

COMMUNITY COLLEGE CORNER

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Serving as an Advocacy Partner on the

ACM Education Policy Committee

THE ACM TWO-YEAR COLLEGE EDUCATION COMMITTEE (TYCEC), a standing committee of the ACM Education Board, works very closely with a number of colleagues and affiliated organizations to pursue its advocacy role regarding policy matters related to community colleges. In particular, we are very pleased to mark the one-year anniversary of the appointment of a TYCEC representative, Robert D. Campbell, to the ACM Education Policy Committee. The Education Policy Committee (EPC) is charged with “engaging policymakers and the public on public policy issues in science and math education relevant to computing and computer science, focusing initially on steps to ensure that computer science education is identified as a critical component of education policy in the U.S. at both federal and state levels.” (See <http://www.acm.org/public-policy/education-policy-committee>.)

Furthermore, the EPC is specifically instructed to “review issues that impact science, math, and computer science education in K-12 and higher education systems; determine if current policies are adequately serving the computing field and recommend improvements; comment on proposals before governmental bodies that impact computing issues; educate policymakers on the role and importance

of computing education; and provide expertise on key computing and education issues to policymakers.” The relationship of these activities to the advocacy responsibility of the Two-Year College Education Committee is a natural opportunity for partnership and collaboration.

Among its many accomplishments to date, the EPC has played a key role in the establishment of Computer Science Education Week, described by Education Week newspaper as an “annual occasion to raise public awareness about the importance of the field to the nation’s economic future and promote efforts to expose students to robust computer-science instruction.” Supported across the nation by K-12 schools, colleges and universities, and business and industry, the inaugural CS Education Week 2009 included participation by two-year colleges through a variety of activities and initiatives. The TYCEC looks forward to continuing to support this awareness-raising opportunity on an annual basis.

The Education Policy Committee also devotes much energy and resources to a huge challenge, and a matter of great concern to community colleges. As articulated by Cameron P. Wilson, the Director of Public Policy at ACM, “Across the nation, we do not know of any states that require computer science in high school

and know of only a handful of states that count computer science as a math or science course toward graduation.” This reality is reiterated by Chris Stephenson, Executive Director of the Computer Science Teachers Association and a member of the EPC, who puts it this way: “A lot of focus right now is on working with the states to get computer science counted as a [graduation] requirement,” noting further that most students “don’t take courses that are electives - they don’t have time.”

Obviously the lack of a routine expectation of meaningful computer science preparation in high school has an immediate and negative impact on the ability of community colleges to move students quickly and easily into rigorous CS programs of study. Further, we are all well aware that too often high school graduates also have insufficient preparation in mathematics. This combination of insufficient mathematics ability and non-existent computer science background is having a devastating impact on the production of computing graduates from America’s two-year colleges.

In pursuing its mission, the Education Policy Committee had to confront a daunting task, namely providing state and national policymakers with a meaningful answer to the simple question “What is computer science?” (And the corollary: “What is computer science education?”) Few – if any – disciplines may be as challenged as the computing fields to define themselves in a simple, short narrative accessible to others. But absent a clear and succinct definition, it is impossible to lobby effectively for a change as substantial as embedding computer science into the core of K-12 education. While this may still seem straightforward, there is an embedded status quo to overcome, namely the reality that “One of the biggest problems is schools confusing computer literacy with computer science,” as Education Week quotes Barbara J. Ericson, of the Georgia Institute of Technology. This is reinforced by Robert Schnabel, Chair of the EPC, who has noted that “We need to show policy makers that using computing [technology] merely enables people to leverage existing innovation, whereas

understanding computing allows people to create innovations that achieve breakthroughs.”

This brings us to a challenge that many will be surprised to learn is an issue at all. The growing ubiquity of the “STEM” acronym has served as a useful vehicle for promoting increased K-12 standards in these fields and as a handy tool for referring to the targeted disciplines: “Science, Technology, Engineering and Mathematics.” However, while many of us in the computing disciplines may assume that “Technology” in this context serves as a placeholder for computer science, or perhaps as a representative word for the collection of computing disciplines, such is not the case. As Jan Cuny, program officer at the National Science Foundation, has been quoted as saying, “We’re not a letter in STEM, because we really span STEM, we span all four categories, and I think we get lost.” How then do we tackle the inclusion of computer science in a sea of policy and education discussions as well as legislative initiatives that are infused with the STEM acronym? Only through the combined efforts from all education levels of the many computing professionals who long to see our nation react comprehensively and energetically to the dramatic decline in student populations in computer science throughout America’s two-year colleges, four-year colleges and universities.

In closing, I would like to express, on behalf of the ACM Two-Year College Education Committee, our genuine congratulations to the leadership and members of the ACM Education Policy Committee for their accomplishments and our sincere appreciation for the opportunity to pursue issues of shared interest and continued service as an advocacy partner. **Ir**



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