
Community College Corner

Exploring CAP-Space: The Next Frontier in Curricula, Assessment and Pedagogy

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The term ‘Web 2.0’ was officially coined in 2004 during a brainstorming session by Dale Dougherty, web pioneer and vice-president of O’Reilly Media Inc. Dougherty’s coinage attempted to capture in a simple phrase something far more nebulous than an identified group of user-centered technologies: blogs, wikis, podcasts, RSS feeds, and social bookmarking to name just a few. In actuality, the term Web 2.0 embraces the larger notation of a socially connected, web-culture community.

Based on the Web 2.0 philosophy of collaboration, contribution and community, the ACM Two-Year College Education Committee (TYCEC) will construct “CAP-Space”, an interactive information environment for computing educators, students, parents and advisors. In CAP-Space, educators will discover associate-degree computing Curricula, Assessment techniques and Pedagogical approaches in online communities of practice and research. Educators also will have the ability to make contributions to CAP-Space and to participate in online moderated settings for a variety of special interests (including specific associate-degree computing programs in computer science, information technology, computer engineering, software engineering and information systems).

Until this point, associate-degree curricula guidelines have been conceived and distributed as linearly-crafted narratives documenting the two-year college environment, describing a specific curriculum and detailing course content. Subsequent “web versions” of these reports have proven to be meaningful extensions, but have not fully taken advantage of current web technologies nor have they addressed the complete breadth of needs of the user communities. CAP-Space will directly address and remedy these shortcomings. It is no longer adequate to provide curricular resources that merely speak to our constituents; such resources must now actively engage and vigorously serve our user communities.

CAP-Space will address three other significant developments as well. First, while the strong emphasis in recent years to identify, codify and promote the five distinct sub-disciplines of computing (CS, SE, CE, IT, IS)

has been a welcome addition to the conversation, the results have had a regrettable downside as well, namely to encourage silo-thinking, to isolate each sub-discipline from the others and to require educators, employees and practitioners alike to digest multiple curriculum reports and discern for themselves the commonalities. CAP-Space addresses this issue head-on by bringing into one shared environment the sweeping breadth of associate-degree computing programs, with the ability to discover in an instant the commonalities and distinctions among sub-discipline-specific degree programs. From Curriculum content to Assessment rubrics to Pedagogical strategies, CAP-Space will easily provide users with the ability to look at computing issues vertically within a sub-discipline and horizontally across sub-disciplines. This is a significant step forward and signals an entirely new direction for the future.

The second significant development that CAP-Space will address is the need to update and maintain curricular reports and resources. Over time, the ACM TYCEC will adapt all of its curricula recommendations into the CAP-Space frontier as the content of each guideline is updated for currency. Recently, the TYCEC completed a major upgrade to CS and the *2009 Guidelines for Associate-Degree Transfer Curriculum in Computer Science* will forge the way into CAP-Space followed immediately by SE content. As we continue the process of updating and converting previously static Web 1.0 reports into dynamic CAP-Space resources, they are being fully integrated one to the other, with inherent strong mechanisms for facilitating and safeguarding the updating process (and mitigating the risks associated with revising singular portions of an integrated whole), as well as the ability to distinguish and secure TYCEC-endorsed content from user-contributed opinions and materials. Furthermore, the features of CAP-Space which promote participation by the user community initiate a meaningful process of ongoing review that will readily support periodic updates to the TYCEC-endorsed components.

Thirdly, as reflected in its name, CAP-Space will integrate the three fundamental pillars of Curriculum, Assessment and Pedagogy. We are adopting a frame of reference that not only acknowledges these three critical elements but also sees them as equally important, interlocking components in associate-degree computing programs. For too long, curricular reports have overlooked detailed assessment of student learning and program outcomes and have under-emphasized specific teaching and learning strategies. By its nature, CAP-Space pursues these areas aggressively and interweaves them with course content and program curricula.

In short, the ACM TYCEC will launch an online environment that utilizes and leverages Web 2.0 ideologies and technologies, eliminates silo perspectives of computing sub-disciplines and promotes active and ongoing revisions, all in direct service to its user communities. Once launched,

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we invite you to explore and contribute to the Web frontier by navigating online to www.acmtyc.org and clicking on CAP-Space, where unsullied ideas are waiting to be discovered.

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