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.

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Structuring STEM Transfer Partnership Success

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Agenda

• Why STEM?
• STEM Transfer Partnerships (STP)
  ➢ 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?
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?
<table>
<thead>
<tr>
<th>No.</th>
<th>Partnership Details</th>
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| 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  | Highline 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 |
Research


Practice

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

Framework to examine your own partnerships-Inter-institutional Practices

Community College Research Initiatives

uw.edu/ccri
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
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<th>Inter-Institutional Practices</th>
<th>Cooperation</th>
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<td>Advising</td>
<td>Advisors direct students to look online for information about the partner institution.</td>
<td>Advising staff refers students to a particular person at the partner institution. Advisors communicate with each other to address specific questions or problems.</td>
<td>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.</td>
<td>Institutions share staff and have a co-advisor representing both institutions. Advising staff from both institutions meet regularly to improve process.</td>
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<td>Recruitment &amp; Enrollment</td>
<td>Institutions send students back and forth to each other using passive recruitment strategies (brochures, etc).</td>
<td>There is some deliberate effort to send and recruit students to/from the particular partner institution. University staff attend recruitment events.</td>
<td>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.</td>
<td>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.</td>
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# How teams started

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

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Where teams want to go

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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

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

- Paid internships and scholarships
  - Undergraduate research

Increase course pass rates where transfer students have lower success

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

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

- Extremely useful: 61%
- Very useful: 30%
- Useful: 9%
- Somewhat useful: 0%
- Not at all useful: 0%
Post-convening Survey: What is your level of confidence...

(N=33)

- Very confident: 63%
- Confident: 34% (blue)
- Neutral: 3% (blue)
- Unsure: 15% (orange)
- Very unsure: 0% (orange)

- That your STEM transfer partnership will continue to develop?
- Your team will be able to positively impact low-income transfer student outcomes?
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.
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!

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