Makerspace Culture Workshop

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Georgia Tech | Aero Maker Space

Introduction & Motivation

Makerspaces are becoming a central component of the undergraduate education of universities worldwide. These spaces, although physical in nature, are usually led by a group of students and as such also develop a unique culture. Developing an inclusive, diverse, and welcoming culture is often difficult and the objective of this project is to facilitate this process.

To aid in the development of an inclusive makerspace culture we have developed a workshop specifically geared towards undergraduate-run makerspaces that exposes them to best practices in developing a diverse and inclusive environment.

Workshop

The workshop was divided into **three** main activities where students broke into smaller groups and discussed. The results of the discussions were then recorded for the entire group. These activities focused on:

1. Defining a Positive Environment
2. Developing our Core Values
3. Identifying Threats to our Core Values

The slides below show the first two exercises with the student discussion results highlighted in red:

AMS Culture

culture noun
cul·ture | \ \ ˈkəl-chər \

Definition of *culture* **(Entry 1 of 2)**

a : the customary beliefs, social forms, and material traits of a racial, religious, or social group

also : the characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time
// popular *culture*
// Southern *culture*

b : the set of shared attitudes, values, goals, and practices that characterizes an institution or organization
// a corporate *culture* focused on the bottom line

Exercise #1: *Environment*
- 3 minutes. What are qualities or characteristics that you associate with a **positive environment**?
- 5 minutes. Discuss in groups of 3.
- Group discussion.

Discussion results:
- Ability to learn from each other, mentorship
- Empowered to learn and grow
- Being comfortable/friendly
- Ambiance
- Body language, conversations
- Diversity in interests
- Attitude on shift
- Mixed use facility, more than just tools/machines
- Feeling safe to share opinions and be respected
- Supportive/empowered
- Learning over perfection
- Forgiveness/empathy

AMS Core Values

Exercise #2: *Core Values*
- 5 minutes. Groups of 3.
- Write down three **core values** of the AMS.
- Underneath each write three **behaviors that align** with each value
- Group discussion.

Discussion results:
- Customer Service
  - Positive, optimistic, sense of community, caring, kindness
- Approachability
  - Teaching, empowering, mentorship, passion to teach
  - Welcoming, community
  - Education, fostering
- innovation
- Positive feedback
- Setting tone for visitors in the space
- *"Failure is an option, but failure to learn is not"* ©
- Diversity of knowledge and people

The culture workshop was trialed at the Aero Maker Space in the School of Aerospace Engineering during the Spring 2019 Semester.

A major outcome of the workshop is a **shared vision** for the Aero Maker Space put together entirely by the students. The Fall 2019 shared vision is shown below:

Summary. Our **shared vision** for the AMS

- Positive Traits:
  - No Judgement
    - Get to do dumb things, safely
  - Learning over perfection
  - Diversity of thought, experience, majors, etc.
  - Support and community
  - Inclusion
- Core Values:
  - Care
  - Equal Access for All
  - Fostering Mistakes and Innovation
  - Mentorship and Empowerment
- Action Items:
  - Karting
  - Welcoming signage, AMS instructions
  - Extending space
  - Casual/Lounge area
  - Blind hiring?

Survey & Student Comments

The following questions were rated from 1 – Not Important to 5 – Very Important. Not all questions are shown.

1) How important is it for maker spaces across campus to foster a positive culture?
**Average Answer: 5**

2) A portion of the workshop was devoted to discussing issues of inclusion, bias, and diversity and how they could affect the AMS. How useful did you find this portion of the workshop?
Average Answer: 4.5

3) How important is for other maker spaces to have similar culture workshops for their students?
Average Answer: 4.7

4) Should the AMS continue to hold a culture workshop?
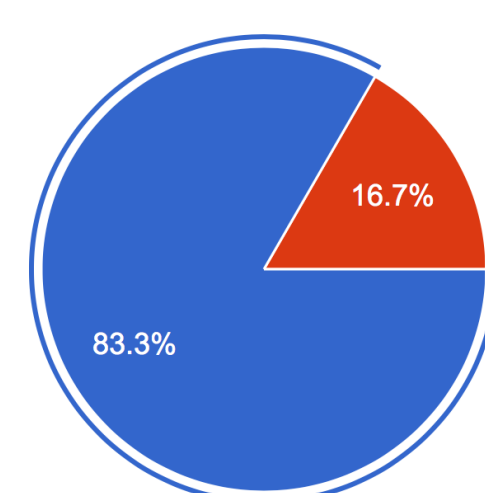
- Yes - Every Year
- Yes - Every Other Year
- No - Did not find it relevant. (Please comment below if you can)
- No - Found it relevant but would prefer a different format. (Please comment below if you can)

83.3%   16.7%

Selected comments to: What was your main takeaway form the workshop?
- "Understanding my own biases and how to learn from them"
- "I main takeaway was the importance of defining and reflecting on the values of AMS. I think it made me think a lot about how my actions can affect and promote the values of the space..."
- "That we even though we are on the right footing to having more diverse hiring processes, we still have a long way to go."