

# USE PATTERNS OF BREAKOUT SPACES AT ROOSEVELT HIGH SCHOOL

PORTLAND STATE UNIVERSITY + BASSETTI ARCHITECTS

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## ABSTRACT

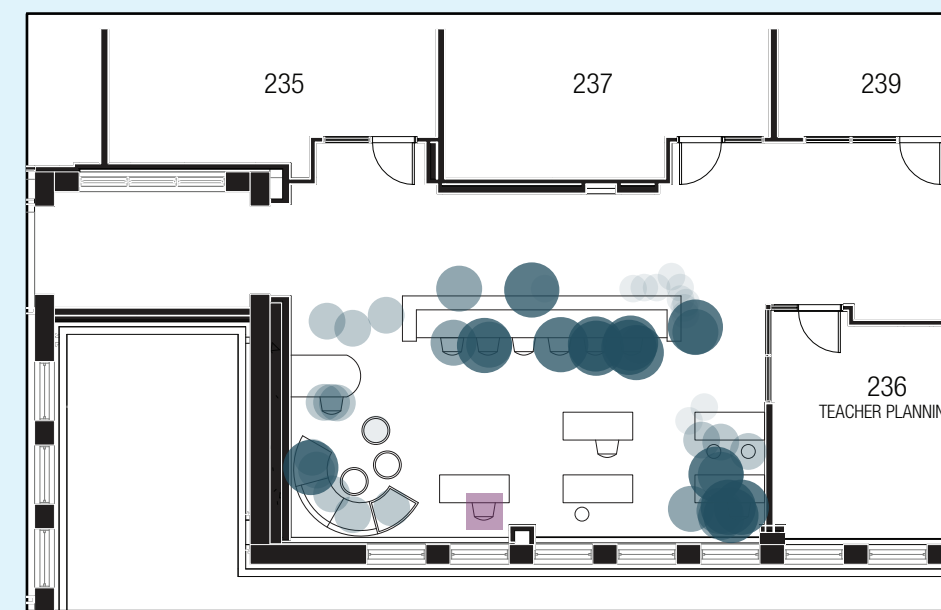
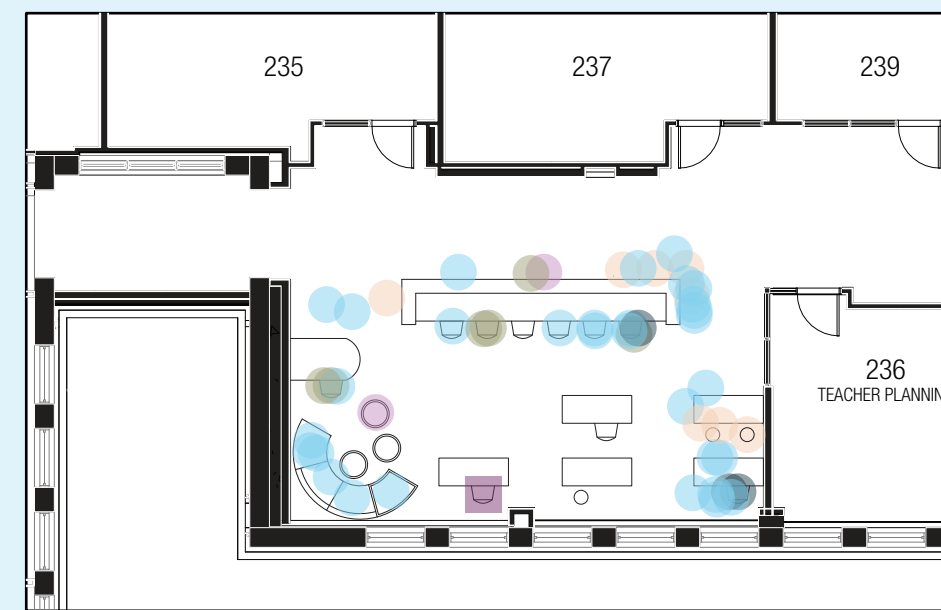
The objective of this research is to observe and analyze the use patterns of flexible breakout spaces at Roosevelt High School. Use patterns are recorded through observation of movement, behavior, length of stay, and activity. Environmental analysis of light, sound, and temperature in the breakout spaces were recorded. Two observational and analysis studies were recorded with users typically spending an average of one minute or less in the spaces, with cell phone use as the main activity. An additional observational study, several weeks later, utilized a model for breakout spaces. Some findings show correlations with learning pedagogy of breakout spaces and design intent, while others do not. This research aims to understand the effectiveness of the design intent of breakout spaces as determined by student-centric learning pedagogy.

## METHODOLOGY

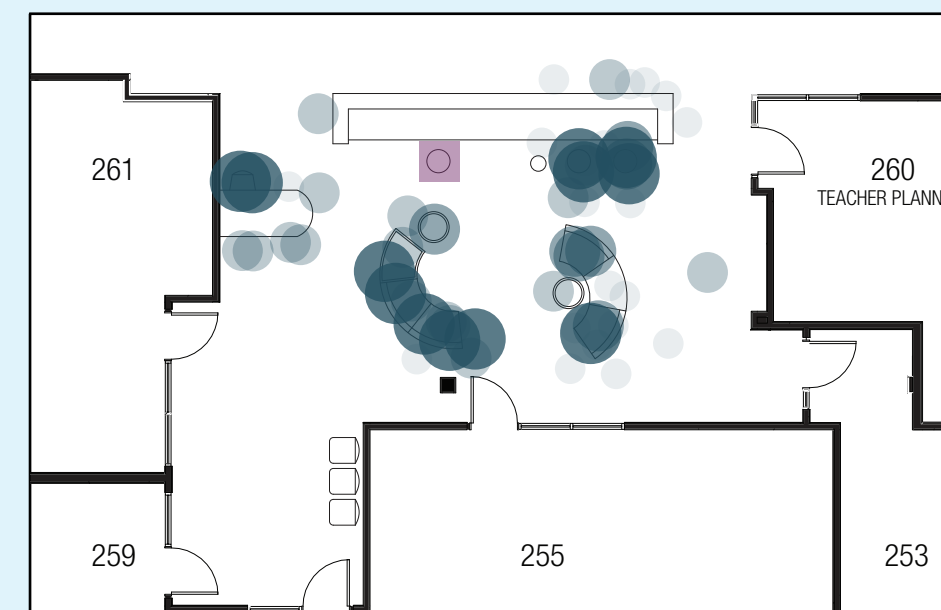
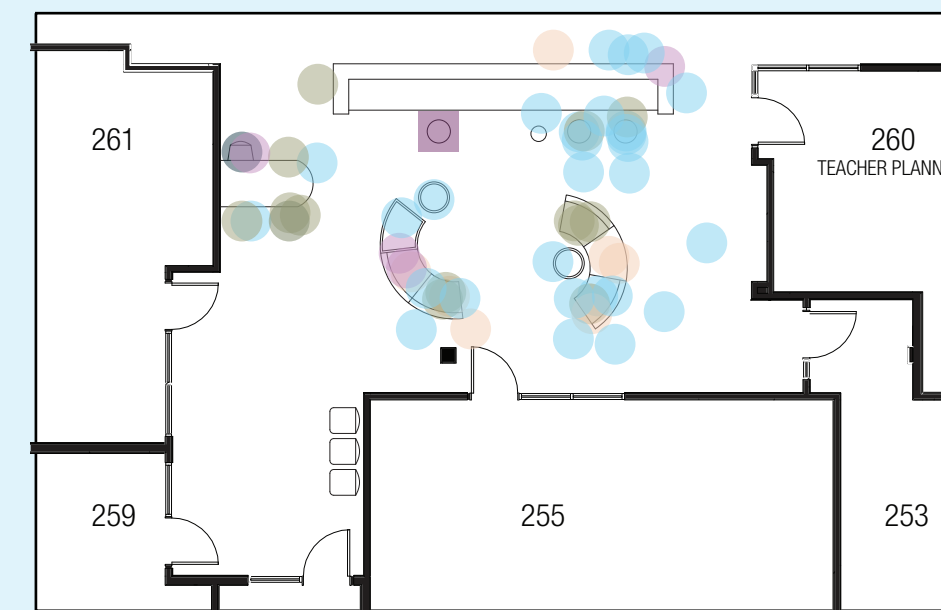
Student-centric learning spaces emerged in the 1970s and were largely based on the work of Vygotsky. According to Vygotsky, "remembering and application of knowledge had to be situated in the student's lived world in order to become authentic learning (Dovey and Fisher, 2014)." That is to say, students 'construct' meaning of knowledge in a social context. Informal learning spaces, such as breakout spaces, have become programmatic elements in educational design because they are spaces for social activity for small groups. Two breakout spaces of the recently remodeled Roosevelt High School, by Bassetti Architects, have been observed and analyzed over the span of two eight-hour days to understand its effectiveness as a student-centric and informal learning environment. Utilizing a model for breakout spaces, additional observations of one breakout space was recorded for a comparative analysis of use patterns.

## Control Study Observations

### BREAKOUT SPACE 1



### BREAKOUT SPACE 2

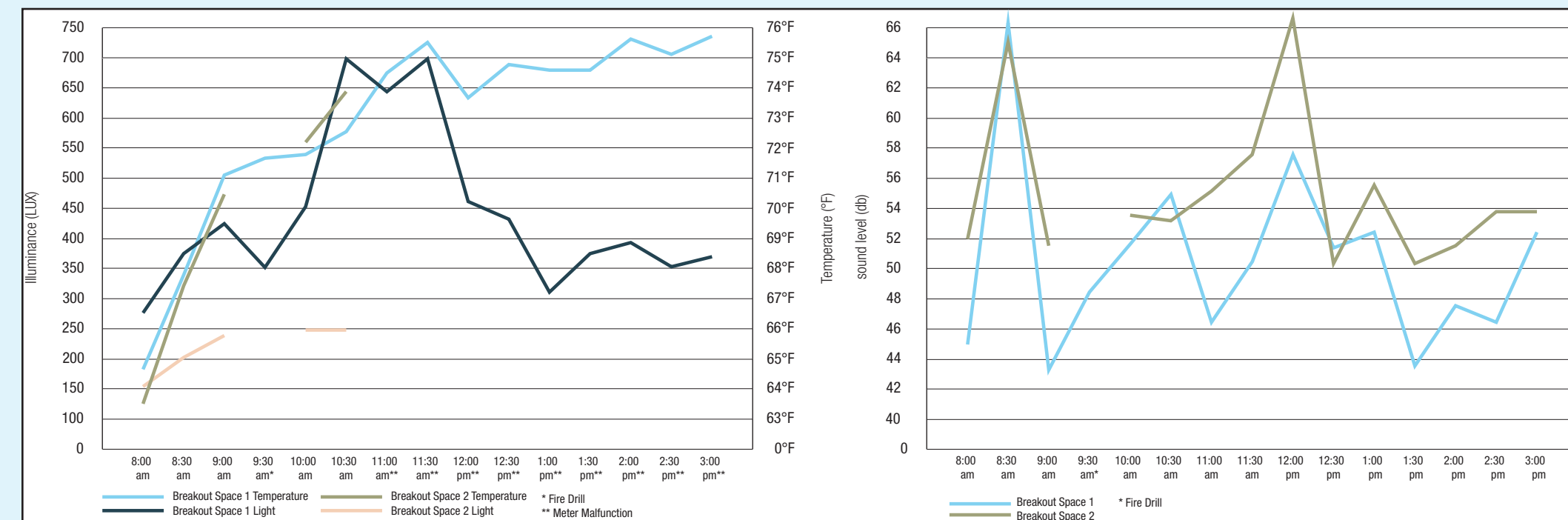


**ACTIVITY MAP**

- STUDY
- TALK
- CELL PHONE USE
- WAITING FOR CLASS
- OTHER
- RESEARCHER

**DURATION OF USE**

- < 30 SEC
- 1 - 3 MIN
- 3 - 5 MIN
- > 5 MIN
- RESEARCHER



## RESULTS

Breakout Space 1 experienced significantly less foot traffic due to being situated off of the main circulation corridor. However, both spaces experienced about the same amount of users throughout the day, with breakout space 1 having 50 users and breakout space 2 having 56 users. Use of each space is clearly dependent upon furniture layout. Use of breakout space 1 is only along the walls and the genius bar (Figure 2). No use was recorded at the central tables, not including the researcher's table. Conversely, use of breakout space 2 is primarily in the center of the room and the genius bar, with the exception of one table that is along the only wall without a classroom entrance.

2016-2017

Design + Construction

Phase 1 May 15 - Aug 16

Phase 2 Jun 16 - Aug 17

2018

Jan 15

Jan 22

Jan 29

Feb 5

Feb 12

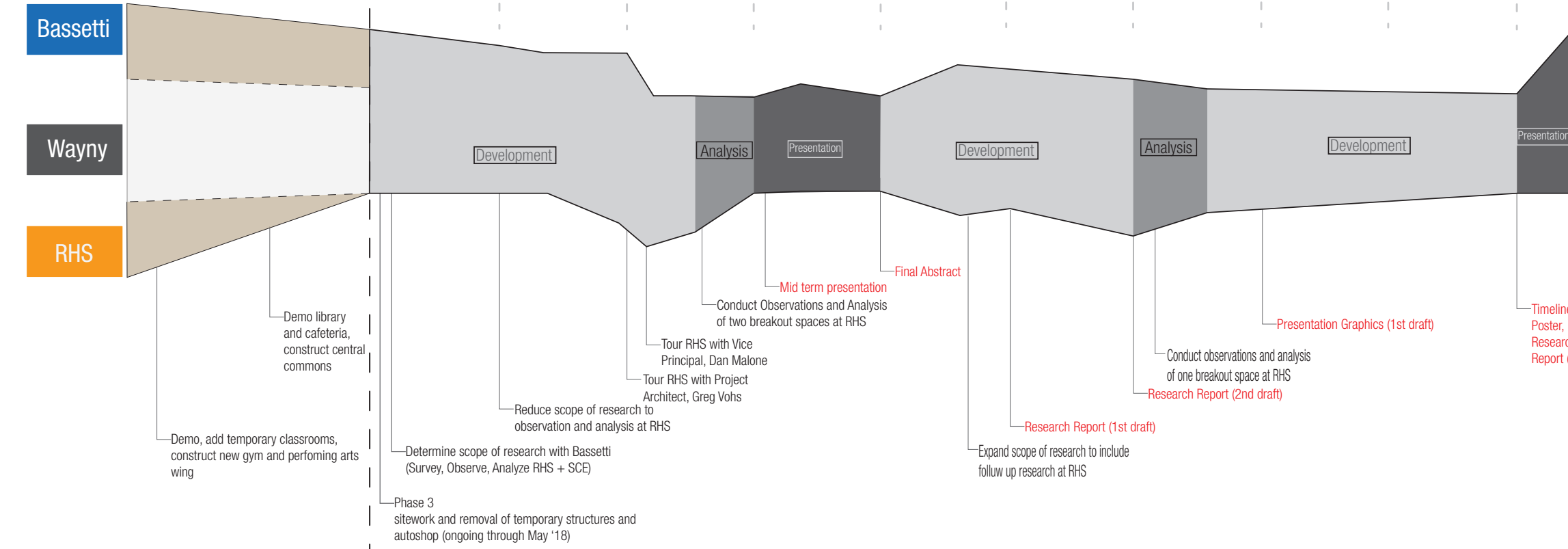
Feb 19

Feb 26

Mar 5

Mar 12

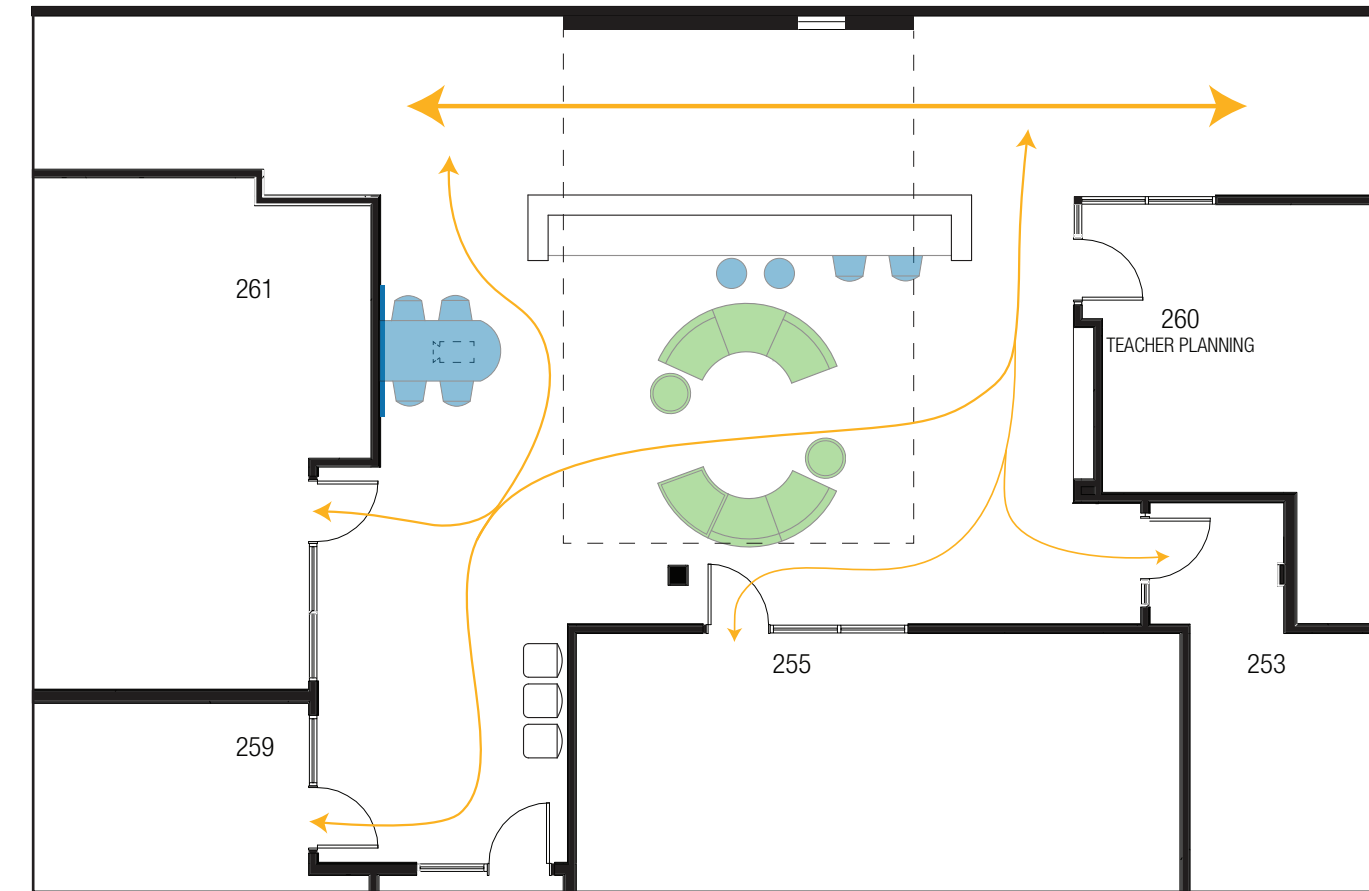
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## Breakout Space Model (Linking Pedagogy and Space)

Breakout spaces provide lounge areas, small study rooms, widened corridor spaces that allow gathering away from formal learning activities.

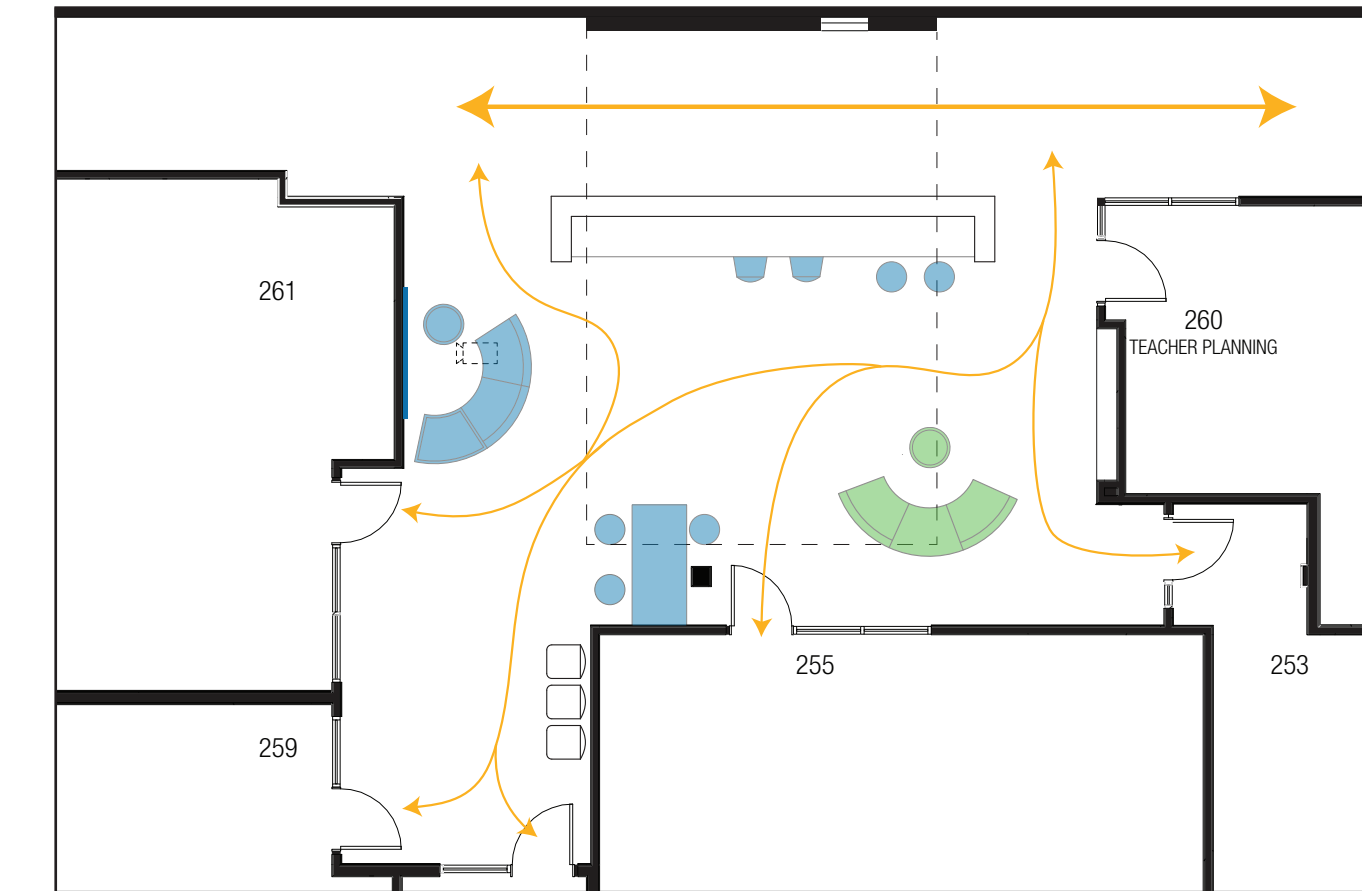
### MODEL SPACE 1



### HYPOTHESIS

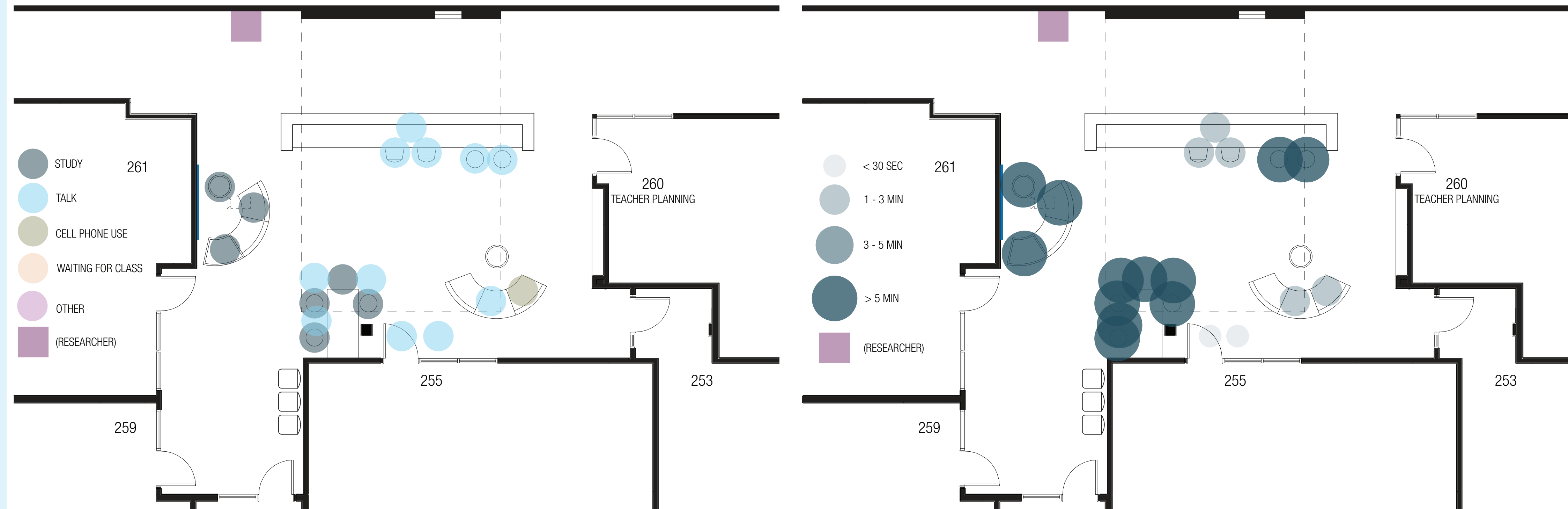
Students prefer to sit at the edges of the room. By providing informal seating at the center of the room, students are more likely to study and collaborate in the center, rather than, at the edges of the room.

### MODEL SPACE 2



### HYPOTHESIS

Students prefer to sit at the edges of the room. By providing informal seating at the edges, students are more likely to study and collaborate at these locations.



## METHODOLOGY

Breakout space 2 from the control study was chosen for further study. The breakout space model from *Linking Pedagogy and Space* was used. This model closely relates to the existing conditions and furniture of Roosevelt High School. Although small study rooms do not exist at Roosevelt High School, furniture groupings could suffice.

Each model space was observed for one class period. Of the four classrooms surrounding the breakout space, two classes would be in session for each of the observation period. Use patterns and environmental analysis was recorded.

## RESULTS

During the course of the observation, only model space 2 was utilized by the students. Students preferred to sit at the informal seating areas when given the opportunity. Once the lounge seating was taken, the genius bar was the next preferred sitting area. However, students were unable to work as a large group at the genius bar, so they moved to the rectangular table.

