Success with Developmental Math in Small Schools

Dr. Paula Whitman

Division Chair Math & Science, Vernon College

Dr. Connie Richardson

Math Pathways & Corequisite Math Consultant, Richardson Consulting

Texas Success Center

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

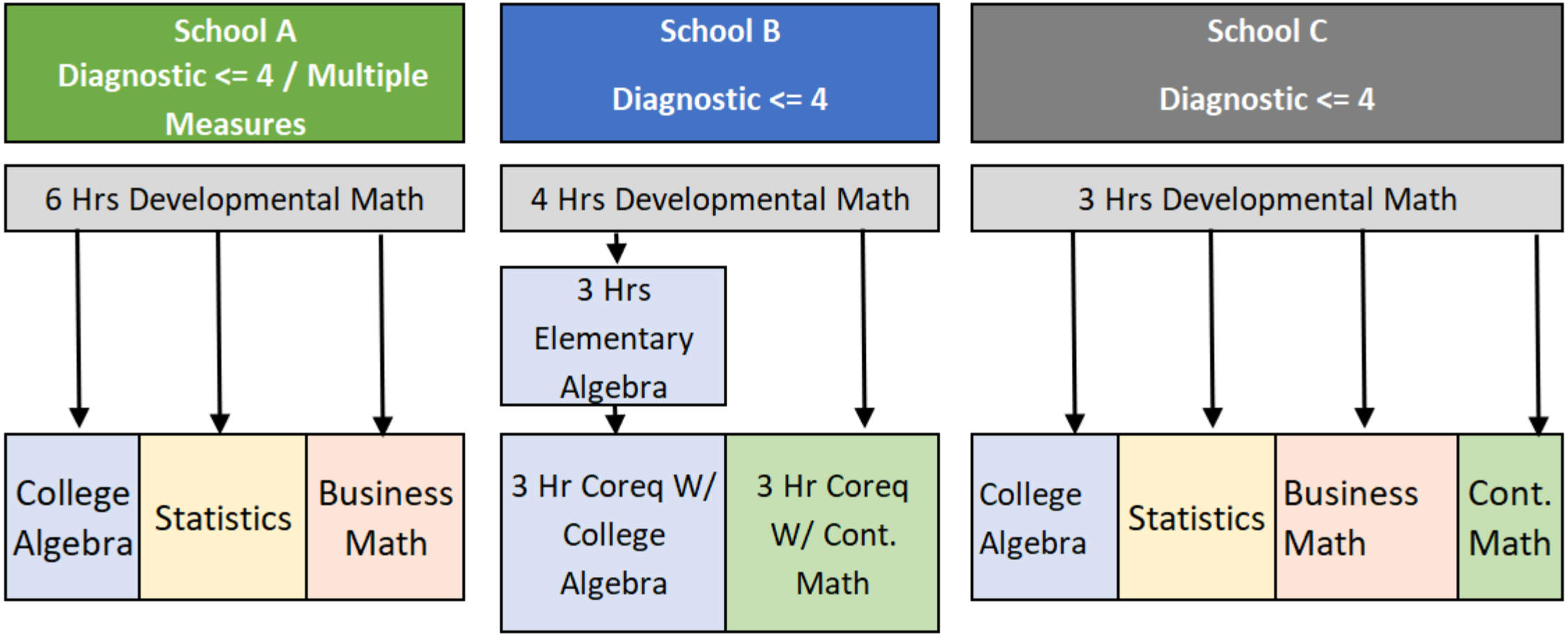
Concerning small schools (FTE < 5000) in Texas Community Colleges:

- *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*?*

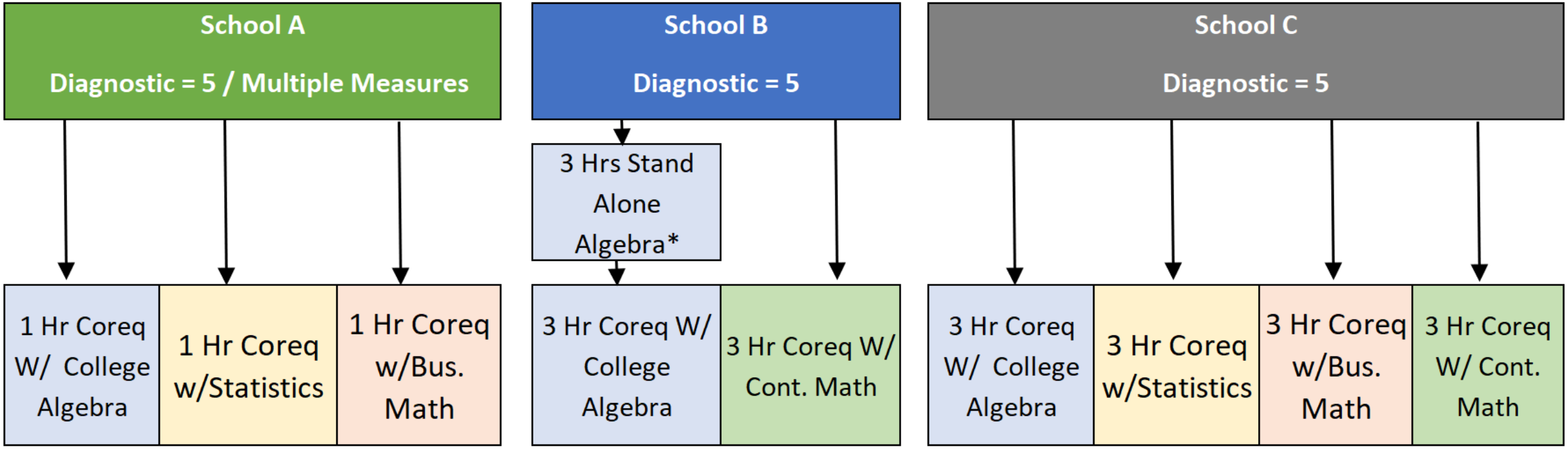
Objectives for Today

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

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

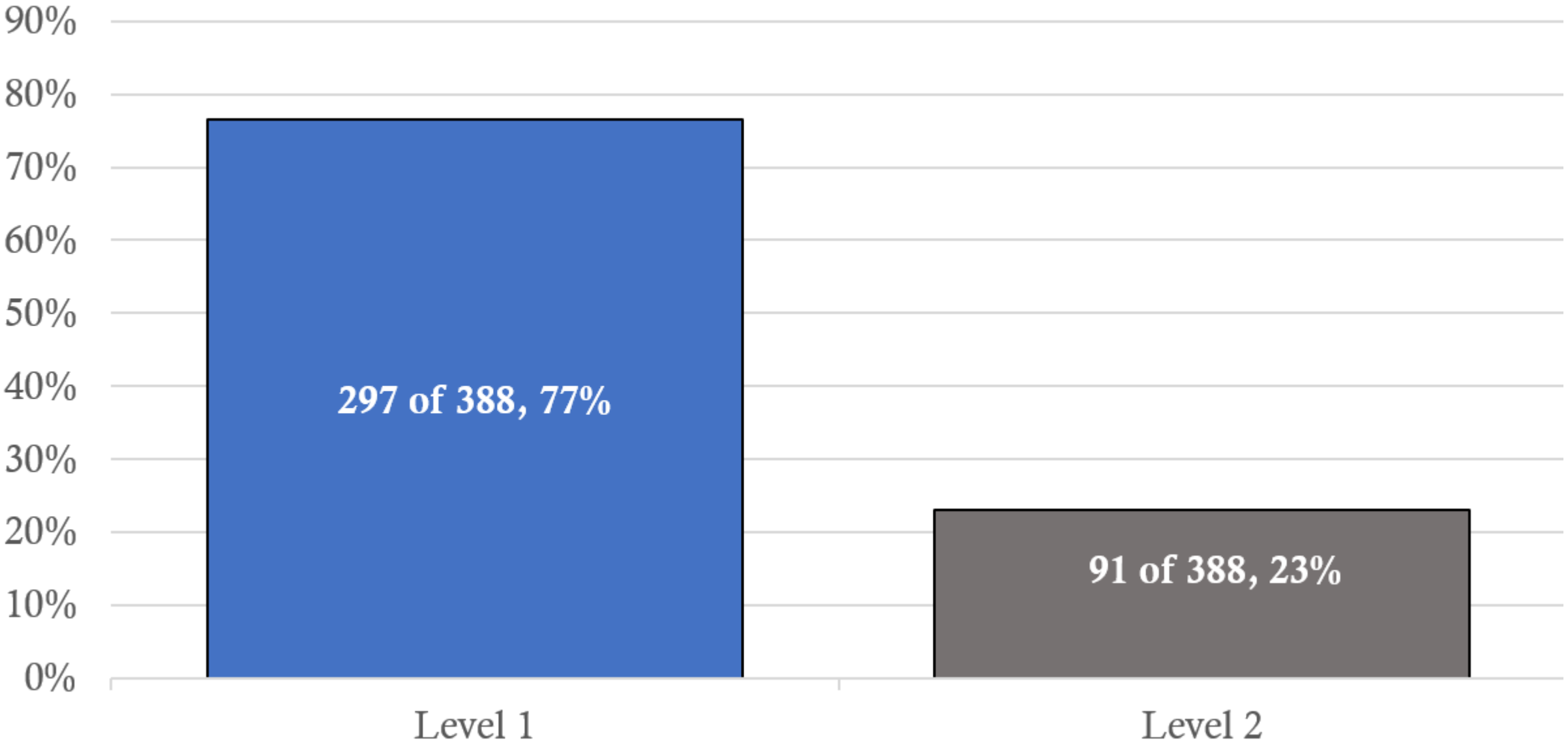


Placement Level 2 – Corequisites

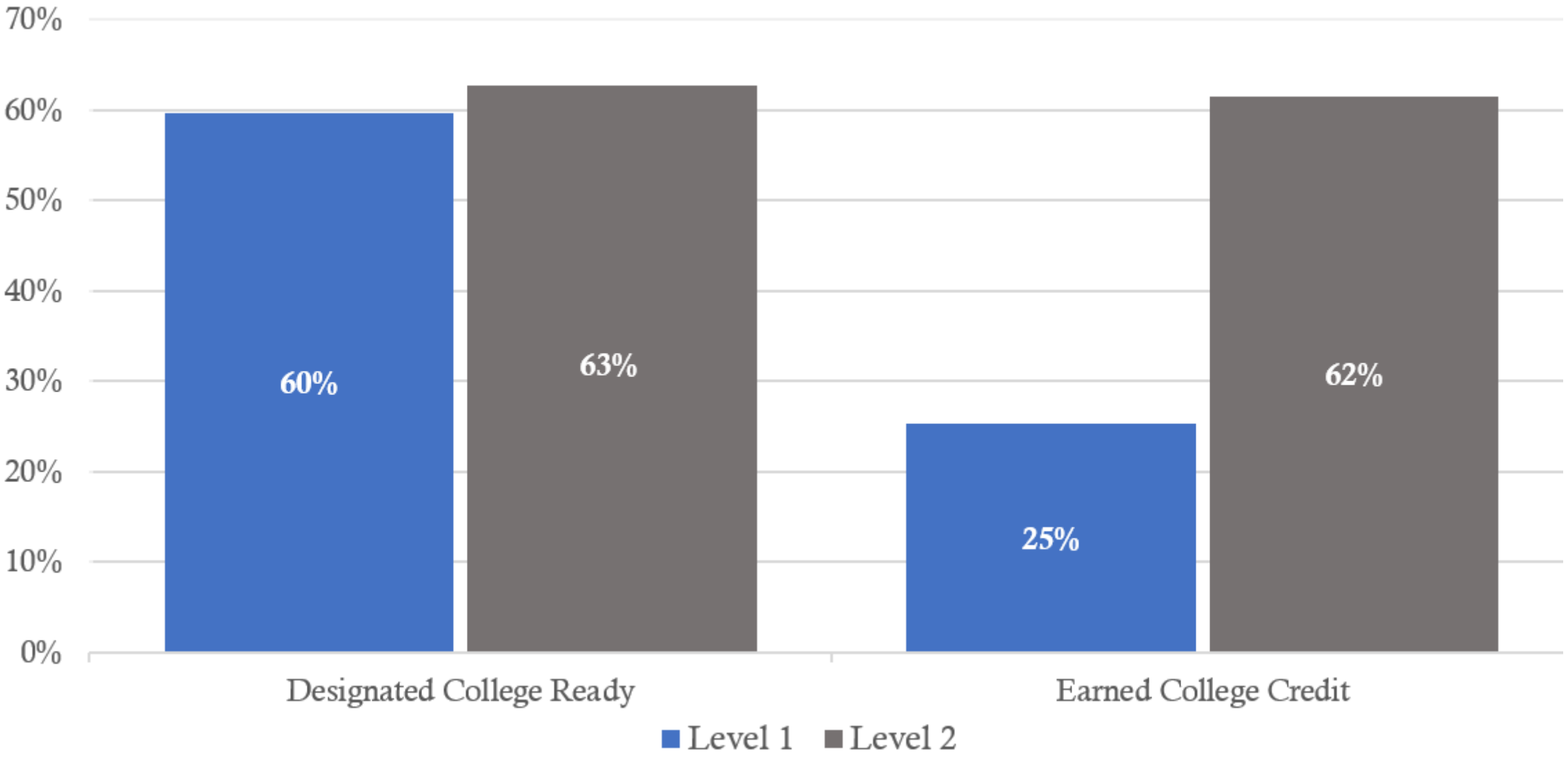


* for students designated BASIC proficiency

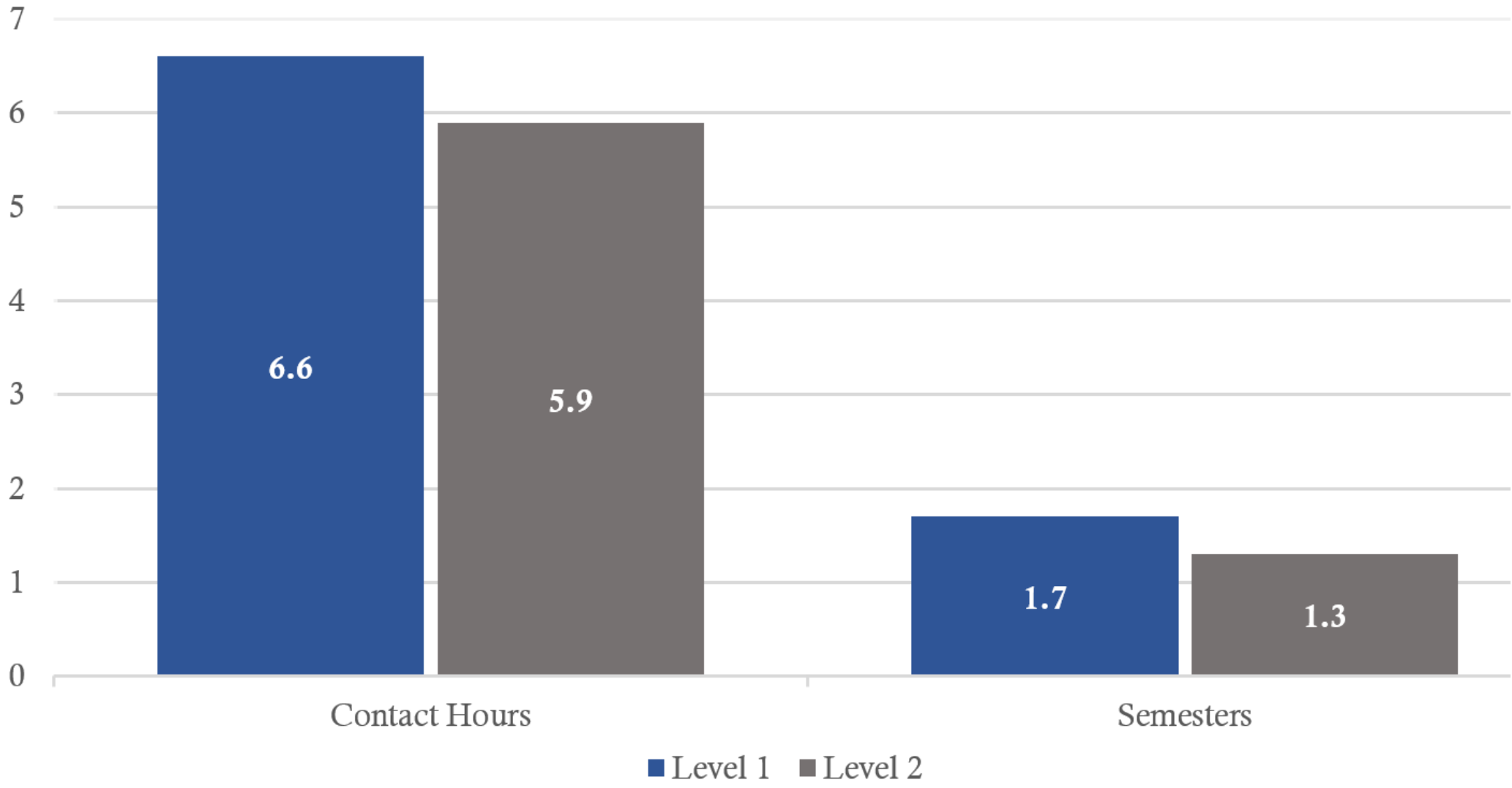
Student Placement Based on First Enrollment



Student Progress by Placement Level



Average Contact Hours and Semesters by Placement Level

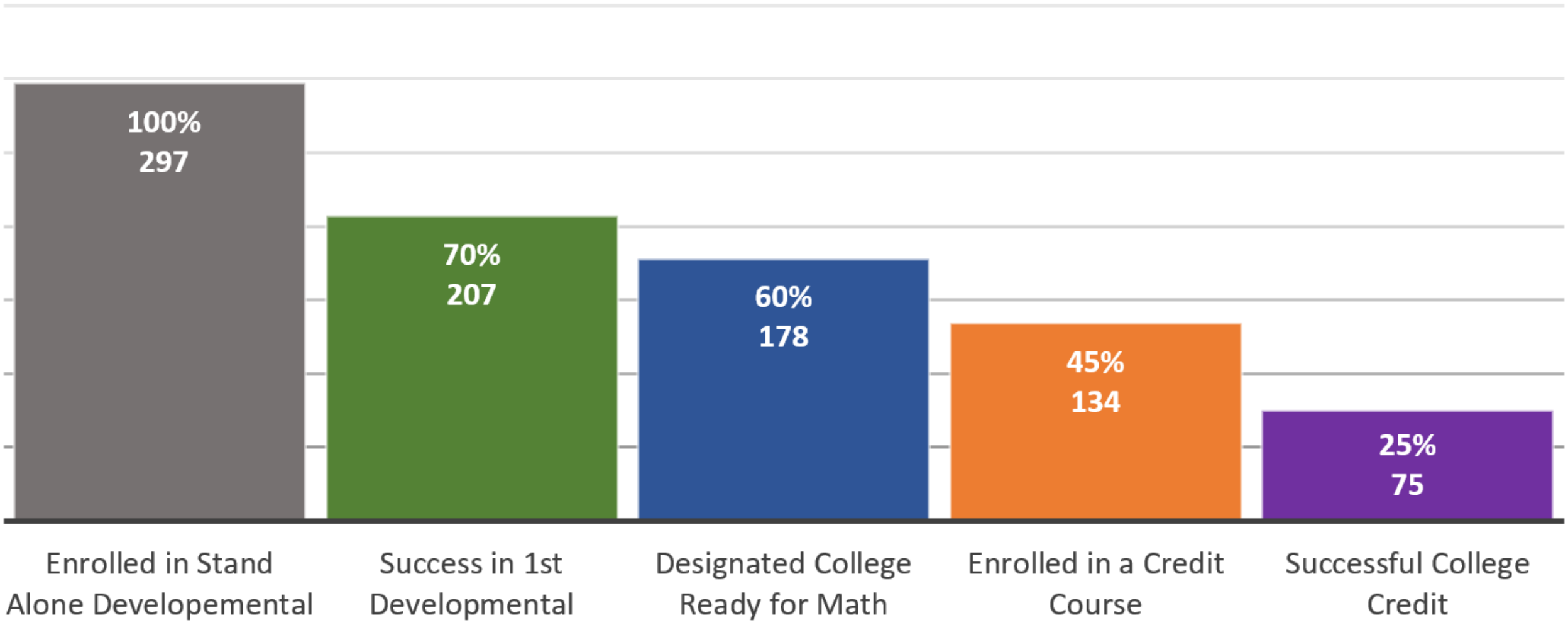


Deep Analysis – Level 1 Students

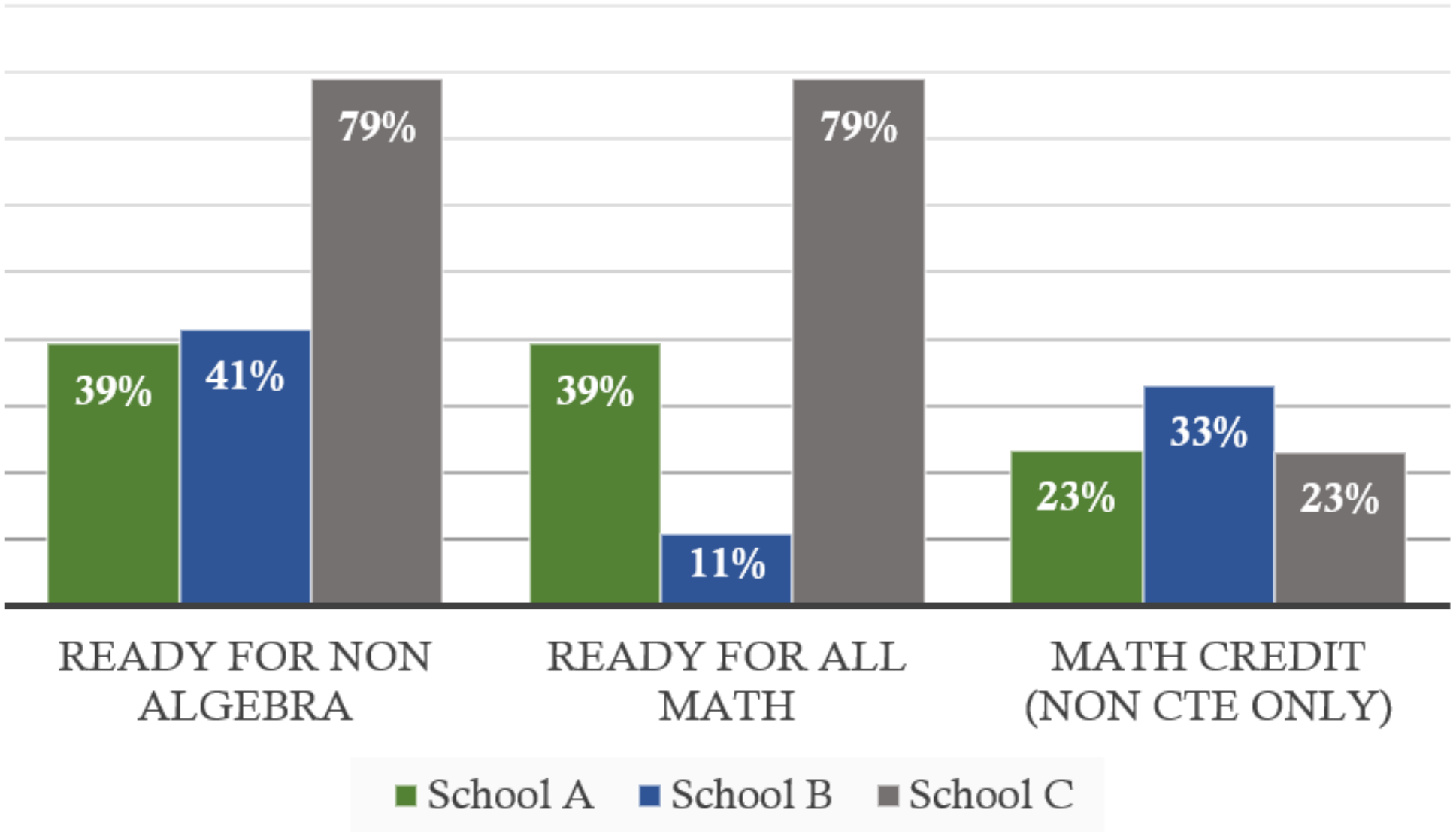
- Florida has a large-scale study of Texas Corequisites
- 77% of participants placed in level 1
- 44 of the 59 community colleges offer Developmental Education to students scoring at the Diagnostic <= 4*

*DEPS 2023 Survey

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 1st developmental with proactive/intrusive advising
- Long Term – Consider completion rates in successive courses, curriculum adjustments may be helpful
- College A – low percentage passing 1st 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 1st 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?

Dr. Paula Whitman

Division Chair Math & Science, Vernon College

pwhitman@vernoncollege.edu