

For Immediate Release



AUB conference calls for innovative uses of computer-based technologies to teach math and science

Beirut, Lebanon- 19/03/2012 - Innovative uses of computer-based technologies in teaching science and mathematics were among the highlights of the 15th Annual Science and Math Educators (SMEC) Conference, held at the American University of Beirut over the weekend.

The SMEC Conference is an annual event designed to promote the continued development of a professional community of mathematics and science educators across Lebanon and throughout the region. The conference provides a platform to exchange practical ideas about teaching and learning, allow researchers to disseminate their findings, encourage interaction with overseas professionals, and contribute to the ongoing development of a professional culture of science and mathematics teaching at the school level in Lebanon and the region. This year it brought together some 550 participants and presenters from Lebanon and abroad.

“Looking back on my own education, I now realize that I did not have good science teachers..., [They] had never asked me as a student to think about generating ideas,” said Patrick McGreevy, AUB’s dean of the Faculty of Arts and Sciences, in his welcoming speech. “New ideas might challenge what we now take for granted... Science sometimes progresses by shattering our current understandings.”

McGreevy gave the example of meteorologist Alfred Wegener, who in 1912 described the moving of landmasses as continental drift, which resulted in a scientific debate that took 50 years to resolve and resulted in the theory of plate tectonics. Many geologists opposed it, based on the common sense that the earth was solid, labeling it absurd, even though almost anyone can see how the continents of South America and Africa are matched like puzzle pieces.

“I wonder what educators can do to encourage young people to think creatively as Alfred Wegener did 101 years ago?” added McGreevy. “It will require that they experience science as something that is never complete and settled, but an ongoing process to which they can contribute. We need to encourage their questions.”

Tamer Amin, AUB SMEC director and conference chair, explained that that this year’s conference focuses on two new interesting themes in science and math education. The science education plenary reexamines how the scientific method is addressed in science education, encouraging curriculum designers and teachers to help students appreciate the great variety of methods used in the sciences. Meanwhile, the math education plenary invites mathematics educators to engage with the social and ethical dimensions of using mathematics in a real world full of social, ethical and political complexities, noted Amin.

“This year’s conference continues a long tradition of community outreach activities carried out by the Science and Mathematics Education Center at AUB. We hope that this can now serve as a platform for greater professionalization of science and mathematics teaching in Lebanon and the region and more collaboration between schools and universities,” he added.

“Nothing great will be achieved without determined people,” said Rola Khishfe, program committee member. “The 15 years of success of SMEC reminds us all of its importance.”

In the plenary lectures, Zoubaida Dagher, University of Delaware USA professor, explored the myths surrounding the scientific method, discussed their impact on science learning, and proposed a richer framework for addressing scientific methodology in science education using examples from different science domains. Meanwhile, Bill Atweh, visiting professor from Malmo University in Sweden, argued for a socially responsible mathematics education, with the challenge being to support the teacher to be able to respond to the needs of the student and support the students to be able to respond to the needs of their lives.

In concurrent interactive sessions, Nancy Updegraffe from Governors State University, said that science should stimulate students to think critically by observing, questioning, reasoning, challenging, inquiring and innovating. “Science should be the most dynamic class in a student’s education, and with today’s technology-savvy kids, it can lead to the misperception that all information from the internet is accurate and there is little new to discover,” she said. “All countries face the challenge of how to motivate students to seek knowledge and to seek careers in science and math to solve world problems and we need to inspire teachers to use student’s curiosity to generate interest in science learning.”

The innovative ideas session saw the promotion of whole brain thinking as a tool for better understanding by Samia El-Hajj of Brummana High School-Lebanon. “One of the problems that teachers face when explaining a lesson is to get all students to understand the concept at hand and using whole brain thinking techniques is an effective method to reach out to more students,” she said. “By becoming a whole brain thinker, the teacher not only helps students become better learners, but he/she gains insight to arrive at better solutions to complex problems.”

In developmental workshops, Dounia Sawan and Louma Halawi, from Makassed-Houssam Eddine Hariri High School, Saida Lebanon, in their quest to make it easy for the brain to learn math, introduced educators to the mechanisms of the brain and to the instructional strategies that are compatible with these mechanisms. The brain controls how we represent numbers and deal with these quantities and yet there is little understanding among educators on the nature of these mechanisms, said presenters in these workshops, noting that greater awareness of how the brain works when it comes to mathematical concepts can explain the difficulties found in the classroom and can facilitate brain compatible instruction.

There were 42 sessions and workshops during the day-long event, which also hosted a publishers’ exhibit in West Hall where various teaching materials and technologies were displayed.

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For more information please contact:

Maha Al-Azar, Associate Director for Media Relations, ma110@aub.edu.lb, 01-75 96 85

Note to Editors

About AUB

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 600 full-time faculty members and a student body of about 8,000 students. AUB currently offers more than 100 programs leading to the bachelor's, master's, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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