Designing for Academic Success
A collaborative research model between architects and environmental psychologists

SCUP Regional Symposium // Monday, June 17, 2019

Sara Grant
Evie Klein
Problem: What Does Equity Look Like?
Research Design
Sommer, Social Design, 1983
Zeisel, Inquiry by Design, 1984
Cranz, Ethnography for Designers, 2016
Crouch and Pearce, Doing Research in Design, 2015

Educational Spaces
Sanoff, School Building Assessment Methods, 2001
Woolner, “A Sound Foundation? What We Know about the Impact of Environments on Learning and the Implications for Building Schools for the Future.” 2007
Strange and Banning, Educating by Design, 2001

Equity and Ideology in Educational Space
Giroux, Theory and Resistance in Education, 1983
Three Objectives: Medgar Evers College Research Project

Typology: Informal Spaces Outside the Classroom

Advocacy: Sharing Knowledge

Practice: Learn from Data
Recognition: Medgar Evers College Research Project

2018 IRG Grant Winners

Designing Academic Success at Medgar Evers College

Leigh Graham, John Jay College of Criminal Justice
Christopher Blaszczak-Boxe, Medgar Evers College
Research Team

SOCIAL SCIENTISTS

Evie Klein, MArch
User Design Information Group
Founding Member

Leigh Graham, PhD
John Jay College
Assistant Professor

Eleanor Luken, MS
User Design Information Group
Founding Member

Troy Simpson, MPhil
User Design Information Group
Founding Member

ARCHITECTS

Sara Grant, AIA, LEED AP
Murphy Burnham and Buttrick Architects
Partner

Luiza Otto
Murphy Burnham and Buttrick Architects
Designer

Temitayo Shonibare
Murphy Burnham and Buttrick Architects
Junior Interior Designer

STUDENT INTERNS

Patrick Gentles
Medgar Evers College
BS Biology Major

Allysha Nelson
Medgar Evers College
BS Biology Major

Kelly-Mae Smith
John Jay College
MPA Program

Maya Williams
John Jay College
MPA Program
CUNY “Significant Statistics”

2016 CUNY Net Assignable SqFt Usage
Net Assignable Square Feet - Total University

Square Feet
Spatial Typology: Space Outside the Classroom

Class & Open Laboratories: 2.4 M NASF
Library: 1.2 M NASF
Student / Faculty Services + Circulation: ?
Medgar Evers College

- Predominantly Black
- 72% Women
- 28% Part-time; 72% Full-time
- Students represent 94 nations & speak 44 languages
### MEC Enrollment and Graduation Rates by Degree Type

<table>
<thead>
<tr>
<th>Program type</th>
<th>Enrollment (Fall 2017)</th>
<th>Enrollment %</th>
<th>Graduation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>3,287</td>
<td>49.4%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Associates</td>
<td>2,875</td>
<td>43.2%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Non-degree</td>
<td>490</td>
<td>7.4%</td>
<td>n/a</td>
</tr>
<tr>
<td>Total</td>
<td>6,652</td>
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</tbody>
</table>

Data from the CUNY and MEC Office of Institutional Research

*does not include part-time or transfer students*
MEC Campus Site Plan
Research Methods
Process: Project Phases

Phase 1: Team formation
- Team formation
- Campus selection + partnership
- Research design
- IRB submission
- Team training

Phase 2: Data collection + site selection
- Field observation
- Semi-structured interviews
- Student mobile survey
- Phase 2 data analysis
- Site selection
- Presentation to AIANY+ Admin.

Phase 3: Pre-design data collection + analysis
- Field observations
- Interviews
- Phase 3 data analysis
- Preliminary design
- Coordination with administration

Phase 4: Design
- Iterative intervention design
- Focus groups

Phase 5: Post-Intervention Data Collection + Analysis
- Intervention implementation
- Field observations
- Interviews
- Phase 5 data analysis

Phase 6: Collaborative Outputs
- Final analysis
- Paper writing
- Presentation + outreach
- Methodology recommendation
Research Design and Methods for Phase 2 and 3 Data Collection

**Inductive, open-ended approach**

**Interviews**

**Observation**

**Survey**

**Focus Groups**

**Goals**

**Phase 2:** Identify campus-wide themes and select a research site

**Phase 3:** Identify how themes are spatialized to inform design

Low, Taplin & Scheld (2009), Daiute (2013)
Phase 2: Data Analysis
Nine Sites Identified for Phase 2 Observation
Phase 2: CAMPUS-WIDE THEMES

site selection

Phase 3: SITE-SPECIFIC USES

Phase 4: DESIGN
Phase 2 Analysis

1. Conduct bottom-up coding of interviews and field notes

1a. Code each interview

**INTERVIEWER:** What do you feel about those different places, like the cafeteria versus the library, versus sitting out here. How do you feel about those spaces?

**PART TS001:** I think they’re pretty good. Cafeteria you can meet with people. Um, library, strictly for studying. If you don’t want to be disruptive you can come out here. You can come out here with your friends and just do whatever without worrying about disrupting other people.

- evaluative - “pretty good”
- cafeteria - for socializing
- non-class time - study
- non-class time - socializing
- library - strict use limits
- soundscapes / disturbances
- designated group socializing areas

1b. Merge codes into groups
Phase 2 Analysis

2. Iteratively review codes and code groups to identify methodological and metatheoretical results

2a. Examine “tensions”

2b. Review codes by source type
Phase 2 Analysis

3. Review survey results

Rank the following members of the MEC community by how important they are to you (drag and drop, with the most important on the top)
Phase 2 Analysis

3. Review survey results

How many hours will you be on campus today?

Mean = 7
Std. Dev. = 2.687
N = 24

How many of those hours are you in class?

Mean = 3.71
Std. Dev. = 2.136
N = 24
Phase 2 Analysis Results

“Home” Space vs Professional Space

High Stakes Student-Mentor Relationships
“Home” Space vs Professional Space

“feels like home”

non-class time

“feels like high school”

contested spaces

faculty mentorship

maintenance challenges

soundscapes

student access to faculty

food

peer mentorship

proximity to home

acceptable uses of space

faculty privacy

security / gatekeeping

hours on campus

student voices taken seriously

personal and professional mentorship

“I can eat, sleep, get work done, it's almost like a second home.”
“[The cafeteria] gives me the high school feeling. When you’re in there, it doesn’t feel like it’s a college. It doesn’t have that impact there, it just looks like a regular cafeteria … We don’t have a productive environment, it was really haphazardly done.”
FACULTY: “You have to be broader in your mindset to be able to teach here because you will encounter all kinds of students here and you should be equipped enough to be able to handle the challenges of teaching a broad range of students if you want to be a successful faculty at Medgar Evers.”
ADMIN: “But the [students] that do stay, they are saying that they have faculty that are good mentors.”
Site Selection for Design
Study Site: Building AB-1 Fifth Floor
Study Site: Building AB-1 Fifth Floor
Study Site: Building AB-1 Fifth Floor
Study Site: Building AB-1 Fifth Floor
Study Site: Building AB-1 Fifth Floor
Phase 3: Data Analysis
AB-1 Fifth Floor: Interviews

Professional / Home
“So, that’s why I’m basically on this floor because this floor is the chemistry floor where most of the labs are. *Mostly I hang out up here if I have homework and stuff because it’s more quiet and the view is amazing.* And also, people come up here, like, if they want to get food and they *brought food from home you could warm your food up here because there’s a microwave.* Relaxation.”
“I mean, the smells of the food don’t really bother me because I’m always so focused on something else. And it’s not noisy up here because there’s not a lot of people up here, so it’s perfect, you know? It’s a good environment for the studying because you can’t study really with noise.”
“I don’t have anything specific but basically when I come here and meet with my friends and go to the classroom over there, and just be ourselves.”
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AB-1 Fifth Floor: Interviews
Mentorship

Planned

Spontaneous

Peer

Faculty
“I would say with faculty, I don’t really have a relationship. With students, I do. And the way I’ve seen is because like we will gather and compare answers, things like that. **This floor is one of those where I run into people. Maybe because I am in this floor, a lot of people are in this floor because of the same reason, so we’ve shared classes.**”
“For example, this semester I am taking language, so I have some students who already speak that language and they’ve helped me out here and there. And it always happens while we’re running into each other.”
"I was up here really struggling with pre-cal problems. And there was a student, she came to warm her food and she was like, “Oh, what are you doing? Pre-cal?” I am a really shy and reserved person, but, like, if you approach me, I am approachable...She was able to explain different ways of doing it...It’s a good thing I was up here, she was just warming her food."
“Um, I think it’s more of a personal thing, but I’ve always just, you know, my mind is like if you’re a higher position, I don’t know, it’s a little. If it’s not a personal thing, I don’t. So unless I have questions, I’ll go. Or if I have a question, *I’ll try to search another way before I reach out to a professor*…”
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“What did you do on the 5th floor today? (check all that apply)”  (N = 47)

<table>
<thead>
<tr>
<th>Response Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to class</td>
<td>36</td>
</tr>
<tr>
<td>Meet with a teacher</td>
<td>11</td>
</tr>
<tr>
<td>Study</td>
<td>38</td>
</tr>
<tr>
<td>Meet with a friend or classmate</td>
<td>38</td>
</tr>
<tr>
<td>Use the microwave</td>
<td>34</td>
</tr>
<tr>
<td>Use the vending machines</td>
<td>21</td>
</tr>
<tr>
<td>Relax or sleep</td>
<td>32</td>
</tr>
<tr>
<td>Visit the chemistry, physics, or other offices</td>
<td>9</td>
</tr>
</tbody>
</table>
AB-1 Fifth Floor: Observed Locations of Users and Activities
(29 observation periods, \(N = 204\) observed users)
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Device Charging
## Phase 3: Linking Campus-Wide Dynamics to Site

<table>
<thead>
<tr>
<th>Phase 2: Campus-wide challenges</th>
<th>Phase 3: Site specific spatial dynamics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home vs. professional setting</td>
<td>● Both academic and home-like qualities</td>
</tr>
<tr>
<td></td>
<td>● Not adequate small group study space</td>
</tr>
<tr>
<td></td>
<td>● Strong link to classroom and department, in student control</td>
</tr>
<tr>
<td>High stakes mentorship</td>
<td>● Student-centered mentoring, planned and spontaneous student-to-student help</td>
</tr>
<tr>
<td></td>
<td>● Faculty meeting are not spontaneous/informal</td>
</tr>
<tr>
<td>Constraints of campus</td>
<td>● Hybrid space compensates for low resourced campus</td>
</tr>
<tr>
<td></td>
<td>● Tension around appropriate use by students in corridor spaces</td>
</tr>
</tbody>
</table>
Phase 3: Linking Campus-Wide Dynamics to Site

Phase 2: CAMPUS-WIDE THEMES
- home spaces
- non-class time
- contested spaces
- soundscapes
- food availability
- academic support
- technology security systems
- hierarchy/authority maintenance
- hours on campus coursework
- access to faculty
- library capacity
- hours on campus privacy

site selection

Phase 3: SITE-SPECIFIC USES
- professional and home more individual than group
- more peer than faculty

Phase 4: DESIGN

home v professional mentorship
Phase 4: Design
Floor Plans

A. Small Group Work
B. One-on-One
C. Individual Study
D. Informal Gathering
Materiality
Type A: Small Group Work
Type B: One-on-One Meetings
Type C: Individual Study
Conclusions + Recommendations
Recommended Process

Discovery Phase: Campus-wide

- Form team of experts, including student informants and researchers
- Seek campus-wide themes through cross-stakeholder data collection and analysis

Spatialize Themes @ Site

- Connect campus-wide themes to sited microculture through interviews and surveys
- Create a design brief
  - This is a companion to the program document

Design

- Hold focus groups for design review
  - Schematic Design through 30% Design Development
  - Conduct FGs with each stakeholder group separately
Discussion and Q & A

- How can this research/approach inform your work, as practitioners, researchers, and educators?

- How do you currently account for informal spaces like this one (that might not be formally categorized) in the program for a new project? Is there a formula or are there other means for justifying? Are there some departments receiving more of this type of spaces than others?

- What ways can this approach be included in an ongoing process or set of design guidelines?
References


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