

The Gazette

The Independent Student Publication of Langston University



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LINC students attend national conference

By Leethaniel Brumfield

Issue date: 10/17/07 Section: News

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Eight students involved in [Langston's Integrated Network College \(LINC\)](#) program presented their scientific research at the 2007 Historical Black Colleges and Universities Undergraduate Program (HBCU-UP) that took place in Washington, D.C., Oct. 4-7.

The HBCU-UP National Research Conference is a national gathering of more than 700 students and faculty working together to enhance the quality of undergraduate science, technology, engineering, and mathematics (STEM) education and research at the nation's HBCUs. At the conference, students are encouraged to present an oral or poster research presentation in more than seven STEM disciplines. HBCU-UP is funded and co-sponsored by the [National Science Foundation \(NSF\)](#) and the American Association for the Advancement of Science (AAAS). It gives each HBCU the opportunity to write a proposal for their own distinctive federally funded charter program. LINC is Langston's program, which was started in 2004 by Dr. John K. Coleman, the chairperson of the chemistry department.

The eight students attending the conference were Karole Blythe, Kariel Ross, Brittanie Atkinson, Felicia Ekpo, Cherie Ognibene, Leethaniel Brumfield, Jason Chandler, and Calvin Hawkins. They were accompanied by Coleman and Valerie Harris, a first-year LINC coordinator and recent Spelman graduate. To gain acceptance at the conference, each student's abstract had to be chosen by the HBCU-UP selection committee.

Coleman and Harris, who spent a considerable amount of time planning the trip for LINC students to facilitate their scientific presentation skills, felt that Langston's representation at HBCU-UP would be a great way for an elite group of LINC students to be recognized for their hard work. It was also an excellent networking opportunity.

"I'm glad I had the opportunity to competitively present my research, while gaining a chance to network with different graduate schools across the nation," said Chandler, a senior from Lawton, Okla.



Top Videos



Exhibit NSF 07 585 Example of Information dissemination on NSF sponsored project, and Institutional support from project PI. CPRL is a proposed activity for NSF 07 585 project.

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LU professor creates program

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Do you remember when, sooner or later, every student had to "go to the blackboard" to work a math problem or diagram a sentence? Well, Langston students and others across the nation may never have to get their hands dirty with chalk again thanks to the efforts of Dr. John Coleman.

Coleman, chair of the chemistry department, has created an innovative and highly technological program that focuses on improving analytical thought and problem solving while merging technology, learning principles, and performance measurement. He has named the program CPR-L (competency performance recording for learning). CPR-L utilizes a three step problem solving process: articulate, assess, and ascertain the solution.

"We call it 'CPR'-L because this method really resuscitates their learning," Coleman said.

CPR-L combines the use of tablet PCs, smart boards, wireless projectors, and rubrics to help students in science and math courses have a better



Dr. John Coleman explains how his

continued

understanding of the material being covered. It allows the student to record an audible running narration of the problem being solved. The PC records the voice and each stroke of the pen as the student writes on the tablet's writing surface. The recorded session can be easily re-recorded and replayed until there is complete conceptual understanding.

Then CPR-L enables the student to wirelessly project an assignment onto a large board for classroom viewing in one of two ways. In what can be described as an "instant replay" mode, the experience is very much like watching a video of the homework completion exercise, except the student's physical form is not included. Instead, it is as if an invisible hand writes across the board as the student's voice narrates the recorded process. If this is not preferred, the student may narrate the demonstration "live."

Mistakes in the assigned homework problem can be easily identified because the problems are to be solved according to a specified rubric. Observing the mistakes create opportunities for discussion and a new level of understanding.

Thanks to a grant from the National Science Foundation's HBCU-UP Program, Coleman was able to develop CPR-L through Digital Village, an online digital media resource and meeting place for science, technology, engineering and math majors that he is also improving.

Although it is too early to formally assess the qualitative and quantitative impacts of CPR-L, Coleman does have anecdotal feedback.

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"Students were especially anxious to attend class and to be personally involved with the magic of technology. They rooted as a group for class answers to be 100 percent correct and were especially delighted to observe their presentations on screen at an instant," Coleman said.

Coleman anticipates the opportunity to provide tablet PCs as learning tools for students. He believes that the "instant replay" feature is key because it forces a student to practice the conceptualization of the problem before coming to class.

"Many of my students tell me that CPR-L has helped them understand chemistry in a new way," Coleman said. "In high school, some of the teachers show the kids shortcuts to solving the problems. They show them how to pass tests, but they don't always ensure that the students actually have a full understanding of the concepts."

Dr. Clyde Montgomery, acting vice president of academic affairs, is proud that a Langston faculty member has created such a beneficial program. He said he sees application opportunities for CPR-L as limitless for any discipline, since students might be given "instant replay" assignments that involve sentence construction and vocabulary building to support communications skills building, as well as sketches or artistic inserts that involve movie clips that can be used to develop and enhance presentations.