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Factors, Practices, and Policies that Influence Students' Upward Transfer to Bachelor's Degree Programs

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A Poorly Understood Transition of the Educational Pipeline

Upward transfer from 2-year to 4-year colleges...

- **Barriers persist for first-generation, low-income, and under-represented students**
- **A blind spot in effective institutional practices**
- **Challenges in state and college policy design and implementation**



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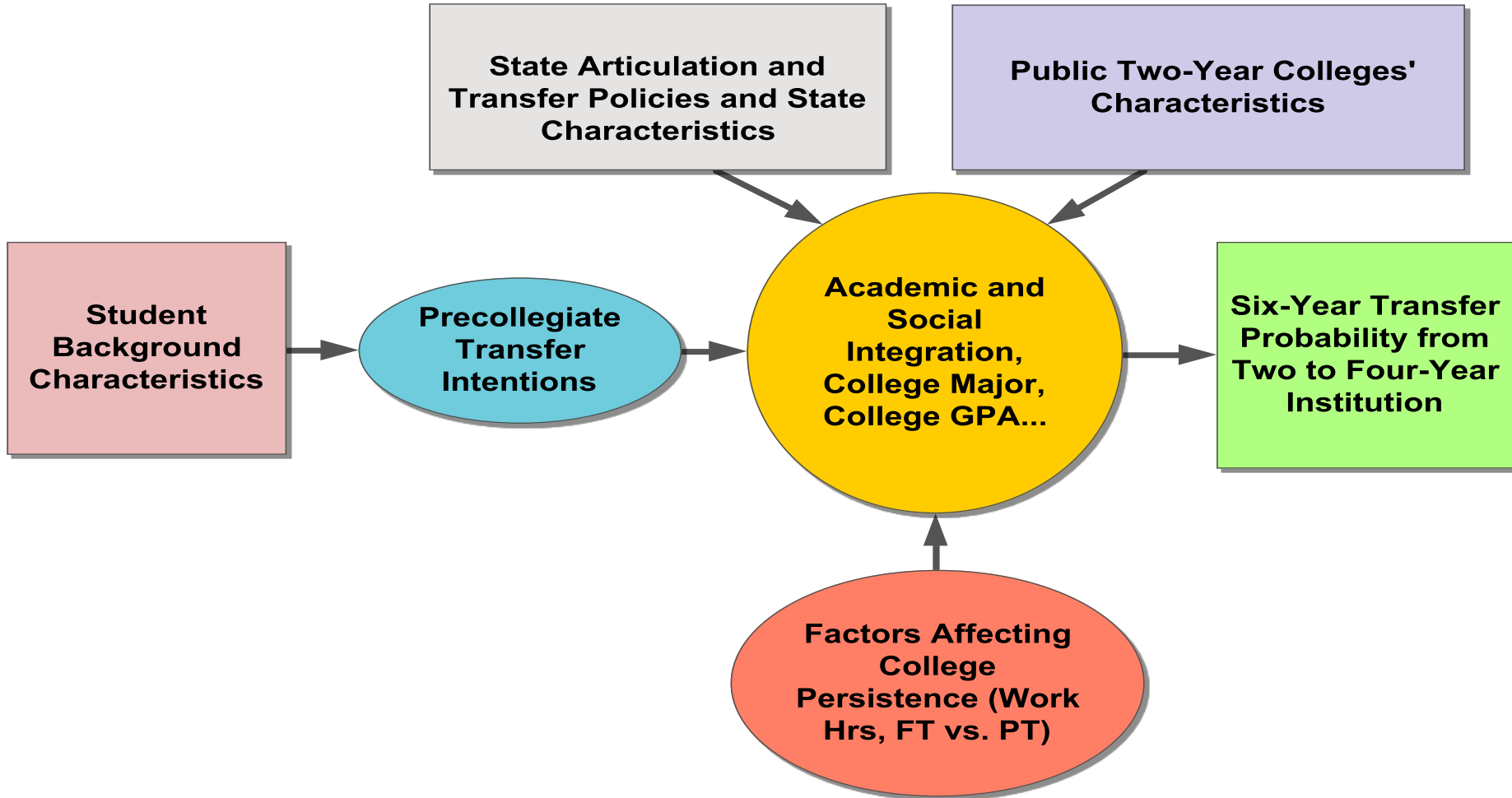
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A First Area of Inquiry

Q1.1 What conditions and policies in community colleges and states contribute to increased probability of upward transfer for low-income, first-generation, and under-represented students?

Q 1.2 How do student behaviors, community college characteristics, and state policies/conditions influence 2/4 transfer probability?

Student, College, and State Factors Influencing 2/4 Transfer





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A Second Area of Inquiry

Q2.1 What are promising practices in the development of systems of support among colleges and states directed towards improving students' upward transfer?

Q2.2 How do leaders engage in ongoing learning and innovation around these practices?

Explanatory Sequential Mixed Methods Design

Multi-level modeling analysis of BPS and supplemental data 2003-09



Cross-case studies of 6 colleges in 3 states



QUANT/QUAL Integration:

- 1) Using QUANT anal. To guide QUAL sampling**
- 2) Cross-reference claims from QUANT and QUAL**
- 3) Use QUAL for analytical depth.**
- 4) Integrate both strands to guide future mixed methods inquiry**



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Quantitative Investigation of the First Area of Inquiry

- **Goal: To probe prominent hypotheses, contradictory evidence, and unexplored avenues in the literature**
- **A secondary analysis of community college entrants in the Beginning Postsecondary Study 2003-2009 data**



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Which State and Community College Factors May Influence Transfer?

- **State articulation and transfer policies?** *Very little, if any influence* (Roksa, Kienzl, Goldhaber & Gross)
- **State cooperative agreements?** *Maybe.* (Kienzl)
- **Community college practices?** *Depends. Perhaps not much.* (MDRC)
- **Community college expenditures?** *Slight/student services expenditures* (Gross and Goldhaber). *None* (Stange).
- **Community college smaller size, higher faculty-to-student ratio?** *Yes.* (Bailey et al., Gross & Goldhaber)
- **Degree of college mission stratification (emphasis on transfer-oriented programs vs. non-transfer oriented, e.g. health/vocational/technical).** *Influential.* (Dougherty)
- **Proximity and selectivity of nearest public four-year institution?** *Maybe.* (Rouse)



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Five Data Sources for Quantitative Analysis

1. ***Students***: Beginning Postsecondary Study 2003-2009
2. ***State Policy***: Education Commission of the States (2001 and 2010 data for policies in effect by 2005)
3. ***Characteristics of Primary Community College Attended***: Integrated Postsecondary Education Database (IPEDS)
4. ***National Economic Data***: County Unemployment in 2005 (Kienzl, Wesar, and Kumar) and Gross State Product in 2003 (Anderson, Alfonso, and Sun)
5. ***Selectivity and Distance to Nearest Public Four-Year Institution***: NCES Barron's Selectivity Data and IPEDS

Rationale for Methodology

Results of Unconditional Model or Intra-Class Correlation:

- **State location – explains 2% of variance in 2/4 transfer probability**
- **Primary college attended – explains 6% of variance**
- **Student characteristics – explains most of the variance in upward transfer probability**

Therefore, used multi-level logistic regression –

- **Random intercepts for college and states, randomly varying slopes for:**
 - **Low-income, first generation**
 - **First generation, not low income**
 - **Planned to transfer in year one**
 - **Declared major in health/vocational/technical field**

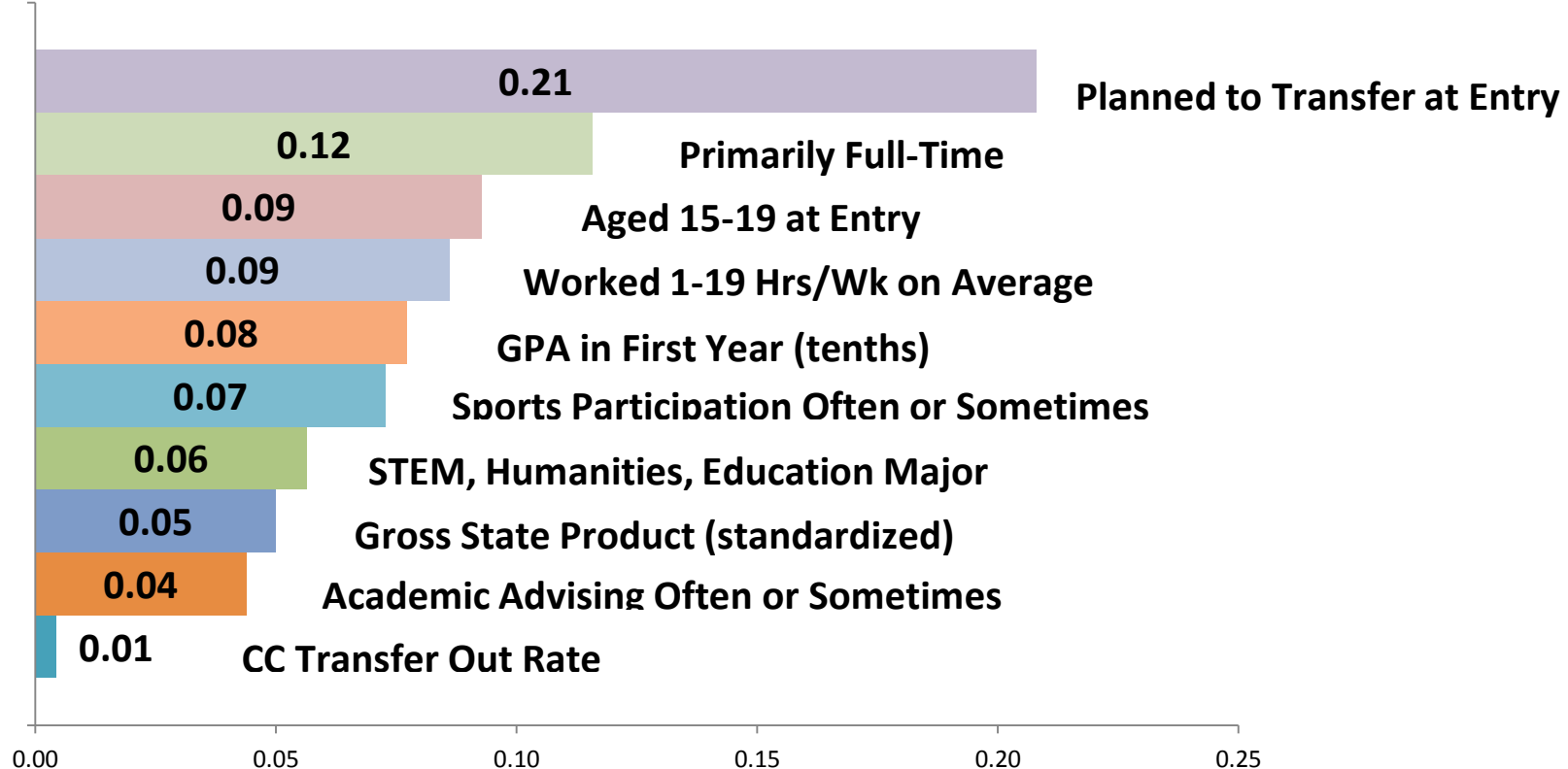


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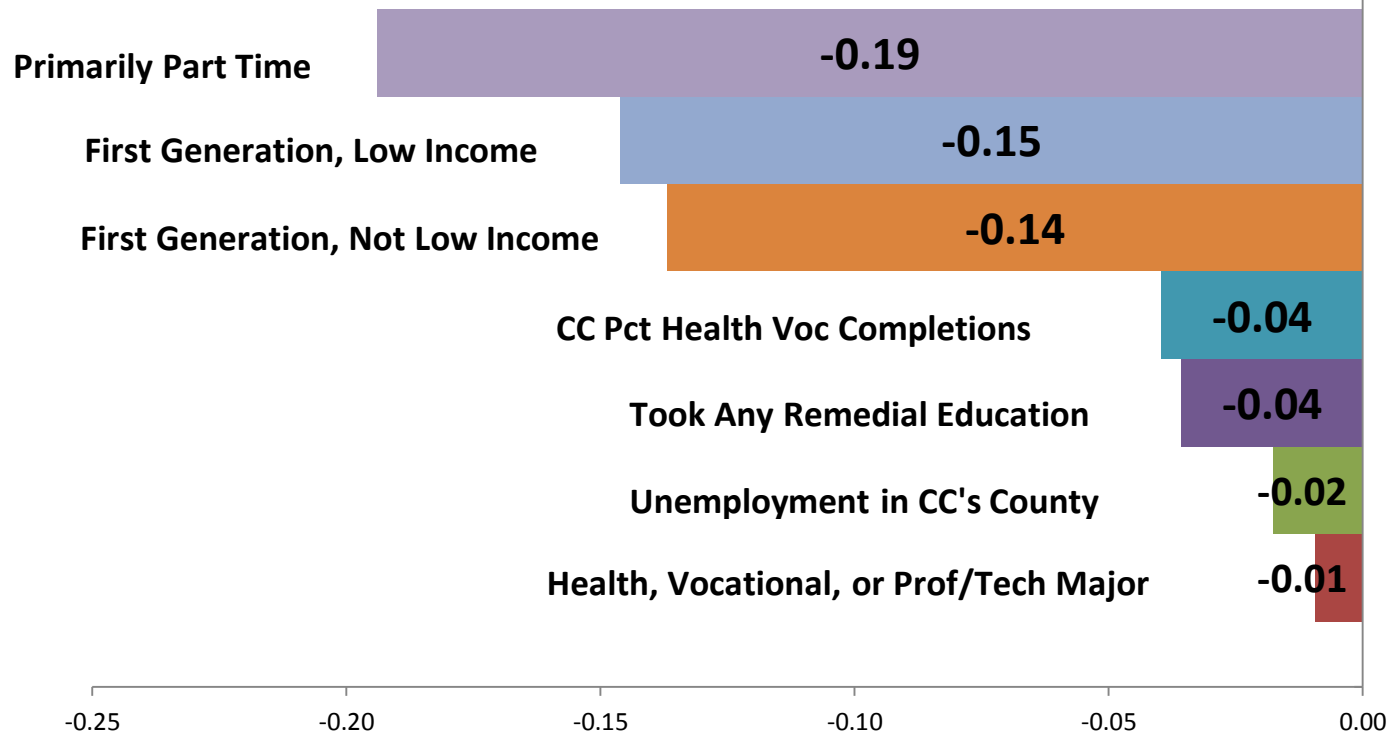
Positive Predictors Associated with Upward Transfer Probability

0 = 50/50 Probability of 2/4 Transfer
Conditioned on Factors in the Model



Negative Predictors Associated with Upward Transfer Probability

0 = 50/50 Predicted Probability of 2/4 Transfer
Conditioned on Factors in the Random Effects Model



Student Characteristics - Negative Associations with 2/4 Transfer Probability

Controlled for state policy variables, county-level unemployment, state wealth (gross state product), and community college mission variables...

	First Generation	Not First Generation
Low Income	-44% odds	Not sig.
Not Low Income	-42% odds	Reference

- Racial/ethnic background did not uniquely explain variance in upward transfer probability in this data analysis.**



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College Characteristics: Associations with 2/4 Transfer

- **Proportion of associates' degree completions in health/vocational fields (neg., $p < .10$)**
- **College transfer-out rate (2% increased odds of transfer) in regression without analysis of random effects by slope**
- **County-level unemployment (neg., $p < .10$)**

Not sig. = i.e. per-student expenditures for instruction or student services, distance to nearest public four-year institution, distance to nearest non or less-selective four-year institution, faculty-to-student ratio, community college enrollment size, percent of full-time faculty, percent of full-time students

State Policies

Random and Fixed Effects Model

– No Slope Predictors for sub-populations that vary in 2/4 transfer by state or college:

- + 35% higher 2/4 transfer odds: State with one standard deviation higher Gross State Product Per Capita in 2003

None of the State Articulation and Transfer Policy Components explained variance in 2/4 transfer probability.

Policy Components

- Transfer data reporting
- State transfer incentives
- State transfer guide
- Transferable general education curriculum
- Statewide cooperative agreements
- Common course numbering
- Statewide articulation/transfer policy

Regression Results: Slopes for Sub-Populations that Vary by College and/or State



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Random and Fixed Effects Model

showed that these factors moderate 2/4 transfer probability for these populations.

Low-Income, First Generation:

- Higher gross state product
- Common course numbering
- College transfer-out rate

First Generation, Not Low Income:

- Higher Gross State Product
- Common Course Numbering

Planned to Transfer (vs. Not Transfer Intending):

- College transfer-out rate

Health/Vocational Major (vs. business/undeclared):

- State articulation/transfer policies not sig.
- Transfer-out rate not sig.



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Contributions of First Area of Inquiry

- **Affirms prior research about ambiguous/unknown effects of transfer/articulation policies**
- **College mission and emphasis/success re: transfer is an influential factor**
- **Promising areas for policy intervention, esp. in high schools**
 - **Help students create specific plans for obtaining a bachelor's degree aligned in a specific field and outline a transfer pathway**
 - **Promote continuous full-time attendance and advising with incentives and accountability**
 - **Widely promote available state resources and policies for improved transfer**



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Qualitative Investigation of the Second Area of Inquiry

- **A multiple-case study analysis of state policy and contrasting community colleges in three states (Florida, Washington, Georgia)**
- **Goal: to explore and identify possible state policy actions and institution policies or practices that enhance prospects for 2/4 transfer**



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Guiding Questions: Colleges

- **How do advising practices differ between above-average and average performers with respect to improving students' upward transfer?**
- **How does data use guide implementation of new practices for improved transfer?**
- **What transfer data use patterns and practices emerge across the colleges and the state contexts?**



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Guiding Questions: States

- **In what ways are state policies and practices aimed at increasing students' upward transfer?**
- **How do states interact with colleges in policy design and implementation to improve students' upward transfer?**
- **How is Florida's model of common course numbering helpful in understanding the positive moderating influence of this factor for first generation students' upward transfer?**

State Selection

- **Used NCHEMS calculations of four-year state transfer rate from National Student Clearinghouse cohort data 2002-2006 as outcome**
- **Conducted regression to control for state population characteristics, higher education governance structure, etc. to find states performing above- average with diverse student populations**
- **Considered prior research (Shulock, Wellman, etc.) on policy innovative states in transfer/articulation**
- **Chose states with a considerable proportion of postsecondary students enrolled in two-year colleges**

College Selection: Above-Average and Average Performer

- **Conducted regressions with state data on two-year/access institutions in all three states, controlling for student/college characteristics to find above-average performers**
- **Consulted with State Higher Education Executive Officers from those states**
- **Consulted Aspen Prize data on top 120 colleges to identify above-average performers**
- **Used college's participation in Achieving the Dream as an indicator of data-driven decisionmaking and experimentation at the college**

Qualitative Methods

- **One hour interviews (n=19 at state-level; n=110 in colleges); Talked with 49 students (9 individual one-hour interviews, 40 students in focus groups); N=178.**
 - **State policy leaders in transfer and articulation**
 - **Presidents, VPs of Academic and Student Affairs, Deans, IR/IE Directors, Directors of Pre-College Education**
 - **Faculty (diverse disciplines)**
 - **Students**
 - **Student affairs advisors, TRIO staff, and academic support staff**
- **Analytic Memo Writing for States and Colleges, Summary Tables and Figures**

Findings – State Policy as a Context for Colleges’ Innovation

Creating a stronger system of support for students’ upward transfer—

- *State-college collaboration on policy design*
- *2-yr to 4-yr collaboration on articulation and transfer...*

.....robust communications and problem solving focused on increasing step-by-step outcomes to BA attainment... supports college-level innovation

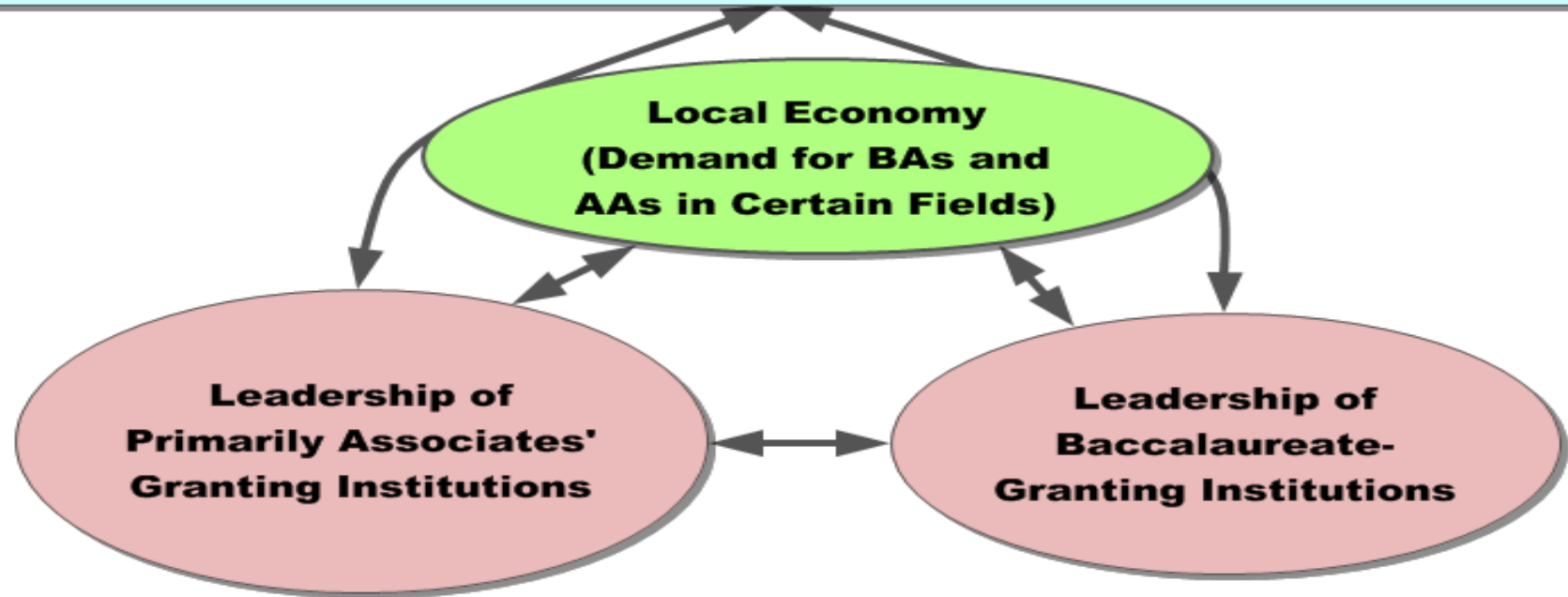
Findings – State Articulation and Policy Context Woven with Local Economies and Institutional Leadership

Framing Influences...

State College Completion Agenda

State Legislation Related to Improving Transfer

State College and University System Supports and Practices





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Common Course Numbering: Lessons Learned from Florida

Moderating influence of common course numbering (CCN) from quantitative inquiry...

- **Four states in the BPS dataset with 30 or more students represented had common course numbering (FL, MS, TX, and WY) and Florida is a case study state.**
- **Common course numbering in FL:**
 - **Foundation built in 1960s**
 - **Community colleges and public four-years led as one system**
 - **Impetus from complaints from registrars and advisors having difficulty helping students with course transfer**
- **CCN Proxy for a more robust transfer policy context?**
- **CCN built from communication across lower and upper division faculty and programs**



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Findings – Advising in Above-Average Performers

Transfer not a universal outcome or push for all students...

College-level systems of support for transfer generally constrained...

Above-average colleges generally have:

- **Academic leaders who champion students' transfer and successfully engage others in this work**
- **Mandatory student advising models**
- **Student affairs staff dedicated to coaching students' on transfer**



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Findings – Advising in Above-Average Performers

Above-average colleges also tend to have:

- **Faculty contracts which include student advising hrs.**
- **Faculty and staff engaged in planning out-of-class supports and enrichment experiences for students that aid transfer**
- **Campus supports for TRIO and similar STEM programs for low-income, minority, and first generation students**
- **Key Support for Stronger Advising: Active communication/coordination with public and private four-year institutions within major fields by administrators and faculty**



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Findings – Promising College Practices in Data Use

- **Use of NSC data to document 2/4 transfer across neighboring states to inform transfer advising (WA above average college)**
- **Quasi-experimental research comparing participants and non-participants (e.g. developmental education reform pilots) (FL above average college and WA average/rising performer)**
- **Weekly tracking of metrics on students' access of out-of-class supports (in-person and online tutoring, career coaching resources, completion of learning plans) (FL average/rising performer)**



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Findings – State Challenges in Colleges' Data Use to Improve Transfer

- **Accessibility of transfer data in P-20W longitudinal data systems**
- **Delay in state provision of cohort-based transfer rates by college**
- **Limited, if any, disaggregation of upward transfer data by sub-populations, students placed in pre-college courses, by major fields of study to guide college-level intervention**
- **States and colleges each prioritize the transfer outcome differently with respect to performance or outcomes funding, and with respect to their own transfer-intending populations**



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Policy Considerations from Qualitative Inquiry

- **States**: Incentives and support for colleges to design innovations and measure effectiveness
- **Colleges**: Collaborative problem-solving and broad implementation of personalized learning and advising supports
- **Colleges**: Incentives to encourage more faculty, staff, and leaders to be transfer champions and engage in transfer advising
- **States and colleges**: More efficient, accessible processes to using data for decision support about students' transfer



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