

NISTS 2023

BE A CONNECTOR FOR TRANSFER STUDENT SUCCESS

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The following presentation was given at the 21st Annual Conference for the National Institute for the Study of Transfer Students. Please cite responsibly and direct questions to the original presenter(s).

Research Spotlight

2770 - Structuring STEM Transfer Partnership Success

Partnerships and Collaboration, Diversity and Inclusion

Though numerous interventions for transfer pathways have been designed and implemented, there remains a need for effective and sustainable models of transfer partnership that address the specific needs of STEM transfer students. This research describes the key components of a program to initiate a community of practice for STEM transfer that supports a cultural shift from siloed colleges and universities to an interconnected system that centers student success.

Lia Wetzstein, *Director, CCRI*

Katie Kovacich, *Research Project Manager*

Leandra Cate, *Research Scientist*

University of Washington

Structuring STEM Transfer Partnership Success

Lia Wetzstein, Ph.D., Director

Leandra Cate, Ph.D., Research Scientist

Katie Kovacich, M.Ed., Research Project Manager



UNIVERSITY of WASHINGTON



**Community College
Research Initiatives**

Agenda

- Why STEM?
- STEM Transfer Partnerships (STP)
- STP Community of Practice
 - Partnership strategies
 - Partnership challenges
- Implications
- Group exercise

Learning Objective

- Learn about key strategies for establishing successful transfer partnerships in STEM
- Apply the strategies to your own institutional contexts
- Generate ideas about how you can create sustainable transfer interventions at your colleges and universities



Data

- Team applications
- Pre- and post-convening surveys
- Observations
- Coaching sessions
- Convening 1



Why focus on STEM?

A microscopic image of plant tissue, likely a cross-section of a stem or leaf, showing various layers of cells. The cells are stained, and the overall structure is complex and layered.

STEM degrees complexity - sequential courses and prerequisites

Low-income students underrepresented in STEM degrees

STEM degrees can provide financially sustaining careers

STEM jobs had lower unemployment during economic downturns

Need for more STEM educated workforce in WA state

Goals STEM Transfer Partnerships

- Increase baccalaureate attainment for low-income STEM transfer students
- Establish a network of sustainable STEM transfer partnerships within Washington state

STEM Transfer Partnerships (STP) Overview

- Funded by Ascendium Education Group
- 9 Teams of 2-year and 4-year institutions part of community of practice in WA
- Teams receive financial and technical support from CCRI



STEM Transfer Partnerships (STP) Overview

- Designed to create institutional and system level, sustainable change
- Balance between CCRI providing support and guidance and institutional agents determining changes needed



Key STP Design Strategies

- Application process required teams to share and look at data
- Responsive technical and financial support
- 5 whole group convenings & monthly coaching meetings
- Participant leadership
- Incentivize and model information sharing
- Student input a mandatory part of process
- Use data for process improvement & inform interventions



Who are our teams?

STEM Transfer Partnerships: Community of Practice

01

**Big Bend Community
College & Central
Washington University**

- **Chemistry/GeoScience**

02

**Big Bend Community
College & Eastern
Washington University**

- **Engineering**

03

**Cascadia College &
University of
Washington, Bothell**

- **Engineering**

04

**Columbia Basin College &
Washington State
University Tri-Cities**

- **STEM**

05

**Clark College &
Washington State
University Vancouver**

- **Biology**

06

**The Evergreen State
College & Centralia
College**

- **STEM**

07

**Highine College &
University of
Washington, Tacoma**

- **Engineering**

08

**Green River College &
University of
Washington, Seattle**

- **Clean Energy
Institute &
Engineering**

09

**Pierce College &
University of
Washington, Tacoma**

- **Environmental
Science**

Transfer Partnerships Research to Practice

Research

Practice

Yeh, T. L., & Wetzstein, L. (2022). Institutional Partnerships for Transfer Student Success: An Examination of Catalysts and Barriers to Collaboration. *Community College Review*, 50(4), 343-365.



Framework to examine institutional supports or barriers to creating/expanding transfer partnerships

Yeh, T. L., & Wetzstein, L. (2020). A continuum of transfer partnerships: Toward intentional collaborations to improve transfer outcomes. *New Directions for Community Colleges*, 2020(192), 21-35.



Framework to examine your own partnerships-Inter-institutional Practices



Convening 1 Outcomes

1. Team building
2. Self-assessment of partnership levels and goals
3. Structured protocol to create action plan
4. Structured protocol to find catalyst and barriers to partnership work

Inter-Institutional Practices	Cooperation	Coordination	Collaboration	Alliance
Advising	Advisors direct students to look online for information about the partner institution.	Advising staff refers students to a particular person at the partner institution. Advisors communicate with each other to address specific questions or problems.	Advisors visit partner institution on a regular basis to do pre-advising. Advisors at partner institutions communicate regularly with each other on changes or updates.	Institutions share staff and have a co-advisor representing both institutions. Advising staff from both institutions meet regularly to improve process.
Recruitment & Enrollment	Institutions send students back and forth to each other using passive recruitment strategies (brochures, etc).	There is some deliberate effort to send and recruit students to/from the particular partner institution. University staff attend recruitment events.	May have university centers, co-located courses, or co-located degrees. They may staff a recruiter at the partner institution on a regular basis. Have access to partner institution information on their website.	Institutions partner to create a formal, co-branded, co-enrolled transfer program. Community college students may be able to begin participating in some events at the four-year college.

How teams started

Key=white-not partners; deeper the blue=more invested in time, connection, resources

Team	Advising	Recruitment & Enrollment	Financial aid	Faculty & curriculum	Data sharing
A	Cooperation	Cooperation	Cooperation	Cooperation	Cooperation
B	Cooperation	Cooperation	Cooperation	Cooperation	Cooperation
C	Cooperation+	Coordination	Cooperation	Cooperation	Cooperation
D	Cooperation	Alliance	Collaboration	Cooperation	Coordination
E	Coordination	Coordination	Cooperation	Coordination	Cooperation
F	Cooperation	Cooperation to Coordination	Cooperation	Cooperation	Cooperation
G	Cooperation	Cooperation	Coordination	Cooperation	Cooperation
H	Collaboration	Cooperation	Coordination	Cooperation	Collaboration
I	Cooperation	Cooperation	Cooperation	Cooperation	Cooperation

Where teams want to go

Key=white-not partners; deeper the blue=more invested in time, connection, resources

Team	Advising	Recruitment & Enrollment	Financial aid	Faculty & curriculum	Data sharing
A	Coordination	Coordination		Coordination	
B	Coordination	Alliance		Coordination	
C	Coordination	Alliance	Alliance	Collaboration	Collaboration
D	Alliance			Alliance	Collaboration
E	Collaboration			Collaboration	Collaboration
F	Coordination	Alliance		Collaboration	
G					Alliance
H	Alliance	Alliance	Collaboration	Collaboration	
I	Alliance			Collaboration	Coordination

Examples of STP team activities and desired outcomes

- Create or revise advising maps
- 2-year student access to 4-year advisors
- Joint advisor



Mapping a clear path and navigational support between institutions to improve transfer and completion.

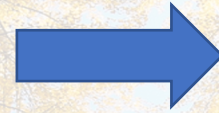
- Create new intro course
- Provide co-courses and co-labs
- Guest talks by 4-year faculty at 2-year
- Peer mentors
- Students from 2-year visit 4-year



Provide student connections (support and belonging) with faculty and students across institutions. Students see themselves being successful at 4-year and learn career options.

Examples of STP team activities and desired outcomes

- Increase pass rate via active learning in pivotal course



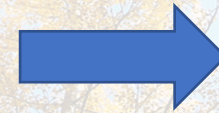
Increase course pass rates where transfer students have lower success

- Data sharing
- Student interviews/surveys
- Using IR data



Use data to understand barriers and if activities are moving toward desired outcomes

- Paid internships and scholarships
- Undergraduate research



Provide access to career experience and STEM identity building activities

STP team challenges

Sharing data

Gathering data

Centering low-income
students

Time

Lack of institutional
knowledge or support

Recruitment

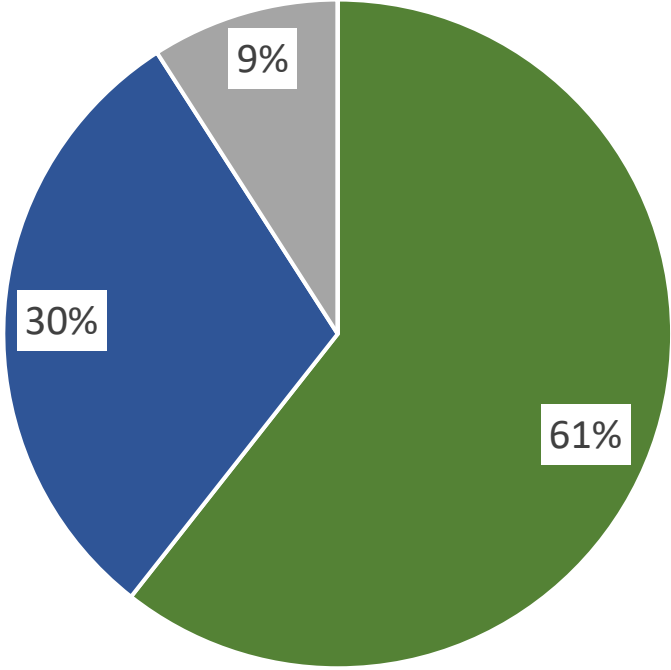
Small number of
transfer students

Institutional turnover

Bureaucracy

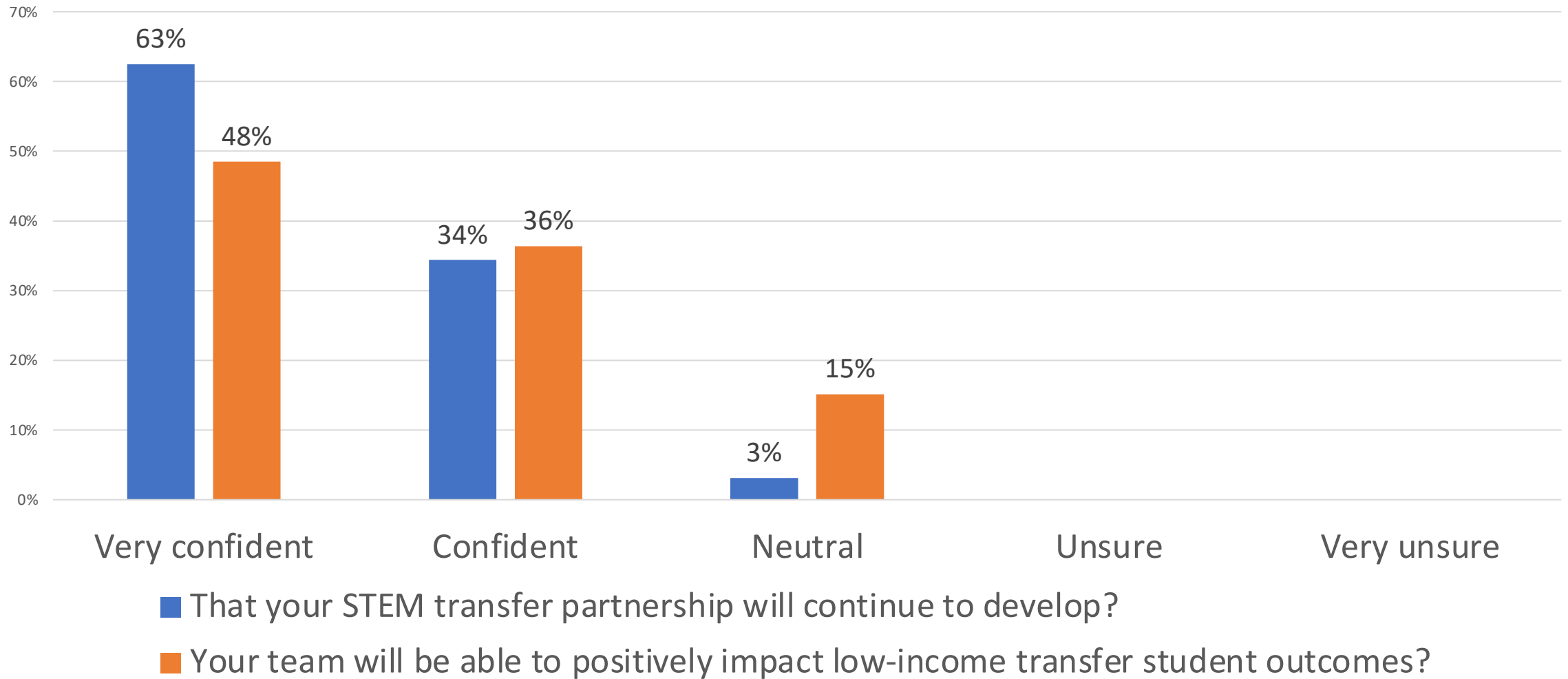
Post-convening Data

How useful was the information and activities provided during this convening? (N=33)



■ Extremely useful ■ Very useful ■ Useful ■ Somewhat useful ■ Not at all useful

Post-convening Survey: What is your level of confidence... (N=33)



Implications

Structured support in combination with contextual knowledges of teams, led to action plan creation and confidence in their ability to impact low-income student outcomes

Community of Practice allows for spread of information and ideas, and helps remove barriers, and feeling of isolation

A large crowd of stylized human figures in various colors (dark blue, light blue, white, orange, yellow) is shown. The figures are arranged in a circular pattern, with one white figure in the center having its arms raised. The background is a dark, blurred crowd of similar figures.

Group Activity

Group exercise (20 min.)

Get into groups of 3-5, to discuss one of the upcoming questions.

Once you found a group introduce yourselves and give a brief description of partnership work your institution participates in.

Someone volunteer to write down takeaways from your groups discussion to share out at the end.



Questions

- What are your low-income transfer students' biggest challenges? How do you know?
- What would motivate your institution to share data with a partner institution? What would be or were the steps to make that happen?
- How could you incentivize faculty and staff at your and another institution to meet, talk and collaborate?
- What unique aspects of STEM degrees could be utilized to develop partnerships at your institution?



Share out (5 min.)

- What question(s) did your team discuss?
- What were 1-2 takeaways from your discussion?

Thank you!

Lia Wetzstein, Director, lwetzs@uw.edu
ccri@uw.edu

