

Klamath Connection: Trial Place Based Learning Community Helps Close Freshmen Achievement Gap



HSU is the Northernmost CSU Campus

County of Origin



CA Region of Origin (2014)

	Head Count	Percent
1-Local	79	6%
2-Northern CA	113	8%
3-SF Bay	214	15%
4-Sacramento	55	4%
5-Coast	29	2%
6-Central CA	108	8%
7-Los Angeles	561	40%
8-San Diego	115	8%
W-WUE state	85	6%
X-Other state	24	2%
Y-Foreign	3	0%
Grand Total	1,386	100%

Challenges



- **Six-year grad rate @ HSU = 42%**
 - 8% behind CSU average
- **Rate in STEM = 43%**
- **Gaps are greater for students from traditionally underrepresented groups (URG):**
 - 6 year graduation rate for URG 28%
 - 6 year graduation rate for URG in STEM is 20%



HSU HSI STEM – Four Components

Place-Based Learning Communities *



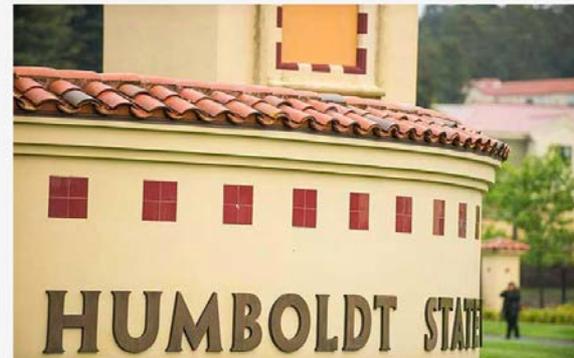
Expanded Tutoring Services **



Reformed Math Instruction



New Pathways for Transfer Students



Place-based Learning Community



Our logic model posits that *place-based learning communities* can effect change and meet absolute priorities of the HSI STEM grant.

Cohorts of first year students in linked courses (Sommo et al. 2012), with interdisciplinary themes rooted in our unique place.



Belonging & Community

Skills & Attitudes

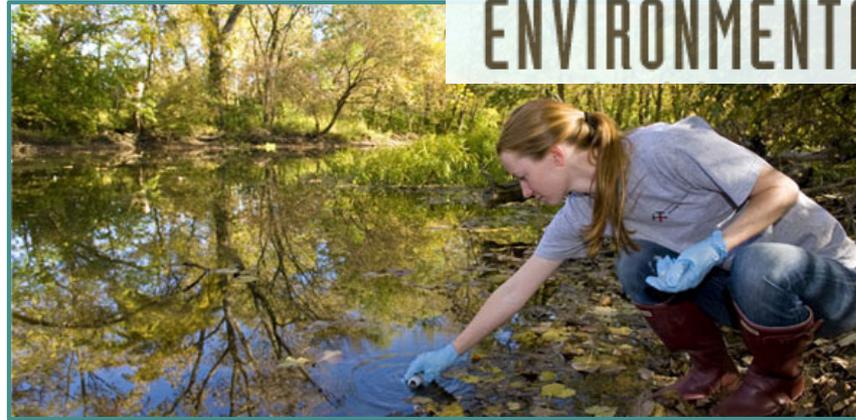
Academic achievement

Retention & Graduation

KLAMATH CONNECTION PROGRAM

Cohort 1 ('15-'16)

ENVIRONMENTAL SCIENCE



BIOLOGICAL
SCIENCES

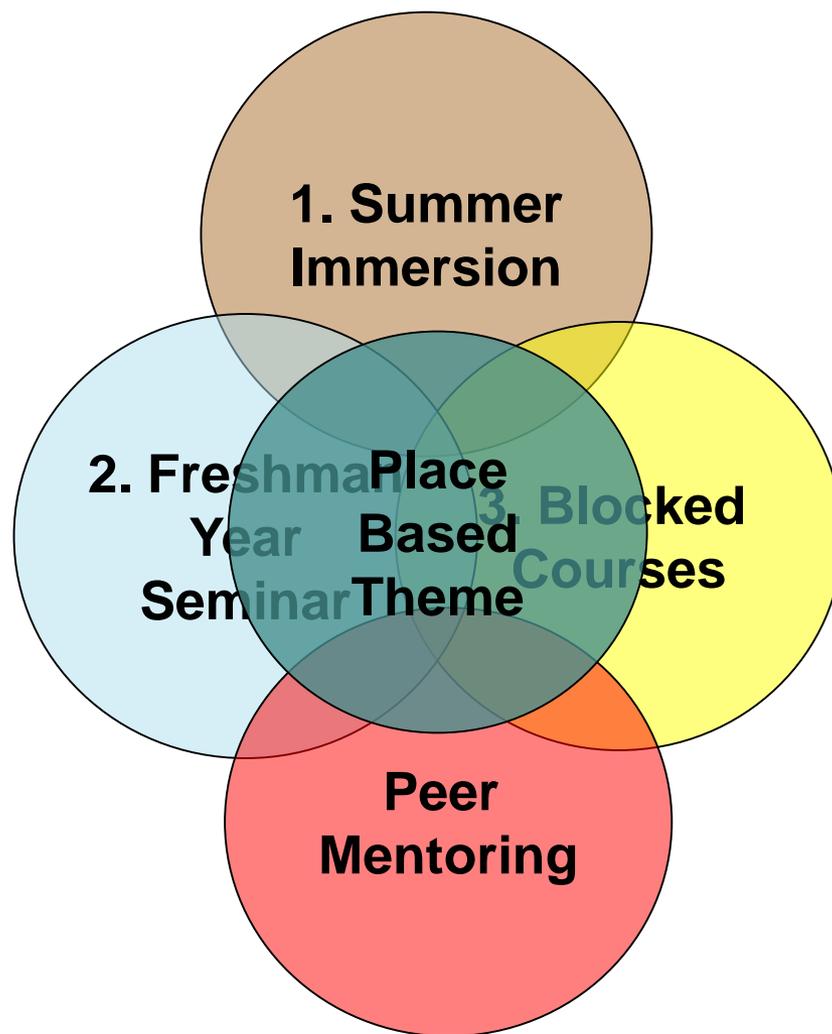
WILDLIFE



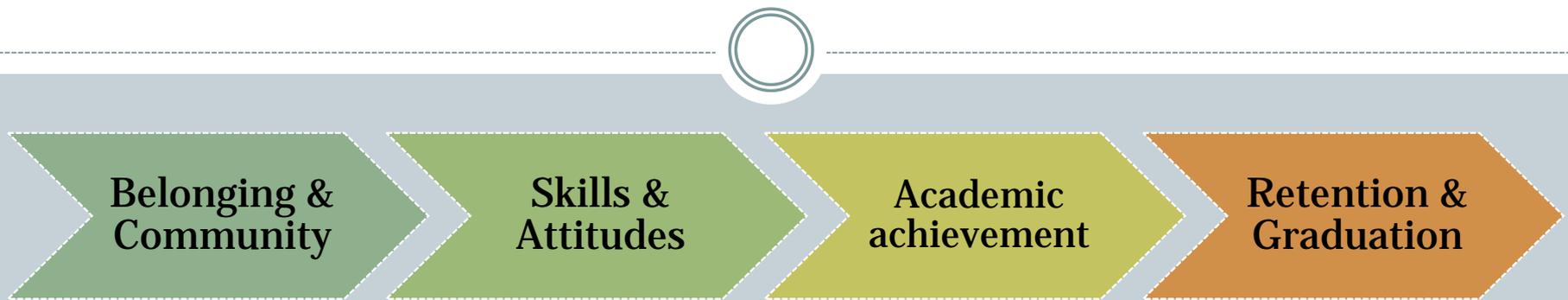
ZOOLOGY



The Klamath Connection Integrates High Impact Practices (HIPs) with a Place-Based Theme



Assessment



63 Students in 1st cohort ('15-'16):

- BIOL, ENVS, WLDF, ZOOL only
- None needing math remediation ('16-'17 cohort includes them)
- % first-gen, % low-income, region of origin, and HS GPA statistically similar to non KC freshmen in focus majors
- 34% underrepresented group, 47% low-income
- ('16-'17 cohort: 41% underrepresented, 41% low-income)



The Summer Immersion significantly cultivated community

% agreeing or strongly agreeing

Belonging & Community	Klamath Connection	Reference	χ^2
I feel connected to other students in my freshman year seminar.	74.6	36.2	$P < 0.01$
I am aware of campus resources that can help me complete my goal of a Bachelor of Science degree.	95.2	82.4	$P = 0.02$
I feel part of the HSU community.	88.9	70.2	$P = 0.02$
I am inspired to be a scientist.	91.8	83.6	$P = 0.06$
I am optimistic about my future in science.	95.2	84.1	$P = 0.04$
I am worried that science might not be for me. (score is % disagreeing or strongly disagreeing)	93.3	64.6	$P < 0.01$



**Belonging &
Community**

Skills &
Attitudes

Academic
achievement

Retention &
Graduation



*Belonging & community grew more for
KC than non-KC students*

MapWorks Factor; Spring	Klamath Connection	Reference	Mann- Whitney U
Commitment to the Institution	47.1	33.1	$P < 0.01$
Peer Connections	41.4	33.9	
Homesickness: Separation	38.0	31.1	
Homesickness: Distressed	34.2	33.2	
Academic Integration	39.7	34.1	
Social Integration	48.4	29.7	$P < 0.01$
Satisfaction with Institution	47.1	30.3	$P < 0.01$
On-Campus Living: Social Aspects	34.8	28.8	
On-Campus Living: Environment	31.8	30.5	
Campus Living: Roommate Relationship	25.9	27.7	

Belonging & Community

Skills & Attitudes

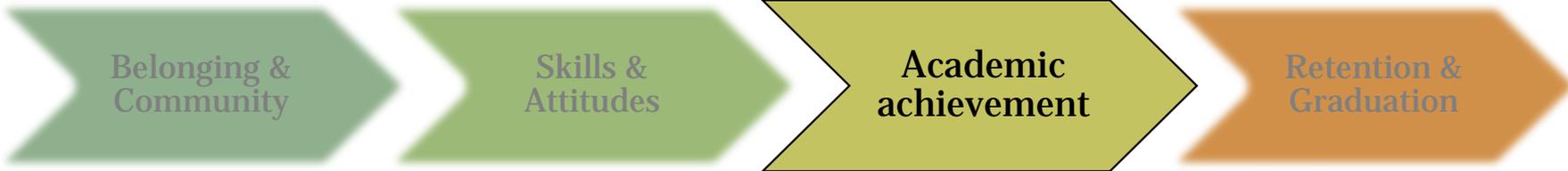
Academic achievement

Retention & Graduation



Skills & attitudes grew favorably in KC than non-KC students

MapWorks Factor; Spring	Klamath Connection	Reference	Mann-Whitney U
Self-Assessment: Communication Skills	38.7	36.9	
Self-Assessment: Analytical Skills	42.2	35.0	
Self-Assessment: Self-Discipline	46.4	34.7	$P < 0.01$
Self-Assessment: Time Management	41.9	35.2	
Basic Academic Behaviors	37.9	38.0	
Advanced Academic Behaviors	43.0	34.5	
Academic Self-Efficacy	42.2	35.0	
Academic Resiliency	35.6	38.5	
Test Anxiety	45.3	33.3	$P = 0.02$
Advanced Study Skills	37.7	37.4	



Belonging &
Community

Skills &
Attitudes

Academic
achievement

Retention &
Graduation

Compare first year...

- *Units earned toward degree*
- *GPA*
- *1st year retention in STEM and at university*

Compare raw values and also use 'propensity matching'

Show raw units earned

Show pie chart of ethnicity, and cross hatched LI

Show bar chart of HS GPA

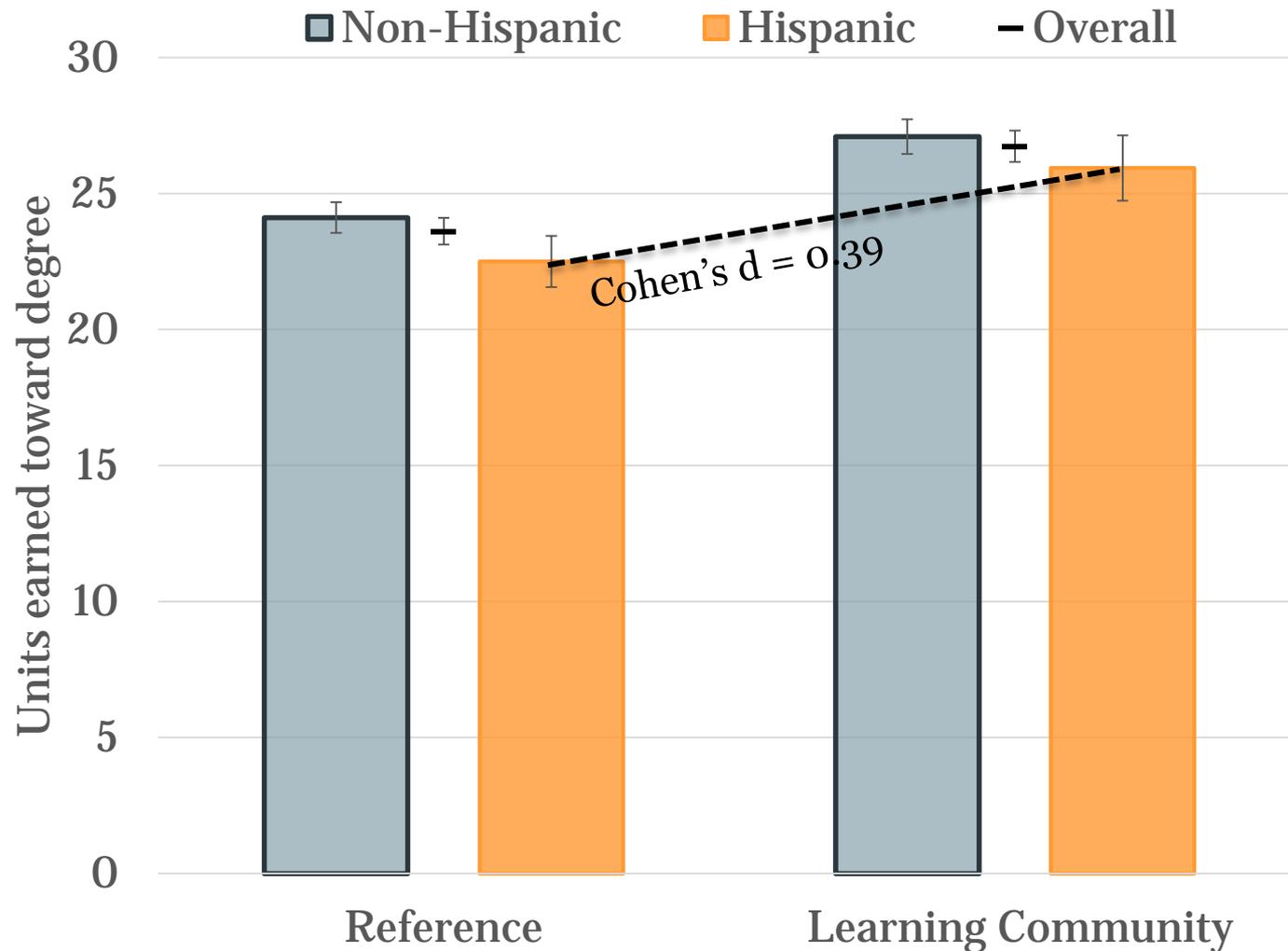




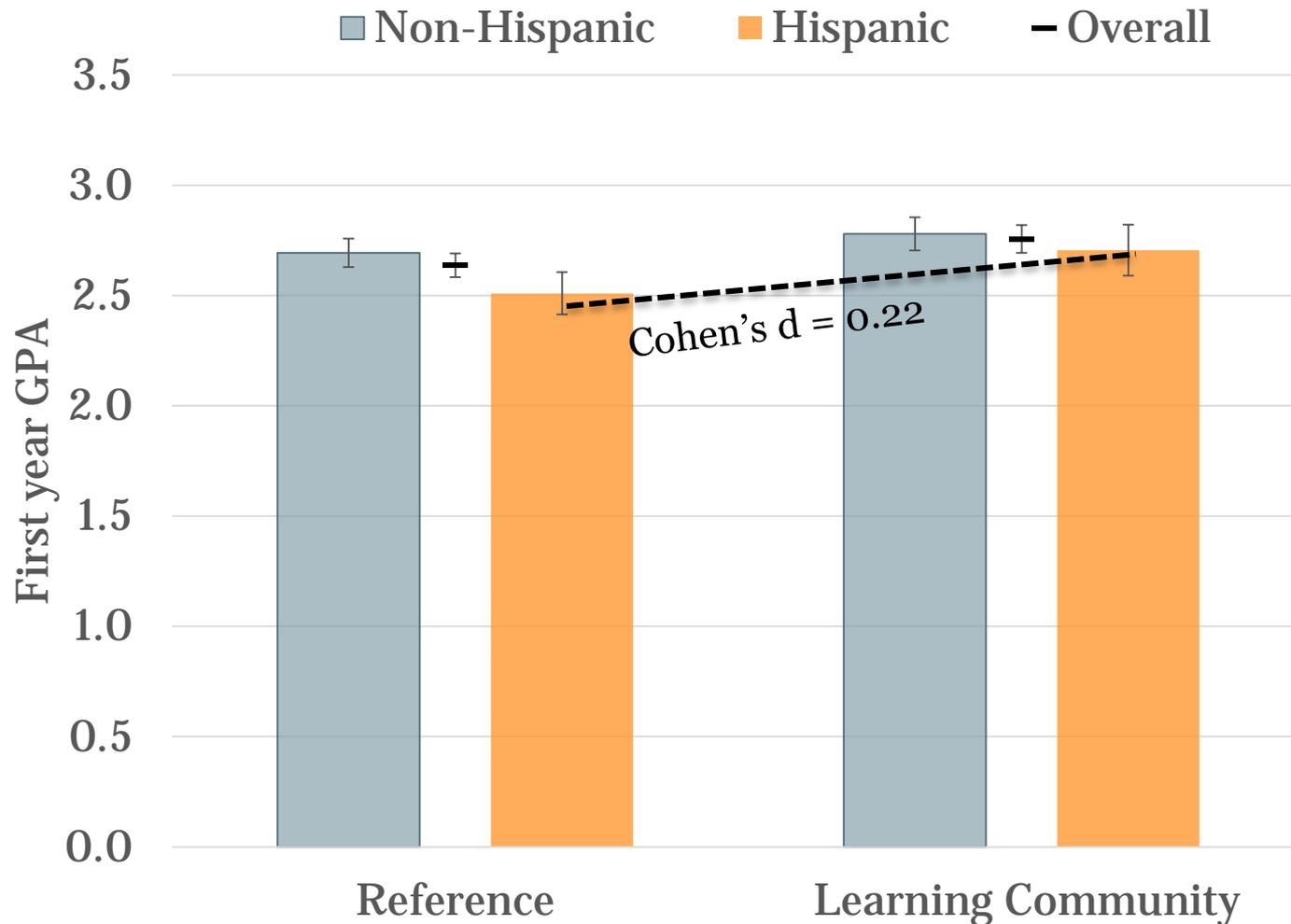
**Something that shows propensity matching, and revised
Show pie chart of ethnicity, and cross hatched LI**

Show bar chart of HS GPA

Learning community increased units earned toward degree

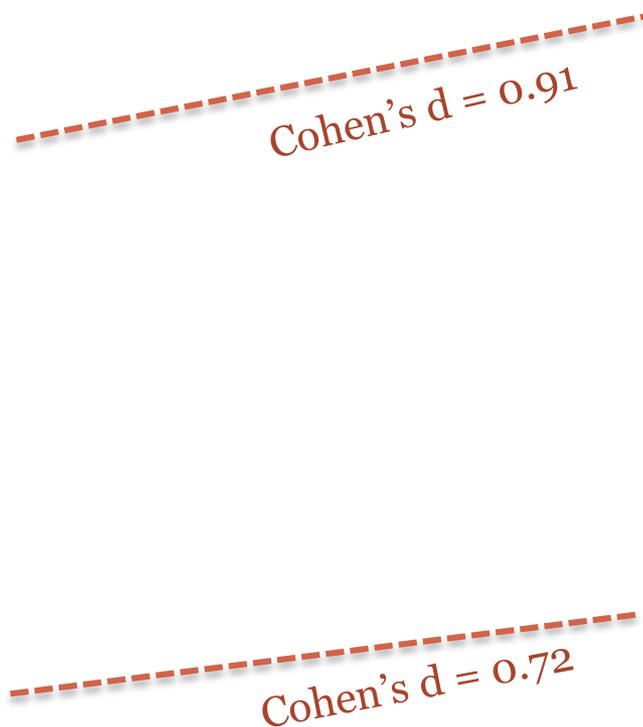


Learning community slightly increased first year GPA

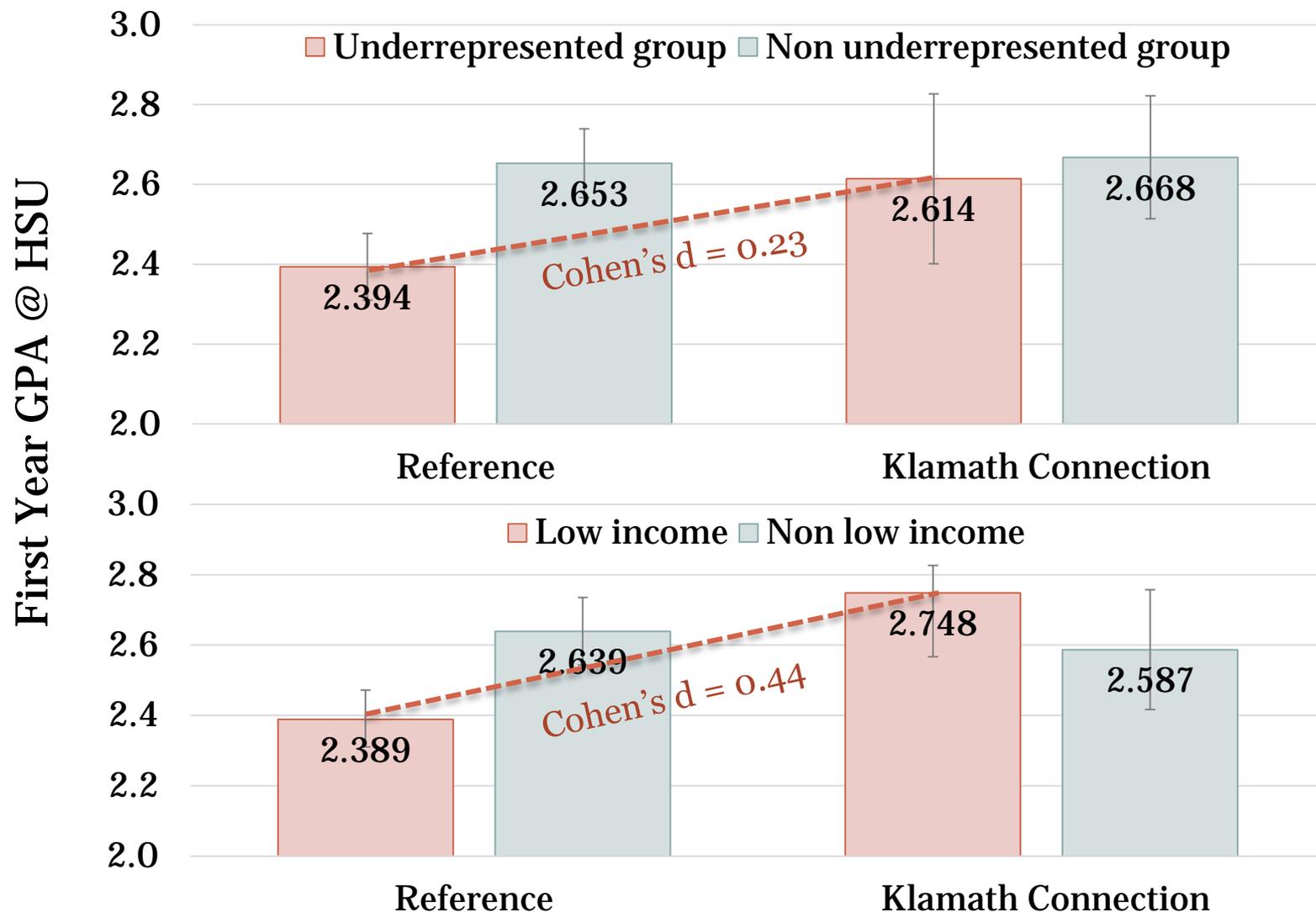


Learning community increased units earned toward degree

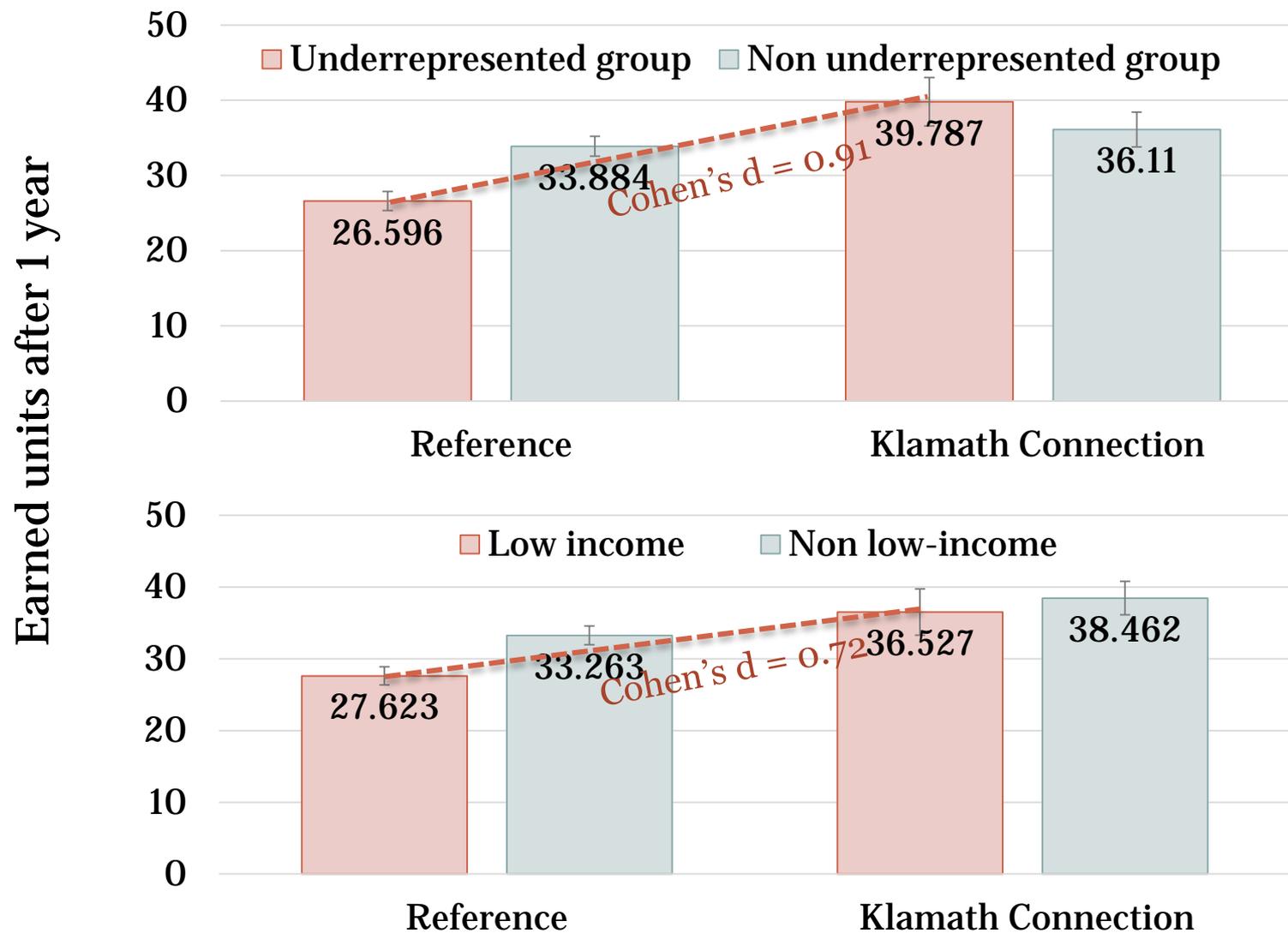
Earned units after 1 year

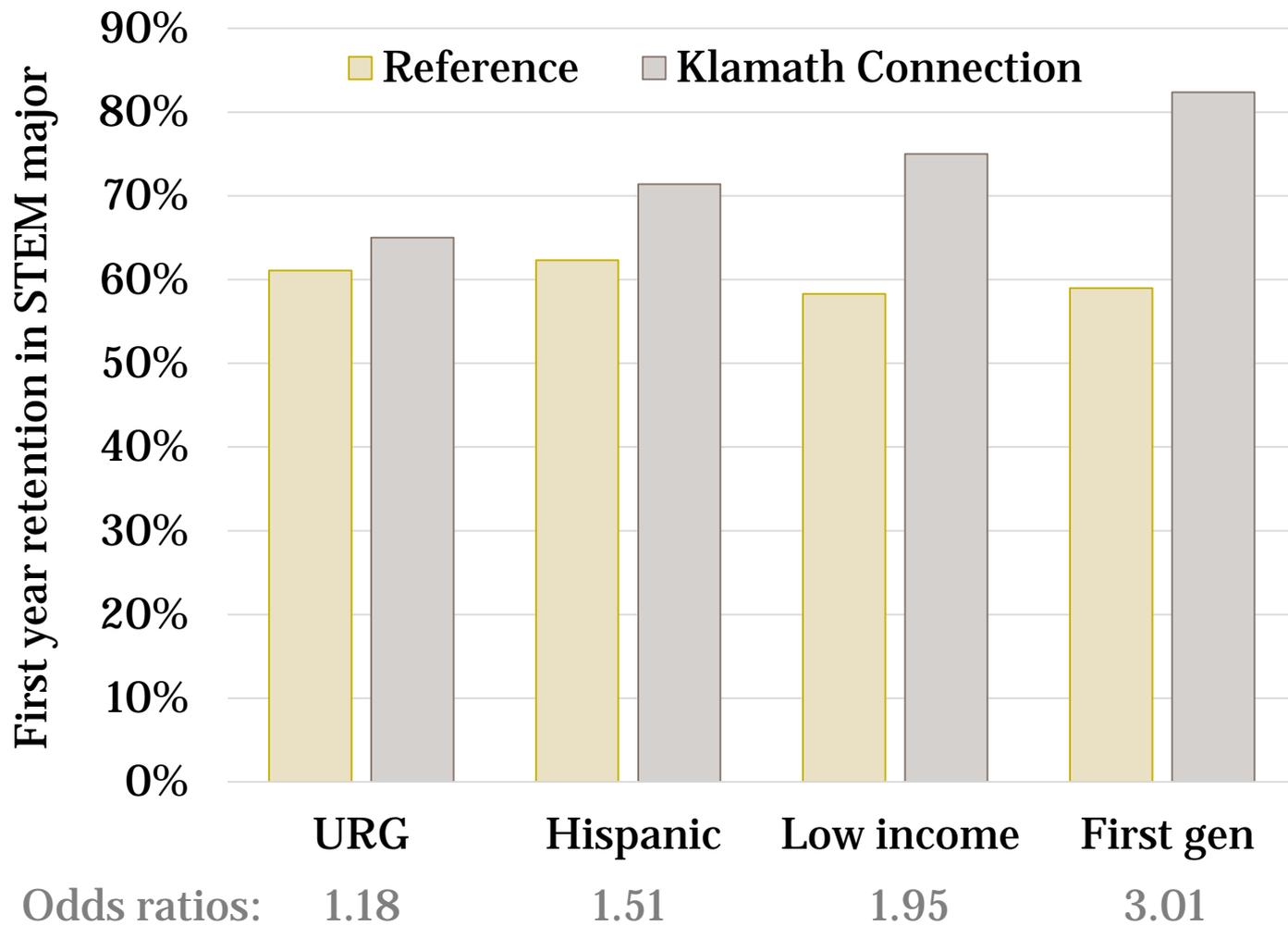


GPA's increased esp. for URG & low income students



Earned Units also increased



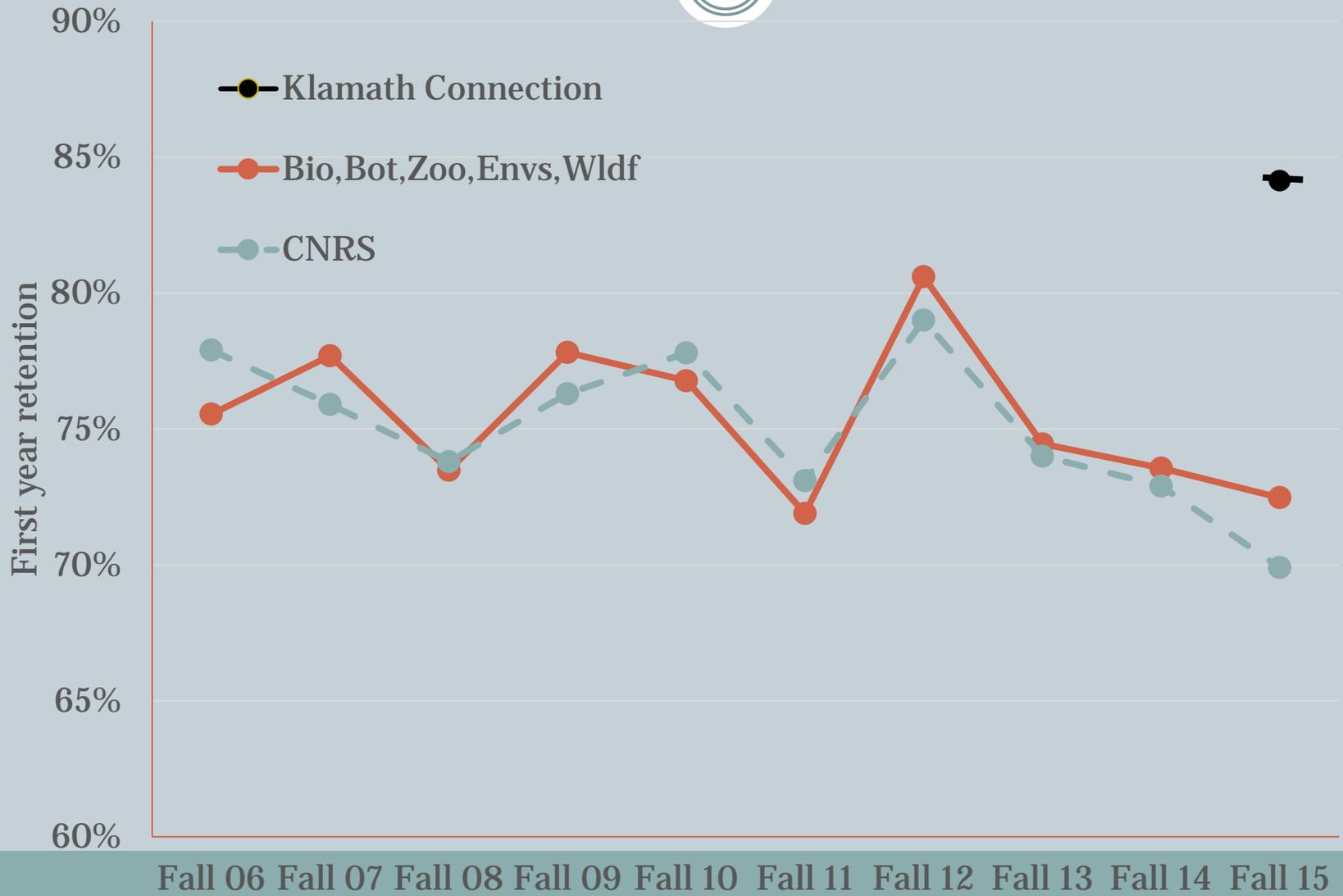


Belonging & Community

Skills & Attitudes

Academic achievement

Retention & Graduation

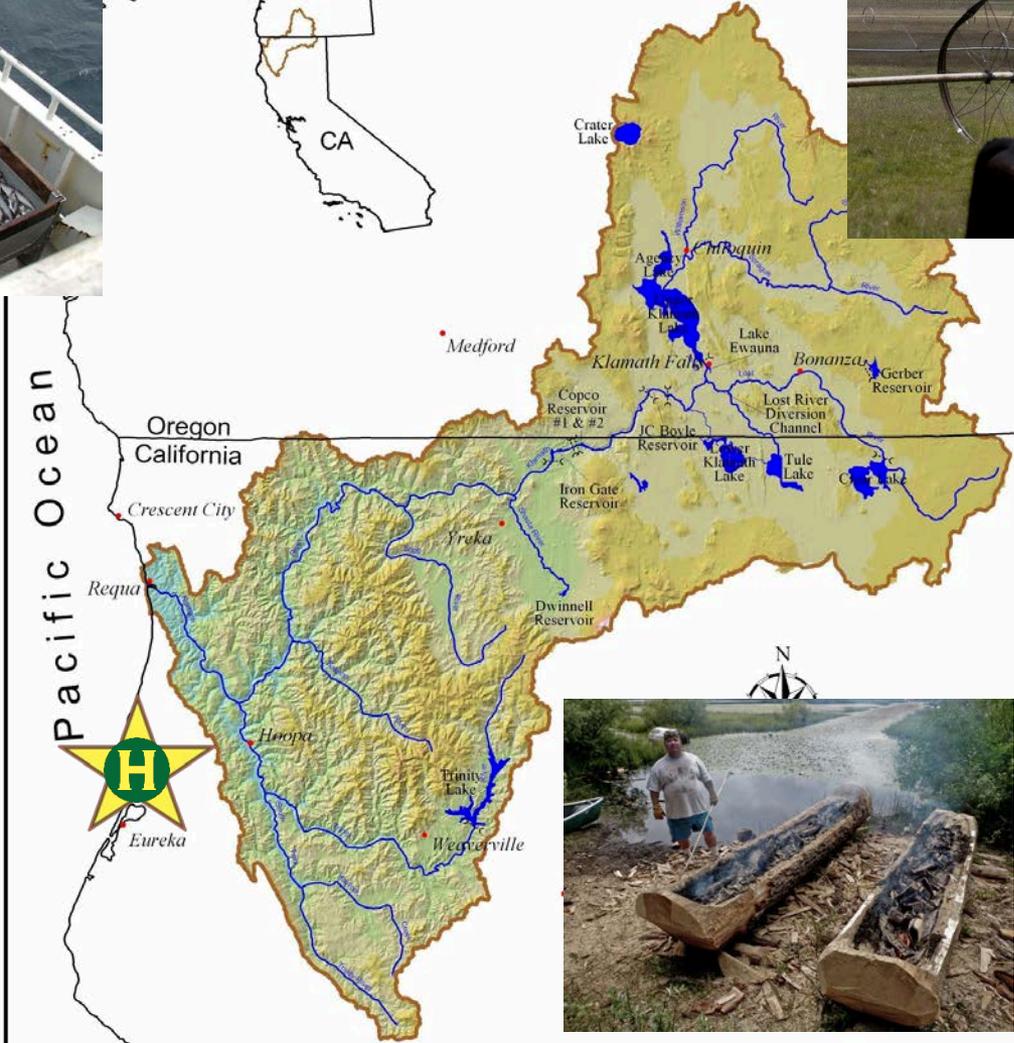


Caveats

- “Hawthorne effect”
- Self-selection
 - No sig difs in composition of participants and non-participants
 - HS GPA as covariate
 - Full analyses will involve propensity matching



Linking The Place to the Curriculum



Linking The Klamath to the Curriculum



The Klamath River Fish Kill of 2002: Analysis of Contributing Factors

Yurok Tribal

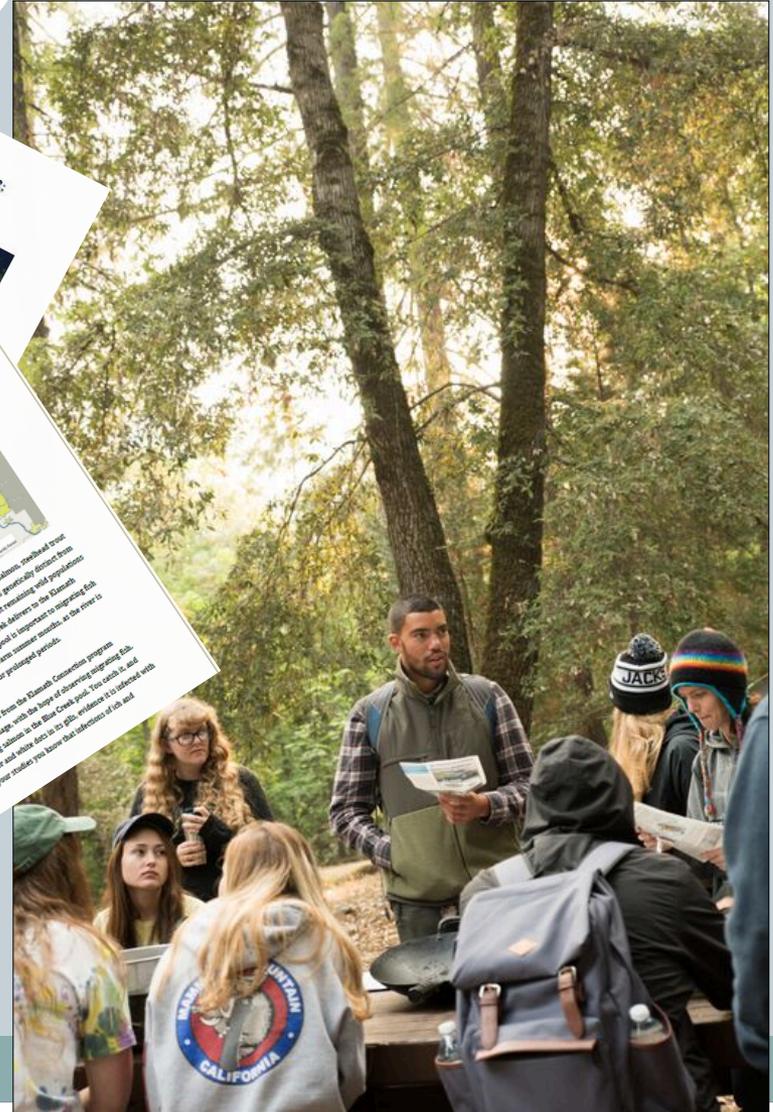
Final Report Prepared by: HSU's Klamath Watershed Institute

Full Report Available at: <http://www.klamathwater.org/2002/>

Background

Blue Creek is a small tributary to the Klamath. For an average of 200 (200 to) of salmon per year, it is the largest tributary between the confluence of the Klamath and the Yurok River and the ocean. It also supports the largest salmonid population in this reach of river, with three of its tributaries identified as being important to salmon spawning and rearing. Four different stakeholder submittal populations are represented in this drainage, including Chinook, salmon, coho salmon, steelhead trout and cutthroat trout. The Blue Creek Lake (the "Lake") is physically distinct from the Klamath River fish and not representative of the rest of the Klamath River basin. In addition, the lake, once water the creek detaches to the Klamath, appears like salmon are not present during the worst summer months, as the river is typically warmer than the fish can tolerate for protracted periods.

The Problem: You and some friends from the District Connection program are going to go to the Blue Creek drainage, with the hope of observing an important fish and wildlife resource. When you arrive, you see a large salmon in the Blue Creek pool. You catch it, and notice the fish has brown color and white dots in its gills, where it is different with fish and cutthroat. From your studies you know that cutthroat of fish and



Linking the Klamath To the Curriculum



HEALTH ADVISORY



AVOID WATER CONTACT IN THIS AREA OF THE KLAMATH RIVER

Pollution has resulted in high levels of blue-green algae that can produce harmful toxins. This has resulted in violations of the State's water quality standards *

- Do not use this water for drinking or cooking
- Do not consume fish livers or digestive organs, and wash fillets with drinking water

Children and pets are at greatest risk

For more information contact staff at:

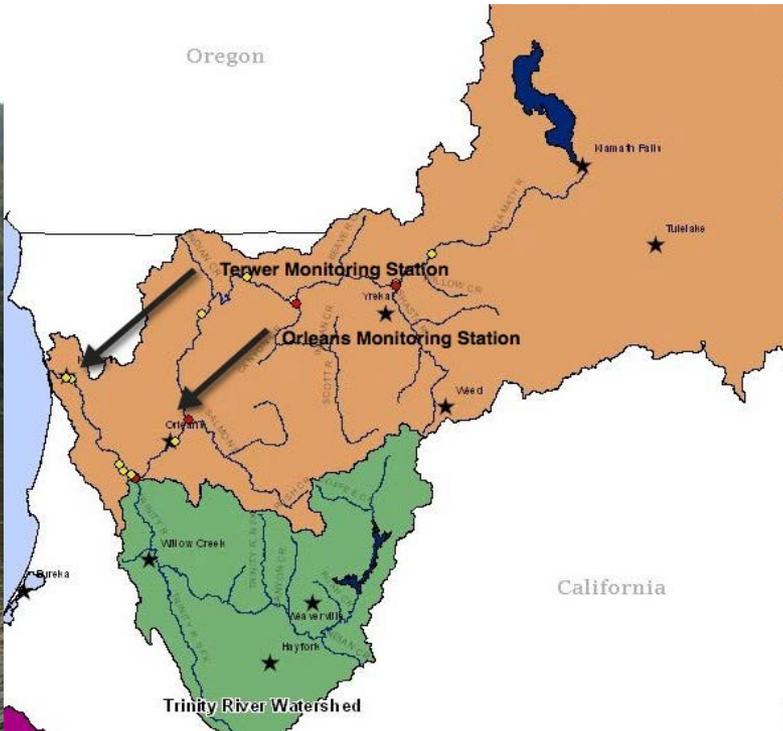
North Coast Regional Water Quality Control Board

(707) 576-2220

*Water quality standards violated include, TOXICITY: waters shall be maintained free of toxic substances, and BIOSTIMULATORY: waters shall not contain excess biostimulatory substances.



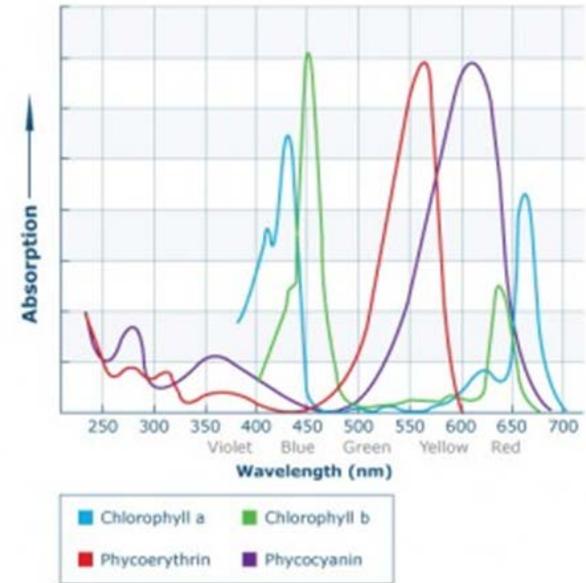
Linking The Klamath to the Curriculum



Linking The Klamath to the Curriculum



Linking The Klamath to the Curriculum

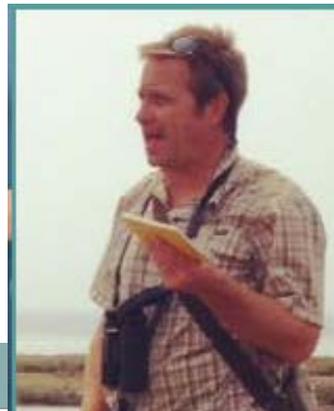


Botany

Math

Critical Thinking

Chemistry



Klamath Freshman Report Many Benefits from a Place-Based Research Curriculum

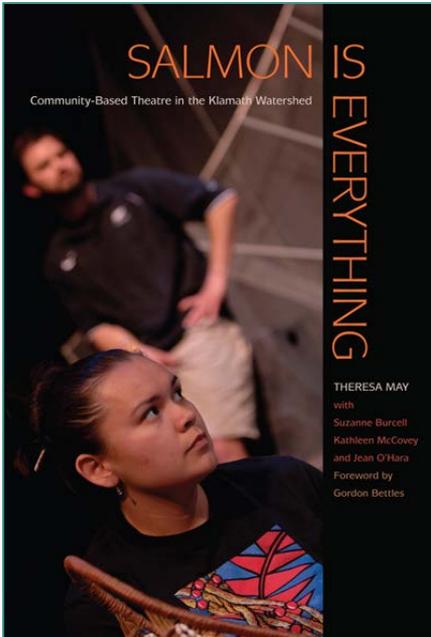


“Going further into what I previously thought about the experiment during the summer immersion, I was honestly excited but at the same time nervous... I was a little scared that this process would end up being too much for me. I was very relieved to find that the complexity of the experiment grew at the same pace we students grew intellectually... I now see this process as something of a tutorial for future projects students may encounter while trying for their science major, a way for us to get our feet wet so to speak.”

Linking the Culture to the Curriculum Promotes Cultural Awareness



Linking the Culture to the Curriculum Promotes Cultural Awareness

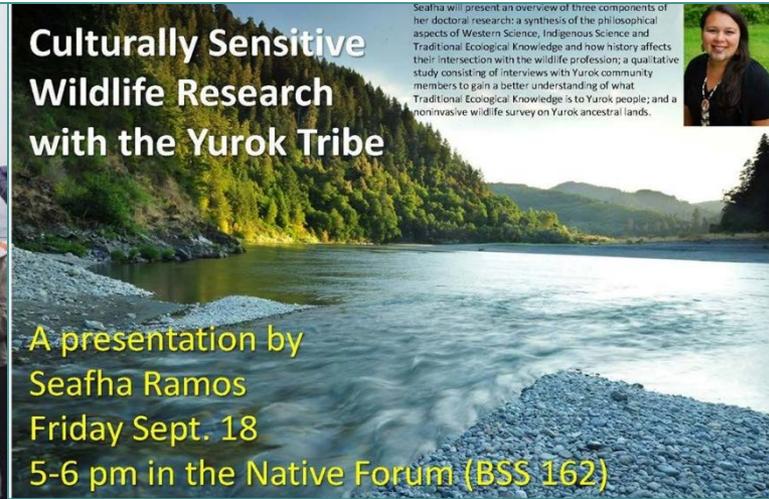


Culturally Sensitive Wildlife Research with the Yurok Tribe

Seafha will present an overview of three components of her doctoral research: a synthesis of the philosophical aspects of Western Science, Indigenous Science and Traditional Ecological Knowledge and how history affects their intersection with the wildlife profession; a qualitative study consisting of interviews with Yurok community members to gain a better understanding of what Traditional Ecological Knowledge is to Yurok people; and a noninvasive wildlife survey on Yurok ancestral lands.



A presentation by
Seafha Ramos
Friday Sept. 18
5-6 pm in the Native Forum (BSS 162)



KLAMATH
Panel on food security, sovereignty, and justice

Food Security, Food Justice, and Diverse Knowledges on the Lower Klamath River

PANEL DISCUSSION WITH
KLAMATH RESIDENTS AND THEIR SUPPORTERS
Lisa Wilson, Food Sovereignty Coordinator, Klamath Tribe
Mark Deegan, FoodShare Program Director, Mid Klamath Watershed Council
Mara George, Forest Supervisor, Sitka River National Forest
Lorna Harwitz, Graduate Student, Humboldt State University
Ben Reed, Cultural Ecologist, Klamath Tribe
Karl Norgaard, Associate Professor of Sociology, University of Oregon
Frank Lake, Research Ecologist, U.S. Forest Service

WORLD-CLASS TALKERS BETWEEN
PANELISTS AND AUDIENCE
FOOD AND INFORMAL CONVERSATIONS
STUDENT POSTER PRESENTATIONS ON
KLAMATH-RELATED RESEARCH

Those interested in presenting a poster should send an email to:
Breanna Smith (bsmith@humboldt.edu) indicating title, presenter(s) (CJ), and author(s)
by October 13, 2015.

Friday, October 23, 2015
1:00-5:00PM
The Great Hall
Humboldt State University

RETURN of the RIVER
CHANGING COURSE IS POSSIBLE.

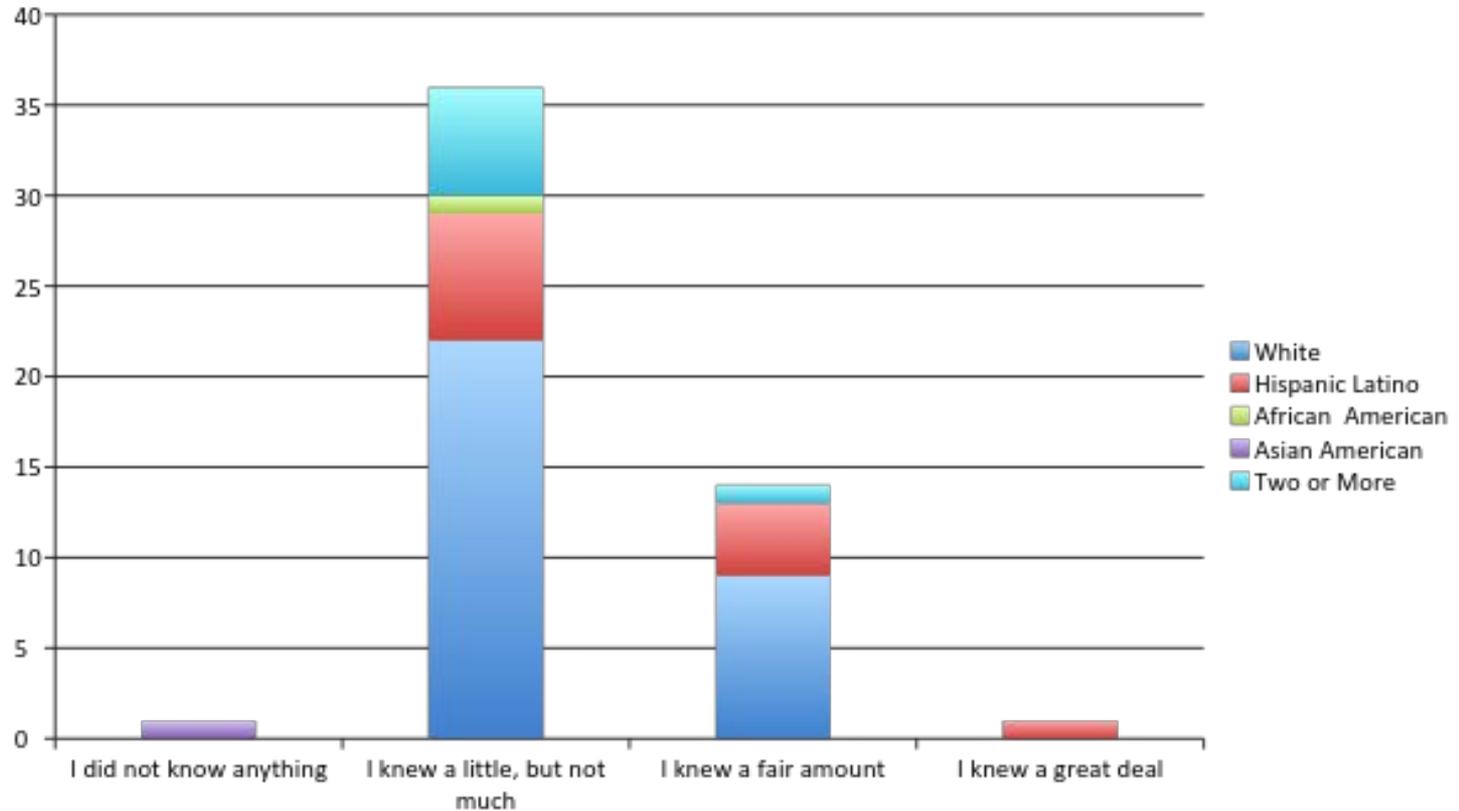
PTFF
2014

RETURN OF THE RIVER

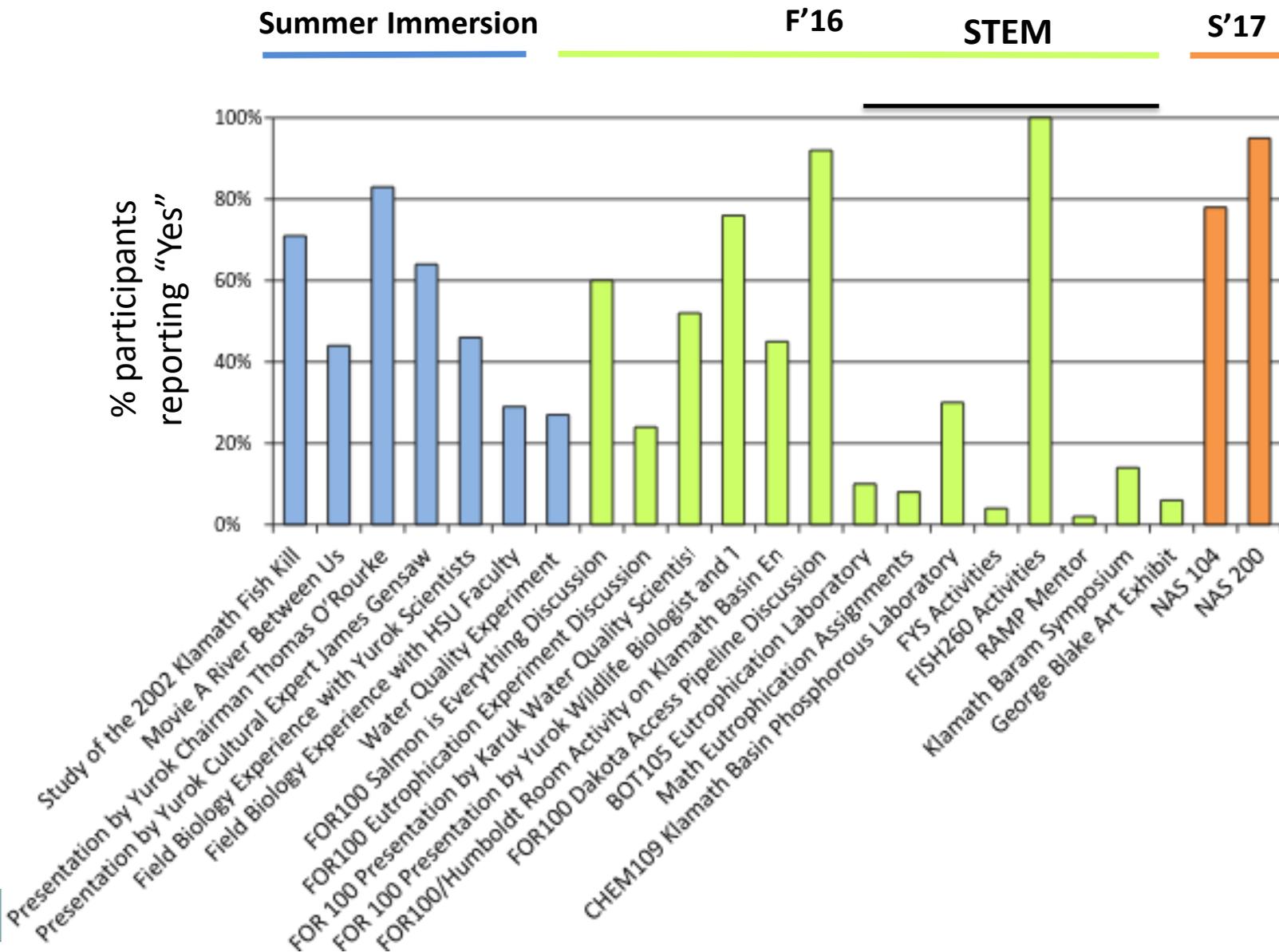
with JON GORDON & JESSICA PLUMB with JESSICA PLUMB with SHAWN BURT with JON GORDON
with JESSICA PLUMB & DAVID WATSON with ANTHONY HAZEL with TOM SEBERT with TERRY HANNA with DEW CRISTE

WAX FILMWORKS

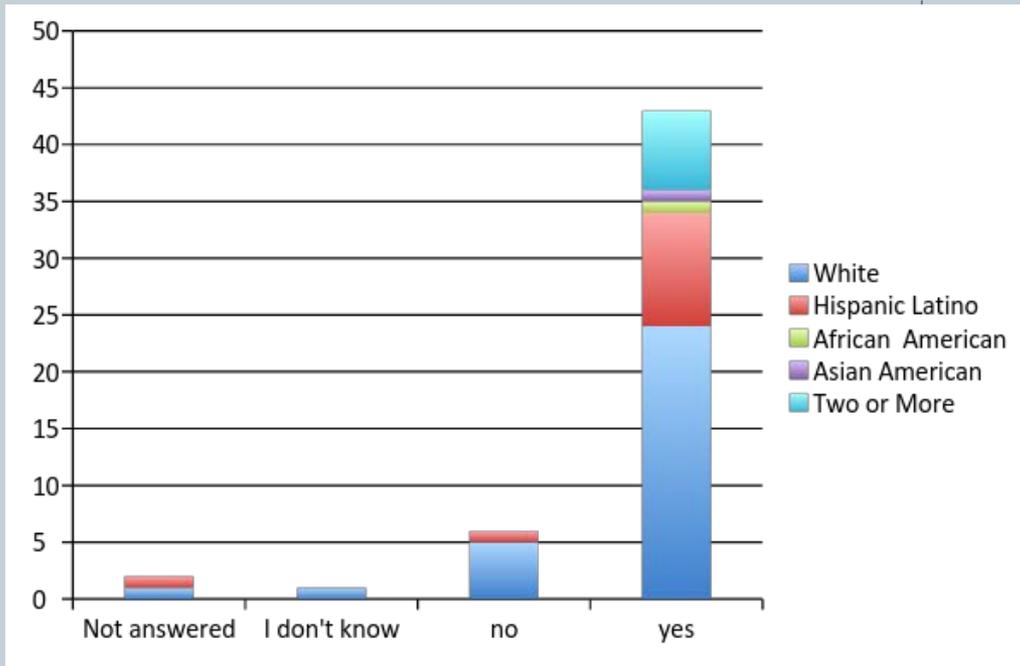
Majority of KC Freshman Knew, “a little, but not much” about Native American Culture Before Entry



98% of KC Freshman Report Increased Knowledge of Native American Culture from KC Programing



84% of KC Freshman Believe Gained Knowledge of Native American Cultures Will Help Them in Careers

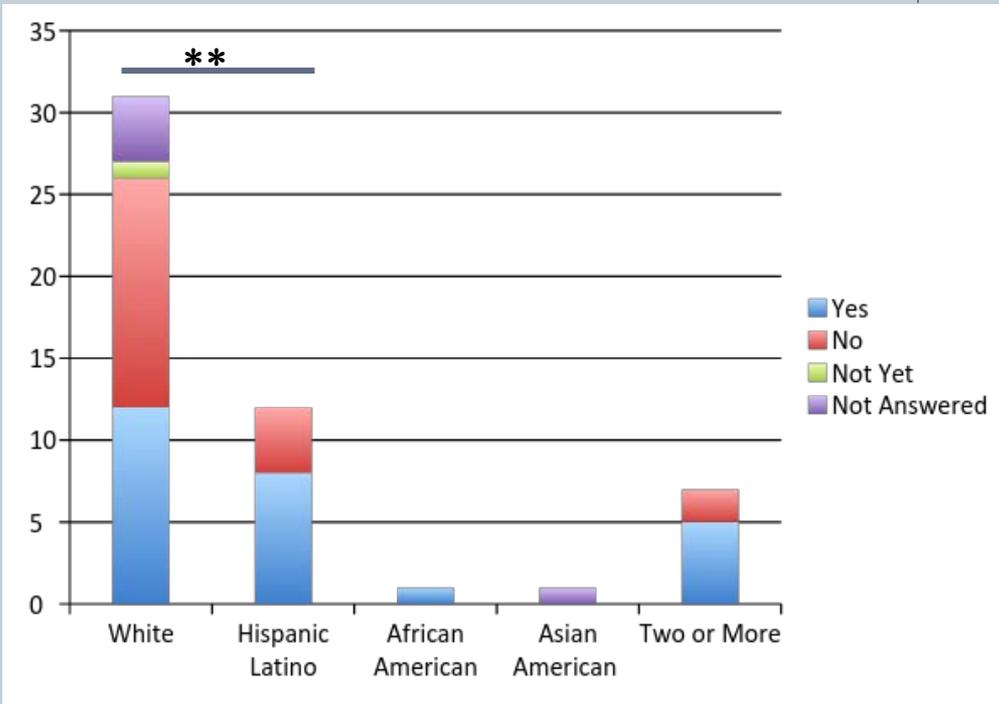


“I believe it will help me understand who I'm working with and how to best work with different communities”

“I will take into consideration how projects will affect the land and the Native American way of life.”

“As a doctor, I have to be culturally aware of my patients to treat them”

Overall 51% of KC Freshman See Parallels with Issues in their Communities; Higher for URG Students



** $\chi^2 = 7.77$, d.f. = 2, $P = 0.02$

“Native American communities struggle like other minorities in society and government.”

“Substance abuse, finding government aid programs, becoming estranged from your cultural background.”

“Being a minority, many people underestimate us. The city I come from is slowly going through gentrification. Business people, mainly white, are rebuilding the land to build a stadium for football.”

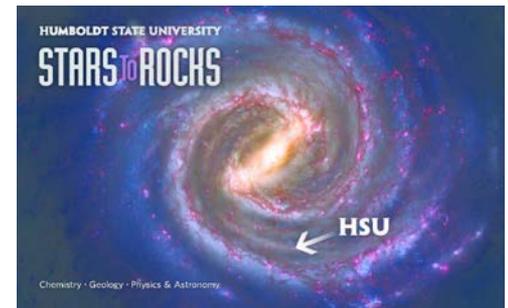
“Pyramid Lake tribe has issues with people fishing in sacred areas.”

Klamath Connection Program at Humboldt State



Next Steps

- **Go Bigger!**
 - *Next n's* = 120, 150, 250, 350, 420
 - ~80% of Freshmen by 2020
- **Other components of HSI STEM**
- **Cultural competency faculty training**
 - Implicit bias training
 - ESCALA Faculty Institute
- **Latinx cultural relevance in curriculum**



Staying Connected

Website

humboldt.edu/klamathconnection

Weekly Newsletter

[Klamath Connector](#)



facebook.com/HSUklamathconnection



instagram.com/hsuklamathconnection

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Acknowledgements

- Lead Program Coordinator Katlin Overeem!
- CSU STEM Collaboratives
- STEM VISTA program
- Retention through Academic Mentoring Program
- Yurok, Hoopa, and Karuk tribes
- EOP
- Admission & Office of the Registrar
- Marketing & Communications
- Residential Life
- Office of Retention and Inclusive Student Success