

# Executive Summary

## Funding for Classroom Refreshes

### Respectfully Submitted by the Teaching and Learning Advancement Team<sup>1</sup>

Pursuant to the goals and action steps submitted in January 2016, the Teaching and Learning Advancement Team (TLA Team) is providing this executive summary to support the request for \$350,000 in funds in FY17 for the upgrade of classroom spaces and for \$500,000 in funds for subsequent years.

This request is grounded in 1) research on the most effective instructional strategies and how spaces impact those strategies, 2) a recognition of the limitations of the majority of classroom spaces across campus, as noted by observation and data collected from faculty and student surveys, and 3) specific costs for refreshing classroom spaces. The request also supports the university's Vision Statement and its call for transformational learning experiences, engaged and empowered students, increase of enrollment, cutting-edge teaching techniques, sensibly infused technologies, and attracting and supporting high-quality faculty and staff.

The team also notes that some of the equipment included in this plan will enable the university to save money by standardizing equipment and replacement parts (e.g. bulbs) and by proactively monitoring equipment in the rooms for maintenance needs.<sup>2</sup>

The team also emphasizes that professional development opportunities to increase faculty knowledge of effective pedagogy and resources related to the scholarship of teaching and learning are vital in enhancing student learning outcomes and asks that forthcoming recommendations on this topic be given equal and due consideration.

#### Goal

The goal of having funds to update classrooms with better technology and flexible furniture is to support instructional techniques and methodologies that are proven to elicit improved student learning outcomes. Given the survey results below, we estimate that our initial goal should be to ensure 40% of the instructional spaces include flexible furniture and enhanced technologies.

#### Relevant Research

As the body of literature on instructional design and student learning spaces in higher education has grown, researchers have clearly proven that reconfigured (with flexible furniture), technology-enhanced spaces positively affect teaching and learning.<sup>3</sup>

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<sup>1</sup> Contributing team members include Dr. Lauren Brewer (Psychology), Dr. Cala Coats (Art), Dr. Randi Cox (History), Dr. Jennifer Gumm (Biology), Dr. Heather Olson Beal (Secondary Education & Educational Leadership), Dr. Nikki Shoemaker (Accounting), Mary Smith (Center for Teaching & Learning, Team Lead), and Megan Weatherly (Center for Teaching & Learning).

<sup>2</sup> In the previous upgrades done in 2015, the design team installed a monitoring software that allows the technology systems in the rooms to be controlled and supported remotely. These systems can be sent a command to automatically shut down after the last class or between classes to save bulb life and equipment fatigue.

<sup>3</sup> Brooks, D.C. 2011. "Space Matters: The Impact of Formal Learning Environments on Student Learning." *British Journal of Educational Technology* 42 (5): 719-726. Dori, Y.J. and J. Belcher. 2005. "How Does Technology-Enabled Active Learning Affect Undergraduate Students' Understanding of Electromagnetism Concepts?" *Journal of the Learning Sciences* 14: 243-279. Walker J.D., D.C. Brooks, and P. Baepler. 2011. "Pedagogy and Space: Empirical Research on New Learning Environments." *EDUCAUSE Quarterly* 34 (4). Whiteside, A.W., D.C. Brooks, and J.D. Walker. 2010. "Making the Case for Space: Three Years of Empirical Research on Formal and Informal Learning Environments." *EDUCAUSE Quarterly* 33 (3). Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. 2014. "Active Learning Increases Student Performance in Science, Engineering, and Mathematics." *Proceedings of the National Academy of Sciences* 111 (23): 8410-8415. Prince, M. 2004. "Does Active Learning Work? A Review of the Research." *Journal of Engineering Education* 93 (3): 223-231.

## Limitations of Current Classrooms

In November 2015, the TLA Team surveyed faculty about their instructional methods, their feelings on the current state of classroom spaces at SFA, and their thoughts on how the spaces affected their ability to engage in the instructional methods that would most benefit students. 215 faculty responded to the survey (of approximately 650 total faculty), for a response rate of 33%. Among the data most relevant to this report are:

- When faculty identified their classroom needs, movable tables and chairs emerged as the second most needed item only behind computers and projectors. Other top needs included whiteboards, reinforced sound, and a wireless presentation system (enabling students and faculty to present from their mobile devices).
- 54% of faculty described the need to be able to quickly and easily rearrange a room to support different types of activities as “important” or “very important.”
- 67% of faculty noted that they would be more likely to develop collaborative assignments if they had access to learning environments that facilitated collaboration between students.

Anecdotal evidence from faculty also supports the desire for consistent technology and support devices when scheduled in multiple rooms. Detailed statistics from both the faculty and student surveys are available in Appendix A.

In March 2016, the TLA Team surveyed SFA students about their thoughts on the classroom spaces on campus. A total of 555 students responded to the survey (of 11,545 enrolled), for a response rate of 4.5%. Among the data most relevant to this report are:

- Nearly as many student respondents wanted flexible furniture (n = 267) as wanted a computer and projector (n = 287) in classrooms.
- 70.71% of student respondents indicated that they would like access to classroom spaces that facilitated collaboration between students.
- When student respondents were asked about the importance of flexible furniture specifically, 76.88% thought it was at least moderately important.
- 53.12% of student respondents indicated that the classrooms at SFA were no better or worse than their high school classrooms. 29.18% said that SFA classrooms are worse than their high school classrooms.
- 15.6% of student respondents rated SFA classroom spaces as bad.

## Costs

Costs for a classroom refresh will vary based on room size, the number of desks required per room, the need for possible additional visual reinforcement (e.g. multiple screens), need for removal of fixed furniture, existing supplies that can be repurposed, etc. For the purposes of this report, we are providing the cost of refreshing a room based on a size of 800 ft<sup>2</sup> and an industry-standard recommendation of 25 ft<sup>2</sup> per student (32 students total). An itemization of these costs is available in Appendix B.

Standard Technology Package (including purchase and installation)	\$24,500
Carpet and Paint (carpet ≈ \$5/ft <sup>2</sup> )	5,500
Flexible Furniture	9,500
Unanticipated Costs (e.g. swipe entry, asbestos abatement, noise suppression)	<u>10,000</u>
	\$49,500

Accordingly, we are including a five-year cost projection, including an estimated annual 10% increase in costs.

FY2017 – 7 rooms @ \$50,000 each = \$350,000

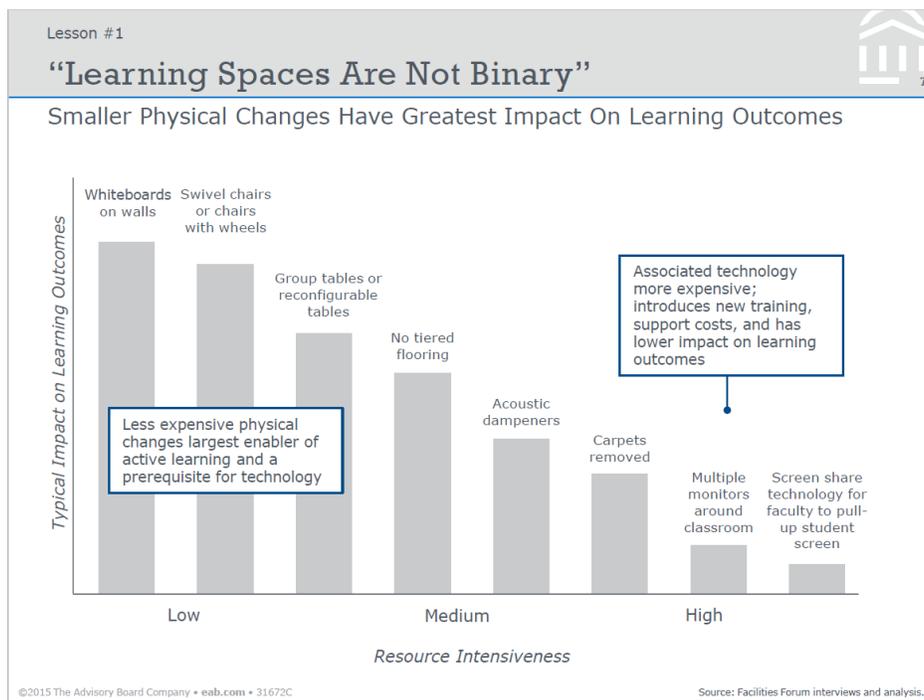
FY2018 – 9 rooms @ \$55,000 each = \$495,000

FY2019 – 8 rooms @ \$60,500 each = \$484,000 + 1 room @ \$15,000 (carpet and furniture) = \$499,000

FY2020 – 7 rooms @ \$66,550 each = \$465,800 + 2 rooms @ \$15,000 (carpet and furniture) = \$495,800

FY2021 – 6 rooms @ \$73,205 each = \$439,230 + 4 rooms @ \$15,000 (carpet and furniture) = \$499,230

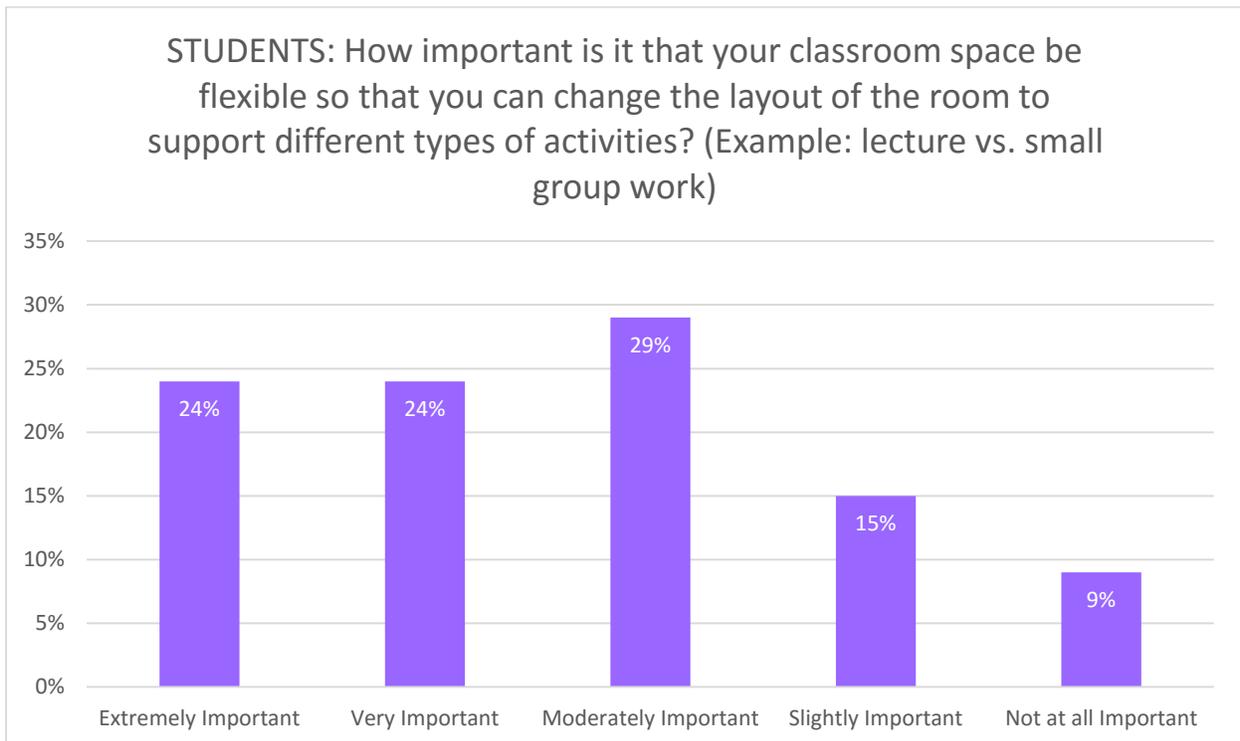
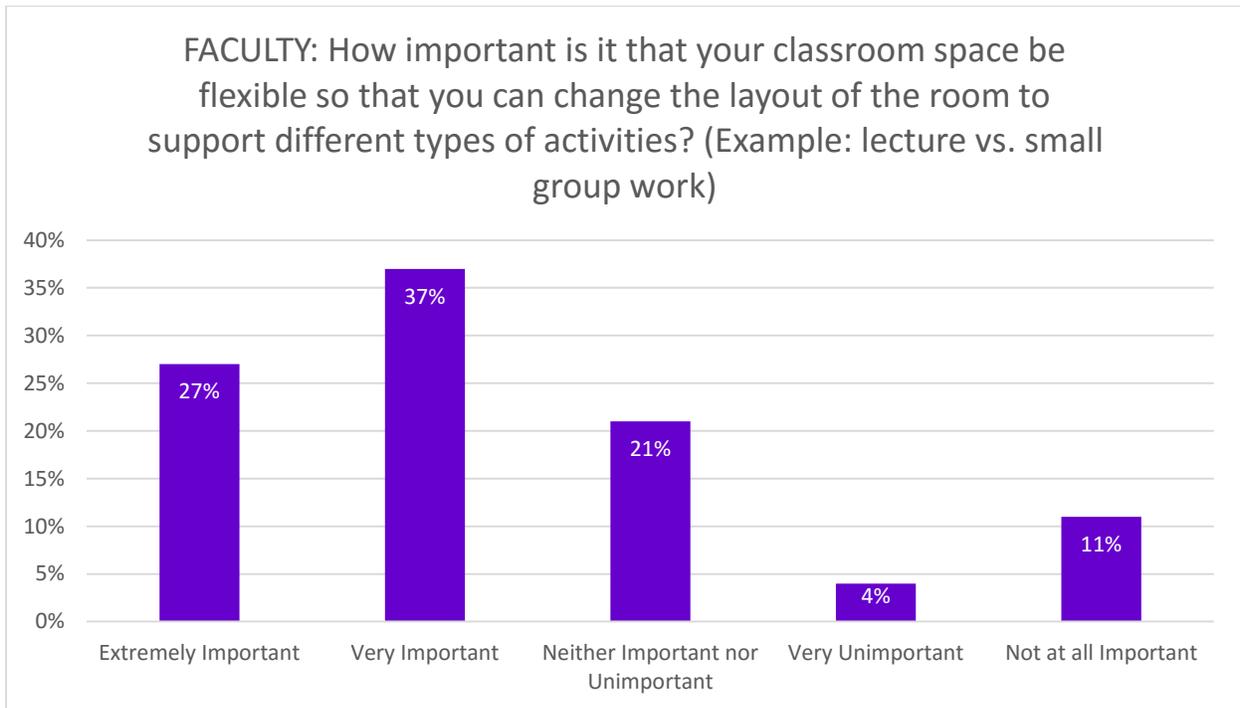
In the report “Evaluating the Most Impactful Trends on Campus Spaces,” the Educational Advisory Board encourages clients to remember that “smaller physical changes have the greatest impact on learning outcomes.” The committee acknowledges that, in some spaces, a simple upgrade in furniture may be the best and most responsible expenditure; this is reflected in the \$15,000 estimations included above.



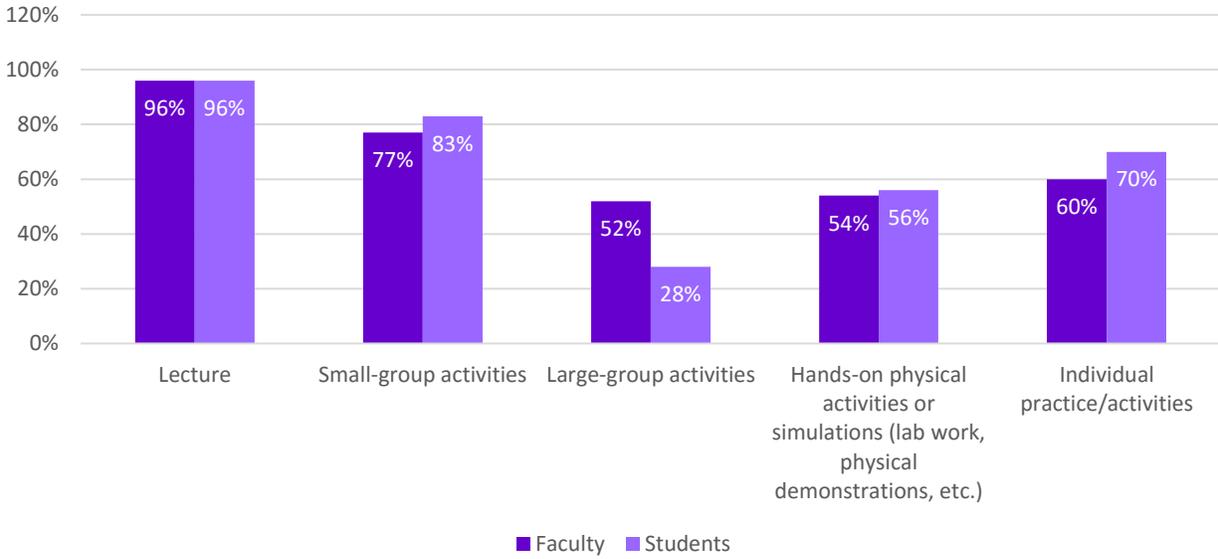
The Teaching & Learning Advancement Team also acknowledges that there are potential human resource costs that could be associated with these classroom upgrades, notably the need for classroom technology support. However, the TLA Team thinks that these potential additional human resources could be used to support other offices and projects (e.g. technicians in the TSC) around campus and could possibly be largely accounted for by a reorganization of personnel currently employed by the institution. We recommend that a sub-committee dedicated to the issue of classroom technology support be empaneled to explore this issue further. However, we think that the requested classroom refreshes could easily be supported by current personnel through May 2018.

Additionally, questions will surely arise as to who “owns” these rooms and is responsible for their inventory and maintenance. The TLA Team believes that such questions are part of a larger cultural and fiscal conversation about space management and ownership at the institution and recommends that a sub-committee be empaneled to discuss the issue further.

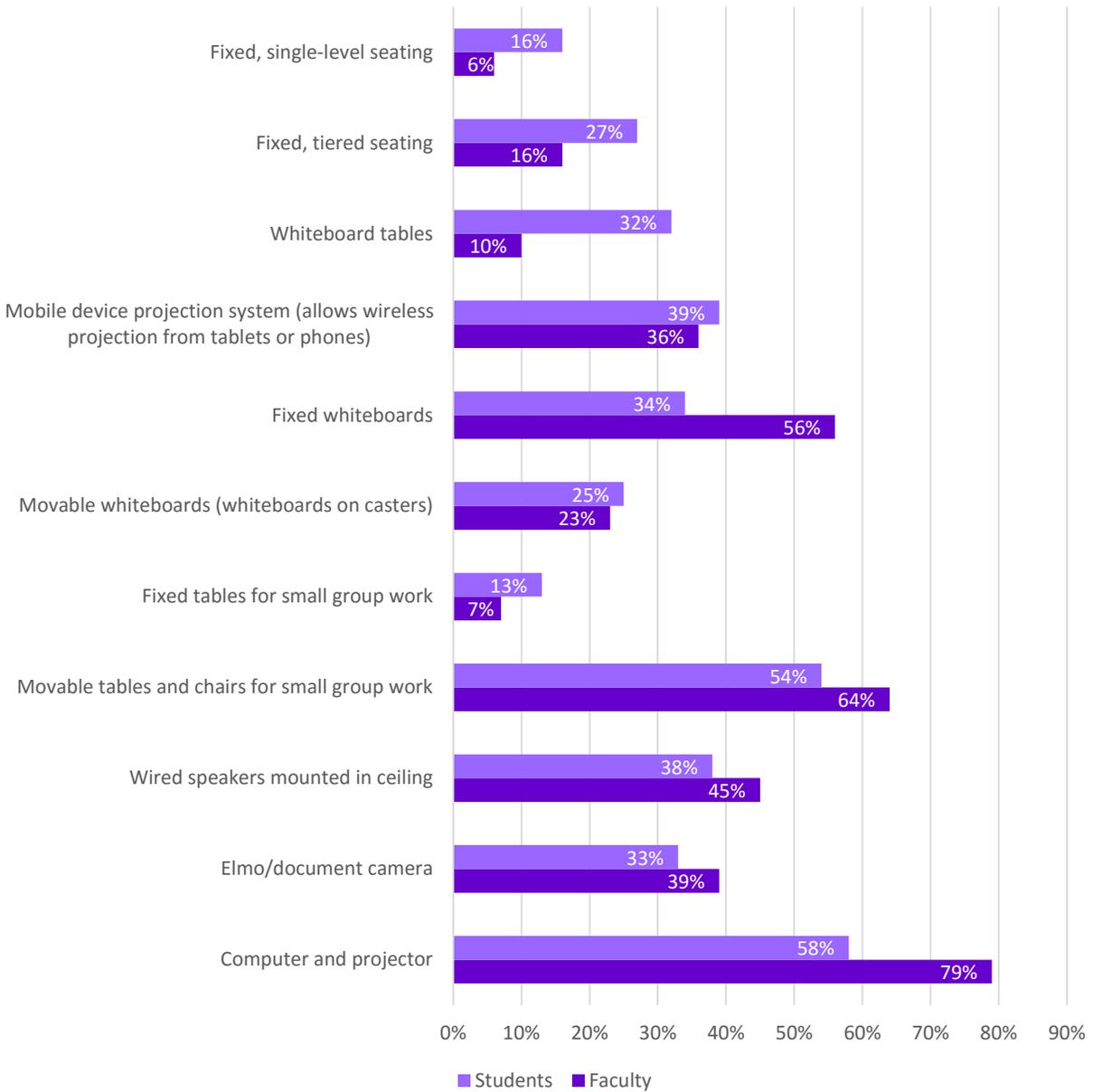
## Appendix A



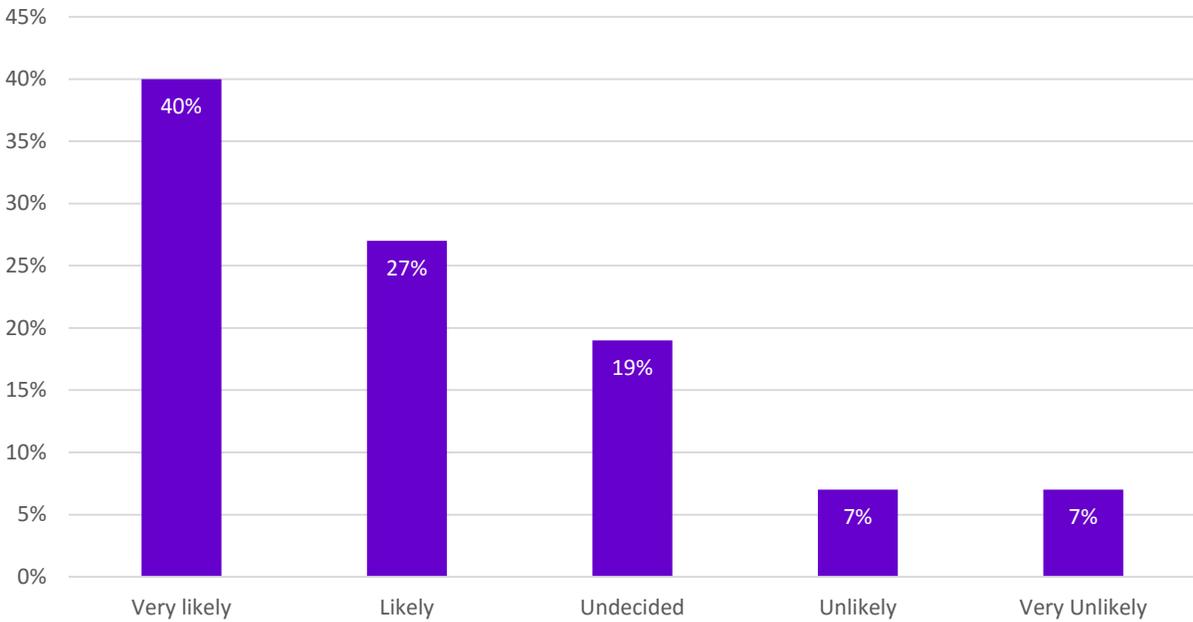
Which of the following instructional practices have you/your faculty used in the last 10 class sessions you taught/this semester? (Select all that apply.)



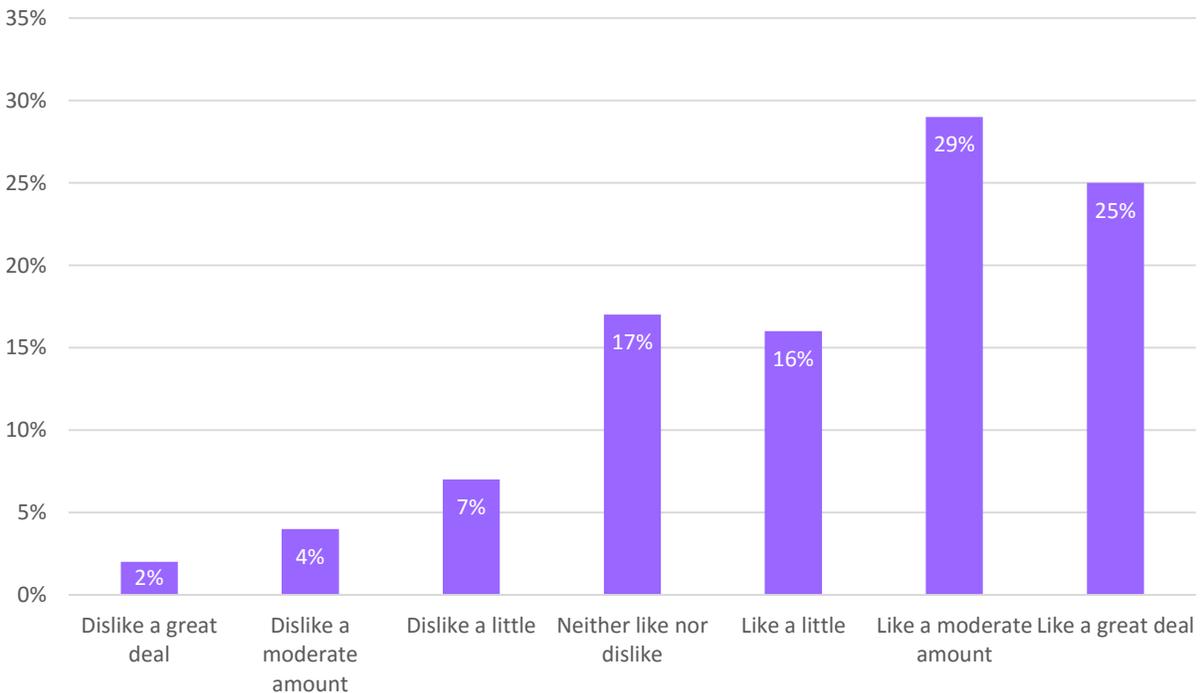
## What items would you like to have in the classroom spaces in which you teach/learn? (Select all that apply.)



FACULTY: If you had access to learning environments that facilitated collaboration between students, how much more likely would you be to develop collaborative assignments?



STUDENTS: Suppose your professors had access to classroom spaces that facilitated collaboration between students. How much would you like this kind of course?



## Appendix B

### Detailed Costs of Standard Technology Package

Electric screen + projector	\$3200
Computer + monitor	1200
Digital control panel + touch display	7400
Sound	400
Peripherals (e.g. document camera, BluRay, WePresent) <sup>4</sup>	4200
Installation + labor	3500
Miscellaneous (e.g. electrical upgrades, drops, etc.)	2000
Lectern/equipment housing	+ 2600
	<u>\$24,500</u>

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<sup>4</sup> "WePresent is a...wireless presentation system that allows [multiple] users to collaborate and give a wireless, interactive presentation from their Windows/Mac computer, smartphone, or tablet." Source: [wepresentwifi.com](http://wepresentwifi.com).

## Appendix C

To better illustrate the concept of an active learning classroom, we offer the following diagram:

