

Vision, Meeting Goals, Guiding Questions January 2008 Critical Advisors Meeting

Overall Vision for Mobilizing STEM Education for a Sustainable Future

By 2020, the United States will have a professional workforce and a citizenry that understands the interrelated scientific and social dimensions of our pressing global challenges. This human resource will be developed and sustained by a STEM education system that enables and encourages all who teach to use (1) teaching practices shown to promote effective learning, and (2) curricula that effectively prepare and motivate students to address critical challenges facing our planet and its inhabitants.

Goal for Critical Advisor Meeting 1 (January 2009)

To generate viable answers to the question:

What theories of change¹ are most likely to reshape STEM education in ways that accomplish our shared vision with the required urgency?

Guiding Questions for Meeting Session

- 1.a. If our overall vision for STEM education reform were to be realized, how would the current USA higher education system be different than it is today?
- 1.b. To realize this re-imagined system, what major elements of the current USA system of higher education would we need to change and in what ways?
2. What existing or emergent trends or system design ideas could be adapted or built upon to bring about the changes in the major elements raised by the previous question? Are entirely new ideas needed, and if so what would they be?
3. How would redesigned elements work together coherently to produce a whole system that could indeed achieve our vision? (Note: We will have more time to work on this in our June meeting.)
4. Given our responses to Question 2, how can our envisioned changes be accomplished and sustained? That is, what theories of change are likely to be effective?
- 5.a. Given what we have done thus far, what should the next steps be in order to move toward our vision? How should/could the CA group itself be involved?
- 5.b. Our second meeting is scheduled in June here in Atlanta. How do we plan that meeting so as to advance whatever course of action is implied by answers to Q5a?

¹ For our purposes, a “theory of change” is a predictive assumption about the relationship between desired changes and the actions that may produce those changes - If I do x, then I expect y to occur, and for these reasons. Theories of change, whether explicitly stated or implicitly embedded, underpin policies and programs that seek to change organizations and social systems. These assumptions also underlie all choices of action in everyday life.

Goal for Critical Advisor Meeting 2 (June 2009):²

To revisit the outcomes of our January meeting,³ and generate viable answers to the question:

What strategies of change and mobilization of resources should be employed to reshape and sustain STEM education in the USA higher education system that achieves our shared vision?

Anticipated questions include:

1. What current, emergent, or new capacities or resources could be mobilized or built upon?
2. What agencies should implement particular aspects of our new theories of change for STEM higher education?
3. What are our priorities for action and what is our timeframe?
4. What people or agencies should be responsible for doing what?
5. How should our proposed change strategies be funded in the shorter and longer term?

² It is our assumption that the goals, questions, and agenda for the June meeting will be shaped by the views of the CAs in the January meeting. Thus the organizing group's views are tentative, pending the considerations of our CAs.

³ We anticipate that primary outcomes of our January meeting will be a set of theories of change about how to shape and sustain a redesigned higher education system that achieves our shared vision.