Influence of Active Learning Spaces on Teaching & Learning

Support Needed for Effective Use of Active Learning Strategies

Active learning is a teaching and learning pedagogy based on student engagement and reflection. Purdue University dedicates resources to design and renovate classroom spaces to accommodate and promote active learning experiences. Through mixed-method data collection, the purpose of this study was to determine how the features and characteristics of active learning spaces influence student learning. This briefing summarizes findings related to the support faculty need. Specifically:

What support do instructors need to effectively plan for and utilize active learning strategies?

Transferrable Skills & Knowledge

Many faculty seek support to develop their facilitation skills. What support they need, and how much, depends on the varying experiences from each instructor's background. All faculty learned some teaching strategies from their prior perspective as a learner, and continue to learn from their experiences as an instructor. Each prior experience creates knowledge transferrable to new teaching experiences.

One way to divide the interviewed instructors is to distinguish between those who formally developed their skills to teach through education programs completed as an undergraduate or graduate student, and those with no formal course-based development of teaching skills. Regardless, there remains the perspective1 “teachers teach the way they were taught.” Interviewed instructors develop their skills to facilitate active learning based on the extent to which active learning strategies are emphasized and/or modeled within their curriculum, or the extent to which these instructors are open to developing their skills and knowledge.

Note that prior teaching and learning experiences were diverse, and not always “traditional.” For example:

“I would say that my teaching style before coming to Purdue was to do student-centered active learning. And then I came here and I was assigned classrooms that were stadium-style seating, and it was impossible to teach the way I had taught previously.”

In general, Interviewed instructors also possess skills and knowledge developed outside of a formal “classroom,” yet transferrable to teaching in a classroom. These experiences include:

- Coaching (or being coached on) sports teams.
- Working as a teaching assistant.
- Mentoring from peer instructors.
- Participating in job training.
- Receiving suggestions or tips from colleagues.
- Completing job-training sessions (including basic training for TAs/instructors and for jobs outside of education).
- Attending workshops or conference sessions.
- Parenting.
- Reading.

It’s possible that any experience an instructor describes as relevant to teaching demonstrates the extent an instructor recognizes the transferability of their full collection of knowledge and skills.

“I've used active learning strategies, group work, role play, facilitated discussions, student presentation, those sorts of things. Even in my corporate training classes that I used to [teach], I would do those sorts of activities.”

Formal Support, via Campus Partners

Most interviewed instructors sought support from other campus partners to facilitate active learning. For some, this support begins within their department or college. At either the college or departmental level, faculty might need support of other instructors to facilitate their course or facilitate learning across courses.

For some instructors, support from campus partners is necessary to maximize use of features in a learning space. Interviewed instructors most frequently cited support from ITaP staff,2 to understand use of classroom hardware and technology tools.3

Some Interviewed instructors participated in IMPACT4, the formal Purdue University faculty development course redesign program to help instructors create student-centered teaching and learning environments. Since IMPACT course redesigns emphasize student engagement and focus on research-based pedagogies, a typical consequence for the interviewed instructors with IMPACT experience resulted in integrating greater use of active learning strategies into their course pedagogy. IMPACT participants are also likely to select pedagogies to maximize their ability to meet course learning outcomes. For some Interviewed instructors, IMPACT served to give them access (via priority during room assignments) to active learning spaces, and empowered them to use various features within these spaces.

“The IMPACT program was good in giving me the time and space to think about what I wanted to do with my class. Many of the things I knew about them already…[but] it was good if I wanted to have some help. Like…how can I do this in Blackboard? [In IMPACT], they were experts.”

2 For support with classroom technology, see: https://www.itap.purdue.edu/learning/
3 For additional information, see the briefing in this series named: “Use of Technology within Active Learning Spaces.”
4 For more information about IMPACT, see: https://www.purdue.edu/impact/
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Support Needed within Classrooms
Support from campus partners affects what happens in class, yet some interviewed instructors alluded to difficulty facilitating active learning without additional support during class. A few interviewed instructors used a co-instructor in class, but most used Teaching Assistants (TAs). TA’s roles or responsibilities vary, yet their in-class presence serves to give students more facilitated contact with an educated facilitator, versus if there was one facilitator within a class. For example, interviewed instructors have:

- Divided one large section into smaller sections where each section was facilitated by a TA.
- Replacing full-class discussions or activities with small team activities, and each team has an assigned TA.
- Created expectations for teams of students to support each other.

Support the interviewed instructors need and use during class time had varying consequences for both the instructor and students. For example, they may:

- Increase the amount of time a student could achieve higher order thinking skills (like project work).
- Improve the ratio of students to an instructor/TA.
- Improve the amount of direct support to students via in-class activities.
- Improve the instructors’ ability to assess student learning and provide feedback.
- Increase students’ engagement with both the course content and others.

"Normally we’re walking around, myself and the other two instructors. We’re constantly just talking with the students. If they get stuck, they can ask a question to get going again."

TAs may also provide out-of-class support such as course preparation or grading. Instructors see TAs as an extra expense for time and money—they too need support from the instructor and they need to be compensated. Yet the interviewed instructors who use TAs perceive TAs provide support to the students justifying the time and cost.

"I know for my students in this department, they’re interested in people; they’re interested in learning; they’re interested in leadership. Those are the things that they’re demonstrating and developing as [TAs]. We really pitch it to them and talk to them about, ‘Here’s a leadership experience, a teaching and learning experience that you can put on a résumé, and you can really market yourself by having had that experience.’"

Conclusions
- Campus partners may offer support to instructors by:
  - Teaching instructors about the features of learning spaces.
  - Providing active learning strategies appropriate for a specific active learning space, based on current research or documentation of past practices.
  - Promoting IMPACT, one-time workshops, or other professional development experiences to faculty.
- Departments or colleges may offer support to instructors by:
  - Providing opportunities for faculty to pursue professional development related to teaching and learning.
  - Empowering peer faculty to share successful pedagogy, particularly for peer faculty teaching the same or complementary courses.
  - Co-developing curricular outcomes across courses.
- Providing resources to support recruitment, selection, and training of TAs for instructors using active learning strategies.

Spotlight on: Instructors Using Undergraduate Teaching Assistants (UTAs)

"Now I have undergrad TAs that help me…without that support, we cannot do it. The TA is critical. And then if we don't have those human resources, you have to basically figure out a way to do it with the limited amount of time."

Based on multiple interviewed instructors who use undergraduate students as TAs, the following tips may help faculty who are considering using undergraduate TAs (UTAs):

- Select students who previously completed the experience, and are relatable to students. (The best peer leaders are well rounded, not only academically strong.)
- When requesting a learning space, consider the seating space needed for UTAs.
- Train and support UTAs before the semester begins and also throughout the term.
- Empower UTAs to hold students accountable for appropriate classroom behavior, involvement, and classroom policies.
- Students may have differing comfort levels with instructors than a UTA. Ask UTAs to obtain feedback from students and share this feedback with you.
- Match UTAs to a specific team(s) of students. One UTA per team seems ideal, but UTAs may support more than one team depending on the team arrangements used and space characteristics.
- Provide each UTA with a designated area within the classroom to target for support. This increases the likelihood a UTA will recognize a student or team that needs support.
- Encourage UTAs to be informal mentors, and have the UTAs recommended out-of-class study strategies, ways to get involved, etc.
- Reward UTAs with academic credit and/or a stipend, giving them a strong experience for their resume, and providing them with mentoring and support.
- Using UTAs can be time consuming (beginning with recruitment). Manage this time through use of a graduate TA or senior UTA.

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5 Interviewed instructors used graduate and undergraduate TAs. Undergraduate TAs were also titled “Peer Mentors” or “Peer Leaders.”