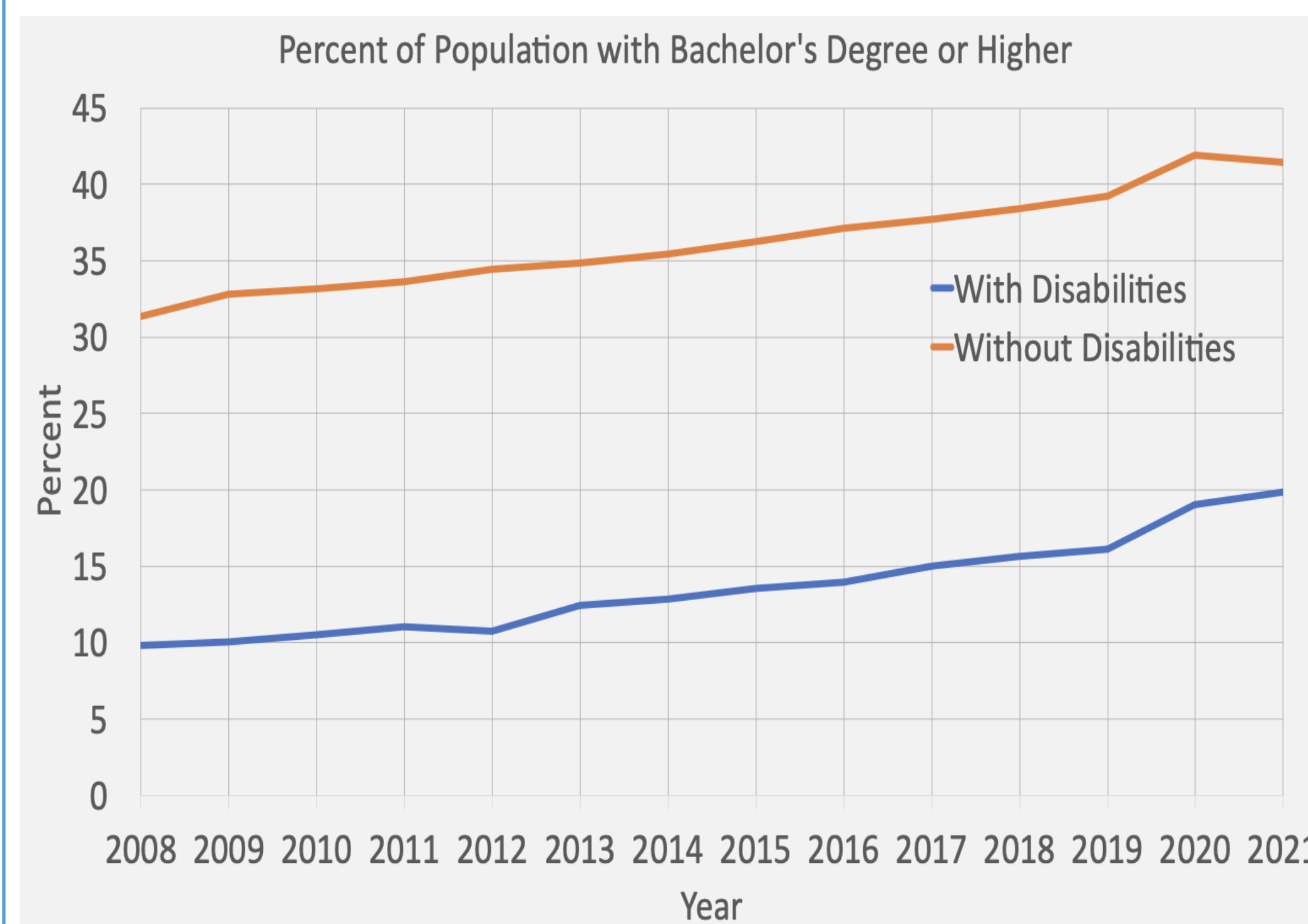


## Introduction

Individuals with disabilities are poorly represented in STEM. This is mainly because STEM education is often inaccessible and students with disabilities are frequently discouraged from pursuing STEM.



To increase accessibility and reduce the negative stigma around people with disabilities, STEM institutions must find ways to help students with disabilities transition from high school and make them feel welcome.

Institutions are thinking of innovative ways to increase accessibility on their campuses. This poster highlights some of the concerns for accessibility in STEM and some innovative programs being implemented.

## Concerns from Literature

### **Stigma around disability in STEM**

- People are afraid to disclose their disability
- Disabled students are discouraged from pursuing STEM
- Few role models with disabilities

### **End of statutory support under IDEA**

- Faculty lack the training to design accessible classes and materials
- Disability services may lack power to make change on a larger scale
- Poor visibility of services and resources
- Campus buildings are not accessible

### **Disabled students are not prepared for college**

- Students don't know available resources or how to get accommodations
- Students lack the necessary social and academic skills to succeed in college
- Students are not used to the independence and lack of support
- Gaps impact first generation students disproportionately

## References



<https://tinyurl.com/ASEEReferences>

## What Can Be Done?

### **Give disabled students a voice**

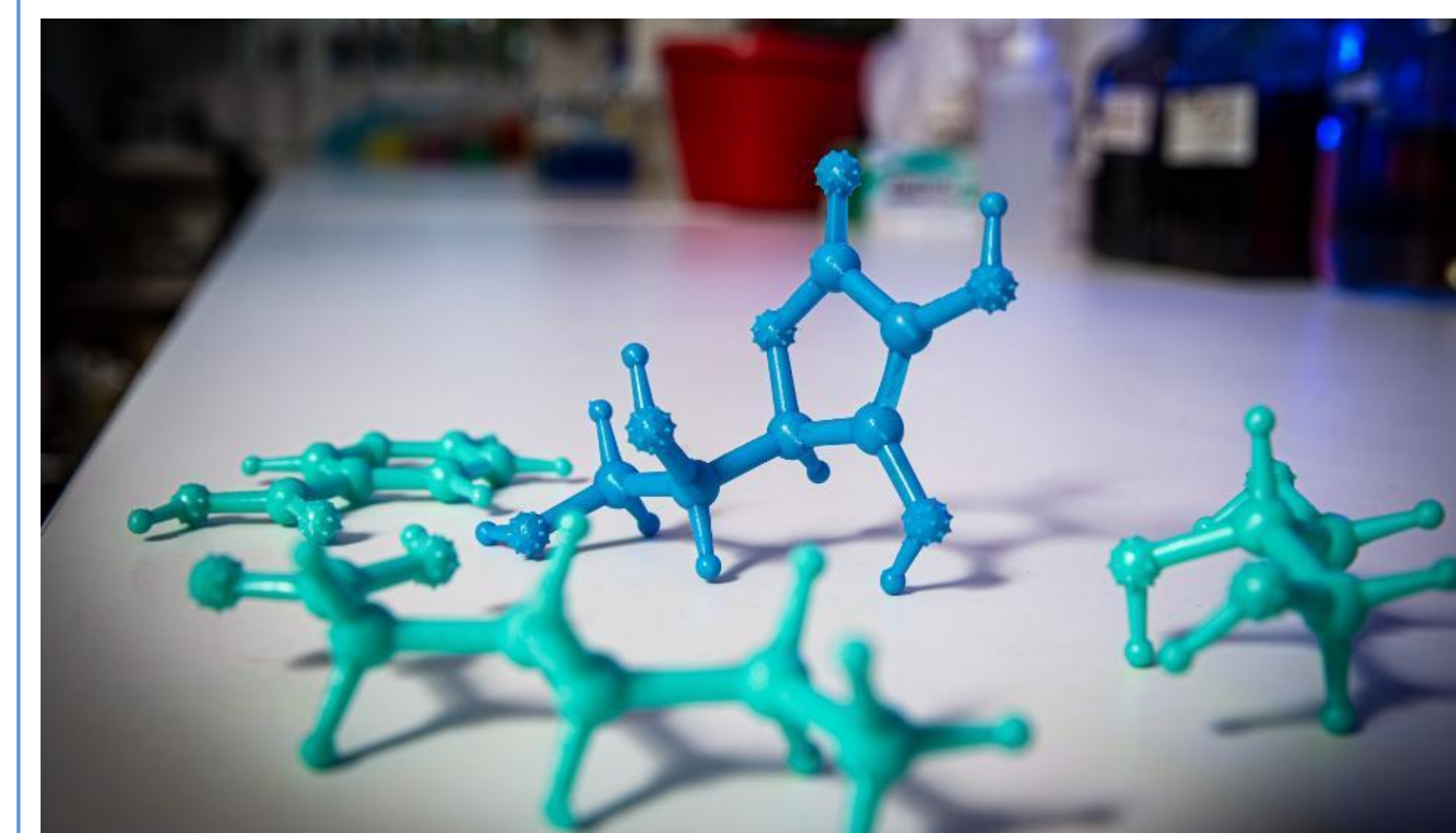
- Student organizations
- Advocacy groups

### **Create mentorship programs**

- Mentees and mentors can learn together

### **Use Technology to increase accessibility**

- Drones that help navigate campus
- BreakThru a Second Life world made for mentoring students with disabilities
- Photovoice highlights disabled student experiences on campus
- 3D printed materials provide tactile access to visual resources



3D printed atoms for visually impaired Chemistry students

### **Advocate for broad change**

- Legislative support for accommodation in post-secondary education

### **Transition programs**

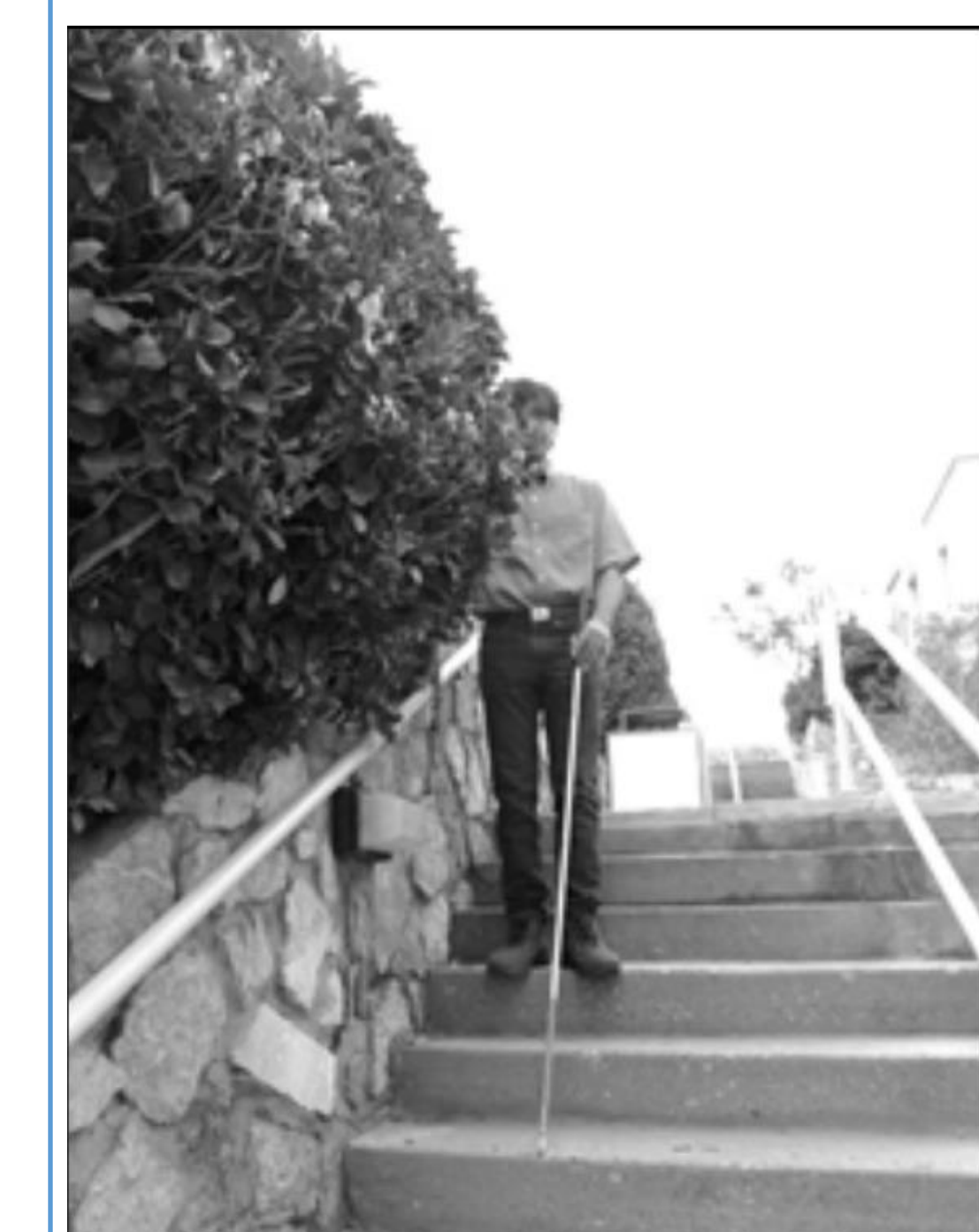
- Teach students college prep skills
- Help students make a plan

### **Universal Design for Learning**

- Provides equal opportunities to learn

## Conclusion

There are many ways to increase accessibility in STEM and help students transition from high school to college. It is important to remember all disabilities are different, even if several students have the same disability, they may have different needs. To ensure an institution is helping the most students possible, they must offer a variety of services and listen to their student's needs.



“Obstacles come in all shapes and forms when one does not have the vision to see the obstacle before it hits them in the face. One is upon this bush before one knows that the bush exists which can cause a hazard including falling or risking eye injury. To the nondisabled person, the obstacle is not readily apparent.”  
Photovoice Example

## Next Steps

1. Survey high school professionals to learn about accommodations and student support at that level
2. Survey Mines students to learn about challenges and persistence
3. Use the data to find ways to make Mines more accessible