Faculty Perceptions of Purdue Learning Spaces

Purdue University seeks to be a leader among peer institutions in design, development, and use of learning spaces. The dedication of resources to offer the IMPACT1 program and to build the Wilmeth Active Learning Center2 reflects the significance of the commitment. While higher education at Purdue has thrived for nearly 150 years, the recent drive to transform teaching and learning spaces at Purdue moves our instructors towards more research-based, student-centered teaching and learning practices. As shown in Figure 1, there are currently 49 active learning classrooms on the Purdue West Lafayette campus. After the opening of the Wilmeth Active Learning Center, this number will grow to 76 classrooms. This equates to the potential of 459 more courses assignable to active learning spaces, more than 2,200 new available seats, and over 38,000 more course registrations (students) in spaces designed for active learning.

Results from a previous study\(^3\) of learning spaces at Purdue challenges the common assumption that active-learning spaces ubiquitously support best teaching practice and suggest considerations for faculty professional development and learning space assignment. This briefing is based on a new study\(^4\) that adds richness to prior findings by compiling the voices of Purdue instructors interested in developing uses of learning spaces. One hundred ninety-four instructors who showed prior interest in learning space research, were invited to participate in this study. Within focus groups, 61 voluntary participants shared valuable insights that can inform how to improve the scheduling, use, and function of learning spaces.

**Instructors Seek Learning Spaces that Align with Their Pedagogical Approach**

Classroom design affects instructors’ planning and teaching; however, renovation and modernization of learning spaces at Purdue does not always align with pedagogical improvement. Instructors dedicating time to extensive development of their courses—such as the effort required by backwards design—expect to teach in classrooms that support the pedagogical improvements they create. The degree to which instructors attempt to use student-centered teaching practices strongly influences the perceived importance of learning spaces. Instructors who integrated student-centered teaching practices into their courses reported that these efforts were optimized when they were assigned to use active learning spaces, whereas instructors who relied on lecture-based practices often de-emphasized the importance of space.

**Physical Features of Purdue Spaces Affect Instructors**

Instructors expressed numerous instances where their needs were met or not met by a learning space. For example, instructors asserted how technology, room acoustics, and flexibility of furniture affect teaching/learning experiences. Over time, the extent to which instructors make use of a space, or find ways to accommodate limitations, depends on instructors’ prior knowledge and experiences, on-going development of skills and knowledge, self-efficacy, and perceived locus of control. Instructors with greater self-efficacy or perceived locus of control are more likely to identify how to adapt their pedagogy successfully. Faculty comments regarding dissatisfaction with space use and design fell into several categories:

- Perception that design decisions are made by those who do not use current spaces or will not use the new space.
- Need for design that accommodates department, college, and institution needs.
- Implementation of technology falls behind advances in technology.
- Confusion about the rationale for modifying/renovating a space.
- Participation in IMPACT and being assigned space that does not accommodate their course redesign.

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Strategically Maximize the Use of Spaces
Instructors perceive active learning spaces to be in high demand. Assigning instructors to spaces containing the features best fitting their pedagogical practices represents the best practical and effective use of space resources on campus.

Figure 2 identifies use of university resources based on the interplay observed between space features and the instructor. The horizontal axis represents a continuum of instructor teaching practices ranging from individuals who rely solely on traditional strategies to individuals who rely extensively on student-centered practices. The vertical axis represents a continuum of learning space design that ranges from traditional learning spaces to active-learning spaces.

While instructors understand there are more factors considered in scheduling than just a match of space to their pedagogical intentions, this model represents a few important considerations:

1. An ideal use of university resources is depicted in the “space-instructor” match area, which includes instructors relying on teaching-centered practices assigned to traditional learning spaces and instructors relying on student-centered practices are assigned to active-learning spaces.

2. The area above the “space-instructor” match represents a waste of university learning-space resources. These instructors are unskilled or uninterested in using student-centered strategies, but assigned to active-learning spaces. This mismatch could limit opportunities for other instructors, who are better suited for this space, to better utilize this resource.

3. The area below the “space-instructor” match represents a waste of the instructors’ skills. These instructors are skilled and interested in using student-centered strategies, but are assigned to traditional learning-spaces.

Instructors Want Training and Support
Instructors openly provided feedback about their experiences with training or support they received, and many alluded to on-going support they want in the future. Instructors’ opinions skewed favorably towards the provision of more training and support for faculty.

Instructors referred to two modes of training. First, a resource-based approach that is (or could be done) through reference materials online or posted in a classroom. Second, an in-person approach based on workshops or one-on-one consultations. Instructors shared that in-person training enables instructors to obtain individualized support for topics that they think are relevant to their own teaching.

Instructors Seek to Improve Their Understanding of Room Scheduling Practices
Instructors believe classroom features contribute to or detract from their intended learning goals, highlighting the importance of effective room scheduling practices. Greater awareness and improvement of scheduling processes could help facilitate instructor’s intended learning goals, regardless of the type of learning space. While study participants desire to use classrooms fitting their pedagogical approach, they expressed varying levels of awareness of class scheduling procedures at Purdue. They want to give input into the space options best matching their needs, yet some participants felt there was no process to advocate for their learning space needs. Multiple instructors recommended a revised scheduling process to help match instructors to spaces that best fit their needs. Overall, they would like to have more information about availability, the features in each space, and how to request spaces.

Conclusion
The full report contains sixteen recommendations to improve support for instructors’ use of learning spaces. Many findings from the study are rooted in the Space-Instructor Match model shown in Figure 2. While this figure suggests including an instructor-centered component to the space assignment processes, this step is perceived to motivate more instructors’ to implement student-centered teaching practices.

An upcoming study designed to collect instructors’ and students’ perspectives of specific classrooms will continue to shape best practices for pedagogical approaches within active learning spaces, including spaces within the Wilmeth Active Learning Center.

1 For more information about IMPACT, visit: http://www.purdue.edu/impact/
2 For more information about WALC, visit: https://www.lib.purdue.edu/walc/
3 McDavid, L., Carleton Parker, L., Burgess, W., Robertshaw, B., & Doan, T. The combined effect of learning space and faculty perceptions of self-efficacy to use student-centered practices on teaching experiences and student engagement. Under review at the Journal of Research in Higher Education.
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