

HP Innovations in Education Grants: 2009 Request for Proposals – College & University (USA): deadline, 30 March 2009, 5:00PM Pacific Time. (Online submission).Original Proposal Submitted in 2008; Planned for resubmission in 2009 and/or 2010.

Institutional Environment: *Technology Vision (150 words)*. The vision of the Computer Information Systems Department of H. Councill Trenholm State Technical College is one of cohesive group dynamics to build individual success. As an *HBCU* serving the needs of many students who lack depth in their understanding and application of technology, the departmental vision is to provide students with a method to learn in a manner consistent with the Original Case Study Design (OCSD) philosophy. The OCSD builds on the codependency of academic achievement, employability skills, and institutional support structures for students to achieve group and individual success. This vision moves students from status quo to change agents in the workforce and within their respective lives as life-long learners. No longer are students left to “fend for themselves” as learners; they become actively engaged in achieving project goals and objectives—all within the framework of using technology as essential tools for success.

Project Details: *Project Name (brief title)*: Integrating TabletPCs and the Original Case Study Design (OCSD) to Prepare Project Leaders

Project Executive Summary (200 words): Students who have limited access to technology are at a distinct disadvantage in terms of how technology is used to solve problems. *Integrating TabletPCs and the Original Case Study Design (OCSD) to Prepare Project Leaders* uses the OCSD methodology to create a group dynamic as a benchmark to support the success of each individual participating in the OCSD. The unique perspective of this approach is the application of TabletPCs as strategic tools for project success and presentation of the originally designed case study. Students must understand three functions to be successful: each individual must be academically active independently and within the group; each person must understand and apply elements of employability skills; and, the group must successfully navigate the maze of institutional support systems, e.g., email, web, etc., to support the successful conclusion and presentation of the OCSD. The project culminates in a formal presentation to a panel of business and community leaders. The presentation is a real-time process using the TabletPCs to professionally present the OCSD outcomes, conclusions, and recommendations. Without the TabletPCs to support the team, the group must provide their own scarce resources, which are varied and often lacking software applications to support group success.

Focus on Learning (300 words): Within the Teaching-Learning-Assessment Domain (TLAD), students are exposed to several classes in the Computer Information Systems program. Many of these courses are based on independent learning in which students are exposed to lectures, work through lab exercises, or learn in small, specific task-oriented projects. The OCSD is a focused process of learning by applied interaction, which includes detailed analysis of how to learn within the team structure as prerequisite to becoming a project leader. By participating in the team learning process, learning is intentionally directed at the individual. Strom & Strom (1999) used the Peer and Self-Evaluation System (PSES) to inform teachers in the community college about group dynamics and interaction from the student point of view. The premise of the PSES was “based on the assumption that groups of people who can work together will be the key to success in the emerging global marketplace” (p. 171), while “group success depends on

individual accountability” (p. 172). The OCSD is built on the principle that group dynamics, when properly understood and consistently supported, leads to the success of the individual. Success of the individual is the ultimate goal of this project, and learning is facilitated and enhanced by using the TabletPCs to guide the learning process at many levels in the group and at all levels for the individual. Philosophically, student achievement in this proposal is the primary outcome which drives all actions to help students learn as much as is humanly possible during the process. The learning is about: the subject matter being studied, how to interact with others to succeed, and how to perform analysis of institutional support structures to be successful in all forms and styles of learning. TabletPCs are the focal point of this process, e.g., the technological tools used to promote and support learning.

Goals, objectives and outcomes (500 words): The goals, objectives and outcomes for *Integrating TabletPCs and the Original Case Study Design (OCSD) to Prepare Project Leaders* are specifically related to student achievement through the application of TabletPC technology. There are two goals within this project: 1) to serve the needs of students who have deficient skills in the project leadership area; and, 2) to fully recognize TabletPCs as a technology of choice in developing leadership and technical skills for project leaders to be successful. Goal one has three objectives: 1) to improve the ability of students to work within the team structure for meeting organizational goals; 2) to provide leadership skills to students so that these skills might be applied in the workforce; and, 3) to prepare individuals to become innovative project leaders. Goal two has four objectives: 1) to introduce students to TabletPC technology as a tool to support the success of a project leader; 2) to improve the technological awareness of students aspiring to be effective project managers or leaders; 3) to teach students how TabletPCs are used as integral components within the Original Case Study Design; and, 4) to build specific skills in project leadership using hardware and software applications included with the TabletPC. Outcomes within the scope of this project are: 1) to assess and document the project leader skills level of students prior and subsequent to student participation in the project; 2) to prepare future project leaders in Computer Information Systems; however, the Original Case Study Design via TabletPCs is transferrable to any discipline in which project leaders are needed; 3) to demonstrate and document that the use of the TabletPC technology has been instrumental in: a) student achievement, b) successful completion of the OCSD, and c) the development of project leaders; 4) to professionally publish the Original Case Study Design inclusive of analysis as to how TabletPCs improved the success of the team and each member; and, 5) to demonstrate to the business community that students have the ability to use technology to improve their level of value to the workforce as project leaders; this outcome is demonstrated in a formal presentation to community leaders, inclusive of web-based and printed materials. At the heart of the goals, objectives, and outcomes is the application of the TabletPC to support the success of each goal, objective, and outcome.

Technology Integration (400 words): To integrate TabletPC technology into the Original Case Study Design project is to create and practice a model for student success generally applicable to any discipline. This integration model includes—but is not limited to—a series of longitudinal steps. *Step I: Establish the Value of the TabletPC to the OCSD Project.* Is it vital that students who have limited access to technology understand the value and benefit that technology gives to student learning and achievement. Understanding the value of TabletPCs enables students to

see first-hand how technology and project success are absolutely inseparable. *Step II: Use of User Manuals.* User manuals allow students to learn specific functions of the technology as directly applicable to project goals and objectives. This practice integrates the purpose in the technology and the application of the technology to group and individual success. *Step III: Correlate Project Components to the Power of the TabletPC.* The Original Case Study Design (OCS) project will have precise elements of design, development and modification. For example, diagrams and charts for organizational structure need to be provided for clarity and project outcomes utilizing applications such as Microsoft VISIO or Microsoft Office PowerPoint 2007 as integrated to the TabletPC. This activity provides students the ability to work in small interactive groups to delve into specifics of the project to prepare a professional product. Without the total integration of the technology and the project requirements, project leaders will not be fully prepared to use technology to maximize success. *Departmental and Institutional Inclusion.* As the OCS is developed, the ingrained and established practices will be formalized and made available to other departments. The integration between TabletPCs and the OCS related to project leader training and development will result in a series of methods and practices applicable and transferrable to other departments to develop project leaders for the workforce. In short, as this technology is integrated within the project, the outcome is applicable as an integrated institutional practice to other subject areas and programs. The integration process will also be presented to faculty and administration in selected meetings.

Project Timeline (200 words): *Two Academic Years, Fall 2008 – Summer 2010.* Fall 2008: configure the TabletPC lab for offering the DPT291 OCS as the pilot phase of the project. Modifications will be addressed and changes implemented prior to Spring 2009. Students will be assessed in terms of Project Leadership in Fall 2008, and compared to Spring 2009, to establish a benchmark for the project. A milestone will be targeted at the beginning of Summer 2009. The Summer 2009 target date is a measurement and reporting period using the data from Fall 2008 and Spring 2009 to assess improvement in the student skills and perceptions of the technology as a primary source of support for project leader development. Year two, Fall 2009 – Spring 2010, projects will consist of total integration of real problems associated with the college which are given to the students to offer valid and reliable solutions. The milestone for the second academic year is to use the Summer 2010 to assess the success of the solutions provided by the project leaders to the college. Summer 2010 will result in a professionally bound (and web) report summarizing and discussing the project, its implications, and significant contribution of the TabletPC technology.

Project Context:

Course Impacted (100 words): *DPT291 Case Study in Computer Science.* This course is a case study involving the assignment of a complete system development project for analysis, implementation, and documentation. Emphasis is given to the development of project leadership in a technical area. This course is a 3-semester hour, blended-attendance format with limited lab hours specified.

Course Redesign (200 words): DPT291 Case Study in Computer Science is presently configured as a blended course, with limited lab exposure and primarily conducted as an independent study. The course will be redesigned in terms of the Original Case Study Design format of: 1) 20% of

the course will be face-to-face with the Project Director (instructor); 2) 5% of the course will be required status reporting by the project leaders (each student); 3) 65% of the course will be documented project leader/group meetings to include analysis, planning, goals, objectives, and proposed solutions by the project leader (each student); 10% of the course will be accessing the Project Director Help Desk for guidance, instruction, and technical support. All work performed in the restructured class is group centered using the TabletPCs, whether that group work is located in the lab or at the discretion of the student teams/project leaders. The material in the course will be housed on the college website and within the TabletPCs to establish how project leaders use resources to accomplish goals. All testing and evaluation procedures will be conducted in real-time using the TabletPC technology, with most assessments accomplished in group work. Individual assessments are specific to project leadership concepts/practices.

Course Discipline (checkboxes): Science (physical, environmental, or computer science)

Faculty (25 words): First year, 4 faculty in the CIS Department; year two impacts the college (70 faculty) as the project is presented at a Professional Development session.

Students (25 words): As DPT291 is a capstone course, all students in the CIS Department will be impacted (approximately 100 per academic year, 200 total).

Extra Consideration (checkboxes): Check ... Serves underrepresented, includes pre-college outreach... Describe each element: H. Councill Trenholm State Technical College is an HBCU serving central Alabama. The majority of our students are under-represented in terms of access to technology, leadership experience, and educational opportunities. ... Outreach includes visits to High Schools in the service area. During these visits, we will promote the TabletPC project and motivate pre-college students to take the challenge of becoming project leaders in their communities, lives, and in the workforce. Additionally, it is anticipated that this project will be used to enhance articulation agreements and inter-school project leader building between the college and selected high schools over the two-year period of the project—an effort to have students think in terms of entrepreneurship.

Sharing Best Practices:

Project visibility (200 words): This project, *Integrating TabletPCs and the Original Case Study Design (OCSD) to Prepare Project Leaders*, will be promoted in all areas of the college. These areas include, but are not limited to: a) an interactive web site explaining the project, its goals, objectives, and expected and actual outcomes as the project progresses, including the integration of the TabletPC technology and the OCSD project to build project leaders who are progressive leaders in technical areas and leaders in their communities; b) printed materials will be distributed locally to all students and throughout the community; c) the Advisory Committee will become advocates for the project and will be provided a complete set of materials for promoting the project throughout their sphere of influence, especially in the workforce; d) the project will be promoted during professional development conferences and in each instance of application for recognition of the college, e.g., NISOD, League for Innovation in the Community College, Innovative Learning Conference, the 2008 Sylvia Chorp Award for District Innovation in Technology, etc. No visibility-stone will be left unturned as this project is precisely the type of

life-changing, innovative practice which changes lives; the key component is directed technological support, e.g., TabletPCs.

Team:

Principal investigator(s): Dr. Ken Scott, Program Coordinator & Instructor, Computer Information Systems Department; Director – CISCO Regional Academy. Phone: 334-420-4392, Fax: 334.420.4201. Email: kscott@trenholmstate.edu.

Additional team member: Mr. Syed Raza, Instructor, Computer Information Systems Department. Phone: 334-420-4392, Fax: 334.420.4201. Email: sraza@trenholmstate.edu.

Administrative support and approval:

Key administrator: Barbara Anne Spears, Dean of Academic Services. Phone 334.420.4479, 334.420.4206 (fax), bspears@trenholmstate.edu.

Statement of support: As Dean of Academic Services at Trenholm State Technical College, I offer the full support of the administration to this project. I have reviewed the goals of this project, and I believe that it will be of great benefit to the many low-income, underprepared students served by TrenholmTech. Resources committed to this project shall include the following: College information technology personnel will work to install and maintain the laptop lab, which will be housed in college facilities. Likewise, the college will support the faculty teaching in the program by providing necessary materials and supplies, software, furnishings, and any other necessary supporting project materials. Faculty training, professional leave, and schedule adjustments will be allowed as needed to ensure the success of the project. Additionally, the college will meet all terms of the grant, including sharing of project outcomes with the college and community. Barbara Anne Spears, Dean of Academic Services, H. Council Trenholm State Technical College, 1225 Air Base Boulevard, Montgomery, AL 36108, 334.420.4479, 334.420.4206 (fax), bspears@trenholmstate.edu.

Approval of terms and conditions. (B. Spears) Approved by Dean Spears, 2-13-2008.

Privacy terms and conditions (B. Spears) Approved by Dean Spears, 2-13-2008.

Institution Information:

Institution Name: H. Council Trenholm State Technical College: Trenholm Campus, 1225 Air Base Boulevard, Montgomery, AL, 36108, 334.420.4200, 334.420.4206 (fax); Patterson Campus, 3920 Troy Highway, Montgomery, AL, 36116, 334.420.4200, 334.420.4201 (fax).

Institution Mission: H. Council Trenholm State Technical College is an associate degree-granting institution with the mission to provide accessible educational opportunities, including credit and non-credit courses and certificates, for career preparation, advancement, and life-long

learning as well as to promote economic growth and enhance the quality of life for residents of Central Alabama.

Institution tax ID number: EIN #nnnnnnnnnnnn; AL Tax Exempt #nnnnnnnnnn

Tax exempt: Check the YES box...Reason: The college is a publicly supported two-year technical college within The Alabama Community College System.

Shipping instructions: Ship to Kenneth Scott, 334.420.4392, 334.420.4201 (fax); Shipping address: 3920 Troy Highway, Montgomery, AL 36116: ATTN: Warehouse.

DEADLINE: 14 February 2008, 5:00PM Pacific Time ONLINE....

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