Driving Questions from Architects

Learning Spaces Collaboratory Roundtable
Spring 2016: Focusing on the Future of Planning Learning Spaces
Georgia Institute of Technology

Notes:

A.

1. A T-shaped individual is an individual who is anchored in a discipline but has the capacity and openness to span across disciplines. How can learning and the spaces for learning ensure that students become T-shaped individuals upon graduation?
2. Current trends in higher education point value a culture of openness and sharing in the academic environment. What can our learning spaces do to promote strategic partnering between students from different backgrounds and disciplines to push learning beyong the boundaries of a classroom?
3. Can architectural identity help champion a program? Can a new space be a catalyst not only for new ideas, but for new programs and curriculum? If you create space, will they come?
4. Can new or renovated architectural space serve as a mechanism to spur innovative learning techniques on a campus? What does a collaboratory look like?
5. Can we grow our potential for learning without growing our campus footprints? Can today's academic needs fi t neatly into yesterday's structural bones?
6. How can we structure our buildings on public universities, usually built via capital funds or private donors given to specifi c programs, as to not silo student thinking? What does a classroom or student environment look like in a topic-based education model?

B.

7. Can a facility advance academic science programs forward 50 years in quality, including the incorporation of emerging and future technologies, laboratory flexibility and adaptability, modern learning methodologies and skills, and sustainable energy/ building management systems?
8. How does climate impact design with respect to issues of connectivity and separation?
9. Can the limitation of building "footprint" be an asset when designing a facility that requires more program than available site can accommodate?
10. Does "art" integrated within the architecture enhance student learning and discovery?
11. How do students understand how to use the spaces provided?

Notes:

12. What are the upper limitations/ thresholds for the number of students moving through and engaging with the faculty and within the facility during the course of a typical day?

C.

13. What are the opportunities and challenges of integrating sciences and engineering into a core interdisciplinary STEM facility?
14. How can governance and facility design leverage advanced research tools to enhance student learning and research?
15. How can a facility respond to the unique curriculum and pedagogic needs of the lower division (early years) learners?
16. How does a facility encourage and foster the undergraduate research experience?
17. How does an institution build a pathway from departmental to interdisciplinary learning and research models?
18. How can a facility engage with the broader community whether actively participating or passively experiencing the place?

D.

19. What are the opportunities and challenges of integrating sciences and engineering into a core interdisciplinary STEM facility?
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E.

25. How can a small portion of an unloved, sputnik era chemistry building slated for demolition be repurposed in the shortterm to create an economical, “pop-up” collaboration environment?
26. After the initial renovation, the University became excited about the potential of a comprehensive, phased renovation and asked “If we use this for prototyping collaborative space and demonstrating our commitment to sustainability, what groups/departments have unmet needs for interdisciplinary innovation and how can we create a unique environment for teaching & research?”
27. Throughout the multiple phases we asked: “What is a good mix of functions, spaces, furniture and technology that allows students to find optimum accommodations for individual and group learning?”

Notes:

28. When the final phase was conceived as flexible maker space, various stakeholders asked “what are the key components of a home that encourages informal investigation and tinkering?”
29. Now that the project is fully occupied, Lord Aeck Sargent believes a post occupancy evaluation should assess the successes and opportunities for improvement with one key overriding question being: “How do we best determine/ quantify if a diverse mix of nonscience and science faculty and students in a single building creates an environment more conducive to interdisciplinary work and innovation than if in separate, more discipline specific buildings?”

F.

30. How do we create a campus-wide “heart” for student engagement and innovation?
31. How do we enhance technology-enabled problem-solving skills for students?
32. What does an agile, timeless, learning and research environment look like?
33. What tools, spaces, relationships and events will attract, retain and support the highest caliber faculty & students?
34. How do we create deep learning through immersion in critical-thinking scenarios?
35. How do we create the destination for collaboration with industry, government, and academic partners to accelerate intellectual and economic development and help students build a bridge to a bright future?

G.

36. How can we proactively plan for change?
37. How do we navigate institutional change, while maintaining a steady course throughout a prolonged or multi-phased project?
38. How can we create a “commons” that will physically connect a diverse range of different programs?
39. How can we celebrate diversity and manifest interdisciplinarity in our physical spaces?
40. How might we foster a sense of “community” in an urban campus with a predominately a commuter population?
41. What types of spaces should we create and co-locate that will encourage commuter students to stay and collaborate with peers beyond regular classtimes?
42. How do we create a vibrant heart for intellectual exchange, encouraging peer-to-peer, student-to-faculty, and faculty-to-faculty interactions and chance encounters?

H.

43. What does student-centered planning mean? How might we address in our planning the need for spaces that enable us to engage fully our entering and lower level students in the doing of engineering from the very first day?

Notes:

44. Engineering itself is a multi-disciplinary community. How can our planning and the spaces resulting from our planning dissolve barriers between disciplines, and build community across disciplines that is sustainable over the long-term?
45. Becoming socialized into a community of STEM practitioners requires spaces where students can build and test the things they draw and design. How can we introduce students to the environments where engineering is practiced in the world beyond the campus? How are such spaces different from those of past generations of spaces for educating engineers?
46. How many different kinds of spaces, traffic patterns, adjacencies, etc. need to be considered in developing an ecosystem of learning spaces for 21st century learners in fields of engineering?

I.

47. Can an institution struggling with inertia take a quantum leap into modern classrooms?
48. How can an institution better serve the needs of its students – not just for improved learning but to also close gap between the academic environment and the professional world most students will enter post-graduation?
49. How can a campus create a “common ground” where instruction and innovation are facilitated to succeed where past experiments and attempts to change culture have failed?
50. Is there a better way than “If you build it they will come” to mitigate risk (sunk cost for stuff they don’t need/use) and steward a place that will continue to grow technologically along with the institution, it’s teachers, it’s students, and the world?
51. Where is the next InfoCommons-like incubator happening?
52. How are emerging technology trends affecting / improving learning spaces?