The first Annual Mosaic Design Symposium was held on Friday, June 15, 2018 on the IUPUI Campus in Hine Hall Room (IP) 118. Mosaic Fellows were invited to a day of design workshop and conversation about the future of Indiana University's learning spaces. This following serves as a summary of the event and its results and includes:

### Design Symposium Participants

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### Design Symposium Resources

- Event Agenda
- Design Scenario Inspiration Images
- Design Scenario Prompt

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### Group Responses

- Computer Lab
- Large Lecture
- Medium Classroom (seats up to 65)
- Small Classroom (seats up to 25) | Group 1
- Small Classroom (seats up to 25) | Group 2

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# 2018 Design Symposium Participants

Mosaic Fellows selected, via a pre-symposium survey, a classroom type to design and were grouped accordingly.

<table>
<thead>
<tr>
<th>Computer Lab</th>
<th>Education</th>
<th>IU Southeast</th>
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<tbody>
<tr>
<td>Faye Camahalan</td>
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<tr>
<td>Margaret Lion</td>
<td>Public Health</td>
<td>IU Bloomington</td>
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<td>J Duncan</td>
<td>Informatics</td>
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<td>Adam Maksl</td>
<td>Journalism</td>
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<tr>
<th>Large Lecture Hall</th>
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<tr>
<td>Shawn Boyne</td>
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<td>Pat Clark</td>
<td>Biology</td>
<td>IUPUI</td>
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<td>Kathy Marrs</td>
<td>Biology</td>
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<td>Judith Wright</td>
<td>Business</td>
<td>IUPUI</td>
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<tr>
<th>Medium Classroom (Seats up to 65)</th>
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<tbody>
<tr>
<td>Louie Zhu</td>
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<tr>
<td>Yu Kay Law</td>
<td>Chemistry</td>
<td>IU East</td>
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<tr>
<td>Shabnam Kavousian</td>
<td>Math</td>
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<tr>
<td>Brian Krohn</td>
<td>Tourism/Event Management</td>
<td>IUPUI</td>
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<th>Small Classroom (Seats up to 25)</th>
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<tr>
<td>Andy Buchenot</td>
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<tr>
<td>Kelly Hanson</td>
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<td>Elaine Monaghan</td>
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<td>Kevin Jones</td>
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<tr>
<td>Julie Goodspeed-Chadwick</td>
<td>English</td>
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<tr>
<td>Erin Engels</td>
<td>Political Science</td>
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<tr>
<td>Lisa Contino</td>
<td>Psychology</td>
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<tr>
<td>Susan Popham</td>
<td>English</td>
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<tr>
<td>Lance Mason</td>
<td>Education</td>
<td>IU Kokomo</td>
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<td>Time</td>
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<tr>
<td>10:00 am</td>
<td>Welcome and introductions</td>
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<tr>
<td>10:15 am</td>
<td>Review classroom images</td>
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<tr>
<td>10:30 am</td>
<td>Begin design scenario and planning</td>
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<tr>
<td>11:45 am</td>
<td>Lunch and continued design conversation</td>
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<tr>
<td>1:00 pm</td>
<td>Groups share, discuss, and modify as desired</td>
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<tr>
<td></td>
<td>Share: Small Classroom 1, Small Classroom 2</td>
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<td></td>
<td>Share: Computer Lab, Large Lecture, Medium Classroom</td>
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<tr>
<td>2:15 pm</td>
<td>Julie Johnston shares about current projects; and takeaways from the day</td>
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Design Scenario Inspiration Images

COMPUTER LAB

These images were presented to the computer lab design group to inspire their brainstorming and subsequent design.
LARGE LECTURE HALL

These images were presented to the large lecture hall design group to inspire their brainstorming and subsequent design.
MEDIUM CLASSROOM (seats up to 65)

These images were presented to the medium classroom design group to inspire their brainstorming and subsequent design.
SMALL CLASSROOM (seats up to 25)

These images were presented to the small classroom design group to inspire their brainstorming and subsequent design.
Design Scenario Prompt

After reviewing the classroom designs for inspiration, each group was given the following prompt to guide their brainstorming and subsequent design.

Prompt:

You have been awarded an unlimited budget to redesign the classroom of your choice. Money is no object as you brainstorm and envision this space.

Also, your classroom will be built in a new, soon to be designed building. AND you have been granted as much space in whatever size or arrangement you require. So, space (like money) is not a concern.

While you might be inspired from some of the classrooms you just reviewed, think about how else you might conceive of your space. Don’t worry if your ideas might seem improbable or impractical. This is where instructors get to play with classroom design and inspire future classroom designs across Indiana University, so think BIG!!!

What we need from you:

1. **Drawings of your classroom (on the glass-boards)**: Provide us an overhead image and draw any additional perspectives of your design that you wish to highlight. Feel free to utilize multiple glass-boards for your drawings.

2. **Descriptions**:
   a. **A brief description of your space (in Google Docs)**: Two to three sentences describing your space.
   b. **Three key design concepts that inspire your design**: Describe how your drawing realizes those design concepts.
   c. **Additional information**: Space is provided for any additional information you might wish to share with us about your space.
1. **Describe your space in two to three sentences:**

Our goal was to create a computer lab flexible enough for both individual and group work. It could be used by all disciplines. It would have flexible monitor to allow for student sharing and equal visual distance from the instructor from nearly every part of the room. This encourages intra- and intergroup interaction as well as interaction between students/student groups and the instructor. There is also significant interaction between instructor- and student-created learning material and students through monitors and big screens.
2. Below, list and describe the three key design concepts for group’s version of a computer lab. Describe how your final drawings realize those design concepts.

1. The ability for monitors to NOT impede line of sight to other students and the instructor.

2. The curve of the table allows for easier and more substantive interaction within and between groups.

3. The placement of the instructor station in the middle of the room to allow for mobility and equal visual distance between the instructor and most students (i.e., there is no “bad” seat or where a student can “hide”)

3. Please share additional information about your space here.

We looked at the Hine Hall Mosaic lab [Hine Hall IP 102] before discussing this. Many of our ideal spaces before seeing that lab were realized when seeing it. But our drawings and ideal lab described here are attempts to build off of what we can from the Hine Hall lab.

Discussion Notes: Notes taken from the group presentation and discussion

- A favorite feature of the Hine Hall (IP) 102 computer lab was the ability for the student monitors to lie (fairly close to) flat. This allowed for students to be able to put monitors down and have conversation/collaborate while still maintaining the ability to function as a computer lab.
  - I.e. Easy transition of classroom structure/materials to fit pedagogical needs
1. Describe your space in two to three sentences:

Our space will be circular, but with angles (like a hexagon). Room capacity will be 200. The instructor space is in the center. The room is configured in ~4 rows/rings, on 2 tiers. (two sets of desks per tier).

NOTE: In the group discussion, it was explained that the room is like “lecture in the round”, however it’s not just for lecture... it is also for active learning. Therefore, perhaps: Active learning in the round
2. Below, list and describe the three key design concepts for group's version of a large lecture classroom. Describe how your final drawings realize those design concepts.

- **Visual accessibility** - screens, students and instructor! Multidirectional/360 screen access
- **Physical accessibility** - for group work (variable group size), for instructors, and for wheelchair/ etc accessibility. **Flexibility.**
- **Communication accessibility** - GREAT wireless signal. Plug ins at every desk, ready access to whiteboards, Solstice, BAR CODES on the tables to allow students to check in, for faculty to assess who is seated where & when (identification/attendance/research purposes).

3. Please share additional information about your space here.

- 360° screens
- Plug-ins at tables
- Whiteboard / glassboards
- Student teacher eye contact
- Not too chaotic /messy!!
- With 4 tiers, that would be .. about 60 each in the back two tiers and 40 each in the front
- Could also be scalable (a ring of 2's or 3's) = See next page!
- Espresso / stimulant of choice (legal) / soft serve ice cream bar

**Discussion Notes: Notes taken from the group presentation and discussion**

- A few reasons they really like the idea of a "lecture in the round" type of classroom:
  - not having any dark corners that either students hide in or are forced to sit in due to a filled room.
  - equity for students.
  - proximity between instructor and each student.
- Instructors liked the idea of lecture in the round but still wanted the ability to be able to do active learning. Therefore, they included several isle ways so that they and their TAs were able to get to several groups of students.
- Not only did the instructors want many isle ways, but they also want an aisle way around the entire top of the room for ease of movement between groups.
- Many of the group notes refer to accessibility. The discussion was based on the fact that students are just not provided enough space in their learning environments. The instructors noted that often times students choose/prefer the accessible seating because it provides more space. Therefore, just give everyone more space.
- In the drawn design, each tier in the classroom has two sets of tables. This way students at the front table are able to turn around and face the table behind them for quick group formation in a large class. (They love this feature in Hine Hall IP 118)
- Instructors value whiteboard space for students, therefore would like to see individual whiteboards (similar in size to a verb board) hanging on the front of each table.
- The large screens that surround the outside of the room should also have the ability for Solstice connection so that student groups could share out either with other groups or the entire class.
- Instructors would like a way to automate attendance in a large lecture, perhaps with a bar code at each seat that students would scan to show they were present.
Participants: Shabnam Kavousian, Brian Krohn, Yu Kay Law, Louie Zhu

1. Describe your space in two to three sentences:

A four cube room: Tired classroom with 4 rows and 4 groups per tier and 4 students per group. The oval shaped desks where 4 can sit on one side if needed, with retractable screens (see example image) which can connect to students laptops, and movable white boards which can be brought to the desks, or hung on the walls.

2. Below, list and describe the three key design concepts for group’s version of a medium classroom. Describe how your final drawings realize those design concepts.

   1. Line of sight (instructor can see every students across the room).

   2. Flexible pedagogy (instructor can move between the whole class lecture and group activities).

   3. Affordances for group work (shareable screens, movable white boards, and shape of tables).

3. Please share additional information about your space here.

   There is a wall of 16 monitors (matrix) that can be used for individual groups’ screens or used as a one whole screen. Tall ceiling to allow a big matrix screen. Empty space in the front for easy visibility of the large screen in front and room for instructor.
**Discussion Notes: Notes taken from the group presentation and discussion**

- The instructors in this group took parts they liked from a few different designs. The classroom designs they liked most were:
  - IU Bloomington's Student Building (SB) 015 with the screens for each group, large tiled display wall, and plenty of space to move around. Disadvantages of this room that were addressed with the new design were line of sight issues, table shape, and student whiteboard space.
  - IUPUI's Hine Hall (IP) 118 with the double tables per tier for group forming and collaboration, whiteboards for each group, ability to flex delivery format without much furniture change. Disadvantages of this room that were addressed with the new design were digital student collaboration space, length of room.
  - Inspiration image with retractable screen to become table top. The addition of this into the classroom design allows for the best of SB015 with digital collaboration space, and IP118 with great line of sight.

- The instructors also described they felt the back of the room in Hine Hall (IP) 118 was too far away. The design drawing shows that rather than two tables on each tier, there is only 1 oval table on each tier. The tiers would only be separated by a single step (shallow tiers) rather than two like in IP118. The student chairs would be adjustable height chairs which would allow the front row to turn to the second row, and with a slight chair adjustment and lowering of the monitor, be able to collaborate in a larger group.
1. Describe your space in two to three sentences:

Our small class space is comprised of two layers. The first layer is a room with modular desks, rolling chairs, dry-erase boards on the walls, windows, and screens built into the walls. The second layer is a wrap-around informal learning space that featuring tables, chairs, breakout study rooms, and a coffee bar.
2. Below, list and describe the three key design concepts for group’s version of a small classroom. Describe how your final drawings realize those design concepts.

1. Flexible classroom design focused on moveable, modular desk combinations

2. Individual instructors will not use all the available affordances of the space -- that is fine! The space should appeal multiple instructional styles.

3. The learning space extends beyond the small class to an informal, “in-between” spaces that surround the classroom (study rooms, café, outdoor spaces, etc.)

3. Please share additional information about your space here.

Our classroom is part of a small, active-learning house:
- 50% dedicated to 2 active learning classrooms
- 50% dedicated to a study lounge and 6 study/conference rooms
The concept of the house is driven by the idea that the space around a room is just as important as the room itself. The classroom promotes student collaboration, while the public spaces allow students to engage before and after class, and extend the work of learning outside the space of the classroom.

While we designed this space as part of a house, the chunk of rooms/shared spaces could be built in larger buildings.

**DESIGN DETAILS**

The furniture is designed to be flexible:

- The classrooms have small, wheeled moving tables that can be configured in multiple ways (small groups of 4-6; a circle or square for full class discussion; a horseshoe or u-shaped setup etc.)
- The chairs are comfortable, padded, adjustable and don't have arms (accessibility).
- The study lounge is similar to a coffee shop, with bolted desks and movable chairs.

There are 4 walls in the classrooms:

1. A wall with windows and mechanized shades.
2. A wall with multiple screens.
3. A wall of white boards.
4. A wall where white boards can be hung.

The technology in the room includes:

- Solstice
- A lectern near the wall with screens.
- A locked closet with a cart of tablets (for students)
- A tablet for the teacher that controls room technologies and is portable
- Verb boards that are telescopic white boards (legs extend that can be on floor, on table, or held by hand).

The house itself allows for experiential learning in fields like mechanical and environmental engineering, architecture, etc. because it includes green building designs like solar panels, geothermal heating, roofing designs, etc. The aesthetics of the whole building is meant to be pleasant and exciting to be in: bright, but muted, colors, light, etc.

**Discussion Notes: Notes taken from the group presentation and discussion**

- This classroom, which is really a building, could go in Dunn's woods
- This is a vision of classroom space, with space for all that can happen outside of the classroom related to that course (in classroom time, study groups, etc.)
- Space for break out groups, with room to work and not overtalk each other
- The aesthetic impact of the views from outdoors, with the big windows
- This could be a classroom/house in which component parts are more apparent, so that the classroom could be a learning space for civil/environmental engineers and other disciplines. Thus, the classroom could itself be a tool for teaching
- Could be a space for a team taught course
Group Responses | Small Classroom (2)

Image(s) and design concepts for the SMALL classroom | Group 2

Participants: Lisa Contino, Erin Engels, Kevin Jones, Elaine Monaghan, Susan Popham

1. Describe your space in two to three sentences:

Our space is designed for 30-32 students, with a minimum of 800 sq ft total, and at least 8 sq. ft of work space per student. The space is designed to allow maximum focus on student work and collaboration (i.e., student centered) and allows students to work democratically (i.e., no students feel left out or marginalized). To that end, we chose mobile tables and chairs, lots of work space and broadcast opportunities, and multiple power station points, thinking that many students will use their own devices.
2. Below, list and describe the three key design concepts for group’s version of a small classroom. Describe how your final drawings realize those design concepts.

1. Mobility: students can move and shift easily, changing work groups and/or projects
2. Collaboration: students can work together in small and/or large groups easily
3. Opportunities for broadcast/publication of student work: students can use multiple media (verb boards, multiple computer screens, lots of whiteboard space) to show their work

3. Please share additional information about your space here.

Discussion Notes: Notes taken from the group presentation and discussion

- A lot of tools in the room that are mobile. Can easily roll away whiteboards and screens on wheels when not needed and back when needed. Seamless transitions.
- The room design represents the desires of multiple disciplines. We are all each represented in the room, which means this space could serve a lot of different instructors
- There is a lot of different technologies in this space