

Inclusivity in S. T. E. M. Science | Technology | Engineering | Mathematics

A report on LGBTQ+ inclusivity in STEM at the University of Utah. Inclusivity is critical to the success and future of STEM, hence, it is important to analyze how welcoming and accepting students find university STEM environments to be. Students in the Being Human in STEM SCI 3900/HONOR 3990 class of 2023 have conducted a survey to assess current LGBTQ+ inclusivity in STEM at the University of Utah. The information presented in this report was compiled anonymously from survey results. A total of 50 participants responded to the survey in the 21-day period in which the survey was conducted. *Note this is not an official survey and is not meant to be published as research findings.

Assessing the Campus Climate:

Graduate students
Undergraduate students
Other: Post-doc

Figure 1. What is your current role at the University of Utah?

96% (48/50) of survey participants are undergraduate students, 2% (1/50) are graduate students, and 2% (1/50) are postdoctoral.

- College of Science
- College of Engineering
- Not in STEM



Figure 2. Are you a student in STEM (Science, Technology, Engineering, Math), if so what college are you in?

52% (26/50) of survey participants are in the College of Science, 38% (19/50) are in the College of Engineering, and 10% (5/50) are not in a STEM college.



Figure 3. Do you identify as a member of the LGBTQ+ community?

62% (31/50) of participants identify as members of the LGBTQ+ community, and 38% (19/50) do not identify as members of the LGBTQ+ community.

Anonymous Student Stories:

"I feel like there's a large intersection of LGBTQ+ people and STEM that no one talks about. *Our identities are hush-hush* in STEM classes."

"I have met some of the most accepting people and some of the most ignorant people here at the U. I have been fortunate enough to meet a community of people who are LGBT+ in STEM and they make me feel very welcome and happy. But a lot of faculty and people in power are not aware/[are] naive to LGBT+ issues. *It's hard to speak up* if from the start there is not an environment created that is welcoming."



Campus members

Figure 4. Do you feel you can be open about your sexual orientation and/or gender identity in STEM? a) LGBTQ+ Identifying Participants

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among students</u>, 45.16% (14/31) of LGBTQ+ identifying participants responded yes, 41.94% (13/31) responded sometimes, 12.90% (4/31) responded rarely, and 0.00% (0/31) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among faculty/instructors</u>, 16.13% (5/31) of LGBTQ+ identifying participants responded yes, 51.61% (16/31) responded sometimes, 22.58% (7/31) responded rarely, and 9.68% (3/31) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among TAs/LAs</u> (teaching assistants/learning assistants), 25.81% (8/31) of LGBTQ+ identifying participants responded yes, 58.06% (18/31) responded sometimes, 6.45% (2/31) responded rarely, and 9.68% (3/31) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among research teams</u>, 22.58% (7/31) of LGBTQ+ identifying participants responded yes, 41.94% (13/31) responded sometimes, 22.58% (7/31) responded rarely, and 12.90% (4/31) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among staff</u>, 38.71% (12/31) of LGBTQ+ identifying participants responded yes, 38.71% (12/31) responded sometimes, 16.13% (5/31) responded rarely, and 6.45% (2/31) responded not at all.



Figure 4. Do you feel you can be open about your sexual orientation and/or gender identity in STEM? b) Non-LGBTQ+ Identifying Participants

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among students</u>, 73.68% (14/19) of non-LGBTQ+ identifying participants responded yes, 21.05% (4/19) responded sometimes, 5.26% (1/19) responded rarely, and 0.00% (0/19) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among faculty/instructors</u>, 63.16% (12/19) of non-LGBTQ+ identifying participants responded yes, 6.90% (2/19) responded sometimes, 21.05% (4/19) responded rarely, and 5.26% (1/19) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among TAs/LAs</u>, 68.42% (13/19) of non-LGBTQ+ identifying participants responded yes, 15.79% (3/19) responded sometimes, 10.53% (2/19) responded rarely, and 5.26% (1/19) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among research teams</u>, 63.16% (12/19) of non-LGBTQ+ identifying participants responded yes, 10.53% (2/19) responded sometimes, 21.05% (4/19) responded rarely, and 5.26% (1/19) responded not at all.

When participants were asked if they feel they can always be open about their sexual orientation and/or gender identity <u>among staff</u>, 63.16% (12/19) of non-LGBTQ+ identifying participants responded yes, 15.79% (3/19) responded sometimes, 21.05% (4/19) responded rarely, and 0.00% (0/19) responded not at all.

Anonymous Student Stories:

"Whenever LGBTQ topics come up in a STEM class (mainly amongst students, rarely in class material) you can see *students rolling their eyes*."

"University's copy & paste inclusivity statements on syllabi lack any thought from professors—*they are entirely performative.*"

"There is just always kind of a *stigma* considering a lot of people may not be familiar with non-binary/LGBT+ matters"

"I usually am not very out in a lot of STEM spaces because I am *unaware if the spaces are welcoming*."



Figure 5. On a scale from 1-5 (1 being the lowest, and 5 being very inclusive) how would you rate LGBTQ+ inclusivity facilitated by campus members in STEM?

Among students, the inclusivity score had a mean (μ)=3.66 with a standard deviation (σ)=0.806 (out of 50 responses). Among faculty/ instructors, the inclusivity score μ =3.22 and σ =0.898 (out of 49 responses). Among TAs/LAs the inclusivity score μ =3.52 and σ =0.996 (out of 50 responses). Among research teams, the inclusivity score μ =3.12 and σ =1.204 (out of 49 responses). Among staff, the inclusivity score μ =3.53 and σ =0.903 (out of 49 responses).

Anonymous Student Stories:

"I like that Professor De Grandi mentions different events related to LGBTQ people in STEM at the beginning of class. It's a small thing, but I haven't seen any other professors do that. It's very clear that *she's supportive of queer STEM students* and it makes me feel like if I ever have problems at school related to my identity, she's someone that I can talk to."

"Ostem is a club that *supports and engages the LGBTQ community in STEM* and they are very welcoming. Everyone at the event asked and respected my pronouns and we were able to share our experiences while doing a fun activity. Tata who helps run Ostem is very welcoming and kind to everyone who wants to join."

"I made a friend in a biology class when we started talking about chosen names. It was really fun to talk to *someone who had a similar experience* to me as a trans person in some sort of environmental studies program."





Anonymous Student Stories:

" I've seen a TA be misgendered multiple times *intentionally* by students."

"I have seen a few students in my classes be misgendered by the majority. I think teachers try to follow pronouns if they are in Canvas with your name, otherwise, they will just *assume cis pronouns*."



"I literally wear a bracelet that says "they/them" and get "she/her"-ed anyway."

 $\label{eq:Fraction} Fraction \ of \ LGBTQ+ \ respondents \ who \ have \ experienced \ discrimination$

Figure 7. If you identify as a member of the LGBTQ+ community, have you been discriminated against because of your LGBTQ+ identity in STEM at the University of Utah?

Of those participants who identify as members of the LGBTQ+ community, 22.58% (7/31) report being discriminated against by students, 6.45% (2/31) by faculty/instructors, 3.23% (1/31) by TAs/LAs, 3.23% (1/31) by staff, and 0.00% by research teams. 61.29% (19/31) of LGBTQ+ identifying participants report not being discriminated against because of their LGBTQ+ identity in STEM.

Anonymous Student Stories:

"Professor made a *discriminatory joke* about the LGBTQ+ community"

"I was *outed* by a classmate and consequently barred from a study group. I also received a number of small microaggressions throughout the rest of the semester about my sexuality from various students in the class. It was not significant enough nor was I empowered enough to approach the professor about this due to *his own biases that were reflected in how he treated*



Fraction of respondents who indicated training/education is needed for campus members

Figure 8. Which among the following groups would benefit from more education/training about LGBTQ+ identities on campus and in STEM?

When respondents were asked who they believe would benefit the most from more education/training about LGBTQ+ identities on campus and in STEM 80.4 % (37/46) of respondents voted for faculty/instructors, 60.9% (28/46) for students, 52.2% (24/46) for TAs/LAs, 50% (23/46) for staff, and 43.5% (20/46) for research teams.

Anonymous Student Stories:

"The STEM tower is *generally pretty accepting of my identity*. They generally didn't make a large deal of it when they did misgender me, simply accepting and fixed their mistake by simply saying sorry."

"Everything on this campus is *LGBTQ-friendly*, to the point where it's scary to step off campus into a state that's not so LGBTQ-friendly."

"My research team was majority queer in both sexuality and gender. All of them were *highly supportive* of my identity, open about their own identities, and willing to have conversations about LGBTQ+ issues during our team meetings as well as having check-ins when something damaging might happen in either legislation or society at large. The last conference we attended was queer-themed (as the main topic) and I was able to create a community of queer physicists both here in our graduate department and abroad. Having this *system of support makes me feel validated and heard in my experiences.*"

Helpful Resources to Continue Education and Promote Inclusivity In STEM

The LGBT Resource Center at the University of Utah is able to provide support and resources for the LGBTQ+ community on campus. Formerly, they were able to hold workshops to educate faculty/instructors and staff (among others). However, due to more recent issues of understaffing, they have shifted their resources to be student-centered as of Summer 2019. The LGBT Resource Center is here to help students as need be; students in crisis are their main priority. In lieu of understaffing, listed below are resources that can help provide support, education, and awareness on and off campus.

On Campus Resources

- <u>LGBT Resource Center</u>
- Racist & Bias Team on campus for filing reports on incidents
 - LGBT Resource Center can also file reports on behalf of students
 - Although these acts of discrimination are not yet against the legal policy including title IX discrimination, making behavior reports are crucial
- University of Utah LGBT Support Group (free and confidential)
- University of Utah Trans/Non-Binary Support Group (free and confidential)
- <u>oSTEM</u> University of Utah

Off-Campus Resources

- <u>Utah Pride Center</u>
 - Education and training, family programs, community health, many events year-round
- Encircle
 - Resource for Youth, ages 12-25
 - People 18+ can Volunteer
 - Therapy, daily programs, drop-ins
- <u>Under the Umbrella Bookstore</u>
 - Immerse yourself in the community
 - Read LGBTQ+ literature in both the local and international community
- <u>Utah Pride Festival</u>
 - June 1-4, 2023 in Salt Lake City, Utah
 - Hosted by the Utah Pride Center
- Ogden Pride Festival
 - August 4-6th, 2023 in Ogden, Utah
 - Hosted by the Ogden Pride Center

If you have experienced or witnessed an act of discrimination or bias (regardless of severity), please report it to the University of Utah's Racist & Bias Incident Response Team, reports can be submitted anonymously.