Education Advisory Committee

Minutes

May 11, 2007

1:00-2:00 P.M. -- Friday, May 11, 2007
Location – Lory Student Center room 203

Attendees: J. Folkestad, K. Kaminsky, M. De Miranda, P. Seel, E. Chong, P. McCarthy, C. Cranston, H.J. Siegel, M. Stroub

Acceptance of minutes of last meeting.
The April EAC meeting was the FITness symposium, so no minutes to approve.

Please review the Symposium action plan and summary (see below) before Friday's meeting.

a. New EAC members
   - Jim Folkestad from Construction Management as new co-chair
   - Karen Kaminski from SoE
   - Hari Eyer from Statistics
   - Christos Papadopoulos from CS

b. FutureVision 2012 – Friday, September 14, 2007
   i. IAC input on FV2012 plans discussed
   ii. Track planning – milestone schedule defined
   iii. Keynote update – still looking
   iv. Siegel will do all fundraising

c. High School Day – (15 min.)
   i. Date is Friday, November 2, 2007
   ii. Reviewed planning calendar
   iii. Sponsorship plans
      1. Siegel will do all fundraising
      2. will supply documentation about program for emails and letters to sponsors

d. FITness Action Plan – (15 min.)
   i. Review symposium and ISTeC Exec. recommendations (see below)
   ii. Charge for K-14 group
   iii. Charge for CSU FITness Group
   iv. How to measure progress and success? Metrics?
   v. CSU/PSD partnership
      1. De Miranda suggested working with IAC to sponsor CS faculty buyout to allow CSU faculty to teach at PSD

e. EAC plans for AY 2007-2008– building on our achievements
   i. Bob Marcus (SRI) has volunteered to develop and IS&T K-12 portal

f. Next semester meetings determined to be 2nd Friday from 1-2. Location TBD.

g. Adjourn at 2 p.m.

FITness Action Plan **(revised with 5/8 input from ISTeC Executive Cmte.)**

Create two implementation groups within the EAC:
K-14 Initiatives Group and a ***CSU FITness Group (CFG)***

K-14 Initiatives -- Charge:

Step 1 – EAC will work with advisory partners to do assessment of K-14 teacher technology education needs. Some of these may be met by CSU summer courses that would be designed with FITness principles in mind. Suggested group members –

Karen Kaminski, SoE; Wim Bohm, CS; Michael DeMiranda, SoE
Other interested EAC members? _____
Dawn Lauterbach, technology educator at Blevins Junior High
Alicia Howe, technology educator at Kinard Core Knowledge School
Karl Dukstein, technology educator at Front Range Community College
Ben Johnson, technology education supervisor, Poudre School District
David VanSant, Strasburg School District superintendent
Dan Smith and Leo Vijayasarathy from CIS, and Paul Kennedy from Math
Esther Worker, ESRI Incorporated, Broomfield, CO

Step 2 – Investigate grant and funding options to support these efforts. Submit proposals.

Step 3 – Create statewide advisory group drawing upon ISTeC's Industrial Advisory Council (IAC) for contacts and expertise.

Step 4 – Work with ISTeC departments to create summer courses for K-14 teachers in CO.

Step 5 – Work with the new ACT program to tailor curriculum to meet FITness goals.

CSU FITness Group (CFG) -- Charge:

Step 1 – Support the ICT testing program in fall 2007 (supervised by Patrick McCarthy). This will provide additional data to support FITness programs for CSU students.

Step 2 – Over summer 07 draft ***FITness White Paper*** with research summary and suggested action steps. Meet with Tom Gorrell and Alan Lamborn to review White Paper and action steps.

Step 3 – Work with TILT and CTSS to develop FITness integration workshops for CSU faculty. Goal is to <u>integrate FITness-oriented projects into coursework</u>. (the suggested method from the FITness report)

Step 4 – Investigate an ICT-type assessment as a CSU admission requirement. Investigate math modules approach for students who do not score well on the assessment.

Step 5 – Create supplemental coursework to fill-in gaps in student preparation for CSU.

Members – Pete Seel, JTC; Patrick McCarthy, ML; Kevin Nolan, CTSS; Jamie Switzer, JTC; Others _____?

FITness Symposium recommendations

April 6, 2007 at Colorado State University

Group A) Role of K-14 education in preparing prospective students for admission to CSU (Michael, Wim, Christine, Karl)

How can CSU work with school districts in the state to better prepare students for university-level work? How do we improve communication between the university and these schools?

Improve K-12 student access to IS&T programs/ knowledge/ skills:

Tutoring for underserved populations (similar to the Triunfo after-school program at CSMATE)
High school programs (High School Day at CSU)
Enrichment and engagement programs – ***(??? -- need more detail here)***
Introduction to higher-level topics
Teach problem-solving skills

Improve programs for K-14 teachers in the state:

Create summer workshops, credit courses, and licensure & certificate programs
Conduct needs assessment of our K-14 partners – ***action plan needed***

Improve CSU-community college connections in IS&T:

Develop Applied Computing technology (ACT) articulation agreements
ACT – Computing education (teacher licensing)
ACT – Business computing
Develop CIS – ECE – CS articulation agreements with community colleges

Group B) Needed knowledge/ skills at CSU admission as part of the fluency mix? (Cap, Jamie, Alicia)

What types of knowledge and skills should CSU require for admission? We have other types of admission requirements – can we make a case for FITness on admission? How do we assess this?

No additional requirements by department

Need a requirement for assurance of skill prior to advancement into initial series of courses

Requires an assessment of all students at freshman level

Departments chose threshold of performance required for enrollment in 200+level courses.

Need to offer some alternative way to meet threshold

Group C) IT fluency requirements at graduation from CSU

(Jon C., Pat, Karen, John P., Patrick)

Given the FITness model, what types of I.T. competencies should our students have at graduation. How should (or can) we assess this? What is do-able at CSU?

We do not recommend a uniform solution across the board.

We recognize from the work that has been done that students in those departments/colleges that provide technical degrees, or specific course work, are stronger in the IT fluency. We also noted that students who do not have access to technology courses express a great deal of interest for more.

Once Patrick has a solid assessment on the ETS application, we recommend using this as a springboard to initiate discussion. First take it to Tony Frank, Alan Lamborn, Tom Gorrel, and Bob Jones in the fall. They will indicate if we should proceed to faculty council.

Main ideas:

- Require all incoming freshman to take the basic assessment
  - It was discussed with later groups that each department could uniquely select the skill level they required -- or opt out of requiring one
- Provide a basic skills course as optional for all students with a provision for testing out -- This course should require some conceptual skills
  - Note: when College of Business tried to end their BD105 skills assessment requirement, the Finance and Real Estate Department indicated the students would not have the necessary prerequisite skills, so the college re-instated the requirement.
- Work through and across curriculum so other courses teach application/concepts
- Offer an option for students to take the Advanced ETS and receive a Certificate
  - Can we make this transcripted?
- Watch what is taking place state-wide and nationally
  - Reauthorization of No Child Left Behind (NCLB)
  - CCHE group looking at technology standards
  - STEM

Questions:

- How do faculty integrate this into the curriculum
  - Support, knowledge, skills
- How would we staff a course such as BD150 for everyone?
  - Ag, CS, and CoB already offer coursework
  - Where would it be housed?

Other ideas discussed:

- EAC summer symposium for PSD?
- CTSS contact Jody Bublitz, PSD to notify of empty seats in their skills courses?

Group D) Faculty FITness and involvement in the process

(Gene, Steve, Pete, Jim, and Dawn)

If faculty lack FITness, how can we expect them to incorporate these aspects in their courses? This problem will moderate over time as senior professors retire, but what can we suggest now to resolve this problem?

Barriers to faculty adoption of FITness elements in courses:

- FITness is another burden to learn and use (in addition to other demands such as learning revisions to WebCT)
- Many faculty are resistant to change – "if it's not broke, don't fix it"
- Old research model was to collect and then horde data until publication
- New model is Open Source – share information, collaborate, disseminate
- Lack of institutional support for technology ed. (administration, not technical)
- Some faculty don't like peer-to-peer learning to acquire new knowledge and skills (may reveal personal lack of knowledge)

Making faculty FIT:

- Understand faculty rewards and motivations – design with these in mind
- Take advantage of pressure from students for faculty to use I.T. in teaching
- Build FITness aspects into course rubrics with common assessment goals between sections (Poudre School District does this now between tech. programs in schools)
- Make instructional innovation a key part of tenure and promotion packages
- Encourage a culture of sharing of digital resources on campus -- Similar to an open source model

Key Point – Emphasize to faculty that conducting academic research is fundamentally a FITness-oriented task (the collection, analysis, and publication of information -- typically using a variety of digital tools). Teaching this knowledge may be very useful to students, now and in their futures.
(It may make "selling" this concept easier to faculty who see I.T. as a vocational field)

Encourage faculty to use expert resources:

- Guest lecturers from I.T. fields and related areas
- Take advantage of resources on campus (e.g. TILT, ISTeC, Library, CTSS)