



FLATE Goal Status Summary

National Visiting Committee

Annual Meeting

January 31 - February 1, 2008

Objective

The objective of this document is to provide a summary of FLATE activities in the context of FLATE's goals and target objectives since the February 2007 meeting of the National Visiting Committee as well as preview plans for the new three years of renewal funding. This document provides a wide range of information that is intended to trigger rich discussions regarding FLATE's short-term and long-term future.

Executive Summary

FLATE drives its activities with a three pronged strategy (Curriculum, Outreach, and Professional Development) embedded in its objectives. FLATE's mission is to help Florida's Community Colleges add industry-relevant depth and breadth to Florida's manufacturing workforce. During FLATE's first four-year funding cycle, FLATE has operated under a set of six goals with a number of Target Objectives that were intended to provide the statewide resources needed to develop the high performance workforce required by Florida's manufacturers and to elevate FLATE to statewide recognition and value to facilitate sustainability. As we approach the end of this first grant cycle we have made major strides towards achieving our goals.

Status Details

Since the previous NVC report, no changes have been made to the text of the six major goals. However, to facilitate attaining those goals in a changing environment, several Target Objectives have been changed, combined, clarified, or deleted and some new Target Objectives have been added. In an effort to accurately represent our current progress towards completing these target objectives, several of the start and completion dates have been adjusted in response to external and internal factors. With respect to Version 4 of the FLATE Goal Timeline Charts (See Appendix A), the following narrative provides details for the status of each goal.

GOAL 1: Create an administrative region for FLATE that will have statewide recognition as an educational resource for manufacturing-related curriculum, content, and activities.

This goal has been achieved with outstanding results. FLATE is recognized statewide as a catalyst for curriculum leadership as well as a unifying force for manufacturing and related technologies education. This recognition can be identified at local schools, school districts and community colleges, within a number of Divisions of the State Department of Education, the

Manufacturers Association of Florida, Workforce Florida, Inc. and the regional workforce boards, as well as numerous other statewide professional and civic organizations.

FLATE Staff:

FLATE is currently fully staffed with the following changes in the past 12 months. Ms. Jodi Sutton joined us as a Curriculum Coordinator in May 2007 after Dr. Fernando Senior resigned to pursue other interests. Jodi has been focused on redesigning our learning challenges, aligning the MSSC Skill standards to the Engineering Technology Curriculum Frameworks, and providing additional support materials for the Toothpick Factory[®]. Sharon Hernandez moved from the Student Assistant position to a P.T. Staff Assistant for 6 months (June-Dec) upon graduating with her AA Degree. She left (December 2007) us to pursue her 4-year degree at USF. John Pacheco joined us as a P.T. Student Assistant in October 2007. We have also just hired Teja Berrie as a second P.T. Student Assistant, and Mike Zajac as a P.T. Administrative Technician. Dr. James Hales resigned as our External Evaluator in the spring of 2007 and we contracted with Mr. Phil Centonze in May 2007 to assume that role. Phil is active in the Florida Sterling Council, a Master Sterling Examiner, an engineer by training, and deeply vested in quality initiatives. He has been instrumental in helping us redefine our evaluation plan and integrating the data we need to support NSF with the quality initiatives of the Baldrige Sterling process. Finally, Dr. Eric Roe's position was reclassified within the HCC system, without a FLATE title change, to a higher position class to better reflect his role and responsibilities with FLATE.

The FLATE Ambassador Program that supports our Outreach Program outside of the Greater Tampa Bay area is operational. Three ambassadors are now under contract in the greater Ocala area; greater Jacksonville area; and northern Florida. The FLATE Ambassadors report directly to David Gula, the FLATE Outreach Manager. The activities of this program are discussed and reported later under the specific goals.

Related to FLATE, at FLATE's host institution, Mr. Glenn Byrnes has joined HCC as the new Manufacturing Technology faculty and Program Manager, replacing Dr. Omar Mohammed. FLATE organizationally continues to reside within the HCC Brandon Campus Associate of Science division under Dean Sabrina Shapiro, who reports to the campus President, Dr. Carlos Soto. As such, FLATE facilitates the program at HCC as much as possible. The Campus Organizational Chart Appendix B-1) illustrates the college structure. FLATE's internal organizational chart is also included (Appendix B-2)

Industrial Advisory Committee:

Our Industrial Advisory Committee is holding its 9th meeting in conjunction with the 2008 NVC meeting, January 31, 2007 and has over 20 members (See list in Appendix C). This past year an IAC subcommittee developed and implemented the FLATE Academic and Industry Recognition Awards program, and offered seed funds to support this effort. The details of this successful activity are reported under Goal 4. The IAC also provided a strong letter of support for FLATE's renewal proposal and has begun discussions for how to engage a larger geographic area of the state's industry in this advisory group as we go forward for the next 3 years. A report from this subcommittee will be presented at the joint NVC/IAC meeting.

National Visiting Committee:

Our NVC has nine members: 3 academic members John Stilp (Milwaukee Area Technical College), Dr. Ken Ryan, NVC Chairperson (Alexandria Technical College), Dr. Bob Williams (Daytona Beach Community College); 4 members from industry – Stefan Kraemer (Siemens), Mark Berg (3i), Al Carlson (Sun Hydraulics), and Anthony Fedd (BASF); and 2 from state government offices, Andra Cornelius (Workforce Florida) and Eric Owens (Florida Department of Education). Anthony Fedd also serves on the NVC as the representative from the Manufacturers Association of Florida (MAF). Duncan McBride our NSF Project Manager and Phil Centonze, FLATE's External Evaluator, also participate annually in the National Visiting Committee.

FLATE's NVC remains largely unchanged from 2007. However, we will be making at least one change to our National Visiting Committee this year to replace Nancy Cordill from the Florida Department of Education Career and Technical Education Division. Nancy has served on the NVC for 2 years, and retired from her DOE position in Dec. 2007. Eric Owens, State Supervisor for Industrial Education is attending this year to represent the FLDOE Career and Technical Education Division. Eric is an active member of our FLATE Industry Advisory Committee (IAC) and regularly attends the Engineering Technology Forum. We anticipate replacing Nancy with her successor when that person is named. The FLATE Leadership Team actively sought out new members from Florida industry in an effort to broaden the diversity of the NVC membership as requested in the 2007 NVC report to FLATE. We were unsuccessful in identifying new candidates and look forward to discussing this with the committee to generate additional alternatives. We anticipate input from NSF as to the NVC makeup and distribution in the new grant cycle, so there could be more changes in the coming year.

Executive Committee:

Our FLATE Executive Committee structure and mission will be reviewed at this NVC meeting. For the second year in a row, we have had a significant amount of membership flux on this committee compared to our first 2 years. The committee is designed to be small and composed of the FLATE Leadership Team and an upper level administrator at each of the PI institutions plus the chairperson of the IAC (total of 8). With change of the administrators at the partner schools, we have not been able to use this committee as intended for long range strategic planning within the academic institutions and the local community. Despite the lack of continuity, the February 2007 meeting (Please see notes in meeting Appendix D) offered significant support from the institutions as well as some strategies for long-term sustainability. Unfortunately, Jim Moore of St. Petersburg College has retired since that meeting and will be replaced by Stan Vittetoe, Executive Officer of the SPC EpiCenter. A 2008 meeting will be scheduled as soon as we hear about our renewal grant.

Sterling Application:

For Goal 1, FLATE continues its drive towards an application for state level Sterling recognition at the end of year 4 (July 2008). Phil Centonze, our new external evaluator has worked closely with the FLATE leadership team since last spring to integrate the data collection and reporting required and desired by NSF with our Baldrige/Sterling quality initiative. Our updated

Evaluation Plan can now be found on our website at: www.fl-ate.org/about_us/evaluation.html as well as in Appendix E 1-10 and will be presented to the NVC at the 2008 meeting.

Strategic Planning:

FLATE Leadership has focused significantly on long-term strategic planning during the last 12 months. Related to this, a number of initiatives have been undertaken, including:

- Submission of a 3-year, \$2.9M renewal proposal to NSF ATE in October 2007 (July 1, 2008 - July 1, 2011). An electronic version of the proposal text is provided to you.
- FLATE secured \$500,000 from the USF Florida Center of Excellence BITT as their Workforce Development partner. This contract was signed in December 2007. The award will support one person to manage the project as well as support skills assessment, curriculum development, and training for biotech, biomedical technicians related to the BITT Center. One goal for FLATE under this contract is to develop another Technical Specialization for the Engineering Technology Degree in Medical Systems.
- Started a not-for-profit organization, FLATE, Inc., to provide us a mechanism for statewide fund raising particularly for our “Made in Florida” Outreach Campaign activities.
- Established a working FLATE account in the HCC Foundation currently supporting the FLATE awards and will possibly be used to handle state level scholarship funds for manufacturing related programs.
- Began a series of industry training courses. We will be partnering with the HCC corporate training organization to serve the manufacturing and technical business community and to possibly develop this activity into a revenue stream that will also help with student recruitment.
- Scoped the feasibility and logistics of establishing a small online “store” for FLATE products including our new “Florida Manufacturing” poster series, “Made in Florida” lapel pins; the Toothpick Factory[®], and possibly other curriculum pieces and modules as well as consultant fees and professional development workshops.
- Defined, with the HCC Brandon Campus President and leadership, a future organizational chart for the Associate in Science Division of the HCC Brandon Campus that partially institutionalizes FLATE personnel positions. See Appendix F.
- FLATE’s workforce development partner, the Employ Florida Banner Center for Manufacturing, developed and delivered training curriculum associated with the MSSC Production Technician Certification, and established MSSC Assessment Centers throughout Florida in its first year of operation. It was refunded for year-2 at \$200,000 from Workforce Florida. See Appendix G
- Additional efforts and ideas from the NVC and IAC are welcomed.

Outstanding (Open) Objectives:

- **Target Objective 1.2.4** (sustainability) is discussed above and is continued to be viewed as an open (and unending) item.
- **Target Objective 1.4.1** evaluation will be conducted in year 4. The Executive Committee, the IAC, and FLATE leadership team will undertake this effort with a goal of redefining the organization at a sustainable size, scope and budget for the period beyond full NSF funding. This will be based on the integration of FLATE into the HCC organization and on defining key activities, products, services, and tasks that FLATE

would need to continue to maintain its identity, reputation and role as a leader in the state for Career and Technical Education.

GOAL 2: Create, for statewide implementation, an educational delivery system that contains curriculum, content, and technical programs to support high performance manufacturing.

GOAL 3: Adapt and/or create needed regional related manufacturing curriculum, content, activities, and/or services that can not be adopted from existing NSF, NSF-ATE or other appropriate sources.

FLATE has continued to make significant progress with goals 2 and 3. In the December 2007 Goal Timeline review, the FLATE leadership made minor changes to the target objectives: 3.3.1 and 3.3.2, which are discussed below. Accomplishments of note include:

- The Curriculum Frameworks for the AS/AAS Engineering Technology Degree were approved by the FL Department of Education in May 2007 and posted for the 2007-2008 academic year. This one plus one degree design has a common Engineering Technology Core in year-1 of the program and 5 specialization tracks for year-2. The E.T. Core is aligned with a national certification for manufacturing, the Manufacturing Skills Standards Council (MSSC) Production Technician certification. Each specialization has 1-3 technical certificates [total of 10], to respond to short term technical needs of industry which have the potential to serve as alternatives to non-credit, corporate training programs. A one-page overview is attached and the FL DOE Curriculum Frameworks are provided as an electronic file. (Appendix H 1-6) The handout includes the state level CIP numbers and the specializations and certificates offered at this time by the colleges offering the degree in the 2007-2008 academic year.
- Three partner colleges: Brevard Community College (BCC), Central Florida Community College (CFCC), and St. Petersburg College (SPC) adopted the ET Degree in the Spring/Summer of 2007 and began enrolling students in the Fall 2007. (Appendix I 1-3)
- For the 2008-2009 academic year, 3 additional colleges will be offering the ET Degree: Pensacola Junior College (PJC), Hillsborough Community College (HCC) and Florida College at Jacksonville (FCCJ).
- Other colleges that have inquired about the degree and requested assistance from FLATE for transitioning to or implementing a new ET degree. FLATE is currently engaged in conversations with the following 5 institutions: Manatee Community College (MCC); Chipola College (CC); Miami-Dade College (MDC); Tallahassee Community College (TCC) and Daytona Beach Community College (DBCC).
- To further support colleges that adopt the ET Degree, FLATE has provided an alignment matrix (mapping) of the Florida Curriculum Frameworks to the MSSC Skill standards. FLATE provided the framework and community college faculty from across the state validated the mapping. MSSC has recently updated its Skill Standards and FLATE is in the process of updating its mapping to align to the new standards. These mapping document are available for public access at http://www.fl-ate.org/partners/et_forum.htm and included in Appendix J.

- Another accomplishment related to the ET degree is the proposed statewide articulation agreement (Appendix K) developed by FLATE for anyone who holds the MSSC Certification. This agreement allows the student to be awarded 15 credit hours toward the ET Degree at any institution that offers it. This articulation agreement is in the final stages of approval (state committee approval meeting in mid February) at the FL DOE and is a first of its kind in the state to offer statewide articulated credit via certification for any certification holder. This agreement opens the door to college for many incumbent workers as well as encourages high school students to continue their education, either right out of high school or after gaining experience in a work environment.
- FLATE collected baseline enrollment data from the community colleges for programs related to the ET Degree for the 2006-2007 academic year, prior to any adoption of the new ET Degree. This data will serve as our benchmark data for enrollments with respect to the ET Degree. 19 Florida colleges with related technical programs were sent the surveys and encouraged to respond. To date, nine colleges responded. The summary data by college and programs can be found in Appendix L.
- The ET Degree offers several advantages including streamlined enrollment determinations and program evaluations for academic institutions; maximum flexibility for students and colleges; articulated pathways from related high school programs; 1 year college certificate options and short technical certificates; an ET Core (18 credit hours) aligned to the MSSC national certification; articulates (2+2) directly to any Florida Bachelor's of Applied Science Degrees offered at most 4-year degree granting institutions in the state; and pending articulation(s) per specialization to the Bachelor's of Engineering Technology Degrees at the University of Central Florida (UCF), one of two universities in the state that offers Engineering Technology degrees at the 4-year level.

FLATE has been working with high schools and their curriculum frameworks to align several state curriculum frameworks with the MSSC Skills Standards so more high school students in the state can take advantage of the statewide articulation. Currently, one proposed secondary state framework aligns with MSSC (Automation and Robotics Technology). Two existing frameworks which could easily be made to align with small changes are "Production, Materials and Processes Technology" and "Engineering Technology". FLATE will be working with the FL DOE and Florida high school teachers this year to align these two frameworks. On a point of information, the high schools together with their district administration choose a Curriculum Framework to offer at a particular school based primarily on the teaching certification of the teacher hired for the program.

FLATE has revised Target Objective 3.3.2 to focus efforts on support of the ET Degree core courses. ETM 1010c Mechanical Measurements and Instrumentation was approved by the FL DOE this past year and is included in the ET Core of the ET Degree. The course outline, objectives and equipment lists are available for community colleges adopting the curriculum and are provided in the Appendix M 1-2.

FLATE will develop a Career Path for the Bio-manufacturing related disciplines by providing the Curriculum Framework(s) for a new ET Degree specialization(s) for the bio/medical-related discipline(s) like Medical Systems, in partnership with the SPC NSF ATE project for Medical Devices and with additional support from the funding secured from the USF Center of

Excellence for Bioidentification and Targeted Therapeutics (FCoE-BITT). This collaboration will provide a comprehensive product with broad appeal across the state.

The HCC WebCT component of the Linked Distance Learning Outreach Curriculum (Target Objective 3.1.2) has undergone a complete revision of the user interface, organization and content, thanks to our new Curriculum Coordinator, Ms. Jodi Sutton. It is now more attractive to teachers, easier to use, as well as more accessible. The materials developed are now called “Made in Florida Learning Challenges”. The lessons’ target audience is high school and middle school students are still based on real Florida industries and are aligned to the Sunshine State Standards. The lesson plans/activities have been simplified and more lesson plans have been added. Currently, we are working to expand this selection as well as add interactive components to each topic area. For dissemination, this year we have presented this at 2 venues to Florida teachers and prepared sample lessons on a mini CD to distribute as a give-away. Target Objective 3.3.1 was rewritten to better reflect these materials (application modules), and their intended audience base. The new graphical interface and a sample lesson are included in Appendix N and on the CD, respectively.

Our Industrial Advisory Committee suggested that we investigate contributing to the middle school career curriculum materials on the FL DOE website. Florida middle school (6th - 8th grades) students now are required to have a minimum number of “career planning” hours focused on 7 areas: Understanding the Workplace, Self Awareness, Exploring Careers, Goal Setting/Decision Making, Workplace Skills, Career/Education Planning, and Job Search. FLATE has worked directly with the state coordinator of this curriculum and has had 2 lesson plans approved and added to this state curriculum resource. We plan to provide 5 additional lesson plans on Manufacturing and related technical careers and career pathways, providing one for each category listed above. These are posted on www.fldoe.org/workforce/ced/ and included in the Appendix O 1-3.

The Soft Skills Module, “The Toothpick Factory[®]”, meeting Target Objective 3.2.1 has been overhauled as a product, but maintaining its fundamental content and learning objectives. It now contains rich pedagogical information, background materials for the teachers/facilitators and a more defined first sample lesson”. We have made the teacher materials available on a mini CD so they can electronically access the presentation PowerPoint lesson files and other consumable files. We have beta tested these revisions and believe it is now ready for marketing. In the Fall of 2007, we partnered with the Endeavour Academy (www.endeavouracademy.com) to market the Toothpick Factory[®] as a component of some of their Professional Development offerings. They will begin promoting it to school districts in Florida early in 2008 and it is posted as a resource on their website and the Made in Florida website. It is also listed on the NCME’s (National Center for Manufacturing Education) MERC Resource Center (www.merconline.net), where it received a record number of hits (>400 in 2 days) for a new posting and is currently their featured resource. We have offered it twice to faculty and to two groups of entry-level workers. The new flyer for the Toothpick Factory[®] can be found in Appendix P. We have also outlined the details for new module focused on industrial engineering process flow issues and resource management for the Toothpick Factory[®] that will be rolled out in 2008.

Outstanding (Open) Objectives for Goals 2 and 3:

- **Target Objective 2.5.1** evaluation will be conducted in year 4.
- **Target Object 3.1.2** is still to be addressed related to the Distance Learning Component related to the community college curriculum. We are not abandoning this objective, but the colleges have requested to hold but for pilot efforts, during the transition to the new ET Degree. We will address this objective during the renewal funding cycle.
- **Target Objective 3.4.1** evaluation will be conducted in year 4.

GOAL 4: Create a viable Manufacturing Education Awareness System (MEAS) that promotes manufacturing careers, honors outstanding manufacturing education champions and educators, and that fosters industry supported academic scholarships in manufacturing education.

FLATE continues to believe that engendering an awareness of, and interest in Manufacturing and STEM careers is essential to systemic and long term increases in Florida's manufacturing workforce. The objectives identified in Goal 4 serve to guide FLATE on this important mission. The principle advancement toward this goal over the past year has been the expansion of FLATE's outreach campaign "Made in Florida". We have continued to grow many aspects of this program as well as add new ones, partnering with the Manufacturers Association of Florida (MAF); the Florida High Tech Corridor Council; regional manufacturers associations; individual industries; academic institutions; local, regional and statewide economic councils along with social and workforce development organizations. Our goal is to be able to provide resources across the state wherever this need and interest exists. New components of the campaign are: FLATE Focus quarterly newsletter; FLATE Educator Recognition Awards; support of local and regional robotics competitions; FLATE "Made in Florida" poster series, legislative advocacy with MAF; "Made in Florida" toolkits for FLATE's Outreach Ambassadors; partnering to host and judge the SkillsUSA manufacturing related state competitions; and FLATE's "Made in Florida" lapel pins.

FLATE and HCC offered a summer camp for 9 middle school students in conjunction with First Robotics, Inc. of Pinellas County. This is the same camp that FLATE has supported for 3 years at regional Girl's Inc facilities. Last year, FLATE co-sponsored this camp at the Girl's Inc in Sarasota where 14 girls participated. We will offer a Lego robotic camp this year in partnership with Dowdell Middle School, for economically disadvantaged youth.

FLATE presented its first annual recognition awards at the awards banquet at the MAF Annual Summit in Lake Mary, FL in November 2007. The award protocol was developed in the spring of 2007; distributed to our stakeholders in the summer months and the award committee (FLATE personnel plus members of our IAC). Three awards were given: FLATE Secondary Educator of the Year (Ted Norman, Treasure Coast High School); FLATE Post-Secondary Educator of the Year (Meer Almeer, Brevard Community College), and Distinguished Industry Contributions to Manufacturing Education (Steve Lezman, PepsiCo/Tropicana). The award application is found in the Appendix Q1-2 as well as the award winner flyer. Two of the awards were sponsored by the

Florida High Tech Corridor Council and one by Conmed-Linvatec. We hope to engage three new sponsors for the 2008 awards, which will also be awarded at the MAF Summit Award Banquet (Jacksonville, November 2008). We hope to generate more nominations from stakeholders with a new online form and earlier announcements.

We have published 4 issues of the FLATE Focus Newsletter since last winter when our inaugural newsletter was distributed. The four page newsletter has stories highlighting several partners (industry and academic) and summarizing a variety of FLATE related projects and activities. Over 1300 individual copies have been emailed to our stakeholders and partners. We post a PDF version on the FLATE website NEWS page and have recently added a newsletter signup feature at www.fl-ate.org and www.madeinflorida.org so other stakeholders and interested parties are able to join our email newsletter distribution list. In addition to the electronic distribution, about 50 hard copies of the current newsletter are distributed monthly. The inaugural issues of FLATE Focus are included on your CD.

The “Made in Florida” DVD is still being distributed throughout the State. To date, over 700 of these DVD’s have been distributed to educators, guidance counselors, workforce development professionals, and manufacturers throughout Florida. We are currently re-mastering the DVD to include a Spanish voice over as well as introducing chapter markers that point to various Manufacturing sectors in the video. This will allow the viewer/user to quickly access the featured industry sectors.

The outreach campaign’s main communication mechanism is still our outreach website, www.madeinflorida.org. Through 2007, there have been over 233,000 hits. Additions to the site this year include the addition of customized, interactive career pathways which allow a user to see sample paths that Florida manufacturing personnel have followed in their careers; the Spanish language “Made in Florida” video and script; updated manufacturing handouts; and an enhanced educators’ area which now directs the teachers to FLATE’s Made in Florida Learning Challenges.

In 2007 FLATE continued its work with several RMA’s and the Florida High Tech Corridor Council (FHTCC) to maintain and expand the student “Made in Florida Industry Tours”. This brings tour totals to 1726 students and 168 faculty over the course of 90 tours. Each tour provides an overview of Florida Manufacturing careers, a prelude of the facility and its product(s) as well as a focus on a particular technology that is integral to the particular site. Additionally, students are directed to the “Made in Florida” website and FLATE’s mascot (Flater)’s MySpace page (www.MySpace.com/FloridaFlater).

Associated with the “Made in Florida” tours, 2007 marked the rollout of our FLATE Outreach Ambassador Program. As mentioned earlier, this program supports our Outreach initiatives outside of the greater Tampa Bay area and 3 Ambassadors are currently under contract. In the 2007 calendar year, at an expense of \$9657, these Ambassadors disseminated “Made in Florida” materials in 4 additional regions of Florida; conducted 12 tours for 199 students and 21 educators; participated in 18 Regional Manufacturer Association meetings; and developed school/business partnerships in their communities.

In the 2005-06 and 2006-07 Fiscal Years FLATE matched \$33,860 of personnel and materials costs with \$20,000 from the FHTCC and an additional \$67,440 of in-kind support from the RMA's and industry.

2005-06		
FHTCC	Cash donation	\$ 10,000
SAMA & BAMA	Industry In-Kind personnel costs to host tours	\$ 13,440
	RMA support time and materials	\$ 2,400
	Industry Cash Contributions	\$ 3,500
MACF	Industry In-Kind personnel costs to host tours	\$ 9,600
	RMA support time and materials	\$ 500
2006-07		
FHTCC	Cash donation	\$ 10,000
SAMA & BAMA	Industry In-Kind personnel costs to host tours	\$ 17,000
	RMA support time and materials	\$ 2,400
	Industry Cash Contributions	\$ 3,600
MACF	Industry In-Kind personnel costs to host tours	\$ 12,600
	RMA support time and materials	\$ 2,400
TOTAL		\$87,440

The results of the student surveys after the tours continue (similarly to the past 2 years) to indicate significant increases in interest in manufacturing and related technologies careers and that the students increased their awareness of the importance of math, science and technology in industry. Anecdotal comments on the surveys from teachers and industry hosts also are extremely positive. This data is summarized on the FLATE Impact handout and a full summary of the post tour survey results is included in Appendix R 1-2.

FLATE and its partners again produced a second, "Made in Florida" manufacturing careers advertorial (See Appendix S) in the 2007-2008 edition of Florida Trend's NEXT magazine and accompanying teen career website, www.floridanext.com, with an accompanying lesson in the NEXT Teacher Guide. The Florida Manufacturing Extension Service (MEP), the Banner Center, BASF, Pepsico/Tropicana, Hoerbriger, Lockheed-Martin and MAF provided the financial support while the content was developed by FLATE and the staff at Florida Trend's NEXT. This student edition of the Florida Trend is published annually and distributed free of charge to over 750,000 Florida high school students. Since distribution in October 2007, over 3400 students have responded to the 2007-08 advertorial, enquiring about degrees in manufacturing and other technical careers as well as information about community colleges and technical schools. FLATE has responded to each of these students' requests for information with electronic handouts discussing careers and educational pathways in manufacturing and information about Florida's technical schools and community colleges. FLATE also sorted the student requests by county and distributed the contact information to partner community college department heads and/or faculty for localized recruiting. Eleven academic institutions requested and receive this data regularly from FLATE. Hillsborough Community College is conducting a pilot effort to track the students in its service area that were responded to. HCC will be able to see if these students enroll at HCC and in what program. We anticipate being able to report some preliminary data that should help define the effectiveness of the advertorials impact to the NVC next year.

FLATE began a more focused Community College program student recruitment outreach effort with an outside marketing company to develop a comprehensive plan, as well as the specific print and media materials to raise awareness and recruitment of the Engineering Technology Degree. Sample handouts for educators, posters for industry and educators, a web page on www.madeinflorida.org, and print and web advertisements have been developed in a template format. Radio spots, press releases and media stories (editorials) are being released. FLATE hopes to provide the colleges that have adopted the ET Degree with an initial package of college specific materials for their own use, as well as providing the templates and master files for their own use. Sample items, specific for HCC, are included as examples in Appendix T for review.

In addition to the media campaign, FLATE has launched a modest MySpace site for the ET Degree, defined under our “mascot”, Flater (www.myspace.com/floridaflater). To generate interest of young people, we are populating the site with information about student industry tours and upcoming related events. We have engaged 1 student from PJC to provide content regularly about his ET program there. Once some curriculum related material has been posted, we will soon make a “public” announcement about the site to the other partner colleges in hopes that the students will build a community and social/educational network. We have also posted a short version of the “Made in Florida” video on YouTube.com: www.youtube.com/watch?v=zUT4Hf1LFSI.

A table of all FLATE Outreach Activities and their impact can be found in Appendix U.

Outstanding (Open) Objectives for Goal 4:

- **Target Objective 4.2.1** creates a student honor role that will be rolled out this year on the MIF website.
- **Target Objective 4.2.2** creates a scholarship and/or awareness program which still needs to be addressed. We are currently compiling a database of Regional Manufacturer Associations’ Scholarship opportunities and will add this resource to the “Made in Florida” website when finished. We have entered discussions with the Manufacturers Association of Florida Board of Directors about the possibility of creating a donor supported scholarship fund with matching State funds. We are evaluating partnerships and exploring the use of the Dr. Philip Benjamin Matching Program to make this happen during the next year.
- **Target Objective 4.4.1** evaluation will be conducted in year 4.

GOAL 5: Create and implement a faculty development program for technical and educational skills as they relate to best practices for high performance manufacturing in the state.

Addressing professional development is the third major component of FLATE’s three pronged strategy (Curriculum, Outreach, & Professional Development) to add depth and breath to Florida’s manufacturing workforce. Goal 5 focuses on professional development related to technical and workplace skills. Additional professional development in the area of best and current practices for curriculum development, pedagogy, and teaching and learning strategies are

addressed in Goal 3. Reform of the Curriculum Frameworks encompassed both technical content and pedagogical philosophy.

Professional Development opportunities and activities include:

- Toothpick Factory© train-the-trainer workshops, which has been revised, per the suggestions of the NVC in 2007 and were discussed specifically under Goals 2 and 3. We look forward to the addition of the Production Module as well as opportunities to deliver the workshops again this next year. Our marketing strategy was also discussed under goals 2 and 3.
- High School Technology Initiative (HSTI), the product of a previous NSF ATE Curriculum Development (2002-2006) and professional development project, whose materials have been left for FLATE to disseminate. HSTI produced science and math content designed to connect high school students and teachers to today's technologies and be aligned with the standards.
- Teacher Quest, the summer externship program of the Florida Endeavour Academy, www.endeavouracademy.org, which FLATE partners with in the recruitment of both industry and teacher participants. This program is partially funded by the state and places K12 science and math focused teachers in STEM related-companies during the summer around the state to explore applications of science and technology that they can bring into their classrooms. During the summer of 2007, 6 FLATE partner companies hired 1 teacher each and for the 2008 summer, 5 of FLATE's industry partners have already committed to hire a total of 6 teachers. FLATE will also be participating in Teacher Quest 2008 by hiring a teacher who will help develop and deliver our FLATE Lego Robotic Camp.
- Curriculum reform project for the new ET degree involved ten community college faculty across the state in defining competencies and aligning industry needs with curriculum frameworks in both formal and informal sessions over 2 years. The effort continues as we develop additional specializations for the ET degree, mentor more faculty who adopt the degree and continually check for industry relevancy.
- Other professional development activities include FLATE supported for and/or delivery of formal training, participation in conferences, workshops, webinars, etc. A listing of all professional development activities can be found in the Appendix V.

The effort to partner with the Florida Department of Education to provide professional development for teachers and faculty in programs related to manufacturing and aligned with the MSSC Portable Production Technician Certification (addressed in Target Objective 5.4.1) has been delayed. A draft professional development plan to expand these interactions with manufacturing and related educational programs throughout the state was developed and submitted in 2006. Unfortunately, the FLDOE has not been able to fully address this aspect due to the workload associated with the development and implementation of the Perkins IV plan for Florida. This funding would provide ongoing support for curriculum reform and realignment efforts at all three levels of the C&TE system (secondary school academies, technical schools, and community colleges). Award of these funds also supports the sustainability of Goals 2 and 3 where the curricular reform and delivery are housed.

FLATE will undertake professional development activities for the MSSC certification of faculty and teachers in the spring of 2008 and are in the processes of developing an implementation plan.

Outstanding (Open) Objectives for Goal 5:

- **Target Objective 5.4.1** addresses sustainability through funding of professional development activities. This effort was discussed above and has been delayed.
- **Target Objective 5.4.2** develops self-sustaining partnerships between industry and academia. This is in progress (see objective 4.1.4) and a natural outgrowth of the Outreach program. An example of this in effect is the self-sustaining relationship formed by Braden River High School in Manatee County and Sun Hydraulics. Based on initial interactions facilitated by FLATE, the instructor at BRHS has since had a summer externship at Sun; has had several Sun engineers come to his classroom to guest lecture; and is currently working with Sun to build a pilot scale version of their robotics and milling operations so that students can work on equipment in the classroom and travel to the facility to see it in real world operation.
- **Target Objective 5.4.3** evaluation will be conducted in year 4.

GOAL 6: Create an exciting manufacturing and technology educational environment that encourages and facilitates under-represented student participation in partner educational programs and activities.

As reported last year, FLATE's Underrepresented Student Participation Plans (UPP's) are works in progress based on a "grass roots" model for developing strong relationships with the under-represented students in the educational pathway. The Target Objectives in goal 6 address activities targeting under-represented student population includes women, black, and Hispanic students.

Succinctly, FLATE's overall UPP identifies existing local minority student supportive activities, programs and/or organizations and then offers to work with that local program to extend its message to include awareness of technical career path awareness (particularly manufacturing), development of strong and secure math and science backgrounds, increasing student involvement, and promotion of faculty development with respect to technology and its supporting careers.

The long term strategy for Goal 6 is to develop a collection of sustainable and portable components that adapt to a specific environment or situation and increase the cognizance, comfort, and confidence level of under-represented students at any stage in the educational path that leads to and includes a community college supported technical degree. Effort is focused on islands of activity that are or could be of interest to minority students if there was a facilitating mechanism to promote participation. With this target in mind, FLATE interacts with and supports local organizations that extend this involvement opportunity to students or have an organized effort to reach parents and/or instructors directly involved with minority education issues. When such opportunities are identified, FLATE has and will continue to work with the group to support a local program and also determine if that particular activity has the potential to be tailored to a regional and/or state model promoting and/or supporting underrepresented students in Florida's community college technical programs.

Hispanic students – In order to connect with Spanish speaking students and often more critically, Spanish speaking gatekeepers such as parents, FLATE has expanded the awareness of technical education and careers in manufacturing via the translation the “Made in Florida” video script into Spanish and subsequent recording of a Spanish language overdub of “Made in Florida” video. The Spanish language streaming version of the video was posted on the “Made in Florida” website and is currently being created as an optional language track on the DVD. Additionally, the content of the Florida Trend NEXT advertorial is available on the NEXT website in Spanish (www.floridanext.com/careers/article_view.asp?id=556). This content is accessed by following the link and clicking on the “En Espanol” button. A printout of the complete advertorial with the Spanish online content are included in Appendix S.

Elementary School Interaction – FLATE has continued its mentoring and developmental activities with a predominantly African-American Elementary School. Douglas L. Jamerson Elementary School is a magnet/attractor school with an engineering theme. It is located in an urban neighborhood where the neighborhood students are all eligible for free or reduced lunches. The school has set a standard of excellence for its teachers (requiring them to attain national board certification) and curriculum (total integration of all its subjects with the engineering theme). The faculties blend interactive learning experiences as elements within their integrated math, science and engineering curriculum.

Women in the technical workforce – FLATE has continued its UPP addressing women by continued support of the Robotics summer camps at Girls, Inc. These summer camps help to address the under-representation of females in engineering technology through their comprehensive program of concentrated summer academic work coupled hands on technology experiments, and mentoring by female professionals in the manufacturing fields. Additionally, Dr. Barger attended a Train-the-Trainer workshop in December 2007 to be able to deliver the IWITTS (Institute for Women in Trades, Technology and Science) which will be offered in Florida to community college and high school faculty in 2008. This professional development workshop facilitates faculty and teacher in the development of a specific plan for recruitment and retention in the participants own institutions.

Outstanding (Open) Objectives for Goal 6:

- **Target Objective 6.1.1** – Activities targeting Hispanic students will continue with rollout of the Spanish language DVD in 2008 and NEXT initiatives in 2008-09.
- **Target Objective 6.2.1** – The Girls, Inc. UPP will continue to be implemented in 2008, the T.O. aligning with SWE has been modified to represent a non-agency specific model.
- **Target Objective 6.3.2** evaluation will be conducted in year 4.