Creating an Inclusive and Empowering Makerspace

Boise State University Albertsons Library’s MakerLab
Amy Vecchione, Deana Brown & Donovan Kay
Five Elements of a Successful Makerspace

- Financial model
- Connections with companies
- Culture of happy collisions
- Student learning experiences are well crafted
- Technical expertise
Create a Great Team
A Vision

The makerspace is a radically inclusive community with a clear pipeline to fabrication resources allowing students to design ideas, objects, and dreams.
Status of Makerspaces

At your institution

Scattered
Unified
Not yet begun
Advanced
How do you self identify?

I make things
I’m a maker
I was a maker before we called ourselves maker
I don’t know if I make things
I don’t make anything
Culture
Process

1. Reach out to the right groups
2. Partner with like minded individuals
3. Craft an amazing team
4. Design and deliver crafted student learning experiences
5. Stress the informal learning in a risk free learning environment
6. Empower everyone
7. Move everyone on up the levels of engagement
8. Create a space for design thinking
Inclusive
Makerspaces are design thinking hubs
Engagement with the MakerLab

<table>
<thead>
<tr>
<th>Level</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro Level</td>
<td>download file from Thingiverse, expresses interest, becomes a part of the community</td>
</tr>
<tr>
<td>Level 2</td>
<td>modifies a print in TinkerCad, tinkers in a workshop</td>
</tr>
<tr>
<td>Level 3</td>
<td>starts a project, meets with librarians</td>
</tr>
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Amy Vecchione & Deana Brown Boise State University
<table>
<thead>
<tr>
<th>Level 4</th>
<th>becomes a part of the “After Hours” program, getting trained on software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 5</td>
<td>becomes a member of the Creative Technologies Association or engages in critical reflection of their projects, prototyping and troubleshooting</td>
</tr>
<tr>
<td>Level 6</td>
<td>works or volunteers in the MakerLab</td>
</tr>
<tr>
<td>Expert Level</td>
<td>offers workshops on 3D design &amp; trains others</td>
</tr>
</tbody>
</table>

Amy Vecchione & Deana Brown Boise State University
is a life skill

Amy Vecchione & Deana Brown Boise State University
Technical Skill Gap
students working on their own prototypes
get trained and privileged access
reduce the queue
mentorship style relationships
building capacity
increasing skills they can apply in the workforce
Create Connections
Using a Slack Channel

scottschmader 12:34 PM
We're turning it into a modifiable Arduino/Pi learning and demonstration station where people can create their own inputs, and outputs, and program them to do cool things.

lang 5:50 PM
Current Votes
1. CTAz: 1
2. CTAz: 3
3. CTAz: 1
4. Czar Cat: ????

amyvecchione 7:14 PM
Czar cats.

amyvecchione 7:50 PM
uploaded an image: Slack for iOS Upload

amyvecchione 7:51 PM
I should explain at some point that this relates somehow to @carlb telling me that he is the supreme overlord of 3D printers. Maybe he's the CTAz czar of 3D printers.

carlb 8:06 PM
If any czar had a hard C like Carl.

 amyvecchione 8:07 PM
Unrelated to CTAz: who sells lilypad Arduino locally?

scottschmader 8:07 PM
Czarl?
Reinforce inside jokes
Hiding Trilobites
“Let’s Let Them”
Apple TV + Raspberry Pi
SENSITIVE
TOY
BAT
USER
USE TOASTS BE RITZY
Sortitators
AMANDA BASCHNAGEL
Student Employee
Web and Emerging Technologies Unit
amandabaschagnagel@u.boisestate.edu

I can help you with...
User Experience
3D Printing
Video
Photoshop
Green Screen
Vinyl Cutting
Some Final Projects
Poor quality, but the centriphone works!
Results from Georgia Tech

1. Provide students with free access to hands-on, state-of-the-art prototyping technologies  
4.69

2. Serve as a cultural hub and meeting ground  
4.05

3. Bolster design within curricula including: introductory design courses, design courses  
4.28

4. Bolster design in extracurricular activities, organizations, and teams  
4.37

5. Encourage collaboration between diverse teams of students from all years and majors  
4.30

6. Welcome all types of projects, personal and professional  
4.40

7. Excite students for careers involving creativity, design, innovation, and invention  
4.52

8. Enable students to tackle open-ended, real world challenges
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Questions
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