WHAT HAPPENS AFTER YOU’VE SET UP AN ACADEMIC MAKERSPACE?

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OUTLINE

• Introduction/Background
• Our makerspace
• Projects from our makerspace
• Major challenges
• More lessons learned
• Questions & share your experiences
LAWRENCE UNIVERSITY AND THE SEELEY G. MUDD LIBRARY
HOW WE GOT A MAKERSPACE IN JUST 4 EASY STEPS!

1. Organize faculty and staff
2. Research
3. Grant proposal
4. Identified and set up the space!
MAYBE NOT THAT EASY... INITIAL OBSTACLES

- Writing a grant proposal
- Setup of the space over summer
- Other duties
- Life
- Tech problems
OUR MAKERSPACE, IN MORE DETAIL
3D PRINTERS
3D SCANNERS
SILHOUETTE CAMEO ELECTRONIC CUTTER
SEWING MACHINE
PAINTING AND COLLAGE STATION
COLORING STATION
THE ACM GRANT

• Faculty career enhancement grant
• Faculty-focused space
• Award included money for equipment as well as a workshop and speakers
GRANT-RELATED EVENTS
PROJECTS FROM OUR MAKERSPACE
CHEMISTRY: INSTRUMENTAL ANALYSIS
NEW MEDIA IN ART
TUTORIALS & INDEPENDENT STUDIES
CELLO BOW GUIDE
COMPUTER SCIENCE: BRAIN WAVE HEADSET
INNOVATION & 
ENTREPRENEURSHIP: INNOVATION

http://blogs.lawrence.edu/makerspace/assignments/
CHALLENGES
MAINTAINING ENTHUSIASM
# Faculty Participation: Maintaining Enthusiasm

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of Classes Brought to the Makerspace</th>
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<tbody>
<tr>
<td>Anthropology</td>
<td>1</td>
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<tr>
<td>Art History</td>
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<td>Chemistry</td>
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<td>History</td>
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<tr>
<td>Innovation &amp; Entrepreneurship</td>
<td>1</td>
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<tr>
<td>Studio Art</td>
<td>2</td>
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</tbody>
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WHAT WE’VE DONE TO IMPROVE FACULTY PARTICIPATION

• Open houses
• Summer coffeehouses
• Discussion meetings
• Social media
Breakdown by discipline of project as reported by students upon receiving access and training for the makerspace.
STEPS TO IMPROVE STUDENT & FACULTY PARTICIPATION

• Student-focused, not just faculty-focused
• Makerspace club
• Regular meetings
• Ask me about the Lawrence Makerspace!
MAINTENANCE & NEW STUFF
EQUIPMENT MAINTENANCE, REPAIR, AND UPGRADES

• Warranty
• Customer support
• Upgrade when possible
• Part supplier
• Perform regularly scheduled maintenance
• Plan ahead
TRY TO MEET A DEMAND

- Laser cutter substitute
- Sewing machine
- Painting and collage table
- Simple creativity and making
- Still no laser cutter... Glowforge
- Initial makerspace demand
TRAINING
TRAINING

Students trained

- Fall term 2015-2016: 22
- Winter term 2015-2016: 25
- Spring term 2015-2016: 26
- Fall term 2016-2017: 18
- Winter term 2016-2017: 29
TRAINING CHALLENGES

- Time-consuming
- Documentation printed in advance, and kept updated
- Work with the space
- Plan a training session all trainers will follow
- Schedule training sessions during set times
- Meet with classes- try to plan these over breaks when professors are creating syllabi
LESSONS WE’VE LEARNED
MORE CHALLENGES (AND SOLUTIONS)

- Usage stats
- Roles established
- Space organization
- Usage stats
- Designate time to work in the makerspace
- Be flexible
- Documenting usage
- 3D design is hard
- Money!
IS IT WORTH IT?

Yes!
QUESTIONS & SHARE YOUR TIPS