

FINAL PROJECT REPORT

"WEB-BASED PRODUCT DEVELOPMENT LEARNING PROGRAMS FOR FOOD INDUSTRY PROFESSIONALS" (AWARD No. 3.16/98)

COMPARISON OF ACTUAL ACCOMPLISHMENTS WITH PROJECT OBJECTIVES

Project Objective 1: To prepare future food processing industry professionals to be effective team members in developing new and improved food products

Food product development classes at Penn State (PSU), Saint Joseph's University (SJU), Texas A & M, and Monterrey Tech were linked via compressed video (Picture Tel) and the Web on most Wednesdays throughout fall semester 1999. (UC-Davis was not included as originally planned because Dr. Haard was on sabbatical leave and his course was not offered.) Course reference materials were managed through Course Info on the SJU server. Topical speakers from the food industry made one-hour presentations from either SJU or PSU. These were followed by questions from the students at each site to the speaker. The net result was that the students benefited from exposure to a wide array of professional speakers. This learning could not have been accomplished without these interactive sessions.

In addition to the four university interactions, PSU and SJU had several interactive sessions during which a decision case was discussed and concept maps of the food product development process were constructed. Because the students from the two universities had complimentary discipline orientations, the students learned a great deal from one another through this interactive mechanism

From the four university collaborative effort, we learned that it is possible to have resource speakers at one school delivering presentations to multiple sites. However, the bridge that was used to "connect" the sites proved to be very unreliable. On several occasions, one of the sites would be disconnected from the tele-lecture. This proved to be very disconcerting to the students at those sites. It also had a negative impact on the question and answer interchange at the end of the speaker's presentation. Degradation of the quality of the sound also had a negative impact. It was apparent that students expect commercial TV quality programs in classes using this approach. While the technologies employed are only tools, they can negatively impact the quality of student learning experiences when they malfunction.

Additional details can be found in the cited publications. Copies of the printed materials are included with this report.

Project Objective 2: To enable current food processing industry professionals to develop new and improved products.

Discussions have been ongoing with several medium size food companies (e.g. Classic Carmel, Snyders of Hanover) about offering modules of the food product development course to their employees. To date, no modules have been offered, largely due to the inability fit company schedules. We continue to believe that this is a viable and effective approach to assist food companies in optimizing food product development, and anticipate piloting it in 2002.

PUBLICATIONS AND PRESENTATIONS

Hood, L. F., S. E. Stefanou and R. A. Anantheswaran. 1998. Food Product Development: Enhancing Critical Thinking and Problem Solving Skills. Poster presentation at the Annual Meeting of the Institute of Food Technologists. Atlanta, GA. June 22, 1998.

Stefanou, S.E. 1998. Teaching New Food Product Development: A Problem Based Learning Approach. Teaching Seminar, Agricultural Economics, University of Nebraska, Lincoln. March 19, 1998.

Stefanou, S.E. 1998. Learning in the Service of the Community. Presentation at the Learning/Teaching Fair, Penn State University. October 6, 1998.

Stefanou, S.E. 1999. Using Problem-Based Learning Approaches to Bridge Academia and Industry Engineering. Bucknell University. April 6, 1999

Stefanou, S.E. and L. F. Hood. 1999. Student Peer Assessment in a Collaborative Learning Environment. Presentation at the 1999 Assessment Institute. Indianapolis, IN. November 8-9, 1999.

Taricani, E., L.F. Hood and S.E. Stefanou. 1999. Using Case Studies to Promote Active Learning via the Web. Presentation at the Seventh Annual Teaching and Learning with Technology Symposium, Center for Academic Computing, Pennsylvania State University. April 10, 1999.

Stefanou, S.E. 2000. Using Authentic Experiences to Promote Learning, Presentation at the Agricultural Economics Colloquium, University of Missouri. March 3, 2000

Stefanou, S. E., L. F. Hood and E. Taricani. 2000. Challenges Beyond the Classroom; A Snapshot of a Collaborative Course. Presentation at the Eight Annual Teaching and Learning with Technology Symposium. Center for Academic Computing. Pennsylvania State University. April 1, 2000.

- Hood, L. F. and S. E. Stefanou. 2000. Teaching New Food Product Development: A Problem-Based Learning Approach. Presentation at the Food Engineering Colloquium. Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM). Monterrey, Mexico. May 23, 2000.
- Lord, J. B., A. Labonis, L. F. Hood, S. E. Stefanou and B. L. Zoumas. 2001. The Lions and the Hawks: Using Videoconferencing and Web Technology to Deliver a Cross-Campus New Product Innovation Course. Presentation at the Sixth Annual Mid-South Instructional Technology Conference. Memphis, TN. April 8-10, 2001
- Hood, L. F., S. E. Stefanou, J. B. Lord, L. Bravo-Gutierrez and R. Waniska. 2001. Web-Based Product Development Learning Programs for Food Industry Professionals. Poster presentation at the 20th World Conference on Open Learning and Distance Education. Dusseldorf, Germany. April 1-5, 2001.
- Hood, L. F., S. E. Stefanou, J. B. Lord, B. L. Zoumas, and J. Hernandez-Serrano. 2001. A Multi-Institutional Web-Based Undergraduate Food Product Innovation and Marketing Course. Presentation at the Annual Meeting of the Institute of Food Technologists. New Orleans, LA. June 24, 2001.
- Stefanou, S.E. and L.F. Hood. 2001. Transferring Experts' Reasoning to Novice Learners in Food Product Development. Presentation at the Northeast Educational Research Association Annual Meeting. Kerhonkson, NY. October 24-26, 2001.
- Stefanou, S.E., L.F. Hood and W.-L. Hsieh. 2001. Give Me a Lecture, I Will Forget; Tell Me a Story, I Will Problem Solve: Using Experts' Stories in Teaching New Product Development. Presentation at the Pennsylvania Association for Educational Communication and Technology. Hershey, PA. November 19-20, 2001.
- Abdullah, G. 2002. A New Way to Learn. Penn State Agriculture. Winter 2002:32-36.
- Hernandez-Serrano, J., S. E. Stefanou, L. F. Hood and B. L. Zoumas. 2002. Using Experts' Experiences through Stories in Teaching New Food Product Development. *Journal of Product Innovation Management* 19(1):54-68.
- Hood, L. F., S. E. Stefanou, J. B. Lord, B. L. Zoumas, and J. Hernandez-Serrano. 2002. A Multi-Institutional Web-Based Undergraduate Food Product Innovation and Marketing Course. *Journal of Food Science Education*. (In press).
- Stefanou, S. E., L. F. Hood and C. R. Stefanou. 2002. Feedback and Change: Assessment of Individual Contribution in Collaborative Activities in the Higher Education Classroom. *Journal on Excellence in College Teaching*. (In press).