide HCC's Brazilian partners with a look into, and knowledge about, how the vocational/technical programs operate, including HCC's workforce programs.

HCC was chosen by a joint committee of the U.S. Agency for International Development (USAID), the U.S. State Department, the American Association of Community Colleges and the Higher Education for Development (HED) Office of the American Council on Education.

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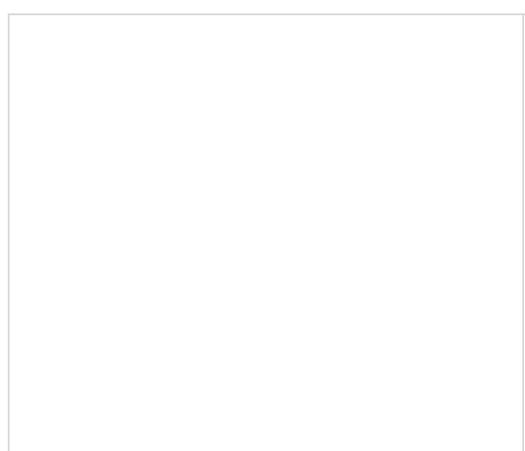
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Higher Education for Development brings together U.S. and Brazilian Educators in the U.S

WASHINGTON, D.C., June 17, 2008 — On June 9–11, 2008, Higher Education for Development (HED) convened a roundtable to launch a Brazil–U.S. Partnership to Strengthen Vocational and Technical Education. Educators from U.S. community colleges and Brazilian technical education centers met at the American Council on Education to learn from each other and create a sustainable and



Participants at the launch meeting of the Brazil–U.S. Partnership to Strengthen Vocational and Technical Education.
 (Photo: Jeanne-Marie Duval, HED)

productive collaboration between the two countries. Following the discussion, Brazilian educators are visiting U.S. community colleges. As part of a bi-national exchange, U.S. community college representatives will visit Brazilian counterparts in early September 2008 to share respective experiences.

During the roundtable, participants described the context of vocational and technical education in each country and explored the role each educational system plays in workforce development and collaboration with the local business community. Program hosts and sponsors welcoming participants included HED's Director of Programs Jeanne-Marie Duval, Board member Maureen Budetti of the National Association of Independent Colleges and Universities (NAICU), Director of International Programs of the American Association of Community Colleges (AACC) Judy Irwin as well as officials from the U.S. Agency for International Development (USAID) and the U.S. Department of State.

Roundtable participants included representatives from five U.S. community colleges and Brazilian technical education centers, known as Centro Federal de Educação Tecnológica (CEFET) from five regions of Brazil. These leaders share a common interest in the role of vocational and technical education in economic development and the expansion of economic opportunity for underserved populations. CEFET leaders are currently visiting a number of community colleges in the U.S.:

- CEFET Pelotas, from the South Region of Brazil, is visiting the Alamo Community College District in San Antonio, TX.
- CEFET Espírito Santo, from the Southeast Region of Brazil, is visiting Houston Community College in Houston, TX.
-

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CEFET Pará, from the North Region of Brazil, is visiting Macomb Community College in Warren, MI.

- ▶ CEFET Mato Grosso, from the Midwest Region of Brazil, is visiting Northern Virginia Community College in Alexandria, VA.
- ▶ CEFET Paraíba, in the Northeast Region of Brazil, is visiting San Diego Miramar College in San Diego, CA.

The educators from Brazil will explore best practices at each U.S. community college, including collaboration between the colleges and the private sector. They will tour the college campuses, view their facilities, and meet with public and private industry leaders.

The genesis of the community college network began in April 2007 when a group of Brazilian educators visited community colleges in the United States. Two American higher education consultants visited Brazil in September and October 2007 to learn about their public federal and state systems. These visits resulted in a comparative study of "American Community Colleges and Brazilian Vocational and Technological Education" written by two U.S. and two Brazilians specialists in vocational and technological education and in community colleges.

Funded by the U.S. Agency for International Development, the U.S. Embassy in Brazil, and the Ford Motor Company with support by the American Association of Community Colleges (AACC) and HED, the roundtable convened a network of U.S. and Brazilian community college and technical education leaders with a track record of innovation that have a long-term interest in building sustainable, productive relationships between countries.

Higher Education for Development (HED) engages the higher education community in the U.S. and abroad for social and economic development through human and institutional capacity building. HED was established in 1992 by the six major U.S. higher education associations to expand U.S. colleges and universities' role in global development. In support of that aim, HED manages a major program of international partnerships between U.S. higher education and overseas tertiary institutions funded primarily by the U.S. Agency for International Development (USAID). Since 1997, HED has managed more than 300 higher education partnerships in 60 countries. For more information about USAID, visit www.usaid.gov and for HED please visit <http://www.HEDprogram.org>.



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Participants at the launch meeting of the Brazil-U.S. Partnership to Strengthen Vocational and Technical Education. In June and September, educators from both countries visited corresponding colleges and met with government officials.

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Similarities bring U.S., Brazilian colleges together

BY MATTHEW DEMBICKI, Published November 11, 2008

AUSTIN, Texas — The U.S. and Brazil may be in opposite hemispheres, but similarities in their histories, cultures, economies and aspirations have brought together a group of community and technical colleges from both countries.

This year, five community colleges from across the U.S. paired with 10 technical colleges from across Brazil to exchange ideas on topics ranging from access to education to workforce education for a global economy. The U.S. colleges included Alamo Community College (ACC) and Houston Community College (HCC) in Texas, Macomb Community College (MCC) in Michigan, Northern Virginia Community College and San Diego Miramar Community College (California).

In June, leaders from the Brazilian system came to the U.S. to start a dialogue about common trends and

possible solutions to address critical areas, such as shortages of skilled workers. In September, a team of community college leaders visited Brazil to see firsthand how its technical college system operates.

A dilemma facing both countries is providing an affordable education to help low-skill, poorly educated people attain well-paying jobs, which in turn fuels economies. In both countries, underserved students must overcome financial, academic and cultural barriers to succeed, according to a summary description of the international initiative.

"While the U.S. has a tradition of open access, we face new challenges driven by high dropout rates, underprepared students and increasing costs. Brazil has the challenge of competing in a global market with the average worker having six years of schooling," the report said.

Advocates for the initiative say sharing ideas and visiting each other's colleges can foster ideas. For example, Brazil recently found new oil reserves off the coast of Rio de Janeiro. So it seemed logical to pair the local technical college with Houston Community College (Texas), which has an institute developed to provide energy training programs, including petroleum.

Representatives of the Brazil/U.S. Partnership to Strengthen Vocational and Technical Education gave an overview of the initiative at the annual National Council for Workforce Education (NCWE) conference here last month. The partnering colleges say the initiative could prompt new areas of focus for the institutions.

Vicente Ferreira de Lucena Jr. of Paraiba Federal Center for Technical Education noted that his technical college is on an island in the rural Amazon rainforest. The next largest city is about 500 miles away. The government created the college to help foster new industries in an area desperate for jobs, Lucena said. It even offered tax breaks for companies to locate there.

Today, the college trains workers to build motorcycles and electronic home devices for companies such as Honda and Philips, Lucena said.

Kristin Stehouwer, MCC's vice provost for arts and sciences, noted her college and its Brazilian partners are near some of the largest freshwater sources in the world. Although community colleges typically aren't involved in research, Stehouwer said MCC is interested in studying freshwater issues and could partner on the endeavor with the Brazilian colleges.

The institutions had various strong points that their partners wanted to explore further. The Brazilian colleges were particularly interested in remedial education and in programs that address such issues, such as Achieving the Dream, said Federico Zaragoza, vice chancellor at ACC. They also wanted to learn more how U.S. colleges updated and aligned their curricula with industry needs, he said.



Meanwhile, U.S. community colleges want to focus on Brazil's strong service-learning component. One project had students collecting plastic bags and molding them into building blocks that were used to build homes for the homeless. U.S. colleges were also impressed with how the Brazilian system accelerated its use of distance education.

At the conference, the presenters were asked how their colleges could justify working with foreign colleges and traveling abroad in tight economic times. Donald Ritzenhein, provost and chief learning officer at MCC, said colleges such as his—which serves a blue-collar county that's facing declining jobs—must learn to help prepare students to think globally. Colleges have typically limited their international education programs to language and liberal arts students, but technical education students must also become familiar with global issues and how to work in various countries and cultures in order to land good-paying jobs, he said.

"It's a strategic necessity," said Mary Gershwin, a consultant with the initiative. "It's a global economy and everyone else is faced with similar challenges."

Other countries are not waiting to partner. When the U.S. contingent was in Rio de Janeiro, more than three dozen instructors from Angola arrived to learn how to train their poorest populations for jobs in Angola's emerging oil industry.

NCWE will soon publish a best-practices summary from each of the participating colleges and possible next steps. That will likely include an exchange of students and instructors.

"We hope we are paving the way to build other partnerships in both countries," Stehouwer said.

The initiative is funded by the U.S. Agency for International Development, the U.S. Embassy in Brazil and the Ford Motor Co. It is supported by Higher Education for Development and the American Association of Community Colleges.

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HED Brings Together U.S. and Brazilian Educators to Strengthen Vocational and Technical Education

June 17, 2008

[Higher Education for Development](#) (HED) convened a roundtable last week to launch the Brazil-U.S. Partnership to Strengthen Vocational and Technical Education.

Educators from U.S. community colleges and Brazilian technical education centers met at the American Council on Education (ACE) from June 9-11 to discuss how to create a sustainable and productive collaboration between the two countries.

Roundtable participants included representatives from five U.S. community colleges and Brazilian technical education centers, known as [Centro Federal de Educação Tecnológica](#) (CEFET) from five regions of Brazil. These leaders share a common interest in the role of vocational and technical education in economic development and the expansion of economic opportunity for underserved populations.

Following the discussion, Brazilian educators are visiting U.S. community colleges. As part of a bi-national exchange, U.S. community college representatives will visit Brazilian counterparts in early September 2008.

The educators from Brazil will explore best practices at each U.S. community college, including collaboration between the colleges and the private sector. They will tour the college campuses, view their facilities, and meet with public and private industry leaders.



Roundtable participants included representatives from five U.S. community colleges and Brazilian technical education centers from

five regions of Brazil.

The roundtable was funded by the [U.S. Agency for International Development](#) (USAID), the U.S. Embassy in Brazil, and the Ford Motor Company with support from the [American Association of Community Colleges](#) (AACC) and HED.

Program hosts and sponsors included HED's Director of Programs Jeanne-Marie Duval, Board member Maureen Budetti of the [National Association of Independent Colleges and Universities](#) (NAICU), and AACC Director of International Programs Judy Irwin, as well as officials from USAID and the U.S. Department of State.

Established in 1992, HED assists the nation's six major presidential higher education associations, including ACE, in partnering with USAID and other development agencies, donor organizations, and foundations.

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NEWS

Title III Comes to Close Leaving Lasting Accomplishments *prepared by Maryza Seal*

During FY 2003-04, Miramar College received a \$1.7 million dollar Title III grant from the United States Department of Education (USDOE). This grant funding was provided over the course of five years to strengthen student retention and success through the development and improvement of academic programs, student services and faculty development. The key goals of the grant plan included the development of: (1) a student educational planning system, (2) an academic management and decision-making software system for curriculum and program development, enrollment management, and budget development, (3) professional development opportunities for faculty to infuse new technologies and active instructional strategies into their courses, and (4) alternative instructional modalities for students to achieve their educational objectives. Over the past five years, the \$1.7 million dollars in grant funding funded the purchase, development, or support of the following activities:

- Faculty mentoring program for new contract faculty;
- *Teaching Institute* professional development workshops;
- *Learning Communities* program development;
- Program Review/SLOAC process development;
- Institutional Effectiveness process development support;
- Decision Support System and Toolbox software development;
- Transfer Guide for students;
- Grants Coordinator position;
- Webmaster and Professional Development Center Intern positions;

- Web designer for academic program website development;
- Computer equipment for the Professional Development Center, Deans, and Department Chairs;
- Library books and audio visual equipment;
- Two Smart classrooms.

USDOE expects its Title III grant recipients to institutionalize the programs funded with grant funding once the funding has ended. The College has been successful in institutionalizing the Mentoring, Teaching Institute, and Learning Communities programs. It has also institutionalized the Grants Coordinator position.

Thanks to Maryza Seal for outstanding leadership as Title III Coordinator.

Calling All Alumni

It's time to nominate a former student for the 2009 *Distinguished Alumnus Award*. The annual recognition program began over a decade ago, honoring an alumnus who embodies the spirit of the community college and the role the college can play in a person's personal and professional goals. Prior years' recipients have included San Diego Mayor Jerry Sanders, San Diego City Fire-Rescue Chief Tracy Jarman, doctors, teachers, technicians, artists, entrepreneurs, and other accomplished individuals.



Monika Fitzsimmons
 2008 Distinguished Alumna
 ER Nurse, Grossmont Hospital

The 2009 award will be announced in January and conferred at the college graduation ceremony scheduled for May 21st. Nominations are due no later than October 30. Contact Sandi Trevisan, Communications Services, strevisa@sdccd.edu, for more information.



Walk For A Worthy Cause

Student Health Services is looking for students and employees to join a team for the *Making Strides Against Breast Cancer Walk, October 19 at Balboa Park, corner of 6th and Laurel*. The walk is FREE and only 4 miles long. Come walk with the Miramar Team, <http://makingstrides.acsevents.org/sandiego>. Check with Lezlie Allen, Student Health Services for more information, lallen@sdccd.edu or stop by S-103.

President Open Office Hour

President Hsieh opens her doors every other Tuesday from 4-5 p.m. for an "Open Office Hour" for anyone who'd like to stop by with a question or concern. The next scheduled hour is Tuesday, October 7. Come on by room A-102.

Globetrotting May Lead to Faculty Exchanges



Miramar College is one of five community colleges nationwide participating in an educational exchange program with Brazil for the purpose of strengthening vocational-

technical education. For seven days in June, Brazilian college professors Paulo de Tarso Costa Henriquez and Francisco

Weydson Gusmão Ferraz explored Miramar College and best practices.

Most recently, for two weeks in September, President Hsieh

and Dean Dick Bettendorf conducted an extensive tour of Brazil CEFETs (vocational college centers).

Programs of interest were identified for possible exchange -- biotech, aviation and public safety were of greatest interest by CEFET administrators. Hsieh said she was impressed with their innovative interdisciplinary approach and vision for future programming needs. Each entity will begin to identify program/discipline experts and develop an ongoing online dialogue to exchange ideas and formulate strategies



for implementing best practices. At this time, the District is not encouraging foreign student exchanges; however, faculty exchanges between Miramar and Brazil will be explored, modeled after Miramar's successful automotive faculty exchange with Mexico.

Endorsed and funded by the U.S. Agency for International Development, the U.S. Department of State, the American Association of Community Colleges (AACC), and the Higher Education for Development Office of the American Council on Education, the program is designed to convene a network of community college and technical education leaders from the United States and Brazil from institutions with a track record of innovation and success that have a long-term interest in building sustainable and productive relationships between countries.

NEW Student Support Group

Students feeling issues of isolation, grade pressure, stress, depression, or anxiety; are experiencing alcohol or drug problems; or are having problems with family or relationships, are invited to stop by Student Support Group meetings every Tuesday from 1:30-2:30 p.m. in the Library conference room. Group meetings, led by licensed mental health counselor Judy Patacsil, are informal and confidential. Students can be referred by faculty, staff or self-referral. For information, contact Judy Patacsil at (619) 388-7564.



Construction Update

provided by Construction Manager Jim Bray

For more information, FAQs, or for “construction alerts,” check www.sdmiramar.edu/construction.



Parking

On September 23rd, the west half of lot 2, west of the I and T buildings was closed to vehicular and pedestrian traffic. Access to lot 2 is restricted to the east entry of lot 2, east of the Science bldg. The expansion of the construction area results in a loss of 36 faculty/staff spaces and 17 student spaces.

The remaining 41 student spaces in lot 2 have been converted to faculty/staff parking. This results in a net gain for faculty/staff of five (5) spaces and a loss to students of 58 spaces.

To accommodate those 58 displaced student vehicles, part of the temporary dirt lot will remain available to students as needed, resulting in just over 200 spaces. This means that students have a net GAIN of 142+ parking spaces.

PEOPLE IN THE NEWS

SDCCD Succession Plan; Doctoral Candidates Id'd District Chancellor's Cabinet has been working for some time on developing various elements of a succession plan for the district. This is in response to the projected wave of retirements at all levels of leadership at the colleges, Continuing Education, and the District Office. One component of the succession plan is to create various supports and incentives to encourage faculty, staff, and administrators to complete a doctoral program. Although the specifics of doctoral support have not been finalized at this time, elements under discussion include such things as tuition assistance, sabbaticals, assistance with research data collection.

To date, the following Miramar faculty/staff are currently pursuing doctoral degrees:

Crystal Rust, Ph.D., Northcentral University Arizona
Jill Moreno Ikari, Ed.D., San Diego State University
Wendy Stewart, Ed.D., University of Southern Calif
Andrew Lowe, Ed.D. UCSD, CSU San Marcos
Patricia Flower, Ed.D., UCSD
John Couture, Ed.D., Nova South Eastern
Wahid Hamidy, Ph.D. Northcentral University

Welcome, **Dr. Vern Hodge**, Interim Program Activity Manager for the TRIO/Student Support Services Program. Prior to his retirement, Dr. Hodge served as Vice President of Student Services at Irvine Valley College and Saddleback College for 14 years. He has served as Dean of Student Development, Director of Financial Aid, counselor, and Career Placement supervisor and worked with low-income and underrepresented populations with the MESA and Puente programs.

Dr. Patricia Hsieh is one busy President. For 2008-2009, she has been appointed as the Chair of the Economic And Workforce Development Commission of American Association of Community Colleges, as the Vice Chair for the Servicemember Opportunity Consortium, and as the SDICCA Representative to the Economic Development Program Advisory Committee (EDPAC) - An Advisory Group to the Governor.

Welcome **Denise Kapitcke** to Administrative Services. Denise replaces Jennifer Nickles, who retired earlier this year. Denise comes to Miramar from the District Office where she was an Accounting Supervisor overseeing Capital Projects, Propositions “S” and “N”, Trust and Agency funds and directed a wide range of accounting functions. Prior to joining the District, Denise was the Controller at Time Warner Cable. Denise is a graduate from San Diego State University, earning her degree in Business Administration.

Faculty Advancement, Fall 2008

Congratulations to the following faculty who received tenure and promotions:

Mark Dinger, Patricia Flower, Amy Fraher, Tim Hempleman, Mark Hollman, Jordan Omens, Rod Porter, Angela Romero, Alan Viersen, Martin Walsh, Joseph Young. Congrats to *Kandice Brandt, Otto Dobre, Mary Kjartanson, Virginia Naters* and *Sandra Slivka* on their advancement to professor.

ACTIVITIES & EVENTS

www.sdmiramar.edu/calendar

R.A.D. Class Offers Defense Training

Rape Aggression Defense training is offered to all Miramar faculty and staff by SDCCD College Police on Saturdays, Oct. 25 and Nov. 1 from 9 a.m.-4 p.m. in A-111 on the Miramar campus. The free, 12-hour program begins with awareness, prevention, risk reduction, and avoidance, and progresses to defense training. No prior experience is required. To register, contact Sergeant Diana Medero at 619-388-7353.

October is Transfer Awareness Month

Stop by the Miramar Transfer Center to meet the staff, learn about this month's transfer activities and workshops.

Disability Awareness Month

The Disability Support Programs and Services Department has created an informative display in the Library to recognize Disability Awareness Month. Consider giving extra credit to your students for visiting the display.

Friday • October 17 • 6:30-8 PM

I-101 A/B • FREE

*Diversity/International Education Committee,
recognizing Filipino American History Month*

**Diversity ROCKS! Evening with the Experts:
WWII Veteran & Associate Producer, Domingo
Los Banos & film "An Untold Triumph
Contact: Judy Patacsil, jpatacsi@sdccd.edu**

Sunday • October 19 • Balboa Park

Making Strides Against Breast Cancer Walk

Contact: Lezlie Allen, lallen@sdccd.edu



JETS Women's Soccer • Hourglass Field

10/1 • Home vs. Imperial Valley College • 3:15 PM

10/3 • Away vs. Grossmont College • 3:15 PM

10/10 • Home vs. Southwestern College • 3:15 PM

10/15 • Away vs. Cuyamaca College • 3 PM

10/17 • Home vs. SD City College • 3 PM

10/22 • Away vs. MiraCosta College • 3 PM

10/24 • Away vs. SD Mesa College • 3 PM

10/29 • Home vs. Palomar College • 3 PM

10/31 • Away vs. Imperial Valley College • 3 PM

STAY INFORMED

Committee agendas, minutes and reports can be found at www.sdmiramar.edu/gateways/faculty.asp and click on "College Governance".