

# Improving Developmental Math Courses: A Study of Various Methods for Replacing Developmental Mathematics in Higher Education

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- ❖ The odds of a college student leaving the college or university with a degree decreases if that student begins in a remedial math class
- ❖ Only 44% of students leaving high school meet the College Readiness Benchmark in math (SREB, 2013)
- ❖ There is an increase in nontraditional students returning to school who need developmental mathematics courses (Jesnek, 2012)
- ❖ Up to 80% of students enrolled in the entry level math program never receive an actual math credit at the college level (Yamada, 2014)

Recommended  
replacements for  
traditional  
developmental  
math courses:

- Boot Camps: 1-8 week program
- Summer Bridge: 5-10 week program
- Accelerated: combines multiple developmental math courses in 1 semester
- Self-Paced: allows students the opportunity to complete multiple developmental math courses in 1 semester
- S.R.E.B. Math Ready: A remedial math class offered by the K-12 system to senior students who do not meet minimal standards

# Accelerated VS Self-Paced

## Accelerated

- 2 levels of developmental math covered in 1 semester
- Comprehensive exam at midterm & final determines if student receives credit to move on to college algebra
- Multiple studies have found this method successful

## Self-Paced

- 2 levels of developmental math covered in 1 semester
- Students have scheduled times to work assignments in computer labs
- Students are assessed on the skills they have yet to master
- Makes students assume responsibility in building their math knowledge

# Boot Camp VS Summer Bridge

## Boot Camp

- Summer course
- Target: Incoming freshmen and nontraditional students
- Intensive
- Required diagnostic test at the start and end of program
- Useful for skipping developmental math courses

## Summer Bridge

- Summer Course
- Target: high-risk high school graduates
- Longer than boot camps; not as intensive
- No required diagnostic test at the start or end of program
- Useful for improving scores on placement tests in developmental math, English, & reading

# Boot Camp VS Summer Bridge

## Boot Camp

- Cost covered by grants and institution
- Students are charged full or discounted summer tuition
  - Tarleton State charges \$275 for 1-week program, including price of diagnostic tests
- Institutions offer student incentives for completing course (iPad, laptop, tuition waver)

## Summer Bridge

- Cost covered by grants, institution, and high school programs
- Students are charged discounted tuition
  - Chicago State charges \$250 for 5-week program in math, English, and reading
- Institutions & high schools offer incentives (free books, stipend, lunch, tuition waver)

# S.R.E.B. Math Ready

- Offered to twelfth graders
- Sponsored by the Bill and Melinda Gates Foundation
- Purpose: to bridge the gap between high school and college math classes in order to prevent students from paying expensive non-accredited developmental math classes in college
- Allows students who scores an average 80 or above to skip remedial classes and be placed directly into college algebra, regardless of ACT, SAT, or Accuplacer scores
- 76% of students in the S.R.E.B. Math Ready program improved ACT math scores



# CONCLUSION

Research consistently shows that students will always struggle with math, but those struggles can be overcome with creative planning.

