



Department for
Science, Innovation
& Technology



UK Science
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Network



Centering LGBTQ+ perspectives in STEM Career Decision Making

Executive summary

This project, "Centering LGBTQ+ Perspectives in STEM Career Decision Making," explored the experiences and decision-making processes of LGBTQ+ individuals who have left STEM fields in the United States and the United Kingdom. The study aimed to understand the factors contributing to the higher attrition rates among LGBTQ+ individuals in STEM and to provide insights for policymakers, educational leaders, and employers to improve retention and inclusivity.

Key Findings:

1. *Compartmentalising and Compromising:* LGBTQ+ individuals often feel the need to mask or hide their identities in STEM environments, leading to psychological stress and reduced engagement. This constant vigilance and identity surveillance can compromise their ability to perform effectively.
2. *Conflicting Values and Purpose:* Many participants left STEM because their work did not align with their personal values or did not serve a meaningful purpose. They sought careers

Policy Implications and Recommendations:

1. *Creating Inclusive Environments*: Higher education institutions, employers, and policymakers should ensure that STEM environments are inclusive and supportive of LGBT+

participants and four are multiracial or multiethnic participants¹. About half of our participants disclosed a physical or mental disability (n=17, 53%), and 12 (38%) indicated they were the first in their family

don't make a fuss, just don't look like anyone you would want to talk to. Put yourself as a wallflower. Don't be out or loud or anything just because it's not the environment to safely do

to get fired, I felt a need to [mask]...In order to be creative fully and really fully present in my

Therefore, queer and trans individuals decided to leave STEM because they could or would no longer compartmentalise or compromise their identity, as illustrated by Rick, who shared:

to clock into ot

Conflicting Values and Purpose

Another dominant theme in discussing reasons for leaving STEM was that individuals felt that who they had to be or what they did in STEM did not align with their values or serve a larger purpose in solving meaningful problems in the world or for the LGBT community.

work, but I wanted that work t

For some participants, being in STEM not only represented a conflict of values but that functioning within that conflict required changes they were not willing to make. For example,

Participants like K left to be who they needed to be for themselves, and some participants expanded this to others by being who they needed for someone else. Scot left chemical engineering for a role in education that served the purpose of bettering the environment for -gay or anti-trans in one ter place to protect the community here. That part of my job is the part that I love more than

One important pattern has been between people who have experienced discrimination and have been unable to continue in STEM, and people who experienced incongruity between STEM and their personal values. This pattern reflects a difference in level of perceived control over the decision to leave STEM.

Participant 10 who left a STEM career to the high education labour movement, expressed

Peace, and I left [University2] just this May. I'm fully out of it. I feel a lot better not trying to juggle multiple different identities and careers. For better or for worse, I am in the higher education labor movement, and I'm a lobbyist in the [US Pacific Northwest], and that's just where my life has taken me. Yeah. I have health insurance and I feel safe and secure, and

LGBT in the Background

Though several participants reflected that a primary reason for leaving STEM centered their LGBT identity or identities, others suggested that their identity as a member of the LGBT community was in the background to other factors. Participants described factors such as having interdisciplinary experiences, needs for human connection, and struggling academically as reasons for leaving STEM that were not primarily associated with their identities, at least not that they were aware. Within these responses, several participants shared a sense of helplessness in which the decision was made *for* them, not *by* them.

determining the value of performing STEM work or utilising STEM skills in settings outside of that ecosystem is also important to understand in setting policy.

Career Stages of Departure from STEM

trajectories as several found themselves making decisions based on being isolated from others, trying to maintain a sense of mental well-being while dealing with the stressors of the pandemic. One innocuous difference between the US and the UK is the structure of PhD programs in particular; in the UK a PhD comprises solely research, so a couple participants found it easy to move into a PhD program as they were required to complete any prerequisite coursework in prior programs.

In the US context, then, the biggest difference is how widely the nation can vary state-by-state and region-by-region in terms of LGBTQ legal protections and access to services. Whereas the UK health system is nationalised through the NHS, the US system is a patchwork of private medical providers funded through public and private health insurance plans, and access to trans-affirming healthcare in particular varies by the state a person resides. As a result, participants described looking for career opportunities in places or with organisations where they knew they could access the healthcare they needed. Similarly, many participants described being cognisant of the broader political context within each state, with several choosing career opportunities in states with stronger LGBTQ protections or states with more positive attitudes toward LGBTQ people. Many found though that they were able to access the protections and services needed through their employers as frequently an employer's protections against discrimination and healthcare plans may be far more LGBTQ-friendly than the state or regional context. Participants did note that recent politicization of LGBTQ people, and transgender communities in particular, has increased their concerns about social, psychological, and physical safety in locations where anti-LGBTQ legislation is being enacted.

Research Products to Date

Hughes, B. E., Barker, C., & Smith, L. (2024). *Centering LGBT+ perspectives in STEM career decision-making* [Webinar presentation in the *LGBTQ+ in STEM: Using data to foster inclusion* series]. Royal Society of Chemistry.

Smith, L. M. R., Hughes, B. E., Vasconcelos, C. P., & Barker, C. (accepted). *What does this STEM from? Queer and trans voices in the decision to leave STEM programs and careers* [Paper presentation]. AERA Annual Meeting 2025, Denver, CO, USA.

Policy Implication and Recommendations

For the purposes of this report, we bulleted out some high-level implications related to each

Compartmentalizing gender identity from STEM can mean compromising gender expression while in STEM environments, which can range from decisions about subtle ways one expresses trans or nonbinary identities all the way to delaying transition out of fear of employability in STEM

Exerts additional psychological energy to engage in this practice, reduces cognitive resources to do STEM work

At a very basic level, higher education providers, policymakers, and employers need to make clear the protections people have around the expression of LGBT+ identities in work settings. Transgender, nonbinary, and gender nonconforming people specifically need assurance that expressing their gender identity in a work or learning environment will not lead to negative repercussions, and LGBQ people need assurance that speaking about their families or relationships will not as well.

Protection from discrimination is a bare minimum, however, and knowing that LGBT+ people are welcomed and celebrated in work environments helps alleviate the additional cognitive

frees up cognitive resources to tend to the task at hand, leading to improved success and higher productivity. Funders may take special heed to consider how resources could be employed to better understand what an LGBT+ welcoming workplace looks like in STEM and the benefits that accrue to LGBT+ employees, as well as their cis-hetero colleagues, when implemented.

Implication of finding: **Conflicting Values and Purpose**

Motivation to stay in STEM: am I doing something I value?

Many LGBT+ people were leaving STEM because the work they were performing conflicted with their values, especially since so much STEM work is related to defense or resource extraction and consumption. These participants cared about the ways STEM could be utilized to enhance sustainability or promote national and international cooperation. Higher education providers can help people in STEM degrees or majors to see the diversity of occupations they might pursue after completing a STEM degree, and policymakers might leverage this interest toward policy goals of sustainability and peace. Funders might consider how to align funding opportunit

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concerned with broadening the participation in STEM of people who have been historically excluded from STEM should be mindful of the ways that these social categories do not exist in isolation from others, and that multiple forms of marginalisation may lead to quantitatively and qualitatively different experiences than even singular forms of marginalisation.

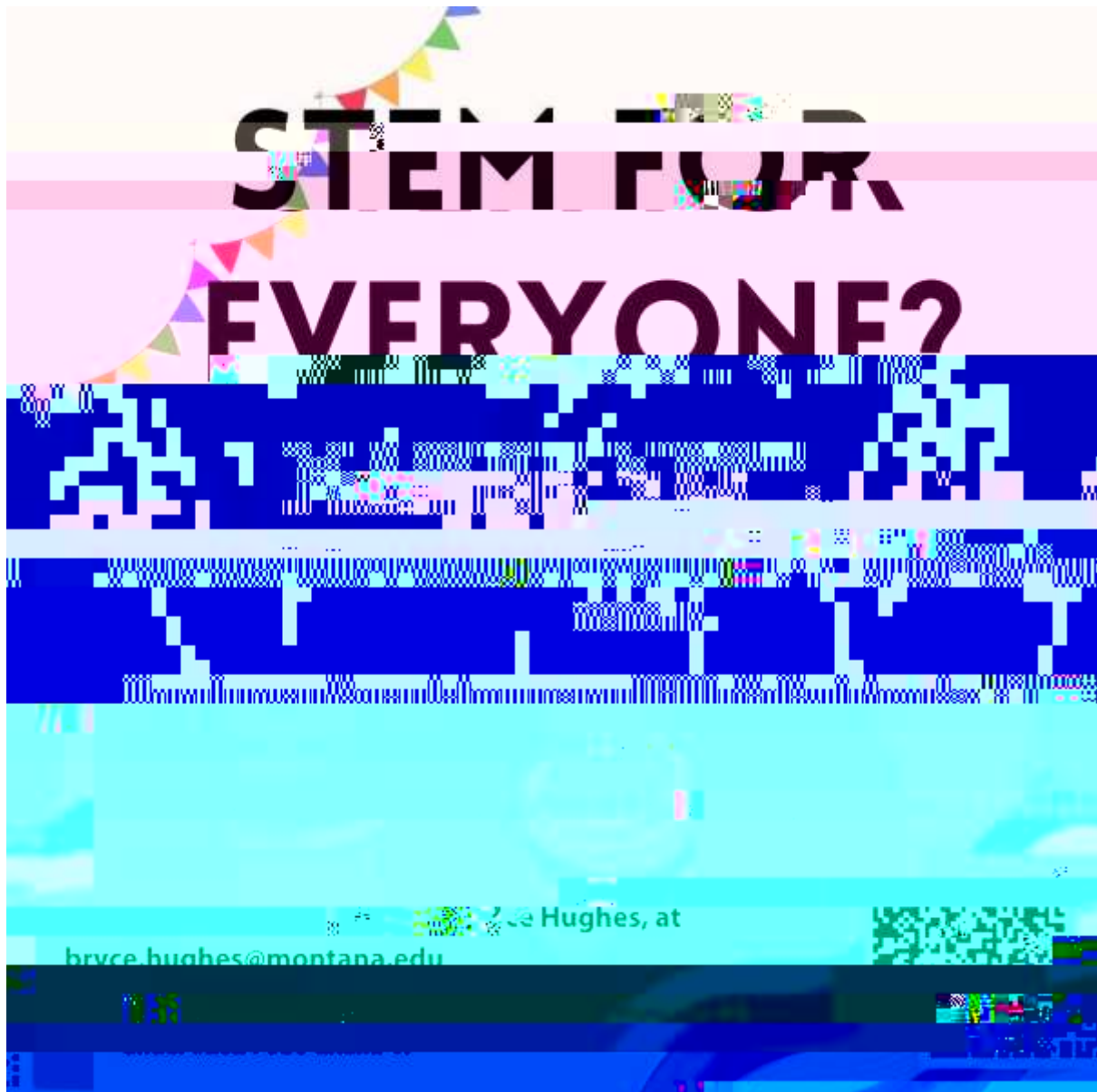
Implication of finding: **Movement in STEM**

Attrition from STEM is complex as the broader ecosystem that encompasses STEM

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Appendix II: Recruitment Flyer with QR Code



Appendix III: Centering LGBT+ Perspectives in STEM: Screening Questionnaire

Start of Block: Default Question Block

Q1 Hi friends! Thank you for agreeing to participate in our study. In this questionnaire, we will ask several questions about how you identify. The purpose of these questions are to help the research team ensure that our work represents individuals across different STEM fields, gender identities, and sexual identities. We will also ask how you identify racially and ethnically to ensure we represent the intersectionality of these identities. We ask that you provide your name and contact information only so we can reach out to schedule an interview

Start of Block: Contact

Q2 Please provide your first and last name.

Q3 Please provide your email address and telephone number.

Phone (1) _____
Email (2) _____

Q4 How would you prefer to be contacted regarding future participation in an interview with our team.

Email (1)
Phone or WhatsApp text message (2)
Phone or WhatsApp call (3)

Q5 Where do you primarily reside?

United Kingdom (1)
United States (2)

Q6 What is your age?

Start of Block: SOGI

Q7 What is your sex (as assigned at birth on your original birth certificate)? Note: A question about gender identity will follow.

Female (1)
Male (2)
Prefer not to say (3)

Q8 How do you currently describe yourself? Please select all that apply.

Female (1)
Male (2)
Transgender (3)
I use a different term (4)

Q9 To confirm, you were assigned \${Q7/ChoiceGroup/SelectedChoices} at birth and now describe yourself as \${Q8/ChoiceGroup/SelectedChoices}. Is that correct?

- Yes (1)
- No (2)

Q10 Which of the following best represents how you think of yourself?

- Gay (1)
- Lesbian (2)
- Straight (3)
- Bisexual (4)
- I don't know (5)
- I use a different term (6) _____

Start of Block: Disability/Impair

Q14 Do you consider yourself to have a disability or long-term condition (such as dyslexia, diabetes, arthritis, a heart condition, or a mental health condition)?

- Yes (1)
- No (2)
- Prefer not to say (3)

Q15 Do you experience barriers or limitations in your day-to-day activities related to any disability, health conditions, or impairments?

- Not applicable (1)
- No (2)
- Yes (3)
- Prefer not to say (4)

Q16 Which option best describes what type of barriers or limitations you face?

- I have a social/communication impairment, such as an Autism spectrum condition. (1)
- I am blind/have a serious visual impairment uncorrected by glasses. (2)
- I am deaf/have a serious hearing impairment. (3)
- I have a longstanding illness or health condition such as cancer, HIV, diabetes, chronic heart disease, or epilepsy. (4)
- I have a mental health condition such as depression, schizophrenia, or anxiety disorder. (5)

Appendix V: Demographic Questionnaire

Please complete the following questionnaire. Do not write any specifically identifying information, such as a name, birthdate, or contact information, on this form. What you provide is completely voluntary; please leave any spaces blank for information you do not want to provide us. We are happy to answer any questions you have about the data we are collecting. This data will help us develop a demographic profile of our study sample as well as identify points of contrast within the sample to compare interview themes.

Which STEM field did you work or study in?

How many years were you in STEM?

What is your gender identity?

What is your sexual orientation?

What is your racial or ethnic background?

Do you have a disability or long-term condition, or do you experience barriers or limitations in your day-to-day activities? How would you describe your disability?

What is your age?

What is your religion or strongly held belief, if any?

If you have a college degree, were you the first in your family to earn a degree?

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