



Beyond Accommodation:
Improving the Sense of
Belonging in Skill-Focused Lab
Activities for Students -

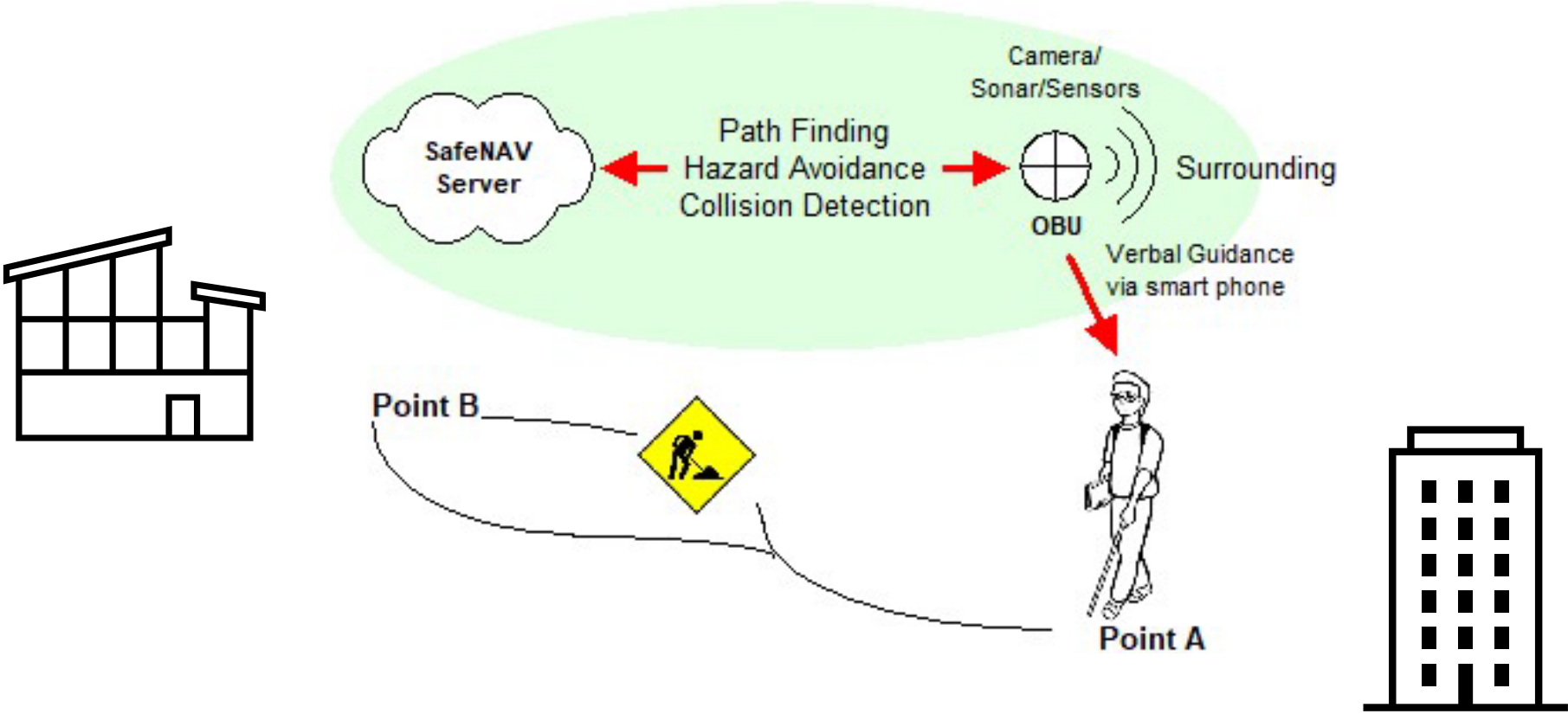
The Baseline Report

Isaac Chang @ Technology

Elahe Javadi @ Information
Technology

Jianwei Lai @ Information
Technology

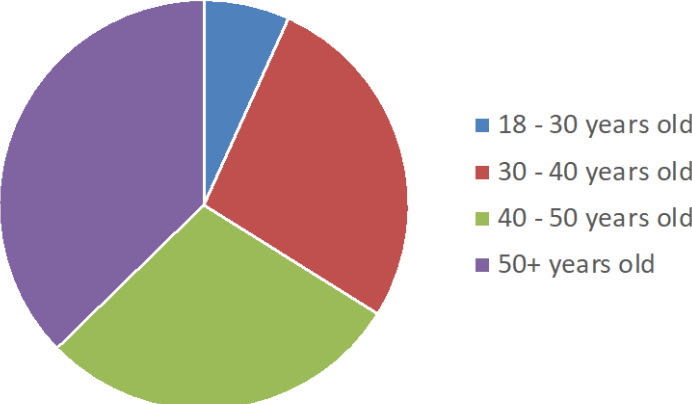
Their Campus Experience



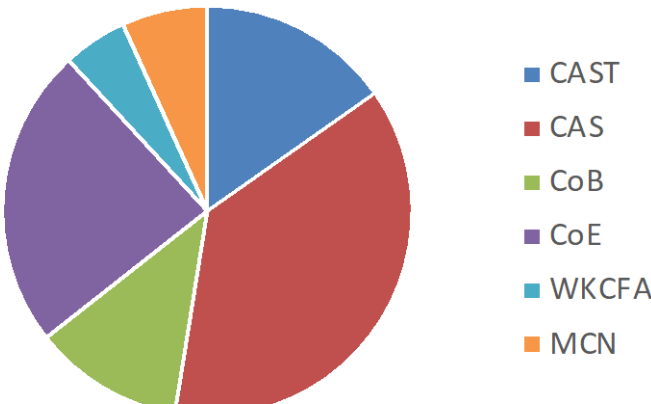
Survey Participant Background

(59 total)

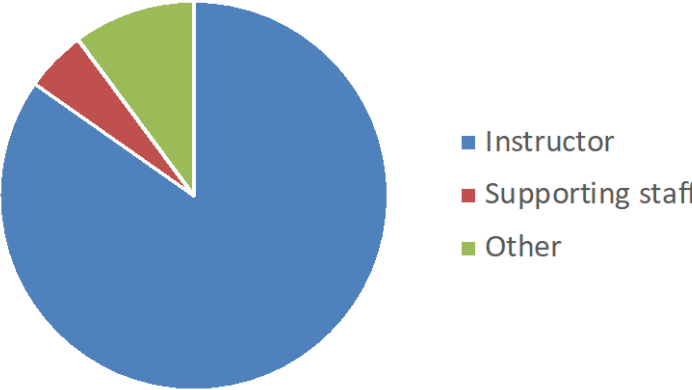
Age Distribution



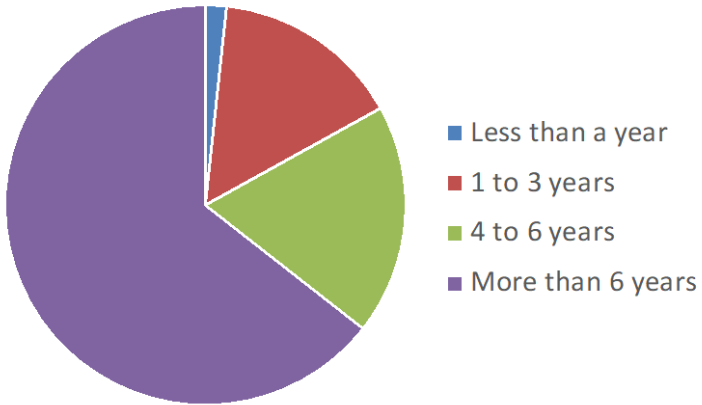
Participant Affiliation



Job Description



Experience



Course Delivery

	CAST	CAS	CoB	CoE	WKCFA	MCN
Total Count (Answering)	8	19	6	10	3	4
Text-based content (e.g., readings, etc.)	100.0%	94.7%	100.0%	90.0%	100.0%	100.0%
Static materials (e.g., images, diagrams, etc.)	87.5%	73.7%	100.0%	80.0%	100.0%	100.0%
Audio content (e.g., recording, podcast, etc.)	25.0%	47.4%	66.7%	80.0%	66.7%	25.0%
Video -based content (e.g., YouTube, simulation, etc.)	62.5%	89.5%	83.3%	70.0%	100.0%	100.0%
Others (Please specify)	25.0%	21.1%	16.7%	30.0%	33.3%	25.0%

Assessment Strategy

	CAST	CAS	CoB	CoE	WKCFA	MCN
Total Count (Answering)	8	19	6	10	3	4
Written assignments or recordings	75.0%	94.7%	100.0%	80.0%	100.0%	75.0%
Hands-on lab activities and reports	87.5%	31.6%	66.7%	70.0%	66.7%	75.0%
Oral presentations (individual or group, Expo, etc.)	62.5%	68.4%	83.3%	50.0%	100.0%	75.0%
Group projects	75.0%	52.6%	66.7%	50.0%	100.0%	75.0%
Exams or quizzes	87.5%	84.2%	66.7%	50.0%	66.7%	50.0%
Others (Please specify)	12.5%	31.6%	16.7%	20.0%	0.0%	25.0%
Assessment selected by students	CAST	CAS	CoB	CoE	WKCFA	MCN
Yes	25.0%	5.3%	0.0%	40.0%	33.3%	0.0%
Maybe	12.5%	31.6%	33.3%	50.0%	33.3%	25.0%
No	62.5%	63.2%	66.7%	10.0%	33.3%	75.0%

Experience with Visually Impaired Students (VIS)

VIS Encountered	CAST	CAS	CoB	CoE	WKCFA	MCN
Total Count (Answering)	8	19	6	10	3	4
Yes	25.0%	36.8%	33.3%	40.0%	66.7%	0.0%
No	75.0%	63.2%	66.7%	60.0%	33.3%	100.0%
Assistive Technology Used						
Always	12.5%	21.1%	33.3%	20.0%	33.3%	25.0%
Most of the time	25.0%	31.6%	16.7%	30.0%	0.0%	0.0%
About half the time	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%
Sometimes	25.0%	26.3%	50.0%	10.0%	33.3%	0.0%
Never	37.5%	10.5%	0.0%	40.0%	33.3%	75.0%

Alternative Formats & Options

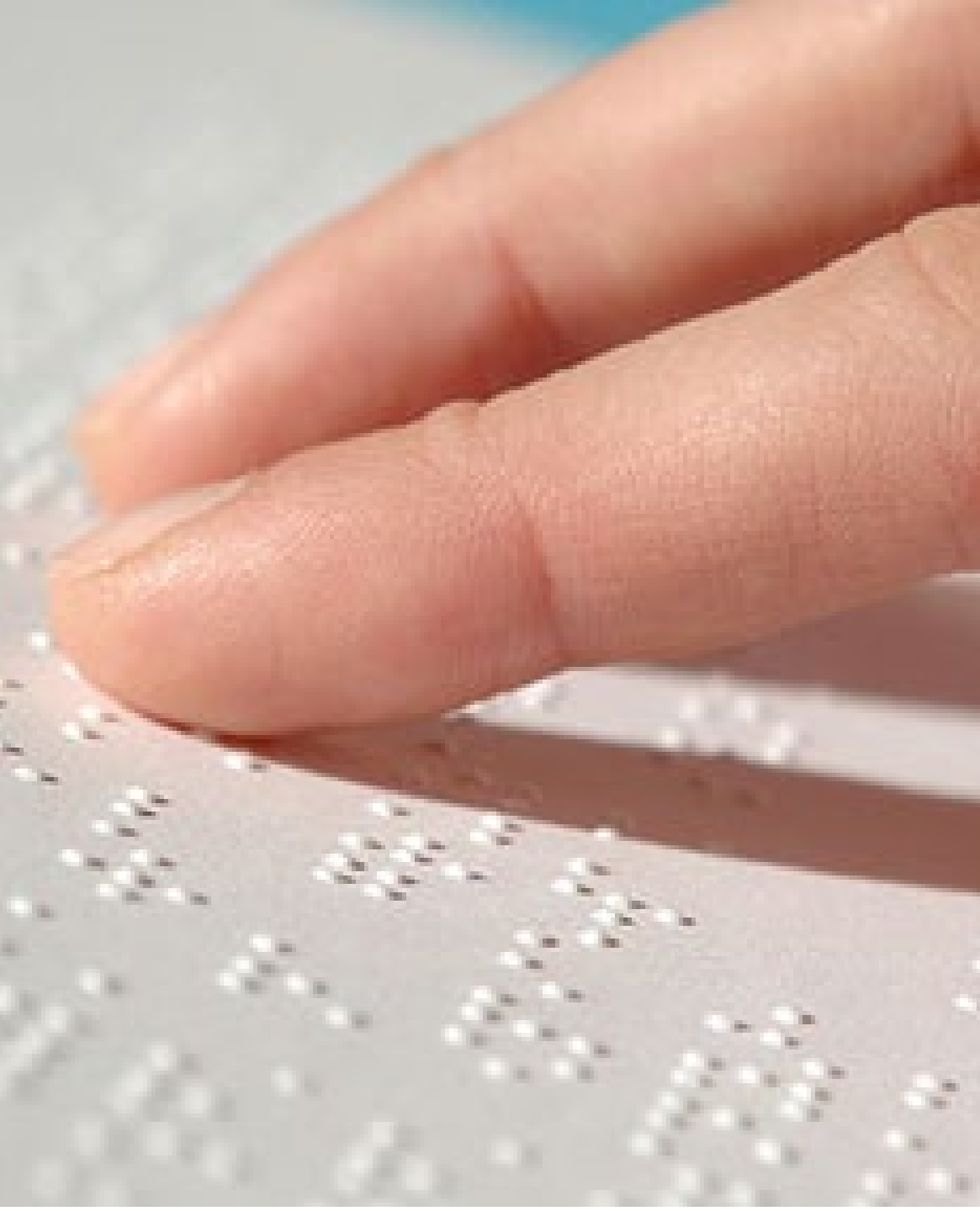
Frequency for Alternative Formats	CAST - 8	CAS - 19	CoB - 6	CoE - 10	WKCFA - 3	MCN - 4
Always	0.0%	5.3%	16.7%	20.0%	0.0%	25.0%
Most of the time	0.0%	10.5%	16.7%	30.0%	0.0%	0.0%
About half the time	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%
Sometimes	0.0%	10.5%	33.3%	10.0%	33.3%	25.0%
Never	100.0%	63.2%	33.3%	40.0%	66.7%	50.0%
Options selected by VIS	CAST - 8	CAS - 19	CoB - 6	CoE - 10	WKCFA - 3	MCN - 4
Always	12.5%	26.3%	33.3%	50.0%	66.7%	25.0%
Most of the time	0.0%	5.3%	16.7%	0.0%	0.0%	0.0%
About half the time	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%
Sometimes	.0%	26.3%	16.7%	0.0%	0.0%	50.0%
Never	87.5%	36.8%	33.3%	50.0%	33.3%	25.0%

Accommodation

Alternative Formats for Course Material	CAST - 5	CAS - 14	CoB - 6	CoE - 7	WKCF - 3	MCN - 4
Yes, a wide range of options	20.0%	0.0%	16.7%	0.0%	0.0%	0.0%
Yes, some options	0.0%	64.3%	66.7%	57.1%	0.0%	25.0%
No, very limited options	20.0%	28.6%	16.7%	28.6%	100.0%	50.0%
No, no options	60.0%	7.1%	0.0%	14.3%	0.0%	25.0%
Assignment or Project Options						
Yes	20.0%	14.3%	0.0%	28.6%	33.3%	50.0%
Maybe	0.0%	50.0%	66.7%	28.6%	33.3%	50.0%
No	80.0%	35.7%	33.3%	42.9%	33.3%	0.0%
Need Consideration for VIS						
Yes, consistently.	40.0%	7.1%	50.0%	28.6%	0.0%	25.0%
Yes, to some extent.	0.0%	50.0%	16.7%	28.6%	0.0%	25.0%
No, limited consideration.	0.0%	42.9%	16.7%	14.3%	33.3%	25.0%
No, minimal consideration.	60.0%	0.0%	16.7%	28.6%	66.7%	25.0%

ISU Facility & Support for VIS

Accessibility for College Physical Spaces	CAST - 5	CAS - 13	CoB - 6	CoE - 6	WFCFA - 3	MCN - 3
Very accessible	0.0%	0.0%	33.3%	0.0%	33.3%	0.0%
Somewhat accessible	40.0%	61.5%	50.0%	33.3%	0.0%	33.3%
Not very accessible	40.0%	23.1%	16.7%	50.0%	0.0%	66.7%
Not accessible at all	20.0%	7.7%	0.0%	0.0%	66.7%	0.0%
Not applicable (e.g., online courses)	0.0%	7.7%	0.0%	16.7%	0.0%	0.0%
Work with Specialists for VIS Support						
Always	0.0%	7.7%	0.0%	16.7%	0.0%	0.0%
Most of the time	0.0%	7.7%	16.7%	33.3%	0.0%	0.0%
About half the time	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sometimes	40.0%	7.7%	0.0%	16.7%	0.0%	0.0%
Never	60.0%	76.9%	83.3%	33.3%	100.0%	100.0%
VIS Support Effectiveness						
Very effective	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Somewhat effective	20.0%	30.8%	0.0%	0.0%	33.3%	0.0%
Moderately effective	20.0%	7.7%	16.7%	33.3%	0.0%	0.0%
Ineffective	20.0%	0.0%	0.0%	16.7%	0.0%	0.0%
Not applicable (I don't have experience with support services)	40.0%	61.5%	83.3%	50.0%	66.7%	100.0%

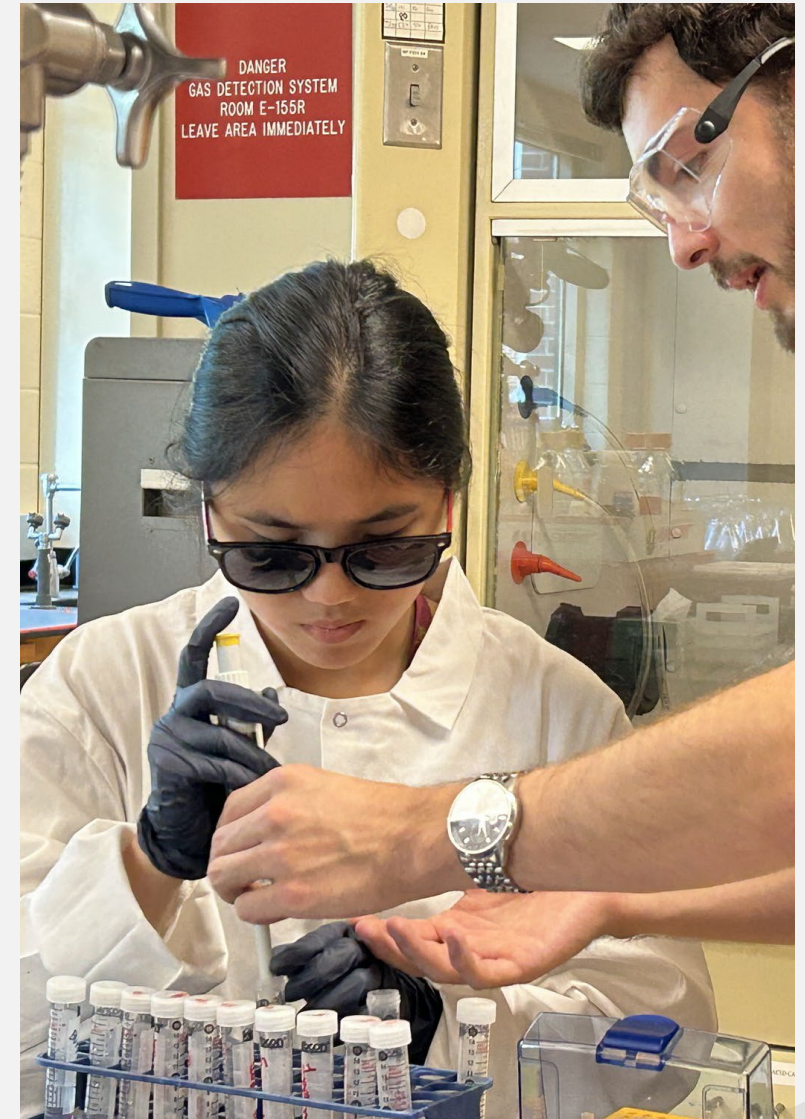


Recommendation

- **Universal design**
 - Include screen readable text description for all graphics and images
 - Audio/Podcast recording of lectures, directions, questions, assignments, etc.
- **Physical access**
 - Seating preferences
 - Large print and paper copy
- **Support**
 - 1 on 1 interaction, class dialogue, oral presentation
 - Utilize SAAS support and build supporting communities

ISU Pain Points

- Services provided by SAAS
 - Resource information
 - Service availability
- Faculty support
 - No direct support from disability experts
 - Not enough training
- Students in class
 - Class time allocation
 - Fairness



<https://baylorlariat.com/2023/11/09/baylor-professor-advocates-for-blind-visually-impaired-students-in-labs/>



The Next Step

- Technology-aided campus navigation
 - Ability to navigate campus safely
 - Design, build & test
 - Support from Facility, Tech Solutions, and SAAS
- CAST DEBI Grant Award
 - Panel discussion
 - Focus group
 - Team building