# Why are Some Makerspaces not so Male-Dominated

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# Motivation (background)

Makerspaces have been shown to play a significant role in promoting innovation and entrepreneurship by providing users with the tools and resources to produce and create products.

# Motivation (issues)

o  Makerspace movement has been scrutinized for exhibiting severe gender disparity

o Only 19% of the members are women (Faulkner&Mcclard, 2014).

o many women are deprived of the tools and educational opportunities commonly available in a typical makerspace.

o  Investing in women's economic empowerment can contribute directly to gender equality, poverty eradication, and inclusive economic growth (UN Women, 2022)

o 2.4 billion working-age women do not have equal economic opportunities (World Bank 2022)

# How we got started?

During our work on the sustainability model for makerspaces, we observed that some makerspaces do not have a noticeable gender gap. This intriguing situation motivated our investigation into understanding the reasons behind the reduced gender disparity in some makerspaces compared to most.

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# Method

We conducted interviews with 27 participants, consisting of 6 females and 21 males.

The interview respondents' job titles reflect a diverse range of positions within the makerspaces:

42.50% identifying as Founder/Co-founder,
3.75% as managers,
11.25% as executive management,
16.25% as directors,
23.75% as the board of directors, and
2.5% as officers

Qualitative

Independent Makerspace

27 participants

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# Finding: *Women in Leadership*

## *The presence of women can create a sense of belonging and support for other women.*

"if I was to go out there right now and show you our volunteers, you'd see that we encourage volunteers of both sexes, we make everyone feel comfortable. So, when a new female comes, they do not feel like they're a fish out of water." [P08]

"60% of our board members are women." [P24]

"what I saw was the facilities that had higher female participation because when the female comes, they see other women are working and involved. It really helps." [P26]

"what helped a lot is having a co-founder who's female." [P03]

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# Finding: *Inclusive Policies and Regulations*

*makerspaces that have well-defined rules and policies are more likely to exhibit a greater balance of gender.*

"we have a code of conduct that's very, very strict, that has to do with harassment has to do with, you know, asserting yourself onto someone else, or asserting your ideas on somebody else without unsolicited advice" [P05]

"we've heard that from lots of people and being inclusive and diverse is definitely something that was grounded in our founding, so we wanted to be a place for all people, regardless of sex, income, skill level" [P20]

"there's always that one […] and like, he is just the most recent one, just self-selected himself out of there. He was a very mediocre […] dude. But, you know, we don't have huge problems that often when they do, they tend to self-select themselves out." [P10]

# Finding: *Women-Focused Activities*

*men and women may prefer different activities within makerspaces.*

"Woodworking is our big draw, and it's stereotypically a guy thing. That's why we tend to attract more men than women. ... I get a lot more women interested in laser cutting because they see the potential for how they can cover a lot of different domains with one tool, which is very interesting because men don't think that way." [P22]

"I believe ceramics is a significant draw for women to our space" [P25]

"our jewelry studio, for example, all these equipments are specifically for making jewelry; really nice professional-level jewelry. And so, this has attracted an entirely huge demographic of women." [P08]

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# Finding: *Safe and Accessible Facility*

*makerspace's location is critical in promoting gender diversity. Given the tight budgets of many makerspaces opt to rent cheaper spaces in industrial areas.*

"you try to get yourself location is important. You know, to be too far on the outskirts of town is going to limit the people who can get to you. So, find a place inside the city in the communities you're trying to reach." [P24]

[P26] attributed their low female participation to the spooky location within an old hospital.

"it's inviting, well, that easy to get to downtown in a safe space. Female members are the winners, the ones that want to build more, they're looking to leapfrog and do more. So they've got a lot more of all the ones that are working in there. Now. There are the go-getters." [P09]

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What's the takeaway?

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This study identified four strategies that some makerspaces employed that create a more gender-inclusive environment and reduce male dominance.

*Women in Leadership*

*Women-Focused Activities*

*Inclusive Policies and Regulations*

*Safe and Accessible Facility*

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# Implications

Contemporary HCI theory focuses on the flourishing of human values (Dourish, 2019), and human values are influenced by entrepreneurship (McCabe, 2012). Makerspaces play a significant role in learning and entrepreneurship building. Understanding the factors driving increased female participation in makerspaces can benefit research on diversity and gender inclusion across various fields.

Thank You

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# Thank You