

# Success with Developmental Math in Small Schools

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# Objectives for Today

- **Study – overview of research**
- Lessons Learned, not what we thought
- Equipping Others



# Scope of Study

- Original idea to study the effect of placement/supports at TSI2.0 diagnostic levels to identify promising practices
- Discovered the University of Florida is studying corequisite math in Texas with a \$1.5 million/5 year study
- Refined focus to smaller schools as many do not have an AEL program or separate developmental math department



# The Process

- Compared developmental math placement and support practices in 3 colleges to discover differences/similarities in levels of support/placements
- Collected course/student/enrollment data to track student progress
- Looked for patterns in student performance that may be related to individual college support / placements
- Conducted interviews with Math Dept Chairs and Advisors to further understand colleges' practices



# Research Questions

*Concerning small schools (FTE < 5000) in Texas Community Colleges:*

- What modalities of developmental math support are being utilized at various college readiness levels?*
- What patterns exist between modalities of developmental math support and placement structures to the success in gateway math courses or TSI-clearance for CTE entry?*

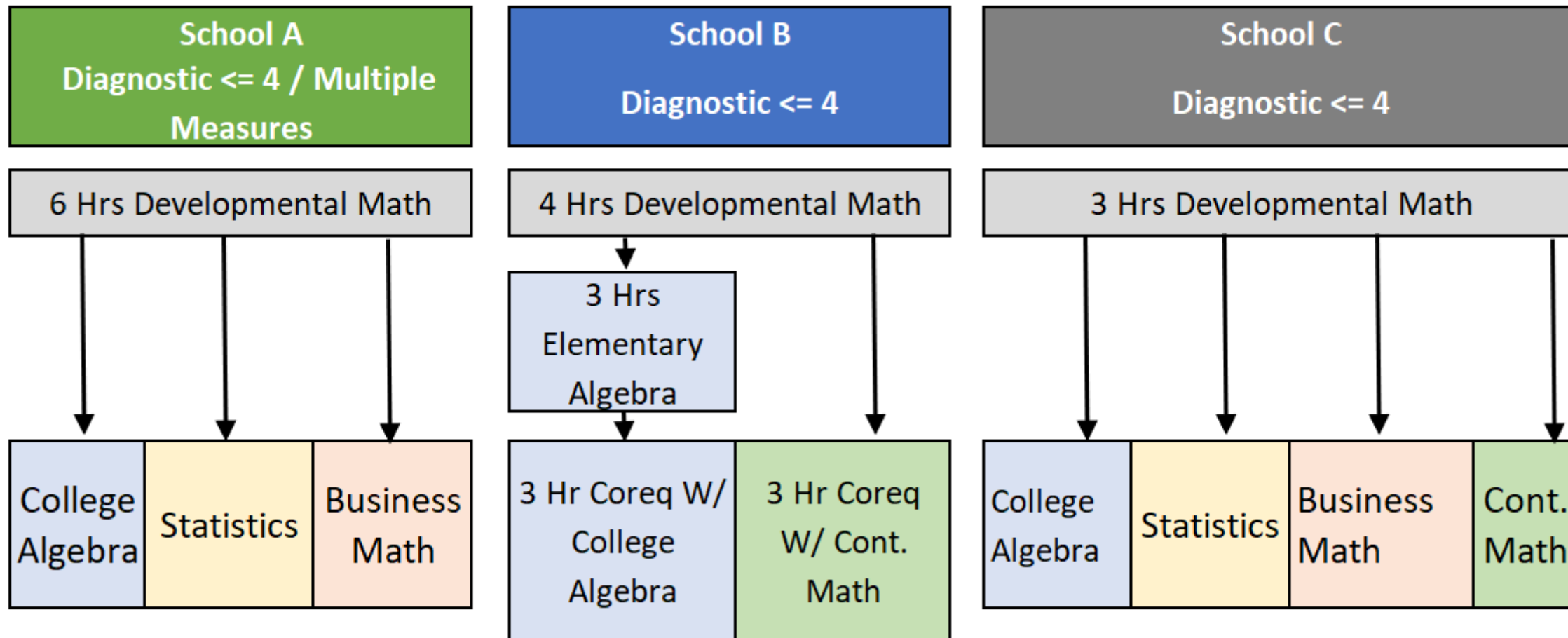


# Objectives for Today

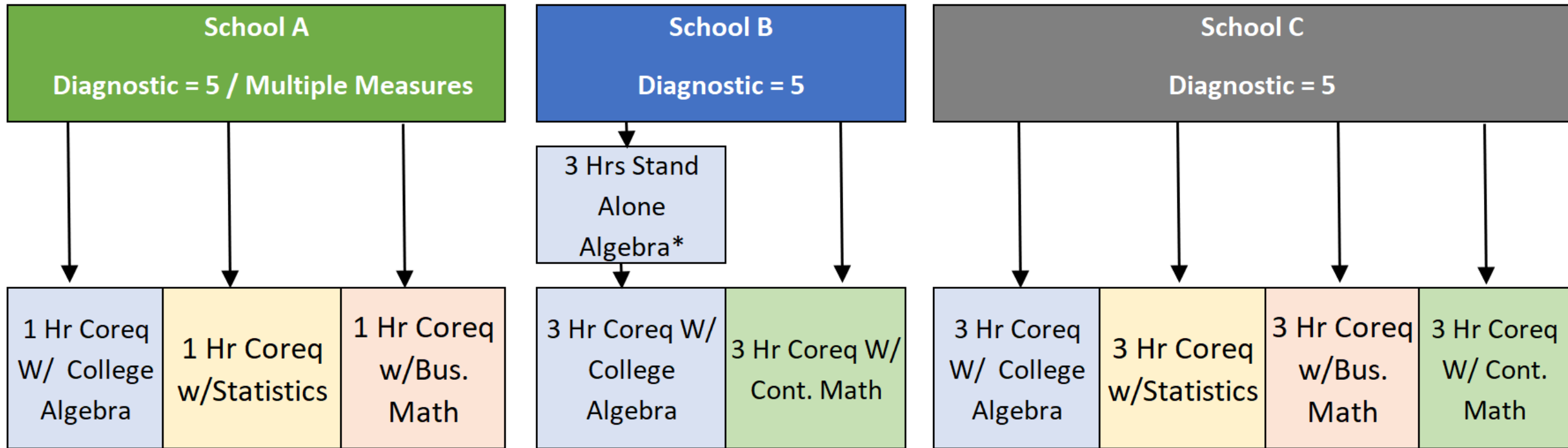
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# Placement Level 1 – Begin in Stand Alone Math (ABE)



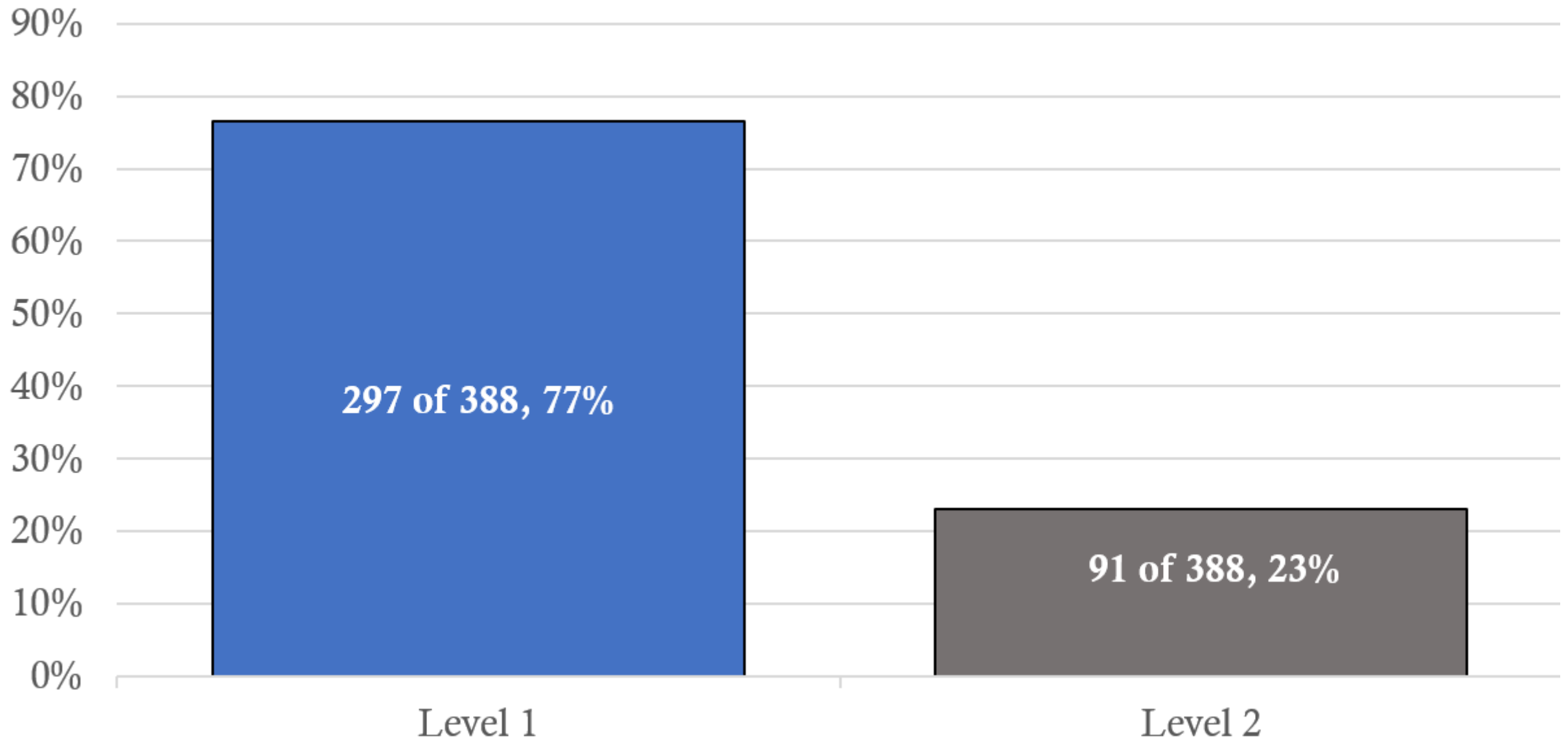
# Placement Level 2 – Corequisites



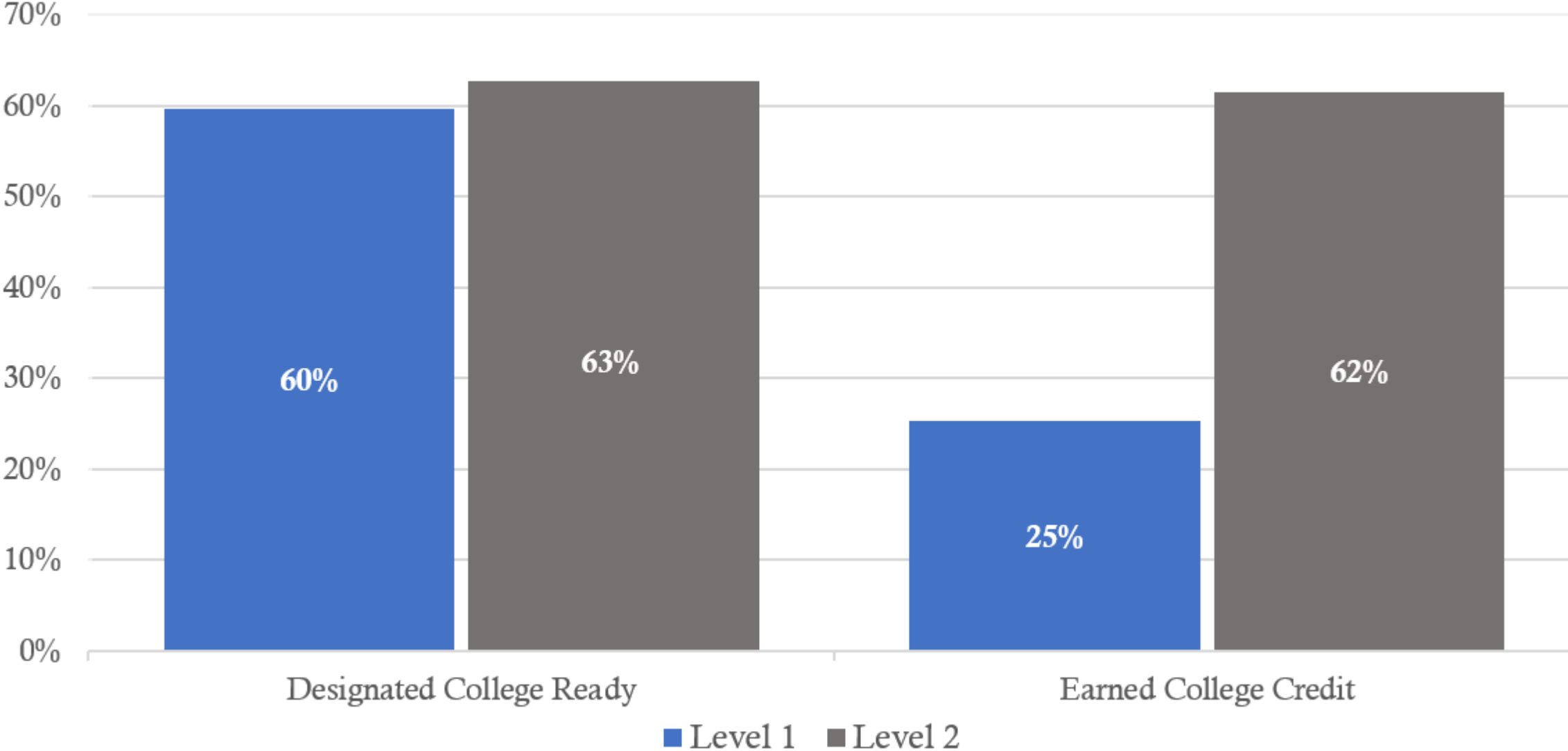
\* for students designated BASIC proficiency



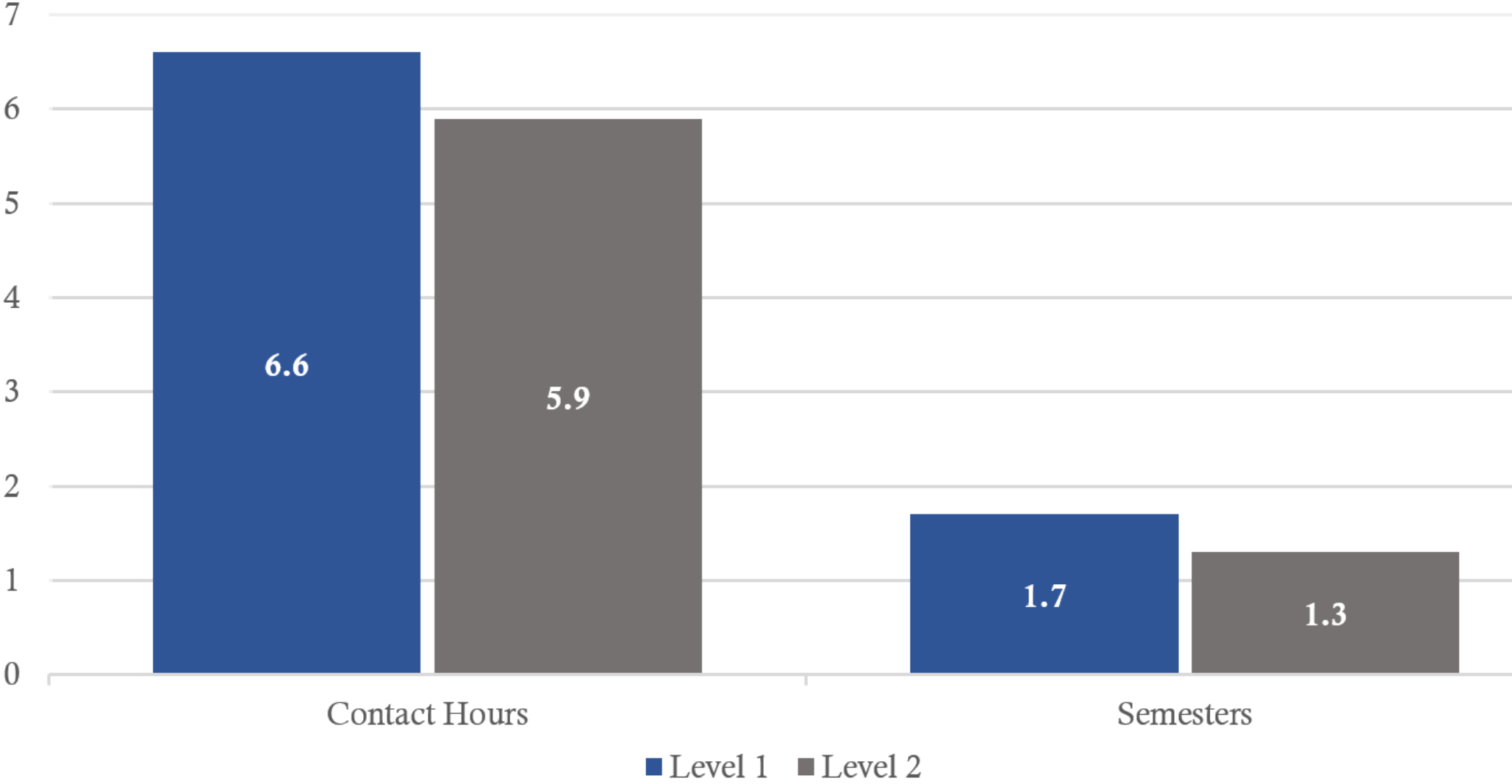
# Student Placement Based on First Enrollment



# Student Progress by Placement Level



# Average Contact Hours and Semesters by Placement Level

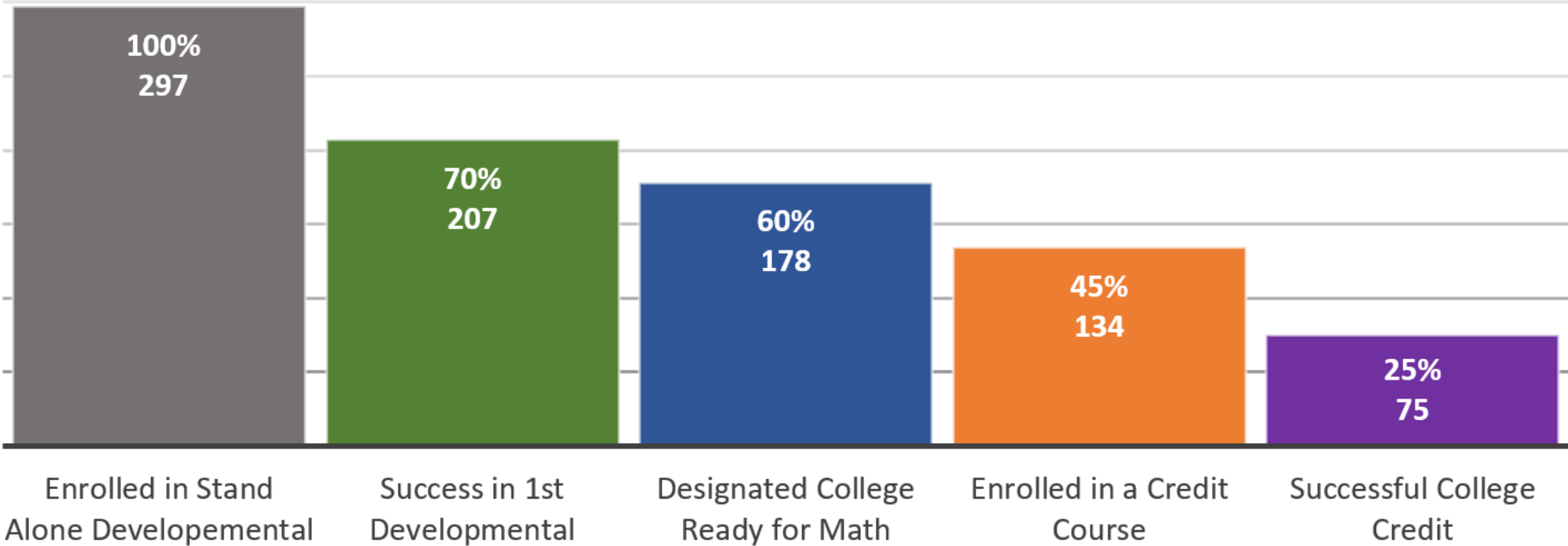


# Deep Analysis – Level 1 Students

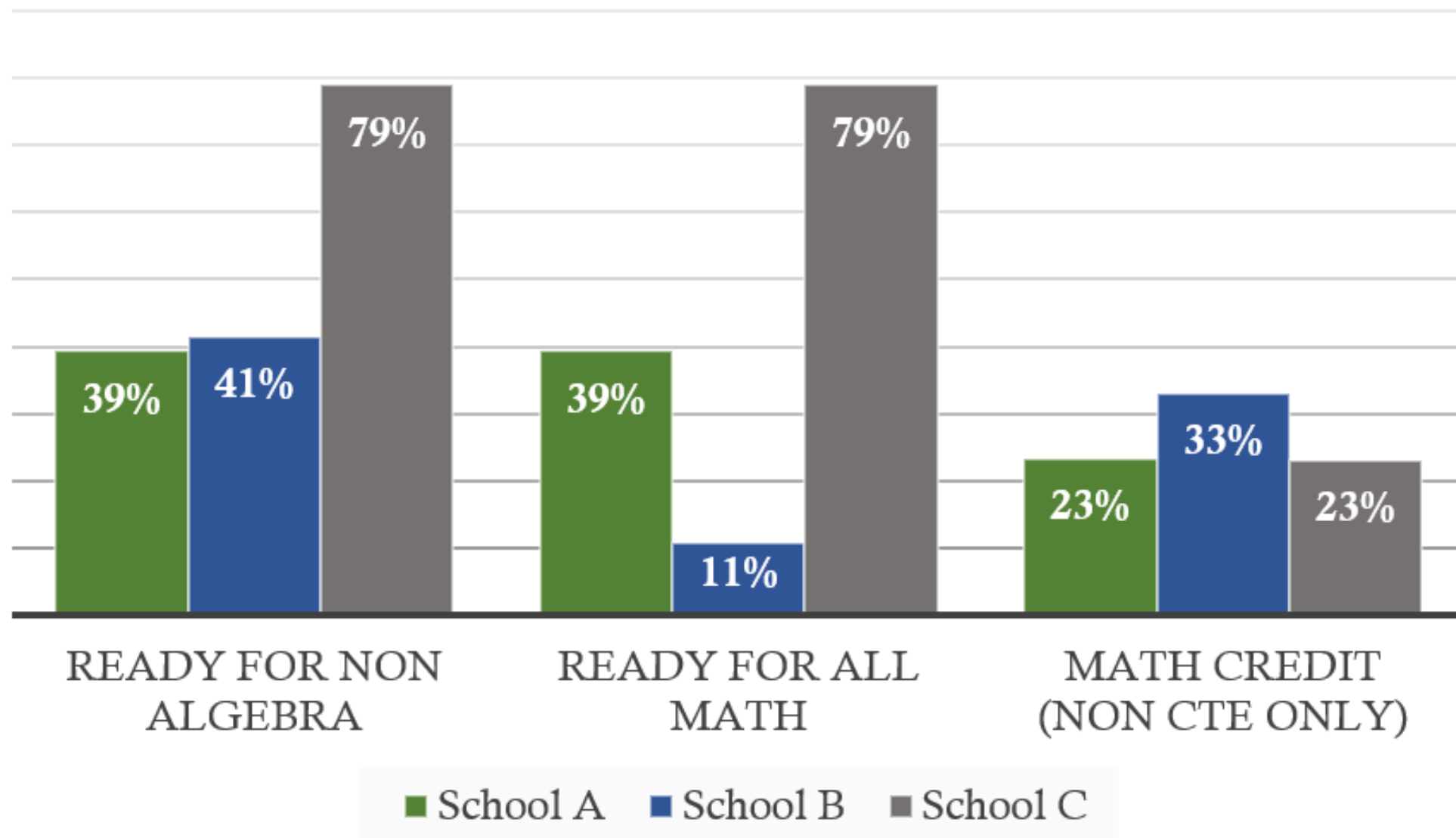
- Florida has a large-scale study of Texas Corequisites
- 77% of participants placed in level 1
- 44 of the 59 community colleges offer Developmental Education to students scoring at the Diagnostic  $\leq 4$ \*



# Overall Progress of Level 1 Students



## Level 1 Progress by School



# Level 1 College Credits Earned by School

	School A	School B	School C
All Students Credit Earned	13 of 56 (23.2%)	31 of 94 (33.0%)	31 of 147 (21.0%)
Degree Seeking only	9 of 39 (23.1%)	29 of 87 (33.3%)	14 of 61 (23.0%)
Averages for Credit Earned	9 Hrs, 2.1 Semesters	11.5 Hrs, 2.5 Semesters	6.6 Hrs, 2.1 Semesters

# Level 1 Persistence by School

	School A	School B	School C
Earn Credit	13 of 56 (23.2%)	31 of 94 (33.0%)	31 of 147 (21.0%)
1st Math Success	6 Hr Developmental 22 of 56 (39%)	4 Hr Developmental 69 of 94 (73%)	3 Hr Developmental 116 of 147 (79%)
Persist->Credit	16 of 22 (73%)	48 of 69, (70%)	67 of 116 (58%)
		3 Hr Elem	
Credit Enrollment	College Algebra Statistics Business Math	College Algebra w/Coreq Cont. Math w/ Coreq	College Algebra Statistics Business Math Cont. Math
Success	7 of 10 (70%) 5 of 7 (71%) < 5 (100%)	8 of 13 (62%) 24 of 38 (63%)	8 of 24 (33%) 15 of 32 (47%) < 5 (40%) 6 of 13 (46%)



# Action Oriented Findings

- Short Term – address the gap in persistence after 1<sup>st</sup> developmental with proactive/intrusive advising
- Long Term – Consider completion rates in successive courses, curriculum adjustments may be helpful
- College A – low percentage passing 1<sup>st</sup> developmental - consider curriculum adjustments or additional supports in stand-alone developmental
- College B – Elementary Algebra– Consider shortening path for College Algebra
- College C – low passing rate in credit course – Consider diversifying stand-alone developmental course or offering additional support with credit courses after stand alone

# Interview Findings – Support Colleges Want

- Retaining at-risk students
- Advising low-level students who are not successful in their first developmental
- Addressing language barriers
- Increasing communication between faculty/advisors to help students make wise choices about their pathway

# Objectives for Today

- Study – overview of research
- What we learned
- **Equipping Others**



# Unexpected Lessons Learned

*Understand the progress of students by entry-level*

- Classify students by 1<sup>st</sup> developmental math – not TSI2.0
- Reveals opportunities for improvement that will be otherwise missed
- Provides a framework for long-term evaluation

# Unexpected Lessons Learned

*Gaps in performance/persistence reveal opportunities*

- Start with a baseline assessment of progress by entry-level
- Repeat analysis, particularly after placement, curriculum, or advising changes
- Have institutional conversations

# Questions?

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# Understanding Sense of Belonging as Defined and Experienced by Community College Students

**Elizabeth D. Scherer**

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Houston Community College



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Thursday, November 14, 2024

# Background

- Sense of belonging impacts all aspects of a student's community college experience.
- Previous studies on sense of belonging and non-traditional students included:
  - Veterans
  - Online Degree-Seekers
  - Racial Minority Commuter Students
  - Working-Class Students
- This study will examine potential differences in definition and experience between traditional and non-traditional students based upon their age.





# Research Questions

- How do traditional and non-traditional students define sense of belonging?
- How do traditional and non-traditional students experience sense of belonging?
- How do the definitions and experiences of sense of belonging compare between traditional and non-traditional students?



# Methodology: Focus Groups

- Recruitment approach
  - Promoting event awareness
  - Registration and participant information collection
- Conducted 11 focus groups over the summer and fall 2024 semesters
  - In-Person
  - Virtual
- 41 Participants



# Focus Group Demographics

- Age
  - 28 Traditional (68.3%)
  - 13 Non-Traditional (31.7%)
- Gender
  - 26 Female (63.4%)
  - 15 Male (36.6%)



# Focus Group Demographics (continued)

- Race-Ethnicity
  - 5 Asian (12.2%)
  - 14 Black or African American (34.1%)
  - 16 Hispanic or Latino (39%)
  - 3 Multiracial (7.3%)
  - 2 White or Caucasian (4.9%)
  - 1 Other (2.4%)



# Participant Responses & Data Analysis



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# Academic & Career Goals

Similar responses from both groups

- Very specific
- Generalized
- Unsure



# Knowledge of HCC & Decision to Attend

## Similarities across age groups

- Recommended by family and friends
- Convenient
- Affordable
- Near-by

## Differences across age groups

- Non-traditional
  - Excited, but nervous
  - Personal decision
- Traditional
  - Confused, scared, worried
  - Directed decision



# Initial Sense of Belonging

- Scaled Response - 1 (strongly agree) to 5 (strongly disagree)
- Similar average ratings from both groups
  - Non-Traditional – 2.4
  - Traditional – 2.1
- Different reasons cited by participants who gave lower rankings
  - Non-Traditional – lack of English skills, previous experience at other institution
  - Traditional – unpreparedness for college-level work as dual credit student, adjusting to differences between high school and college





# Changes to Sense of Belonging (4 Weeks into semester)

## Non-Traditional

- Increased
  - Interactions and connections with faculty and staff
  - Programs and events
- Decreased
  - Interactions with faculty and staff
  - Attending classes at different campuses
- Feelings expressed
  - Desire to help and encourage others
  - Challenged (positively)
  - Still excited, but some worry creeping in



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## Traditional

- Increased or remained the same
  - Interactions with faculty and staff
  - Growing awareness of campus amenities, as well as programs and events
  - Ability to access student services
  - Connecting with other students
  - Atmosphere of inclusiveness, which was missing in their high schools
- Decreased
  - No bookstore on campus
- Feelings expressed
  - Still gaining understanding
  - Taking responsibility



## **Sense of Belonging Defined**

- Personal connections
- Clear and planned communications
- Student spaces
- Opportunities outside of the classroom



**What's next?**



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# Future Questions & Areas to Explore

- Avoiding unintentional sample bias and reaching the unheard student.
- Fostering sense of belonging and community in students enrolled in online only programs.
- Fostering sense of belonging in the college and their host country for International Students.
- Community-mindedness in students at two-year commuter institutions.
- Internally vs. externally motivated students.
- Geography, size, and sense of belonging.



# Conclusions

- **Students' Sense of Belonging at HCC**
  - Initial Perception – Fairly strong across both groups
  - Perception 4 weeks into semester – Improved somewhat across both groups and at a similar rate
- **Experiencing Sense of Belonging at HCC**
  - Non-traditional
  - Traditional



# Q & A



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# Acknowledgements

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  - Office of Student Retention and Completion
  - Other HCC faculty and staff who generously shared their knowledge and experience.



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# Resources

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**Thank you!**

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# **Navigating the Path Ahead: Investigating First-Year Students' Transfer Concerns**

**Sarah Tidwell, M.A. | Lee College**



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# Introduction & Context

- 50–83% of first-time community college students **intend to complete a bachelor's degree** (CCCSE, 2023; Horn & Skomsvold, 2011; Taylor & Jain, 2017; Velasco, et al., 2024).
- Only **1/3** of transfer-intending students **matriculated** to university and **less than half** of those **complete** within in six years (Jenkins & Fink, 2016; National Student Clearinghouse Research Center [NSCRC], 2022; Velasco et al, 2024).
- Increasing **concerns** about the **value of college degrees** and their economic benefits (Belkin, 2023; Carnevale et al., 2018; Marcus, 2022; Pew Research Center, 2016).
- **Texas' HB8** changed community college **funding** to be based on **completion, "credentials of value", and transfer** (Texas Association of Community Colleges, 2024)



# Literature Review

- **State and Institutional Factors Impacting Transfer**
  - Studies have yielded **inconclusive results** regarding the impact of **statewide** articulation agreements (Anderson et al., 2006; Cohen, 2003; Long & Kurlaender, 2009; Mosholder & Zirkle, 2007; Nicholas et al., 2021; Roska, 2006, 2009; Roska & Keith, 2008)
  - **Institutional-level agreements** are more robust and provide **clear pathways** (Nicholas et al., 2021; Xu et al., 2018)
  - **Dual admission policies** benefit FTIC students not admitted directly to four-year institutions (Jabbar et al., 2021)
    - Over **85%** of participants admitted to university **matriculated with an associate's degree** compared to 55% of others. (Nicholas et al., 2021)

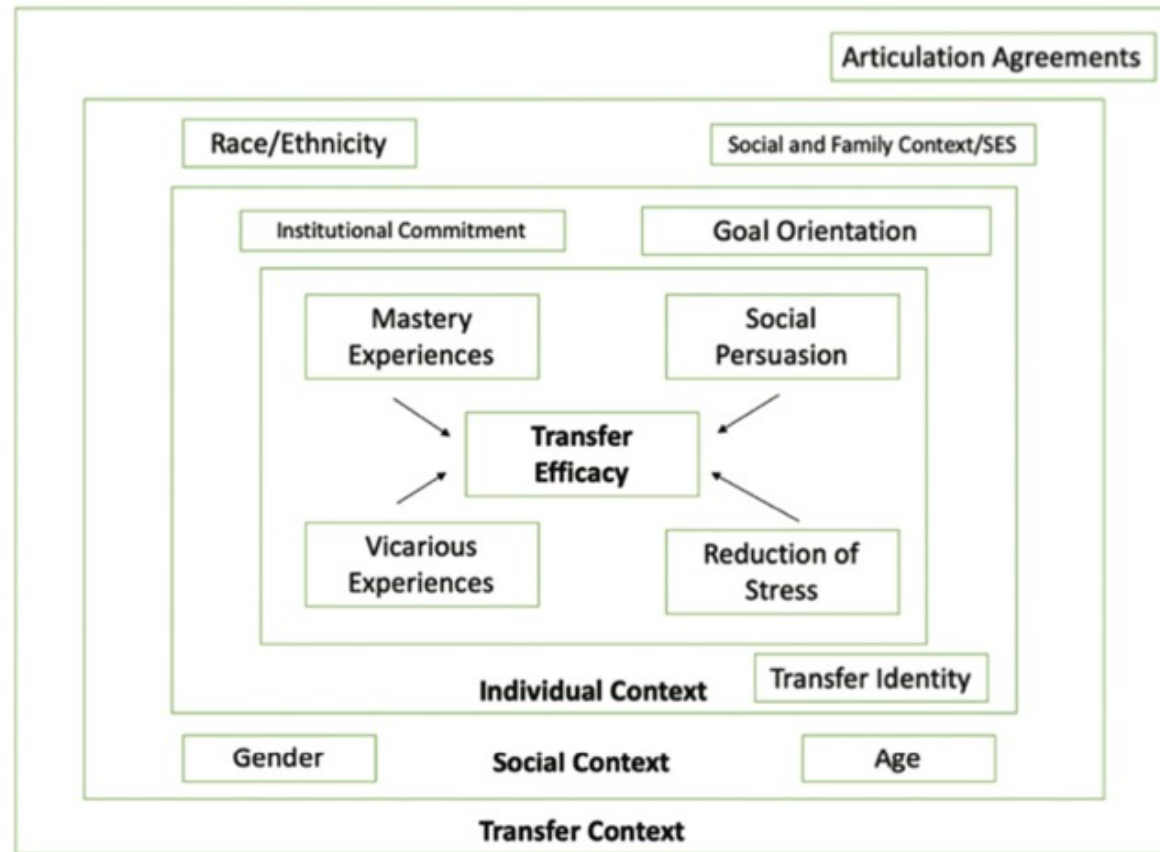
# Literature Review

- **State and Institutional Factors Impacting Transfer (continued)**
  - Institutional partners should work to increase information quality and transparency to prevent **information asymmetry** where information conflicts or language is muddled (Grote et al., 2024; Jones, 2004; Schudde et al., 2020; Spencer, 2018)
  - **Connection** to two- and four-year staff through transfer seminar courses, mentoring programs, strong advising, and university visits build a **culture of transfer** that supports successful matriculation (Andres et al., 1997; Cepeda et al., 2021; Cohen & ERIC Clearinghouse for Junior Colleges, 1989; Cuseo, 1998; Dowd et al., 2006; Eggleston & Laanan, 2001; Elliot & Lakin, 2020; Fay et al., 2022; Grubb & MPR Associates, 1990; Hagedorn et al., 2004; Handel, 2007; Kinnick et al., 1997; Jabbar et al., 2019, 2021; Nahlik et al., 2024; Nunez & Yoshimi, 2017; Pak et al., 2006; Scherzberg, 2017; Strayhorn, 2015; Thompson & McFarlane, 2018; Townsend, 1993a; Townsend, 1993b, Walker & Okapala, 2017; Wang, 2020; Willingham, 1973)

# Literature Review

- Individual Factors Impacting Transfer
  - Support Networks
    - Students with one or more strong support sources are more likely to persist through matriculation. (Anderson, et al., 2012; Jabbar et al., 2019; Hinson Langford et al., 1997; Khan & Antonucci, 1980; Lazarowicz & McGill, 2022; Rumann, 2010; Sáenez et al., 2018)
  - Financial Understanding
    - Transfer students face greater financial difficulties (Nguyen et al., 2024; Karp, 2020)
    - Students do not fully understand university attendance costs, have limited understanding of financial opportunities, and difficulty in navigating financial administrative structures (Goldrick-Rab, 2019)
  - Unexpected Life Events
    - Catastrophic disturbances can significantly impact student matriculation due to reconsidering destination institutions or the decision to transfer (Cox, 2016; Deterding, 2015; Ippolito, 2021; Jabbar et al., 2021; Somers et al., 2006)

# Buenaflor's Framework for Transfer Efficacy (2023)





# Methodology Overview

- **Semi-structured Interviews**
  - Microsoft Teams
- **Interview Protocol Topics**
  - Background & rapport building
  - External commitments
  - Academic integration
  - Social integration
  - Campus supports
  - Educational experience and the journey ahead

(Cruz, 2023; Kelly, 2009; Pope, 2022; Salas, 2014; Zinke, 2019)
- **Sample Recruitment**
  - Participant requirements
    - Within their first year as a non-dual credit student at STCC
    - Self-identify as “transfer-intending”
    - Declared academic plan in student information system
  - Participant perk
    - Entry into a drawing for a \$100 Amazon gift card
  - Advertisements
    - Class announcements in FYE courses, campus flyers, social media



# Findings

- Financial Ambiguity
  - **Estimating** cost
  - Locating financial **aid opportunities**
  - **How to pay** for increased cost
- Lack of Information
  - Locating information (process & course transfer)
  - **“Starting Over”**
- College-Life Balance
  - Commute
  - Course **availability**



# Recommendations

- Regular stakeholder engagement
- Evaluate institutional programming & partnership alignment with needs
- Collaborate with university partners to provide transparent information on expected costs and financial aid opportunities
- Program-specific articulation agreements & co-enrollment opportunities
- University-enrolled alumni access to CC student support services



**Thank you!**

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