

CBE Technology Task Group Research Summary

First, we held regular meetings of our task group (representing architecture, landscape architecture, and construction management departments) and documented our discussions through a Slack channel. Second, we submitted three questions for students and external stakeholders for the CBE-led survey. Third, we produced a targeted student survey to ~90 architecture and construction management students. Fourth, we sent inquiring emails to faculty in the Urban Design and Planning Department, Real Estate Department, and college staff – but received limited response.

Summary of CBE Technology Task Group – Slack Channel

In the area of research:

Funding/ Support – enable continuous discussions among faculty, in seminars, colloquia. Also enable research related to degree programs to use students (MS, Ph.D) (TME)
Partnerships - leverage nearby partners (McNeel, Microsoft, etc.) into funding CBE research (RC)

In the area of teaching:

Tech-related curriculum across CBE (an undergraduate course to teach baseline technologies) (CdA)

Assess what is being taught and how (specific courses), redefine values(RC)

Adopting new means of teaching digital modeling (JH)

Instructors supporting each other in teaching (reviewing syllabi, suggesting ideas) (JH)

Tech courses separate from studio or integrated?

We need to balance technology as a visualizing tool, and be careful of the dangers of falling back on it as a design tool. (CdA)

Enable FACULTY to continue to learn new technologies (CdA)

Perhaps a series of seminars to introduce faculty to new tools – brown bag lunches. (JH)

Are other institutions – JC/CC – teaching courses we rely on?(KH)

Evening workshops to present new ideas to all (CdA)

Need to interrogate tools – define language of how they are used (design, representation, drafting, etc.) (CdA)

Faculty development is important – how can we foster? Learn from other schools (EG)

Give students opportunities. How can faculty be effective leaders, when we are not necessarily the experts?(RobC)

CBE External Survey

Summary of Strengths: our students learn about technology as a tool, through the Fabrication Lab and computer lab. Also, the location of Seattle, and the surrounding tech community.

Summary of Weaknesses: Our technology courses are uncoordinated/underdeveloped, and not connected to real-world issues (technology for its own sake)

Summary of Potential: Huge potential for interdisciplinary partnerships to leverage CBE. Huge potential to support a community-centered technology that encouraged public engagement / social equity. Huge potential to be “Tech Nimble,” especially in Seattle and use tech to address grand challenges.

The most important quality in graduates was the perspective on technology that comes with knowledge, and ability to continuously learn. This was followed closely by a desire for systems/ critical/ design thinking in their work. Professional knowledge/ skills and communication + leadership skills were also highly valued. Other attributes mentioned were abilities to facilitate interdisciplinary collaboration, to address social justice issues and other grand challenges.

The biggest priority is to ensure that communication (including visualization of design ideas) improves with changing technology, and doesn't get worse. This was followed by a sense that the disciplines must critically expand technology-enabled design & facilitation capabilities (not only to 'keep up' but advance the field). Other responses described how with the rapid changes in technology and ubiquitous, we must strive to produce well-rounded students as generalists, rather than specialists.

CBE Student Survey

The most common response was calling for more integration across courses and across CBE. The next response was calling for more use of platforms used in professional work. The next few responses called for improved access to tech resources, more workshops and more online tutorials for gaining skills.

Many students agreed that technology would have a large (though undefined) impact on their future work. Some students recognized this could mean new design and collaboration capabilities, but also that it would require work to keep up to date.

Students acknowledged the potential of technology for better synthesis of more variables in design and better visualization tools. Yet students also acknowledged that this requires thoughtfulness.

ARCH+CM (undergrad) Student Survey

Overall, students felt that they had adequate access to the technology they needed for their courses (93%). Students met these needs through using their own technology (36%) or a combination of their own and UW-owned resources (53%).

When asked if they received the proper instruction in required technologies, 40% responded 'yes' and 45% responded 'mostly' – indicating room for improvement in this area.

The primary programs used by this student group were: MS Office Suite, Adobe Creative Suite, Google Drive/ Documents, Rhino and Bluebeam. Other programs include SolidWorks, 3DsMax, FieldWire, Dialux.

For organizational/ coordination work, our students use the Canvas platform extensively for course information and group coordination. Our students also make extensive use of Messaging apps (iMessage, Snapchat, WhatsApp, GroupMe, Facebook Messenger) and Slack to coordinate on their own via group text.

In general, students felt there was an appropriate use of technology in their education – enabling work that might not be possible otherwise (communication, design, etc.). The primary concern was about learning the required software (often assumed, not taught) and the cost associated with getting the required programs on their personal equipment. Access to University-owned resources was adequate but could be improved, and student licenses (like to the Adobe Suite) have a big impact on their ability to work. Several students called for education in software that they would directly use in their profession.

Summary from Staff/ Faculty

CBE balances funding from the Student Technology Fund (STF) and the College. Popular and expensive tech is funded by the STF, smaller/ more unique funded by CBE. STF funding is becoming less reliable. CBE funding could ramp up to fill the gap and maintain technology in studios. Funding of the Digital Fabrication lab is severely lacking, in both equipment and staffing – overall state is poor & inappropriate for a world-class university.

Suggestions: Culturally, faculty should see technology as part of their work – not external to it. This is how students operate now. There is an opportunity cost to not actively improving our technology standing – loss of status, students, etc. “Education and shared culture development might help. We might for example start having all-college colloquia, some of which would address interesting technological issues by bringing in UW and outside speakers.”

Several proposed a vision is of our College being a fully-networked, accessible environment that enables great work with minimal resistance. The College seems happy with producing good employees, but we have the capacity to actively model future practices that engage and use the digital practices that have been adopted in all professional environments of note.

Practitioners who hire our graduates they consistently say they would like our graduates coming to them with greater fluency in practices that offices don't have the time and flexibility to adopt on their own.

This is possible through a studio culture that encourages collective efforts over individual design would help. It would be great to have a large space(s) for innovation - space(s) in which particular tools, materials and people could be brought in and used.