

FLATE

Florida Advanced Technological center

2012 Annual Report
(06/11 – 05/12)

NSF FastLane
Grant #0802436

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Section 1: Project Participants

Marilyn Barger	Executive Director/Principal Investigator	FLATE
Richard Gilbert	Co-Principal Investigator	University of South Florida
Bradley Jenkins	Co-Principal Investigator	St. Petersburg College
Ali Yalcin	Senior Personnel	University of South Florida
Andrew Hoff	Senior Personnel	University of South Florida
Wilfrido Moreno	Senior Personnel	University of South Florida
Alex Anzalone	Faculty Consultant	Hillsborough Community College
Marie Boyette	Associate Director	FLATE
Phil Centonze	External Evaluator	FLATE
David Gula	Outreach Manager	FLATE
Janice Mukhia	Media Relations	FLATE
Lourdes Fleurima	Senior Staff Assistant	FLATE
Sara LeFils	Ambassador	College of Central Florida
Colin Miller	Webmaster MIF & FLATE	FLATE
Wayne Chin	Graphic Artist	FLATE
Jodi Sutton	Graphics/Web	FLATE
Kim Wilson	Website Contributor	FLATE
Nnaemeka Ibea	Robot Programmer	FLATE
Jennifer Ulman	Fiscal Assistant	FLATE
Jackie Voulgaris	Outreach Specialist	FLATE
Pedro Colon	Undergraduate Student	FLATE
Natasha Crissien	Undergraduate Student	FLATE

Organizational Partners

.Decimal - Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

ABB Inc - Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Accuform Signs - Collaborative Research

Partnered with the center on outreach activities and curriculum development.

Agilent Technologies - Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Aladdin Equipment Co. - In-kind Support

Facility has partnered with the center on outreach activities and supports curriculum development activities.

AMATROL - In-kind Support; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities

Aponte Tool and Manufacturing - Collaborative Research

Industry partner, participating in curriculum reform.

Aqua Cal - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and support curriculum development.

Aso LLC - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

Avatar Packaging - In-kind Support

Partnered with the center on outreach activities and curriculum development activities.

Awareness Technology Inc. - In-kind Support; Facilities

Partnered with the center on outreach activities and curriculum development activities.

BAE - In-kind Support

Partnered with the center on outreach activities and curriculum development activities.

BASF Corp. - In-kind Support; Collaborative Research

Collaborator; sat on NVC. Partnered with the center on outreach activities and curriculum development activities

Bay Area Manufacturing Association - Financial Support; In-kind Support; Collaborative Research
Regional Manufacturing Association partnering in center activities.



Bioderm, Inc - In-kind Support; Facilities

Facility has partnered with the center on outreach activities and supports curriculum development activities.

Biomet 3i - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.

BITT - In-kind Support; Collaborative Research

BITT stands for Biomolecular Identification and Targeted Therapeutics, partner for workforce training and curriculum development.

Black Diamond Strings - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

Brevard Community College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Brevard County Public Schools, Florida - Facilities; Collaborative Research

Partner participating in curriculum reform and outreach activities.

CAE USA - Facilities; Collaborative Research

Facility has partnered with the center on outreach activities and curriculum development activities.

Canyon Bay Boats - Collaborative Research

Partnered with the center on outreach activities and curriculum development.

Capital Region Manufacturers Assoc. - Financial Support; In-kind Support; Collaborative Research

Regional Manufacturing Association partnering in center activities.

Catrike - Facilities; Collaborative Research

Facility has partnered with the center on outreach activities and supports curriculum development activities.

Cellynne Corporation - In-kind Support; Facilities; Collaborative Research.

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Central Florida Box, Inc. - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

College of Central Florida - Facilities; Collaborative Research

Partner Community College participating in curriculum reform activities.

Chapman Tool & Mold, Inc. - In-kind Support; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.



Chipola State College - Facilities; Collaborative Research

Partner Community College participating in curriculum reform activities and professional development.

Clark Western Building Systems - In-kind Support; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Coastal Caisson - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach activities and student tours.

Combs Welding Design, Inc. - In-kind Support

Facility has partnered with center in creating a Virtual Tour of their operations.

Composite Motors - In-kind Support; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Conimar Corporation - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities along with opening the facilities for video production.

CONMED Linvatec – Financial Support; In-kind Support; Facilities; Collaborative Research

Personnel serve on the center's advisory board. VP on NVC. Financial support for awards and NEXT advertorial.

Constellation Technologies - In-kind Support; Collaborative Research

partnered with the center on outreach activities and supports curriculum development activities.

Cost Cast, Inc. - Collaborative Research

Partnered with the center on outreach activities and support curriculum development.

Cross Match Technologies, Inc. - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.

CTC Tampa Bay - Collaborative Research

Personnel serve on the center's advisory board.

Custom Manufacturing and Engineering - Collaborative Research

Industry partner, participating in curriculum reform.

Datamax, Inc. - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Daytona Beach State College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Dean Foods - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

Ditek - In-kind Support; Collaborative Research

Industry partner, participating in curriculum reform.

East Lake High School - Facilities; Collaborative Research

Partner participating in curriculum reform and outreach activities.

EEI Manufacturing Services - Collaborative Research

Personnel serve on the center's advisory board and are partners in outreach.

Emery Thompson Machine & Supply - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

EMI Industries - In-kind Support; Collaborative Research

Facility had partnered with center in creating a Virtual Tour of their operations.

Employ Florida Banner Center for Biotech - Collaborative Research

Partner for Academic Biotech program development.

Employ Florida Banner Center for Mfg. - Financial Support; Collaborative Research

Banner center worked with FLATE for education/training Workforce solutions for Florida manufacturing.

Enterprise Florida - Collaborative Research

Working with the Manufacturing Advisory Council on curriculum reform and outreach activities.

Featherlite - Facilities; Collaborative Research

Facility has partnered with the center on outreach activities and supports curriculum development activities.

FESC - In-kind Support; Collaborative Research

FESC stands for Florida Energy Systems Consortium, partners for workforce training and curriculum development.

Fisher Electric Technology - In-kind Support; Facilities;

Facility partnered with the center on outreach activities and curriculum development activities.

Florida Dept. of Education - Collaborative Research

Workforce, Career and Technical Education Division participating in curriculum reform activities. Vice Chancellor serves on the center's NVC.

Florida Atlantic Marine - Financial Support; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development and legislative activities.



Florida Gateway College - Facilities; Collaborative Research

Partner community college participating in curriculum reform and outreach activities.

Florida High Tech Corridor Council - Financial Support; In-kind Support; Collaborative Research

Financially supports student industry tours and partners in outreach activities.

Florida State College at Jacksonville - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform and outreach activities.

Florida's Natural - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

Fluid Routing Solutions - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and curriculum development activities.

G&T Conveyor Co. - In-kind Support; Facilities

Facility has partnered with the center on outreach activities and supports curriculum development activities.

Gerdau Ameristeel - In-kind Support; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Goodheart-Wilcox Publisher - In-kind Support

Partnered with the the center on outreach activities and supports curriculum development activities.

Greco Middle School - Facilities; Collaborative Research

Partner school participating in professional development and outreach activities.

H&S Swansons' Tool Company - Collaborative Research

Partnered with the center on outreach activities and support curriculum development.

Harris Corporation - Financial Support; In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development and legislative activities. Partially funded outreach activity reaching 750,000 H.S. students.

Hi Tek Truss - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach, curriculum development activities and student tours. Financially supported NEXT advertorial.

Hoerbiger Corp. - Financial Support; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development and legislative activities. Support for outreach.

Honeycomb Company of America - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center in contributing materials for classroom training and project development.

Honeywell Inc - Collaborative Research
Industry partner, participating in curriculum reform.

Indian River State College - Facilities; Collaborative Research
Partner Community College, participating in curriculum reform activities.

Intezyne Technologies - Collaborative Research
Partnered with the center on outreach activities and support curriculum development.

Iverson and Company - Facilities; Collaborative Research
Serves on NVC and are partners in outreach.

Jabil Circuit - In-kind Support; Facilities; Collaborative Research
partnered with the center on outreach activities and supports curriculum development activities.

Jaeger Corp. - Financial Support; In-kind Support; Collaborative Research
Personnel serve on the center's advisory board. Jaeger provides equipment and technical support for FLATE organized statewide skillsUSA annual competitions. Financial support for awards.

Kimball Industries - In-kind Support
Facility has partnered with the center on outreach and curriculum development activities.

Knight Armaments - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center on outreach and curriculum development activities.

Lakeland Electric - In-kind Support; Facilities
Facility has partnered with the center on outreach activities and supports curriculum development activities.

Lear Corporation - Facilities; Collaborative Research
Industry partner, participating in curriculum reform.

Leslie Controls - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center on outreach activities and supports curriculum development activities.

Lockhead Martin - Financial Support; In-kind Support; Facilities; Collaborative Research
Partnered with the center on outreach activities and supports curriculum development activities.

Machining Solutions - Collaborative Research
Facility has partnered with the center on outreach activities and student tours.

Manufacturers Association of Central FL - Financial Support; In-kind Support; Collaborative Research; Regional Manufacturing Association partnering in center activities.

Manufacturers Association of Florida - Financial Support; In-kind Support; Collaborative Research
MAF financially supported the reproduction of the 'Made in Florida' so it can be made available to the schools, counselors, workforce boards, etc free of cost. MAF has also voted to support our www.madeinflorida.org outreach and career website financially. FLATE has a position on MAF workforce and education committee.

Marion County Technical Education Center - Facilities; Collaborative Research
Partner participating in curriculum reform and outreach activities.

Media Tech Plus - In-kind Support
Facility has partnered with the center on outreach activities and supports curriculum development activities.

Mercury Marine - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center on outreach activities and curriculum development activities.

Metal Essence - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center on outreach and curriculum development activities.

Miami Dade College - Facilities; Collaborative Research
Partner Community College participating in curriculum reform activities.

MicroMo Electronics Inc. - Facilities; Collaborative Research
Industry partner, participating in curriculum reform. This company also hosts industry tours.

Micron Pharmaworks - In-kind Support; Facilities; Collaborative Research
Facility has partnered with the center on outreach activities and student tours.

MILEO & Assoc. - Financial Support; In-kind Support; Collaborative Research
Managing partner serves on FLATE IAC and NVC.

MITRE - In-kind Support; Facilities; Collaborative Research
Partnered with the center on outreach activities and supports curriculum development activities.

Mitsubishi Power Systems - In-kind Support; Facilities; Collaborative Research
Partnered with the center on outreach activities and supports curriculum development activities.

Mtron PTI - In-kind Support; Facilities
Facility has partnered with the center on outreach activities and supports curriculum development activities.

Museum of Science and Industry (MOSI) - In-kind Support; Collaborative Research
Local partner for outreach activities in the community.



National Association of Manufacturers - Collaborative Research

Collaborator and partner in outreach activities supporting manufacturing in Florida.

Nature Coast High School - Facilities; Collaborative Research

Working with HCHS and HCC to develop an articulation and/or dual enrollment. Also, FLATE supported the Manufacturing teacher to attend the Florida Manufacturing Summit.

Nature's Products - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

NDH Medical Inc. - In-kind Support; Collaborative Research

Neilsen Media - Facilities

Facility has partnered with the center on outreach activities.

New England Machinery - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities and student tours.

Norris Precision Manufacturing - In-kind Support; Facilities

Partnered with the center on outreach activities and supports curriculum development and student tours.

Packaging Corp. of America - In-kind Support; Facilities; Collaborative Research

Personnel serve on the center's advisory board.

Pall Aeropower - In-kind Support; Facilities; Collaborative Research

Personnel have participated in curriculum reform activities.

Palm Beach State College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Pasco-Hernando Community College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Pensacola State College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

PGT Industries - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities and student tours.

Pierce Manufacturing - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Plasma-Therm- In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Plastipak Packaging, Inc. - In-kind Support; Facilities; Collaborative Research

Personnel serve on the center's advisory board.

Polk Manufacturers Association - Financial Support; In-kind Support; Collaborative Research

Regional Manufacturing Association partnering in center activities.

Polk State College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Polypack, Inc. - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Port of Tampa - Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

PPI Technologies Global - Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.

Pratt & Whitney Rocketdyne - In-kind Support; Facilities; Collaborative Research

Serves on NVC and partners with the center on outreach, curriculum development activities and student tours.

Promedica, Inc. - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

Publix – Financial Support; In-kind Support

In-kind and cash support. Facility partners with the center for outreach activities and student tours.

R. L. Schrieber, Inc. - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

R.C. Stevens, Inc. - Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Raytheon Corporation - In-kind Support; Facilities; Collaborative Research

Industry partner, participating in curriculum reform.

RF Micro Devices - In-kind Support; Facilities

Facility has partnered with the center on outreach activities and supports curriculum development activities.

Rockwell Automation - In-kind Support; Facilities; Collaborative Research
Technical assistance with equipment and training.

Sarasota-Manatee Manufacturing Assoc. - Financial Support; In-kind Support; Collaborative Research
Regional Manufacturing Association partnering in center activities.

Schneller Inc. - In-kind Support; Facilities; Collaborative Research
Industry partner, participating in curriculum reform and student tours.

School Board of Pinellas County - Facilities; Collaborative Research
Partner participating in curriculum reform and outreach activities.

School District Hillsborough County - Facilities; Collaborative Research
FLATE is working with the technical teachers in the development of manufacturing challenges (lessons) and providing professional development opportunities for them.

Senninger Irrigation - Facilities; Collaborative Research
Partnered with the center on outreach activities and curriculum development activities.

Sensor Systems/Fisher Motors - In-kind Support; Collaborative Research
Partnered with the center on outreach activities and curriculum development.

Siemens Energy & Automation - In-kind Support; Facilities
Partnered with the center on outreach activities and curriculum development activities.

Siemens Power Generation - In-kind Support; Facilities
Partnered with the center on outreach activities and curriculum development activities.

Signature Brands - In-kind Support; Facilities; Collaborative Research
Partnered with the center on outreach activities and supports curriculum development activities.

SMC Corporation of America - In-kind Support; Collaborative Research
Partnered with the center on outreach activities and supports curriculum development activities

Smith and Nephew - Collaborative Research
Industry partner, participating in curriculum reform.

Smiths Industries - Collaborative Research
Industry partner, participating in curriculum reform.

Society of Manufacturing Engineers - Financial Support; In-kind Support; Collaborative Research
Personnel serve on the center's advisory board, partners in center activities, and provide financial support for summer camps.



Solid Works, Inc. - Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Somec, Inc. - Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

South Florida Manufacturers Association - Financial Support; In-kind Support; Collaborative Research. Partners on outreach activities and supports curriculum development activities.

Southern Manufacturing Technologies - Financial Support; In-kind Support; Collaborative Research. Partners on outreach activities and supports curriculum development activities.

Southern Powder Coat LLC - Collaborative Research

Facility has partnered with center in creating a Virtual Tour of their operations.

Southland Logistics Services, Inc. - Facilities

Collaborated with the center for outreach.

Southwest Florida Manufacturers Assoc. - Financial Support; In-kind Support; Collaborative Research

Regional Manufacturing Association partnering in center activities.

State College of Florida - Facilities; Collaborative Research

State College of Florida, Manatee participating in curriculum reform and outreach activities.

Sun Hydraulics - In-kind Support; Facilities; Collaborative Research

CEO serves on center's NVC. Facility has partnered with the center on outreach activities, curriculum development activities and student tours.

Sypris Test & Measurement - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

Tallahassee Community College - Facilities; Collaborative Research

Partner community college participating in curriculum reform and outreach activities.

Tallahassee Economic Development Committee - Collaborative Research; In-kind; Facilities Support for outreach and recruitment of students for Florida manufacturing careers.

Tampa Armature Works - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities, supports curriculum development activities and student tours.

Tampa Chamber of Commerce - Collaborative Research

Partner in outreach activities to the community.



Tampa Port Authority- Collaborative Research

Facility has partnered with the center on outreach activities and supports curriculum development activities and student tours.

Technical Training Aids - Facilities

Facility has partnered with the center on outreach activities and supports curriculum development activities.

TECO - In-kind Support; Collaborative Research

Serves on Industrial Advisory Committee and supports curriculum reform and outreach activities.

Teltronics Sarasota - Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities and student tours.

The Mosaic Company - Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.

Tropicana Products, Inc. - Financial Support; In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development and legislative activities. Financial support for awards and NEXT advertorial.

University of Central Florida - Facilities; Collaborative Research

Collaborator for outreach and curriculum reform.

USF Engineering Rehabilitation Lab - In-kind Support; Facilities; Collaborative Research

Collaborative support

USF Nanotechnology Research and Education Center (NREC) - Collaborative Research

Collaborative research and support for curriculum development activities and student tours.

USF Polytechnic - Facilities; Collaborative Research

Partner college participating in curriculum reform and outreach activities.

USF School of Anthropology - Collaborative Research; Personnel Exchanges

Grant proposal partners

Valencia Community College - Facilities; Collaborative Research

Partner Community College, participating in curriculum reform activities.

Valpak (Cox Target Media, Inc.) - In-kind Support; Facilities; Collaborative Research

Facility has partnered with the center on outreach activities and student tours.

Ven-Tel Plastics - In-kind Support; Facilities

Facility has partnered with the center on outreach and curriculum development activities and student tours.

VLOC Incorporated - In-kind Support

Partnered with the center on outreach activities and supports curriculum development activities.

Volusia Manufacturers Association - Financial Support; In-kind Support; Collaborative Research
Regional Manufacturing Association partnering in center activities.

Vulcan Machine - In-kind Support; Facilities; Collaborative Research

Partnered with the center on outreach activities and supports curriculum development activities.

WinDoor Incorporated - Facilities; Collaborative Research

Facility has partnered with the center on outreach and curriculum development activities.

Workforce Florida - In-kind Support; Collaborative Research

Partnered with the center on outreach and curriculum development activities. V.P. serves on Center's NVC.

Collaborators & Contacts

Grant Partner Institutions: FLATE partners with other academic and non academic units with its leadership institutions HCC, SPC and USF-COE.

- * BCC, Meer Almeer, Engineering Technology Program Manager and Faculty
- * FESC, Jana Calahan, FESC Associate Director
- * HCC, Dr. Alessandro Anzalone, Engineering Technology Program Manager and Faculty
- * HCC, Tracey Barnes, Program Manager Electronics Technology
- * HCC, Joe Benvotarto, Dean of Student Services, Brandon Campus
- * HCC, Dr. Ellen Cangi, Dean of A.A. Programs, Brandon Campus
- * HCC, Dr. Ginger Clark, Director of Technical Education
- * HCC, Dr. Adrienne Garcia, Director, Foundation
- * HCC, Deb Gosh, Biotech Professor
- * HCC, Elizabeth McCullough, Chemistry Professor
- * HCC, Judy Nolasco, Academic Dean, SouthShore Campus
- * HCC, Sabrina Peacock, Dean A.S. Programs Brandon Campus
- * HCC, Dr. Carlos Soto, President, Brandon Campus
- * HCC, Nina Stokes, Proj. Man. FESC, Brandon Campus
- * HCC, Yolanda Williams, Director The Corporate Training center
- * HCC, Dr. Allen Witt. Campus President, SouthShore Campus
- * SPC, Mr. Stan Vittetoe, VP Administration
- * SPC, Mr. Guy Graham, Project Director
- * UF, Dr. Tim Anderson, Director FESC
- * UF, Tammy Mandel, CREH
- * USF, Dr. Rod Casto, VP Economic development
- * USF, Bridget Cotner, Research Associate, Alliance for Applied Research in Education and Anthropology

- * USF, Mr. Michael Gunn, USF Office of outreach
- * USF, Dr. Don Haynie, Prof. Physics
- * USF, Dr. Drew Hoff, Prof. EE
- * USF, Dr. Suzanne Lai-Yuen, Assistant Professor IMSE
- * USF, Dr. Wilfredo Moreno, Prof. EE
- * USF, Dr. Raphael Perez, Dean of Undergraduate Studies, COE
- * USF, Dr. Kingsly Reeves, Assistant Professor IMSE
- * USF, Dr. Sylvia Thomas, Associate Dean of Diversity, COE
- * USF, Will Tyson, Associate Professor, Dept. of Sociology
- * USF NREC, Jay Breber, Technician
- * USF NREC, Ashok Kumar, Faculty
- * USF NREC, Rob Tufts, Faculty
- * USF Polytechnic, Dr. Frank Young, Director, Engineering Programs

Industry and Professional Associations: FLATE has formal and informal partnerships with many state, regional organizations for outreach, dissemination, and subject matter expertise.

- * APICS, Jim Moore, Chapter Chair
- * Bay Area Mfg. Assoc., Dave Stailey, Board Member
- * Bay Area Mfg. Assoc., Steve Meitzen, President
- * Capital Region Manufacturers Association, Travis Yelverton
- * CTEF, Paul Wannish, President
- * First Coast Mfg. Assoc., Sherri Mitchell, Director,
- * Florida Assoc. of Career and Tech. Ed., Marsan Carr, Exec. Dir.
- * Manufacturing Assoc. of Florida, Nancy Stevens, Director
- * Manufacturing Assoc. of Florida, Al Stimac, President
- * Marion Regional Mfg Assoc., Pete Tesch, President
- * Mfg. Assoc. of Central Florida, Sherrie Reeves, Executive Dir.
- * NACTC, Dr. Robert McCabe, Exec. Dir.
- * NAM Manufacturing Institute, Emily Derocco
- * NAM Manufacturing Institute, Jennifer McNeely
- * Pilgram Assoc. & Polk Mfg. Association, Dick Pellegrini
- * Polk Manufacturers Association, Thomas Grothouse
- * Sarasota Area Mfg. Assoc., Peter Straw, Executive Director
- * SME, Pam Hurt, Strategic Alliances; Workforce development Mgr.
- * SME, Don Pats, Chairman SME Chapt. 159
- * SME, Mike Stratton, Member and Industry Relations Manager
- * South Florida Mfg Assoc., Dennis Baltitella, Training Director
- * South Florida Mfg Assoc., Tom Kennedy, Executive Director,
- * Southwest Regional Manufacturers Association, Doug Gyore
- * Southwest Regional Manufacturers Association, Chet Sadler
- * Volusia Manufacturers Association, Jayne Fifer, Director
- * Volusia Manufacturers Association, Wayne Van Orden, Member

Industry: FLATE partners with industry for its many outreach and curriculum activities and projects.

- * AeC Inc., Cole Fry
- * Arthur Machinery Inc., Robert Arthur
- * BASF, Anthony Fedd, Site Manager
- * Bioderm, John Debella, General Manager
- * BioneticsGreg Seay, Senior Engineering Tech.
- * Brevard Job Link, Eric Nakamura
- * Brighthouse Networks, Mike Haethorn
- * Carlton Fields, Rheb Harbison, Sr. Govt. Consultant
- * Catrike, Paulo Camasmie
- * Cellynne Corp., Jorge Alteri
- * Chromoloy, Craig Hayes
- * Coastal Caissons, Brian Kamm
- * Combs Welding Design Inc., Connie Combs
- * Consultant Electrical Engineering, Ed Homan
- * Dictaphone, Jim Davis
- * Dictaphone, Karla Micka
- * Draper Laboratories, John Burns
- * DRS Optronics, Anthony Hicks
- * DRS Optronics, Mike Kelly
- * DRS Optronics, Bill Perelin
- * DRS, Matthew Smith, Manufacturing Engineer
- * EEI, Patti Gander, VP Operations
- * E-One Inc., Jason Thorp
- * Enviro Tec., William Erdmann, Manager Engineering and Electronics
- * Featherlite Coaches, Rick Mueller
- * Florida Sterling Council, Phil Centonze, Principle - Poz Impact
- * GE, Richard Foster
- * H&S Swanson's Tool Co, James Swanson
- * Harris Corp, Mike Ennis, - GCSD
- * Harris Corp., Julia Markardt
- * Honeywell, Steve Askew, Super Instrumentation Svcs
- * Honeywell, Frank Cain, Manager Quality
- * Honeywell, Mary Anne Letteri, Manager Quality
- * Industry Consultant, Jerry McCollum
- * InDyne Inc., Mark Edwards, - CAPPS
- * Innovation Express, Anton Horum, President
- * Intersil, Donna Brooks
- * Intersil, Bill Satterfield
- * IT Consultant, Clinton Mells, IT Consultant
- * IT Technologies, Louis Grilli, Consultant
- * Jaeger Corporation, Mark Gaudio, Regional Manager
- * Jaeger Corporation, Rod Jaeger, President
- * Jaeger Corporation, Dean Miller, Customer Service Manager
- * Lear Corporation, Charles Dixon

- * Linvatec, Largo, FL, Mark Snyder, VP Manufacturing
- * Lockheed Martin, Tom Falanga
- * Lockheed Martin, Beth Ferguson
- * Lockheed Martin, Brian O'Connor, Director- Missiles & Fire Control
- * Lockheed Martin, Maricka Rogers
- * Marion County EDC and Lockheed Martin, Bob Kennedy
- * MC Assembly, Vincent Burns
- * MC Assembly, Ben Thomas
- * MC Assembly, Bob Tortolano
- * MetLife, Donald R. Houdek
- * Metal Essence, Al Stimac, Pres.
- * MicroMo Electronics, Marcus Heilner, VP Manufacturing and Engineering
- * Micron PharmaWorks, Ben Brower
- * Micron PharmaWorks, Peter Buczynsky
- * Micron PharmaWorks, Ruth Michael
- * Mileo and Associates, Inc., Don Gugliuzza, Managing Director
- * NDH Medical, Inc., Geary A. Havran, President
- * Network Centric Systems Engineering, Steve Park, Director
- * Nokia, Tony Crosthwaite
- * Nokia, Wanda Morici
- * Norris Precision Manufacturing, Joe Norris
- * Northrop Grumman, John Casco
- * PGT Industries, Julie Guinn
- * Publix, Mike Smith, VP Manufacturing
- * Quality Electronic Manufacturing, Phil Moore
- * Raytheon, Ken Conforti, Manufacturing Engineer
- * Raytheon, Lisa Maciolek, Materials Supervisor
- * Raytheon, William Venz, Systems Engineer
- * Rockwell Automation, Ruly Lopez, Area Manager- Services
- * Rockwell Collins Inc., Robbie Home
- * Rockwell Collins Inc., Dave Mager
- * SAMA, Peter D. Straw, Executive Director
- * Sea Ray Boats, Kevin Shaw
- * Smith and Nephew, Keith Matthews, Quality Assurance Mngr
- * Southern Educational Services, Fred Hampton, President
- * Southern Manufacturing Technologies, Inc., Roy Sweatman, President
- * Sun Hydraulics Corporation, Allen Carlson, President and CEO
- * Sun Hydraulics Corporation, Charles Haynie
- * Sunneclear Corp., Randy Karl
- * Sunneclear Corp., Brain Morevecky
- * Sypris Electronics, Robert Sanders
- * Tampa Armature Works, Dave Adams
- * TAW Custom Equipment, Marshall Moore
- * Tropicana Products, Inc., Steve Lezman, Dir. of Govt. Affairs
- * Valpak, Steve Murphy

ATE centers & Projects: FLATE partners with NSF ATE projects and centers for projects and activities that draw on other expertise or collaborate on joint projects.

- * AMTEC, Walt Barlow, curriculum Specialist
- * AMTEC, Stan Chase, Partner
- * AMTEC, Craig Hopkins, Project Director
- * AMTEC, Annette Parker, PI Director
- * ATEEC, Jeff Armstrong, PI
- * BATEC, Deborah Boisvert, PI
- * BATEC, Paula Voulta, Assoc. Director
- * CARCAM center, Beverly Hilderbrand, Director
- * CARCAM, Michael Mann
- * CREATE, Kathy Alfano, PI
- * CTC, Ann Beheler, PI
- * CTC, Helen Sullivan, Director
- * Evaluate, Lori Wingate, PI
- * ICT, Nina Laurie, Associate Director
- * ICT, Gordon Snyder, PI Director
- *MATEC, Barbara Andregg, Principal Investigator, NSF Consortium for Education in Renewable Energy Technology
- * MATEC, Mike Lesiecki, Director
- * MATEC, Lara Smith, Associate Director
- * MatEd, Mel Cossettee, PI
- * MatEd, Frank Cox, PI
- * NanoLink, Deb Newberry, PI
- * NBC2, Sonia Wallman, Director
- * NCME, Derik Harden
- * NCME, Bob Mott
- * NCME, Gilah Pomeranz
- * NCME, Jack Weintraub, Director
- * NCME, Steve Wendel
- * NEATEC, Abe Michelen
- * RCNGM, Karen Birch, Director and PI
- * RapidTech, Ken Patton, PI
- * SCME, Matt Peel, Director and PI
- * SMART, Barbara Murray, Director and PI
- * SMART, Karen Owen, Project Director
- * SC ATE, Elaine Craft, PI
- * SC ATE, Tressa Gardner, Director
- * SPACETEC, Al Koeller, Executive Director and PI
- * TIME center, Ken Burch, Director
- * TIME center, Denise Faber, PI
- * WeldED, Ramona Arnon
- * WeldED, Duncan Estes, Project Director
- * WeldEd, Monica Pfarr, PI

Post Secondary Education: FLATE partners with schools and districts for outreach, recruitment, articulations and curriculum.

- * Aparico-Levy Tech. School (SDHC), Ann Marie Courtney, Principal
- * Aparico-Levy Tech. School (SDHC), Donna Matassini, Program Advisor
- * Brevard Community College, Meer Almeer, Faculty, Program Coordinator
- * Brevard Community College, Mildred Coyne, Provost, Workforce and Training
- * Brevard Community College, Bruce Heshner, Asst. Professor, Electronics
- * Brevard Community College, Joanne Hutton, curriculum Specialist
- * Broward College, Donat Forrest, Faculty
- * Central Florida Community College, Cheryl Fante, VP Business development
- * College of Central Florida, Robert Frank, Faculty
- * College of Central Florida, Sheriz Khan, Faculty
- * College of Central Florida, Ed Niespode, Faculty
- * Daytona State College, Ron Eaglin, Assoc. VP for Technology Education
- * Daytona State College, Roger Rowan, Faculty
- * Edison State, Brian Botts, Director, Collegiate H.S
- * Edison State, Mary Myers, Corporate College, Faculty
- * Edison State, Bill Roshon, Corporate College, Faculty
- * Florida State College at Jacksonville, Ernie Friend, Program Advisor
- * Florida State College at Jacksonville, Linda Austin, Dean
- * Florida State College at Jacksonville, Jim Simpson, VP Economic development
- * Florida State College at Jacksonville, Lance Wallace, Program Advisor
- * Florida Gateway College, Bob Deckon, Faculty
- * Florida Gateway College, John Piersol, Director, Ag. And Engineering Technologies
- * Gulf Coast Community College, Antonio Adesie, Faculty
- * Gulf Coast Community College, Dean Eavy, Faculty
- * Gulf Coast Community College, Wendy Payne, Faculty
- * Hillsborough County School System, David Reese, Electronics Instructor
- * Hofstra University, David Burghardt, Engineering Dept. Chair; Co-Director, center for Technological Literacy
- * Hofstra University, Michael Hacker, Co-Director, center for Technological Literacy
- * Indian River State College, Kevin Cooper, Special Projects
- * Indian River State College, Jose Farino, Dean
- * Indian River State College, Gary Koser, Faculty
- * Indian River State College, Chrys Panayiotou, Faculty
- * Miami Dade College, Jeff Muller, Faculty
- * Mohawk Valley Community College, Robert Decker, Industrial Faculty
- * Onandaga CC, Bruce Hamm, Assistant Director Business & Workforce development
- * Onandaga CC, Joe Vargo, Executive Director PArtnr
- * Palm Beach State College, Dana Zorovich, Director, Resource and Grant development
- * Pensacola State, Mike Canon, Faculty
- * Pensacola State, Sue Halfhill, Director CTE
- * Pinellas Technical Education center, Mark Erikson, Director
- * Pinellas Technical Education center, Eric McClendon, Associate Director
- * Polk State College, Patricia Jones, District Dean of Academics and Student Services

- * Polk State College, Eric Roe, Director, Banner center for Manufacturing
- * Polk State College - Corporate College, Ernie Helms, Mfg. Manager
- * Seminole State, Lenny Portelli, Dean
- * Seminole State, Mark Staley, Dir. Construction Mgt.
- * Seminole State, Craig Tidwill, Professor
- * State College of Florida-Manatee/Sarasota, Adrienne Gould-Choquette
- * State College of Florida-Manatee/Sarasota, Idelia Phillips, Faculty
- * Tallahassee Community College, Bruce Batton, Director, AMTC
- * Tallahassee Community College, Rick Frazier, Director, Workforce
- * USF COE, Delcie Durham, Faculty, Industrial Systems Engineering
- * USF COE, Suzanne Li, Faculty, Industrial Systems Engineering
- * Valencia College, Nassar Hydat, Associate VP, Technology Programs

Secondary Education: FLATE partners with schools and districts for outreach, recruitment, articulations and curriculum.

- * Braden River HS, Gil Burlew, Dept. Chair, ACT Programs
- * Douglas L. Jameson Jr. Elementary, Robin Little, Engineering Coach
- * Dowdell Middle Magnet School, Allan Dyer, Science Teacher
- * Duval School District, Charles Rutledge, CTE Director
- * Families Instructing Students at Home (FISH), Arlene Meyer, Rep.
- * Greco M.S. Teacher, Elizabeth Heli
- * Lakewood HS CAT Program, Rose Mack, Teacher/Leader
- * Manatee County Schools, Doug Wagner, CTE Director
- * Middleton H.S., Kathy Freriks, curriculum
- * Middleton H.S., Kim Moore, Assistant Principal curriculum
- * Mid-Florida Technical Inst., Joe McCoy, Director
- * Orange Co. Public Schools, Cheryl Awtonomow, Coordinator
- * Orange Co. Public Schools, Chip Bashinski, CTE Director
- * Osceola Co. Public Schools, Joe Luciano
- * Pierce Middle School, Eric Fernandez, Teacher
- * Pinellas Co. Public Schools, Jerry Ditty, Director C&TE
- * Pinellas County Schools, Gary Shepard, Osceola High School
- * Polk School District, Brian Grip, Teacher Resource Specialist
- * Rock Lake Middle School, Mia Conlon, Science Teacher
- * Manatee Cty. Public Schools, Mellissa Morrow, Director C&TE
- * Marion Technical Institute, John Conway, Vocational Administrator
- * School District of Hillsborough Cty., Jo Ann Albarelli, Suprv. Industrial & Technology Education
- * School District of Hillsborough Cty., Dan McFarland, Secondary Science Supervisor
- * School District of Hillsborough Cty., Larry Plank, STEM Director
- * School District of Hillsborough Cty., Jake Prokop, District Resource Teacher
- * School District of Hillsborough Cty., Andi Ringer, Science Coordinator
- * St. Lucie Co. Public Schools, Kathie Schmidt, Director C&TE
- * Tampa Bay Technical High School, Robert Ivey, Welding Instructor
- * USF, Jerry Miezal, center for Science Literacy
- * Young Magnet M.S., Bill Gantner, PLTW Master Teacher

State Agencies, Economic & Workforce development: Formal and informal partnerships many state, regional organizations for outreach, dissemination, and subject matter expertise.

- * CEWD, center for Energy Workforce development, Ann Randazo, President
- * Citrus Levey Marion Workforce Board, Rusty Skinner
- * FEWC, Carol Higley, Chairperson
- * FL Agency for Workforce Innovation, Rebecca Rust
- * FLDOE, Mark Baird
- * FLDOE, Kathryn Frederick, Supervisor, Energy
- * FLDOE, Kim McDougal
- * FLDOE, Eric Owens, Senior Director CTE
- * FLDOE, Joan Roddenberry
- * FLDOE, Judy Yancey (SCNS)
- * Harak Associates, Donna Harak, President and CEO
- * Hillsborough County Economic development, Bruce Register, Director
- * Pinellas County Economic development, Laura Berkowitz
- * Suncoast Educational Alliance, Janice Mee
- * Suncoast Workforce Board, Mary Helen Kress
- * Tallahassee Economic development, Beth Kirkland
- * Workforce Florida, Andra Cornelius

Other Educational Collaborators and Projects: Formal and informal partnerships for outreach, dissemination, and subject matter expertise.

- * Boston Museum of Science, Lorraine Grosslight
- * Employ Florida Banner center for Construction, Kurt Morauer
- * Employ Florida Banner center for Energy, John Holbrook
- * Employ Florida Banner center for Life Sciences, Libby Handle
- * Employ Florida Banner center for Logistics & Distribution, Robin Falls
- * Employ Florida Banner center for Manufacturing, Rob Clancey, PCC-CC
- * FHTCC TechPath, Dr. Jeffrey Bindell, Director
- * FHTCC TechPath, Vicki Morelli, Coordinator
- * Junior Achievement, Carol Williams, Program Director
- * Manager Goodwill Ind. , Dale Person
- * MOSI, Wit Ostrenko, President
- * MOSI, Alicia Slater-Haase, V.P.
- * Hillsborough Education Foundation, Rebecca Davis
- * Pinellas Education Foundation, Susan Hancock
- * Science Center of Pinellas County, Joe Cuenco, President
- * SRI International, Ray McGhee
- * SRI International, Louise Yarnell
- * Tech PlayZone, Desh Badley
- * TRDA - Eneavour Academy, Diane Matthews
- * Virtual Mentor, Scott Davis
- * Virtual Mentor, Jim Scott

SECTION 1: Project Activities and Findings

Part 1: Research and Education Activities

- FLATE determines and articulates research criteria to examine enrollment, completion, and demographic trends for Engineering Technology and associated majors for Florida community and state colleges and high schools.
- MSSC Testing and gap analysis, a systematic statewide assessment designed to improve the integrity of ET curriculum through the development of a consistent set of skills and develop a culture of collaboration was started during the 2010 report period and continued through the current report period.
- FLATE used outreach activities with the *NEXT* advanced manufacturing advertorial to determine if the response of girls to the advertorial was growing, decreasing, or remaining about the same as reported for the previous report period.
- FLATE *FOCUS* Newsletter - Since spring 2007 through the current report period, the *FOCUS* online newsletter has been distributed to 36,351 readers as a platform to discuss a cross section of topics targeted to inform its readers about professional and educational opportunities in high-tech manufacturing and STEM related initiatives. FLATE *FOCUS* articles are timely, relevant, and highlight local industry partners, their role in positioning Florida as a high-tech hub in the nation, and spotlight FLATE's widespread outreach, curriculum and professional development initiatives. FLATE *FOCUS* is constantly evolving and improving. The "STEM Educators Corner" and "Did You Know?" sections capture STEM and manufacturing facts and information. In September 2011, we started a special announcement section featuring news about ongoing and upcoming events, conferences, grant opportunities, and professional development workshops. We also redesigned the *FOCUS* header, increased distribution, and added additional site links. And the award winning sTEM puzzles continue to serve as a fun, enjoyable way to integrate and learn STEM concepts.
- As advised by our external evaluator in his 2011 Annual Evaluation Report and using NSF/ATE center programs and resources, FLATE performed benchmark research for its newsletter and website performance, as well as for similar program initiatives. In each instance, FLATE performance compared favorably with similar ATE center performance. The ability to work collaboratively rather than competitively with other ATE centers is a tremendous asset to move FLATE research and education initiatives forward.
- Advanced manufacturing tours have served a total of 3,386 students and 355 educators with 51% of students expressing an interest in an advanced manufacturing career. Survey results are collected at the end of each tour and depict the level of agreement by attendees with selected survey statements, relating a comparison of the students' inclination toward a career in advanced manufacturing before and after the tour.

- As resources for advanced manufacturing plant tours, FLATE developed its 2nd in a series of Best Practice publications: *Middle and High School Field Trips to Florida High Technology Manufacturing Facilities*. These FLATE best practice guides are available as print-ready online resources on the FLATE websites and are listed in the FASTLANE publications section.
- FLATE has hosted 22 summer robotics camps since May 2005, serving a total of 416 students, targeting middle and high school students to enhance the understanding of science, technology, engineering and mathematics (STEM), and to showcase robotic applications in high-tech manufacturing operations. The effort represents partnership between FLATE, and several academic and industry partners to cultivate STEM, hands-on, technical, leadership, professional, and team-building skills. Although there are robotics camps offered by other organizations around the State, FLATE camps are unique in providing a STEM-focused opportunity to highlight robotic applications in high-tech manufacturing operations and showcase advanced manufacturing companies and their products. In addition, FLATE published "Best Practices for Student Robotics Camps," *American Society of Engineering Education (ASEE)*, June, (2011) based on the research (included in the publications section).
- FLATE Professional development workshops have provided a total of 8,249 professional development hours to 17,966 educators and 6,770 workforce, economic developers, and manufacturing personnel. *FLATE's Toothpick Factory Simulation Game for Soft Skills* professional development workshop received special notice as it received its first award in 2011, receiving a *2011 Best Practice in support of Career Pathways/Programs of Study Initiatives in the State of Florida*.
- Stakeholder Survey - FLATE's bi-annual stakeholder survey, undertaken by FLATE's external evaluator, took place during the report period. FLATE seeks input and partnership with stakeholders to best develop and deliver products and services to industry and academic environments.
- An important objective of any NSF-ATE Center includes the concept of scale-up, defined as "expanding a clientele or number of students served, increasing the reach of a project so that additional business, colleges, or communities are involved" per the NSF-ATE Synergy Collaboratory's June 2011 Report. FLATE's scale up activity has expanded the scope of its reach and impact on stakeholders.
- Based on feedback from manufacturing industry partners, FLATE developed an online clearinghouse for all colleges offering the Engineering Technology Degree in Florida, complete with college contact information and program descriptions. The new web page, *Hire an ET Grad*, provides potential advanced manufacturing employers with direct connection to students across the state in 8 different specialization tracts in the following technical areas: advanced manufacturing, advanced technology (composites, etc.), alternative energy systems, biomedical systems, digital design and modeling, electronics, mechanical fabrication and design, and quality. This new site provides a direct connection for industry to Engineering Technology program managers. As well, companies can provide technician job openings information to the colleges to make available to their engineering technology students.

Part 2: Findings from Activities

• **Engineering Technology Degree program** has demonstrated statewide growth since the program began. For the 2010-2011 academic year:

73% increase in Engineering Technology degree enrollment (603 enrolled)

18% increase in Engineering Technology and related degree enrollment (5,588 enrolled)

21% increase in Engineering Technology and related degree and certificate program enrollment (6,152 enrolled).

43% increase over 2 years for colleges adopting the program.

This is a healthy enrollment trend (Appendix - 2006-2011 Florida Engineering Technology and Related Program Enrollment and Completion), though expansion into south Florida is still clearly indicated. (Appendix - 2011 A.S. Engineering Technology Degree - College Network).

• Testing MSSC outcomes (Appendix - MSSC Alignment Testing: Testing Outcomes) resulted in an outcomes alignment agreement among adopting colleges (Appendix - ET Degree Technical Core Course Outcomes Alignment).

• **NEXT Advertorial** - The advanced manufacturing advertorial has received 19,952 responses since the 2006-07 distribution year. Although overall responders to the advertorial were down by 28% in 2011, receiving only 2,031 responses to the previous year's 2,831, the percentage of girls responding increased by 2%. FLATE plans to use the information provided by responding girls to craft a targeted advanced manufacturing college and careers campaign as part of overall outreach (Appendix - NEXT Advertorial Performance).

• **Benchmark Studies** - Comparing FLATE activities with other ATE programs for newsletter and website performance, as well as for similar program enrollment initiatives demonstrated that FLATE activities are on the right track and provided useful benchmarks. (Appendix 2011 Annual Evaluation Report Executive Summary and Appendix 2011 Benchmark Data).

FLATE FOCUS Newsletter - In 2011, FLATE benchmarked with another ATE center with an online newsletter that has a significantly greater distribution than FLATE (15,000/3,000 vs 2,000). This greater distribution, however, does not translate into a similar difference in reader use measured by visits and shows a favorable performance by FLATE. FLATE intends to continue with this particular benchmark in 2012, collecting additional data, since the benchmarked ATE center, as a national NSF center with similar mission and stakeholder types, provides a NSF recognized model for FLATE. (Appendix 2011 Benchmark Data).

• **Advanced Manufacturing Tour survey results** collected at the end of each compares students' inclination toward a manufacturing career before and after the tour by an examination of two questions:

- Statement #10: "I was considering a career in manufacturing before the tour." (pre-tour)
- Statement #13: "I am now considering a career in manufacturing or related technical industries." (post-tour)

The aggregate results for a total of 3,386 students are favorable in that students were more

inclined toward a career in manufacturing after having completed the tour. Student responses to other survey questions also indicate high levels of their perceptions of the relevance of the tour and awareness of the importance of manufacturing skills. Per the data, 51% of students said they were considering a career in advanced manufacturing after the tour.

To disseminate and institutionalize FLATE experiences and knowledge, the staff has compiled, published, and distributed a best practice guide about the student tour activity as well as produced a targeted lesson plan. These resources are intended to help interested organizations, such as the regional manufacturer associations, plan, conduct, and follow-up successful student tours. The guide and lesson plan are available as an online resource or to print from FLATE's *Made in Florida* website.

- ***Summer robotics camps*** - Using surveys for both students and parents, FLATE monitors perceptions of satisfaction and STEM learning for its growing number of summer robotics camps. Current camp surveys provided by students measure a variety of general response statements returning overall high satisfaction ratings. However, FLATE has determined that a more effective analysis would be available by an examination of pre and post surveys and FLATE will use the new survey model for 2012 camps. Effectiveness of the camps is also judged by a follow-up survey of the campers' parents to determine whether camp attendance had a positive effect on the students and their choice of classes taken during the following school year. Response rates were about 16% and 12% in 2010 and 2011 respectively, and reflect the parents' Agree/Strongly Agree responses to the survey statement: "My student was inspired by the camp experience to enroll in challenging STEM courses [the school year following the summer camp]." Scores range from 94% agree/strongly agree in 2010 to 100% agree/strongly agree in 2011.

- ***Professional development workshops*** Formal, scheduled workshops are surveyed for satisfaction with content, workshop format, timeliness and relevancy of topic, and intent to implement using both quantitative and qualitative strategies. Ratings range from 1-poor to 5-excellent. Overall satisfaction is high for FLATE workshops (average of 4.5 out of a possible 5.0).

- ***FLATE's Toothpick Factory Simulation Game for Soft Skills*** professional development workshop received its first award in 2011, and has received a strongly agree/agree rating of 96% since the game was first offered in 2007 indicating that this resource is a "resourceful way to promote the importance of soft skills." Interest inquiries have been received from as far away as Australia, and expanded offerings have resulted in a measure of sustainability for this resource. (Appendix- Toothpick Factory).

- ***FLATE's 2011 Stakeholder Summary*** of results and recommendations for improvement in meeting the needs of stakeholders are found in the Appendix - 2011 Stakeholder Survey. While it was hoped for more participation, 194 responses were received, a response rate of about 15%. Of the responses received, 17% were K-12 Educators/Administrators, 53% Post-Secondary Educators/ Administrators, 20% Business and Industry representatives, 5% Workforce and Economic Development Professionals, 2% representing Florida Department of Education and Government, and 4% included Educational Suppliers and Vendors. Of the total, 57.7% of respondents were located in the State of Florida.



• **FLATE scale up efforts** have impacted everything from increased newsletter and website performance to increased participation in professional development workshops, more than doubling the scope of its contact area since 2010. These data are reported in the Appendix. FLATE Scale Up Data are gleaned from FLATE’s contact database used for dissemination of information about FLATE, FLATE activities and impact, *FOCUS* Newsletter, advanced manufacturing news including the needs and opportunities of employers in the advanced manufacturing industry, college and industry partners and their activities, general outreach, professional development opportunities, and promotion of online curriculum and services.

TRAINING AND DEVELOPMENT

Professional Development - FLATE has provided a total of 8,249 hours of professional development to 17,966 educators and 6,770 workforce, economic development, and manufacturing personnel. Effort has been made to language and capture events and data which parallel data articulation in the Western Michigan annual ATE survey. FLATE Professional development workshops cover a wide range of experiences including Summer Institutes teaching technical subjects such as Digital Design and Modeling for secondary and college faculty, college faculty “hot topic” workshops at ET Forums, School District of Hillsborough County “by-request” workshops and “summer camps” for secondary STEM teachers, FLATE’s signature Toothpick Factory soft skills workshop (provided both locally and on a national level), to short presentations to raise and promote a positive awareness of advanced manufacturing. *FLATE’s Toothpick Factory Simulation Game for Soft Skills* professional development workshop received special notice as it received its first award in 2011, receiving a *2011 Best Practice in support of Career Pathways/Programs of Study Initiatives in the State of Florida*. Professional development workshops have a Florida focus, but are also offered in a variety of national venues and branched out internationally in 2011 with FLATE’s Iberian partnership.

Training and Certification - FLATE has initiated and supported Manufacturing Skills Standard Certification (MSSC) integration into the Engineering Technology core course curriculum, led appropriate training and course development initiatives for college educators, and provided evaluation and testing for their college students. As well, FLATE provides expertise and leadership to secondary educator training and curriculum initiatives in Florida, such as Career Academies and Project Lead the Way. In addition, FLATE staff have logged 992.5 hours of relevant professional development and training since 2010.

OUTREACH ACTIVITIES

Presentations - Since 2005, FLATE has offered a total of 676 project related events, presentations to raise awareness for advanced manufacturing college and careers, conferences, seminars, and positive promotional events for advanced manufacturing. The overall trend in increasing presentations continues favorably, especially in the last four years with a steady increase in the number of events; data support an increase of both organizations and people exposed to FLATE.



Summer Robotics Camps - A total of 416 middle and high school participants in 22 Summer Robotics Camps including “all girls,” junior achievement, special at-risk populations, and AVID students.

Advanced Manufacturing Tours - A total of 3,386 students and 355 educators on 162 tours to 57 different Florida advanced manufacturing sites.

Made in Florida Outreach Campaign - FLATE’s *Made in Florida* outreach campaign is designed to interest middle and high school students in high technology manufacturing college options and career pathways. 59,975 Florida students and educators have been influenced by the *Made in Florida* campaign, which includes industry tours, the *Made in Florida* (FLATE) video, and presentations highlighting FLATE’s *Made in Florida* website at <http://www.madeinflorida.org> The website recently added high school and college student profiles on its updated “for students” webpages.

Online Resources - FLATE’s *FOCUS* online newsletter, websites, and online lesson plans for educators have served a combined total of 60,223 visitors since 2009.