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
OUR MAKERSPACE
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

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<thead>
<tr>
<th>Department</th>
<th>Number of Classes Brought to the Makerspace</th>
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<tr>
<td>Anthropology</td>
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<tr>
<td>Art History</td>
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<td>Chemistry</td>
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<tr>
<td>History</td>
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<tr>
<td>Innovation &amp; Entrepreneurship</td>
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<tr>
<td>Studio Art</td>
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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.

- Anthropology: 15
- Art: 21
- Art History: 7
- Biology: 5
- Chemistry: 11
- Computer Science: 2
- I&E: 8
- Staff/faculty: 5
- Club/General: 26
- Posse: 8
- Physics: 1
- Public Speaking: 2
- Religious Studies: 1
- Theatre: 2

*Total students*
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

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<td>25</td>
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TRAINING CHALLENGES

• Time-consuming
• Documentation printed in advanced, 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