

WHAT WORKS - A KECK REPORT

ALL THE PIECES ARE THERE BUT NOBODY'S TALKING

BACKGROUND

The president of a small college known for fine arts, teacher education, and health fields wants to establish a reputation in math and science as well and make the college the seat of a planned national math and science teaching center of excellence. The current science building is grossly inadequate and there is no emphasis on faculty or student research. A preliminary plan for renovation of the science building was completed a few years ago, but the college was unable to move forward.

Key Issues: Communication

- ◆ There is little or no communication between the administration and faculty regarding the role of math and science at the institution.
- ◆ Although there is a strong sense of community, engagement, and cooperation within the math and sciences faculty, the departments have different views regarding the curriculum and the new building.
- ◆ Potential impact of the core curriculum review on math and science is unclear.

Recommendations:

Conduct a visioning session that includes a cross-section of campus constituencies to clarify the role of math and science within the institution.

- ◆ Establish academic goals and objectives for all departments in the context of your understanding of what will be the pedagogies of the future.
- ◆ Clarify the role that science and math will play within the broader academic community on your campus.
- ◆ Clarify the future of science and math instruction.

Open lines of communication between faculty and the president.

- ◆ Work together to shape disciplinary visions to ensure that they harmonize with the global mission of the college.
- ◆ Decide how the college will exemplify excellent undergraduate science and math education if it is to become the home for the national math and science teaching center of excellence.
- ◆ Clarify the desire for more interdisciplinary research-based, hands-on teaching methods for the instruction of science and math.
- ◆ Confirm the college's commitment to restructure teaching loads to allow for more faculty and student research.

INSIGHTS FROM MEETING WITH STUDENTS

- ◆ Their biggest concern about existing facilities was the lack of technology; students felt they were not getting the experience they needed with using the software common in their field of study.
- ◆ Their biggest pleasure about the existing facilities was that everyone was near everyone else— departments, faculty, and students.
- ◆ Their greatest dream was for increased access to technologies in large spaces that kept all working together, as well as for small break-out rooms in which to escape the social atmosphere for concentrated study.
- ◆ They also wanted 24/7 access to the facilities, instead of having the spaces close down when faculty leave. This request was consistent with the desire of students to be more engaged in undergraduate research, and they were well aware of issues relating to safety.



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Establish a committee structure to get the process moving.

- ◆ Outline goals, objectives, and responsibilities of the building committee, the subcommittees, and the individuals who serve on them.
- ◆ Focus on establishing the academic priorities for the new facilities and preparing a cogent request for proposals to which design firms can respond.
- ◆ Everyone needs to be talking with each other. There seems to be good moral and good faith, but it does not appear that all of the departments share the same view regarding the curriculum or the new building. At the same time, differences seem to reflect more a lack of awareness than discord. It is not clear that the departments are aligned with the administration and its thinking, but again, differences seem to reflect that discussions have only been tentative rather than discord.
- ◆ There is good energy. It needs to move forward in a positive way.
- ◆ Momentum should not be lost over the summer.
- ◆ We heard a lot about “interdisciplinary teaching.” How broad is the view? Does it speak primarily to initiative within Math and the sciences or are the goals more ambitious? It is necessary to define the term.
- ◆ The system for communication needs to be organized from the beginning of the process. Dissemination of information and sharing decisions are likely to be key to the process and its success.
- ◆ Flexibility of space is important for building utilization. “Territory” is a negative term if it implies establishing fiefdoms, but a positive when it implies shared ownership and community. Space should be flexible, but meet the department’s needs.
- ◆ Dreams need to be sorted from reality, but it is not yet time to prioritize.
- ◆ Student’s feelings must be considered. It is most important for students to feel good and value their space. The student’s role is important as they can change the design.
- ◆ The building operating hours should be considered. Currently, the facility is less available to students than at most other institutions.
- ◆ The college needs to get everyone thinking about math and science in the same way, or at least explicitly examine the differences. ■