17th Annual Charles Carpenter Memorial Lecture

On My Own: The Challenge and Promise of Building Equitable STEM Transfer Pathways

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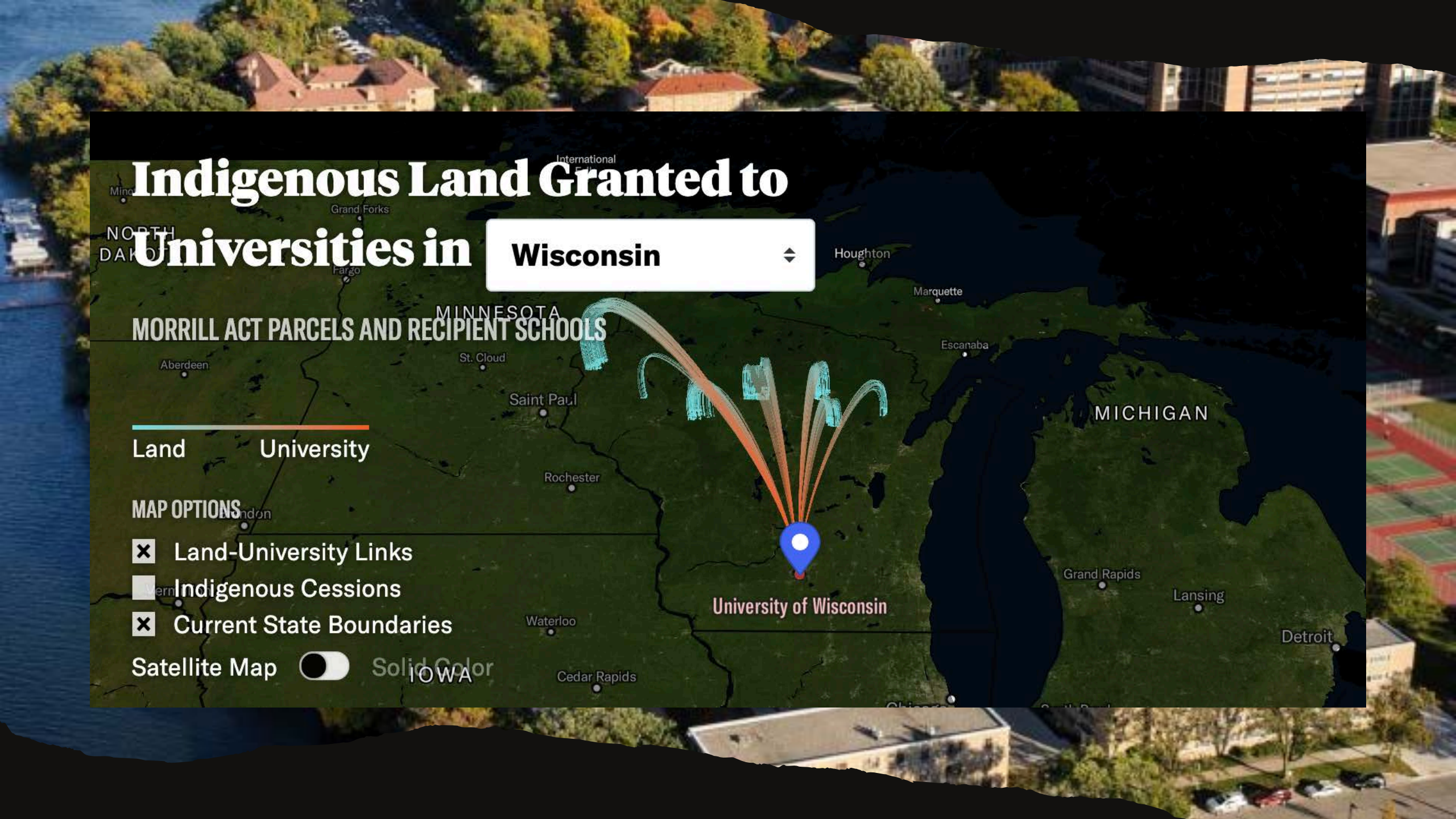
Indigenous Land Granted to Universities in
Wisconsin
MORRILL ACT PARCELS AND RECIPIENT SCHOOLS
Land
University
MAP OPTIONS
Land-University Links
Indigenous Cessions
Current State Boundaries
Satellite Map
Solid Color
University of Wisconsin
MINNESOTA
MICHIGAN
IOWA
Grand Forks
Fargo
Houghton
Marquette
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St. Cloud
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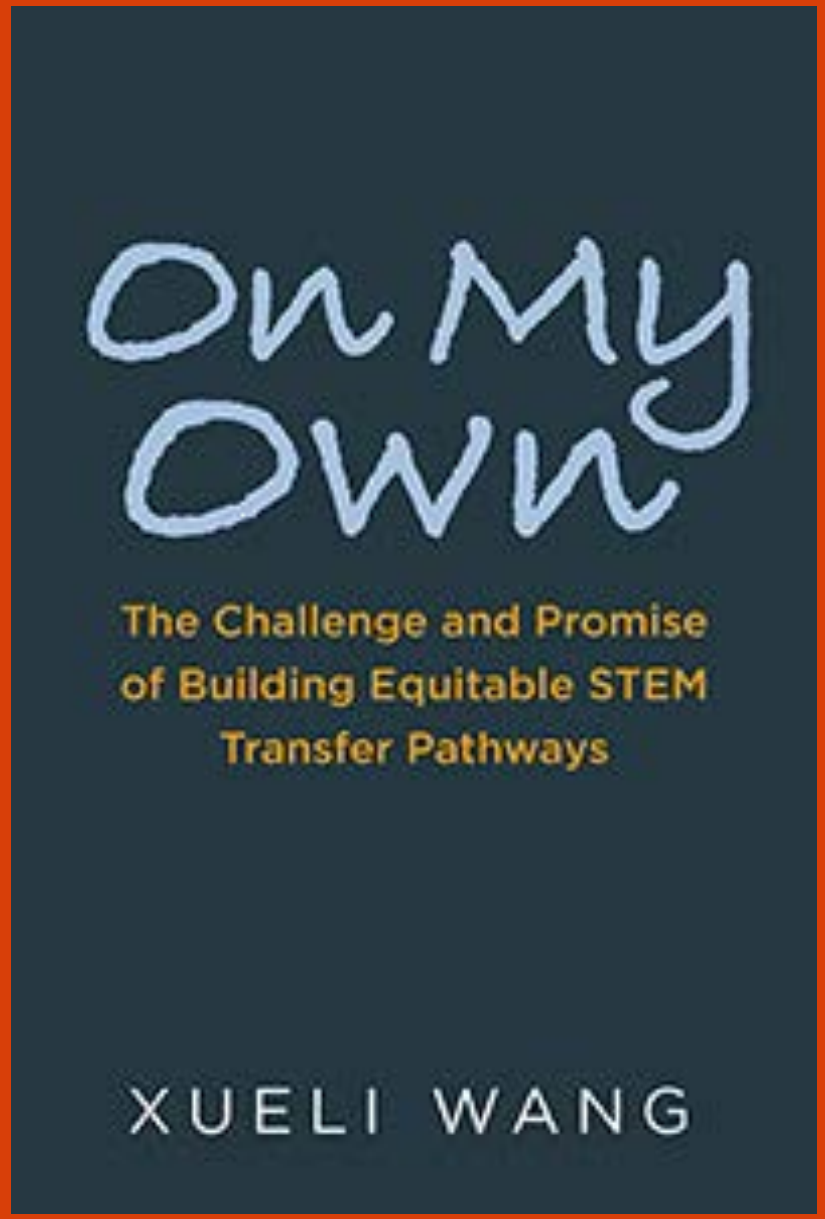
Equitable transfer pathways in STEM and beyond

- *"On My Own"* & its underlying research
- Five key learnings from the book
- What's next?



2020 Harvard Education Press

Transfer as a prominent societal and national policy issue

The community college transfer mission—democracy and mobility

Transfer students as successful and likely to attain bachelor's degree or enroll in graduate school as students starting out directly at four-year institutions

“But many of us DIDN’T make it here.”

–Kimberly

More on STEM transfer

Transfer aspiration-attainment gap

- 80% vs. 25% overall
- 77.9% vs. 10.2% in STEM

STEM policy narratives portraying community colleges as “mid-skills” providers

TRANSFER AS AN ISSUE OF MOBILITY, EQUITY, AND JUSTICE

Why do students with the same desire to transfer end up on different paths?

And what can we do to reduce the gap between what students aspire to and what they actually attain?

Longitudinal mixed methods study (2014 - ~2018)

Two-year colleges with a transfer mission in a Midwestern state

About 1,670 students beginning in STEM programs or courses

Data sources

Survey data: *Expanding STEM Talent Survey*	Administrative and transcript records	Student interviews

Longitudinal mixed methods study

Target population **3,885**	Base year survey Sample size ***3,000*** *Respondents* ***1,670 (56.6%)***	Follow-up interviews **(43)**	1st follow-up survey *Sample size* ***1,670*** *Respondents* ***1,250 (74.6%)***	Follow-up interviews **(34)**	2nd follow-up survey *Sample size* ***1,670*** *Respondents* ***1,250 (74.9%)***	Final follow-up interviews **(45)**
Fall 2014	**Fall 2014**	**Summer 2015**	**2015/2016**	**Summer 2016**	**Spring 2018**	**Summer 2018~**

Colleagues at participating institutions *for supporting the NSF proposal, providing input, ongoing help with administrative and National Student Clearinghouse data.*

Research team members*: Seo Young Lee, Kelly Wickersham, Amy Prevost, Yen Lee, Ning Sun, Ashley Gaskew, Na Lor, Brit Wagner, Brett Nachman, & Xiwei Zhu*

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Toward realizing a fully equitable transfer pathway

KEY LEARNINGS FROM THE BOOK

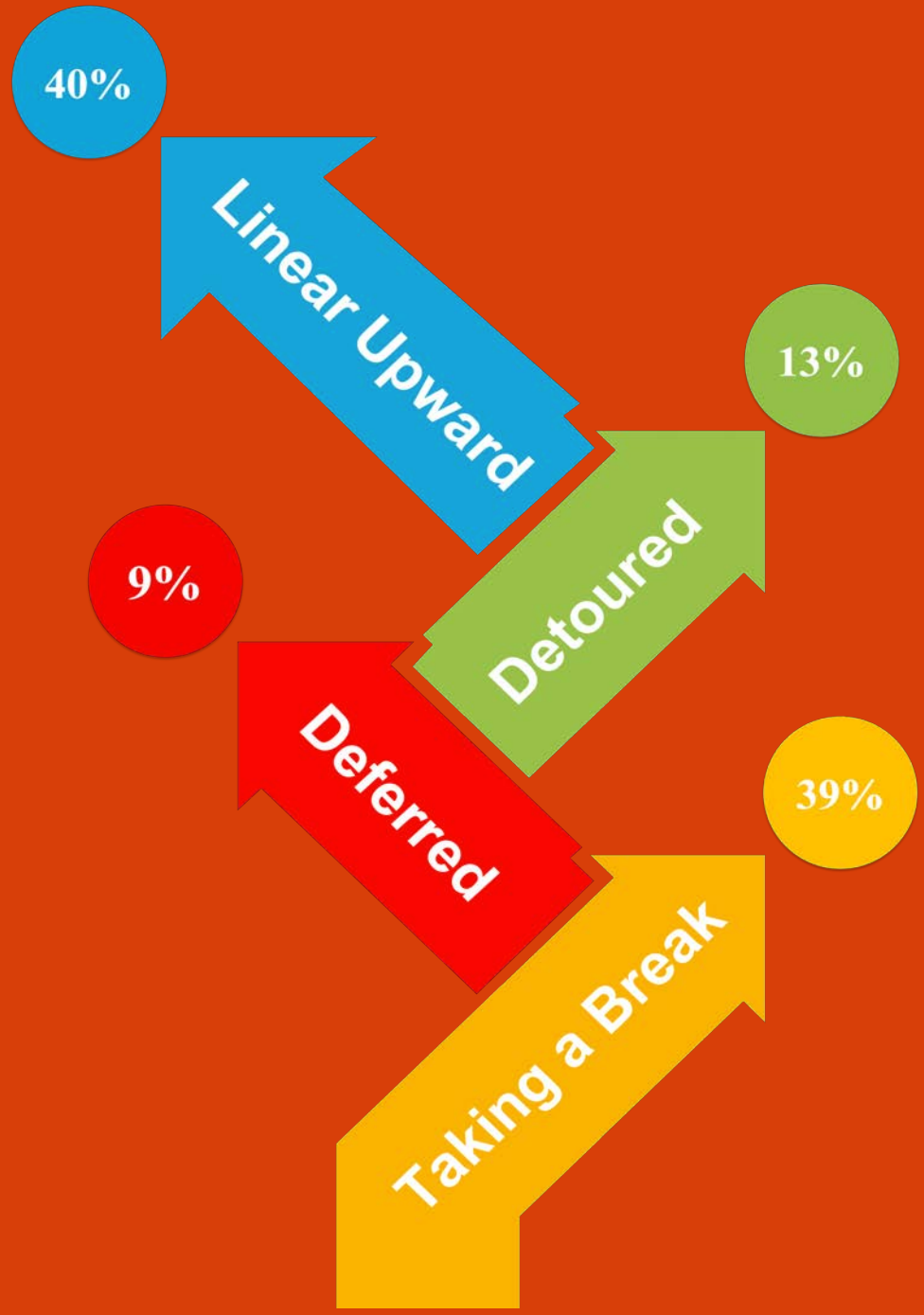
1. Transfer NOT (yet) equitable
2. “On my own”
3. Challenges
4. Promises
5. Call to action: Five ideas

My key learning #1

Transfer trajectories embedded with inequities

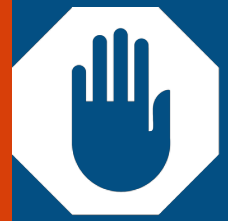
Four years later—

Four momentum trajectories



Four momentum trajectories

Taking a Break



"I can't make this decision on my own."
—Katy (White woman, first-generation, started in chemistry; shared ADHD concerns but told by "kind and supportive" instructor she's doing fine)

Detoured

"I've already wasted the last six years trying to figure out what I want to do."
—Seamus (Multi-Racial Black woman, biotech, loved her major but key transferrable courses offered once a year and in conflict with her schedule)

Deferred

"I have to get a job first."
—Kanda (Native American woman, information technology; perfect GPA but had to give up transfer in final term due to costs and family with disabled brothers)

Linear Upward

"You got to do it (college) on your own."
—Jordan (White man, engineering; transferred into second choice major and lost credits)

Embedded inequities

From quantitative analysis: Trajectories are highly associated with preexisting resources and indicative of disparities in students' backgrounds and contexts.

From qualitative analysis: Although students were largely left to their own devices to negotiate their path to transfer, not every student had equal access to the same "devices," and the "devices" available to students were not of equal quality and utility.

My key learning #2

On My Own

ON MY OWN

Highly individual approaches to negotiating potential transfer path

Institutional side largely missing

Supports are incidental and unstructured

Students harbor doubts and uncertainties

The more "disadvantaged" students persevere to chart their own success

My key learning #3

Cultivating equitable transfer: Challenges

“So it’s like these courses [that transfer]…you can’t make it work with other things that you have going on, which kind of sucks because it prolongs the transfer process.”

– Seamus (Detoured)

“It was that final semester, I was like ‘I have to get a job first. I’m going to finish this up and then I’m going to see if I can get a job within these next couple of months.’ And then kind of save up some money and go back to school once I have the funds to do so.” – **Kanda** (Deferred)

“I didn’t really know exactly the specific classes I should be taking at [community college] that were going to be helping me at [four-year institution].” – **Jordan** (Linear upward)

“I haven’t really been adept at managing, ‘cause I have like four jobs, and figuring out the jobs and the academics and the kids, and I don’t have access to internet, and so it makes it really challenging.” – **Katy** (Taking a break)

Lack of articulation in STEM majors

Lack of course pathways fitting students' scheduling needs

(Un)affordability of transfer

Converging & compounding barriers

Major structural issues

Entrenched politics

Resistance to change

Naïve belief in good intentions

My key learning #4

Cultivating equitable transfer:

Existing promises

Community college and transfer students are assets

Community college education as asset

Community college and transfer educators' commitment and reflexivity

My key learning #5

Call to action: Toward realizing a fully equitable transfer pathway

Addressing both structural and experiential barriers

FIVE IDEAS TO BEGIN WITH

- ✓ Put money where our mouth is
- ✓ Reimagine articulation ~~gatekeepers~~ → gateways
- ✓ Transfer NOT a community college issue alone
- ✓ Support the WHOLE person and journey
- ✓ Inclusivity ≠ SAMENESS

Do we promote an equity-minded culture that intentionally practices deep, honest reflection?

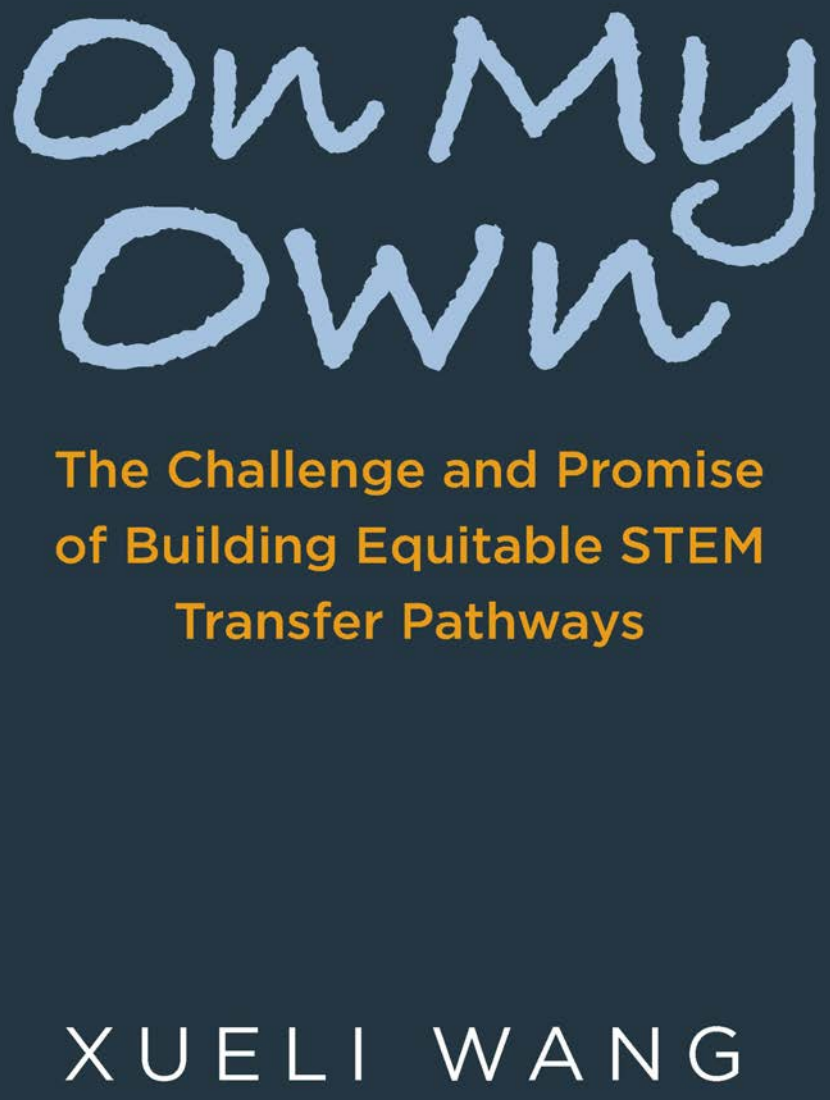
A reflective path toward real change

*Do our efforts serve students **justly** by addressing their **unique needs**?*

***WHO** is still **NOT** supported by our efforts, and how can we **CHANGE** that?*

“I know, having attended [Kanda’s community college] and participating through this study, it made me think how I can be the change in tech. It’s giving me a lot of ideas about how to improve diversity in tech, really promoting pathways through two-year colleges. Especially being a woman, being Native American, and really wanting to promote the background of what I can see our future of technology would be like, because we can’t build the future unless we have the future fully represented in it.”

– Kanda



THANK YOU!

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