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Summit Lays Out Plans to Boost STEM Education (Mass High Tech)

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It has become an accepted fact in Massachusetts in particular -- and around the nation as a whole -- that there needs to be a stronger emphasis on promoting education in the so-called STEM fields of "science, technology, engineering and math." To this end, the University Of Massachusetts held its third annual STEM Summit late last month in Sturbridge.

The STEM Summit III brought together 600 participants that included educators (preschool-12 and higher education), business and agency people, and legislators.

Speakers included UMass President Jack M. Wilson, who was the host of the event;

Massachusetts Commissioner of Education David Driscoll; Higher Education Chancellor Pat Plummer; Christopher Anderson, member of the state Board of Education and head of the Massachusetts High Technology Council; Ellen Ferraro, deputy director, systems validation for Raytheon Integrated Defense Systems; and Kerri L. Brigg, assistant secretary for planning, evaluation and policy development, U.S. Department of Education.

"We in higher education -- particularly at a public research university -- need to accept responsibility and play a major role in addressing this issue through research, teaching, teacher preparation and collaborative efforts in creating new and innovative programs for K-12 teacher and students; and then retaining students as they seek STEM-related education and training beyond high school, whether it is technical training or higher degrees," Wilson said in his opening remarks. "We also need to enhance our relationship with business and industry so that our curriculum remains current; and our students (pre-K through higher education) have an opportunity to see the relationship of STEM to work and careers."

In addition to the speakers, the Summit featured a number of breakout sessions, each woven around selected strands: Policy and Resources, Planning to Address the STEM Pipeline, Moving Toward Alignment-Curriculum for Success, Our Next Design Task: Bringing "TE" Opportunities to "STEM," Vanguard Schools and Promising Practices, Effective Employer/School Partnerships, P-16 Partnerships That Work, NASA's Education Mission and Wingspread strand. The Wingspread strand is exploring how to develop information technology fluency in both students and teachers. Funded by the Commonwealth Information Technology Initiative (CITI), a public/private partnership to promote information technology (IT) education through strategic investments and launched in 2000, CITI brings together K-12, community colleges, public universities, and industry to promote IT education across the curriculum and to respond to technology work-force needs. Presenters in the Wingspread were Chris Dede, Timothy Worth Professor at the Harvard Graduate School of Education; Margaret Honey, vice president of Education Development Center Inc. of Newton; Patrick Schettini, Superintendent of the Reading Public Schools; Mark Schlesinger, associate vice president for academic technology at UMass; and Debra Socia, principal at the Lilla G. Frederick Pilot Middle School in Boston.

"STEM teacher education is the key to a well-educated STEM work force," Wilson told the attendees.

The goals of the summit, to engage the total community in thinking about improving teacher preparation and increasing student achievement in STEM were achieved and the program was very well received.

There are several next steps in the works.

One is to determine whether a state wide databank of STEM initiatives would be useful and to start the process of developing of a plan to move the entire state in the direction of better STEM education from Pre-K through an undergraduate degree.

Improving the STEM education efforts in Massachusetts will not be an easy task. Sate Sen. Stephen M. Brewer, D-Worcester, however, reminded attendees of President John F. Kennedy's statement: "We will go to the moon not because it is easy, but because it is hard."

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