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Implementing Supplemental Instruction in Traditional and Co-Requisite Courses

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60x30TX Texas Higher Education Coordinating Board

What is Supplemental Instruction (SI)

- Peer tutoring model that provides in-class and out-of-class support for high-risk courses
- Facilitated by SI Leaders
  - Attend assigned class
  - Conduct weekly SI group study sessions
- Shown to improve student performance and retention
- Objectives:
  - Improve understanding of course material
  - Strengthen positive study habits
  - Improve individual performance
  - Improve retention and graduation rates
  - Build study groups
  - Foster critical thinking

SI Funding

- How do we pay for this?
  - Grants
    - Institution
    - State level
    - Federal level
  - Base funding
  - Partner projects

- How much does it cost?
  - Cost per SI leader
    - $9-12/hr depending on comparative rates at your university
    - SI leaders start the first week of class and are employed until the last week of class
  - Administrative personnel
  - Possible options
    - Stipends
    - Field experience
    - TA experience/Internship

SI Leaders

- Hiring
  - Online application
    - Faculty recommendation (required)
    - SI Leader recommendation (desirable)
  - Interview
    - 30-minute Mock SI Session that evaluates:
      - Professionalism
      - Written communication skills
      - Oral communication skills
      - Personality
      - Performance under stress
    - Group interview
    - One-on-one interview

- Characteristics
  - Current UHD students
  - Taken and mastered the target course (B or higher)
  - Maintain minimum 3.0 cumulative GPA
  - Demonstrate effective communication skills, professionalism, and integrity

SI Leader Training

- 2-day mandatory training focused on:
  - Role and responsibilities
  - Collaborative study techniques
  - Customer service
  - Public speaking and presentation skills
  - Team-building activities
  - Problem-solving activities

SI leader Evelyn Valdez holds a general biology I mock session during training (Spring 2016).

Responsibilities of the SI Leader

- Attend every class meeting for the assigned section
  - Be a “model student”
- Support and communicate with assigned instructor
  - Direction of SI session
  - Feedback regarding where students are struggling
- Attend and participate in monthly SI Leader staff meetings
- Communicate with mentor and supervisor
- Prepare detailed session plans
  - Session activity
  - Exam review
  - Supplemental worksheets for home study
- Facilitate 2-4 60-minute study sessions per week
  - Be a “near peer”
- Provide additional SI sessions as necessary (e.g. prior to quizzes and exams)

SI Study Sessions

SI leader Carlos Guajardo conducts a team-based exam review for history using Kahoot! (Spring 2017).

- Based around activities that encourage group learning
  - Tailored to a specific course section
  - Students review content in small groups
  - SI Leaders do not re-lecture or give out answers
- SI Leaders:
  - Integrate content with learning strategies
  - Empower students to take control of their own learning
  - Encourage the formation of study groups outside of class and SI sessions

Impact of SI on the Leaders

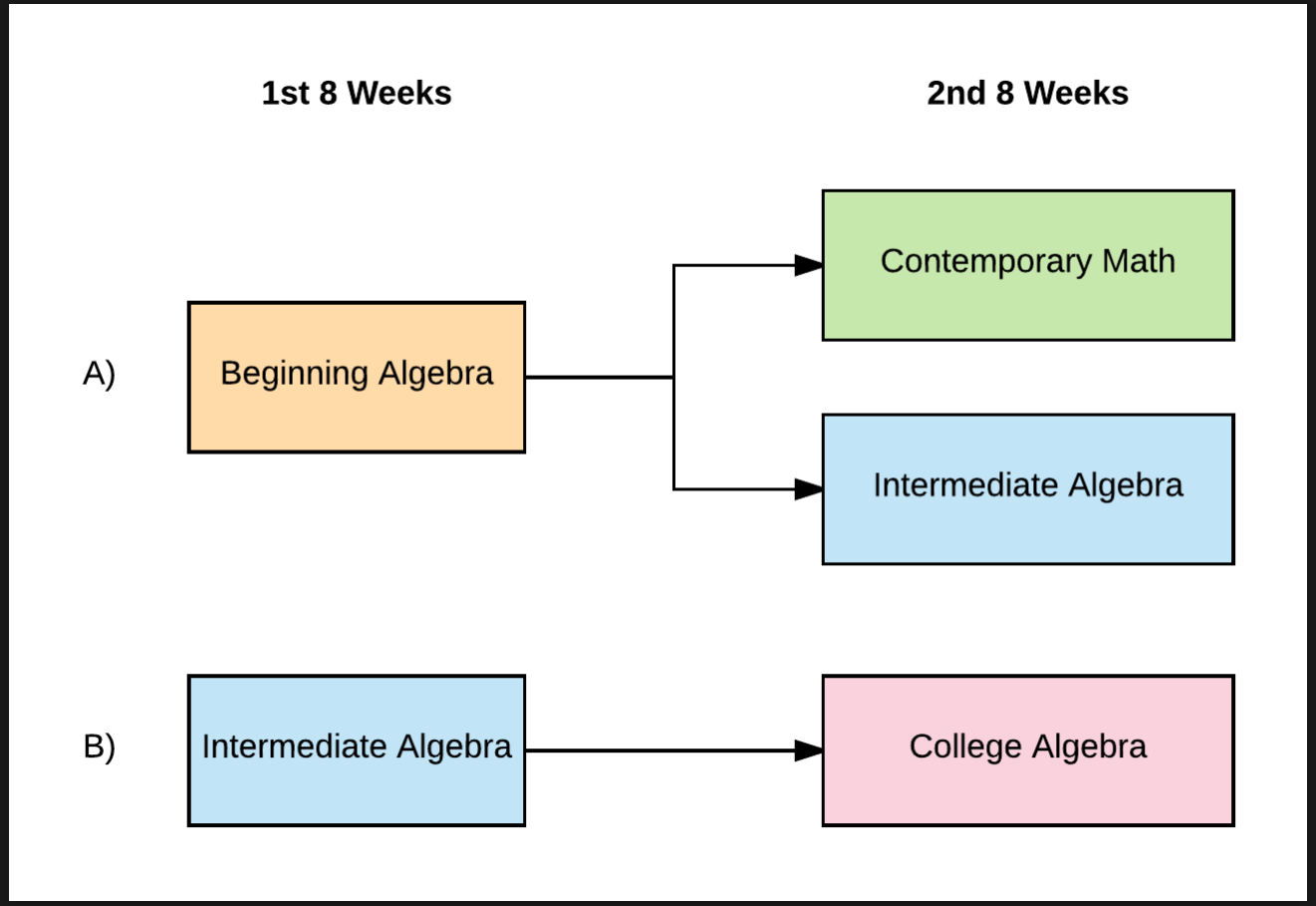
- Content mastery
- Opportunity to collaborate with peers and faculty
- Improved leadership and communication skills
- Research experience
- Convenient job located on campus
- Excellent resume booster
- **SI Leader graduation rate (FY13-FY17): 94%**

SI Leaders Esmeralda Martinez and Evelyn Valdez-Rangel present data on the SI Program at the Innovative Teaching and Learning Symposium (2016).

SI in the Classroom

If the mountain won’t come to Muhammad, then…

Math Acceleration at UHD



Participation and Engagement

- Underprepared students
  - Self-regulated learning behaviors*
  - Perception of self-efficacy*
  - Time/stress management

- Underprepared students at UHD
  - Large gap between HS and college
  - Family/work obligations
  - Commute to/from campus (in Houston traffic)
  - High desire to seek help

*Ley, K., & D.B. Young. (1998). Self-regulation behaviors in underprepared (developmental) and regular admission college students. *Contemporary Educational Psychology,* 23, 42-64.

SI Leaders in the Classroom

- SI Leaders in classroom:
  - Can be a bridge between the instructor and students
  - Can help with handouts and student questions
  - Are knowledgeable of class activities, learning outcomes, and course materials
  - Take what they learn in class (especially difficult concepts, gaps in student foundations, etc.) to enhance SI sessions
- Class meets 4 times per week
  - SI interacts with students every day
- Out-of-class: collaborative study sessions
  - Four times a week
  - 2-4 weekly planning hours
  - Weekly exam reviews
  - Friday open lab for additional assistance

Developmental Algebra: SI Integration into Co-Requisite Courses

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- The Faculty role
  - Integrate group/paired learning activities during class
  - Allow the SI Leader to assist in facilitation
  - Acknowledge the SI Leader in class and recommend SI study sessions
  - Communicate expectations and information

Instructor Description of a Co-Requisite Class

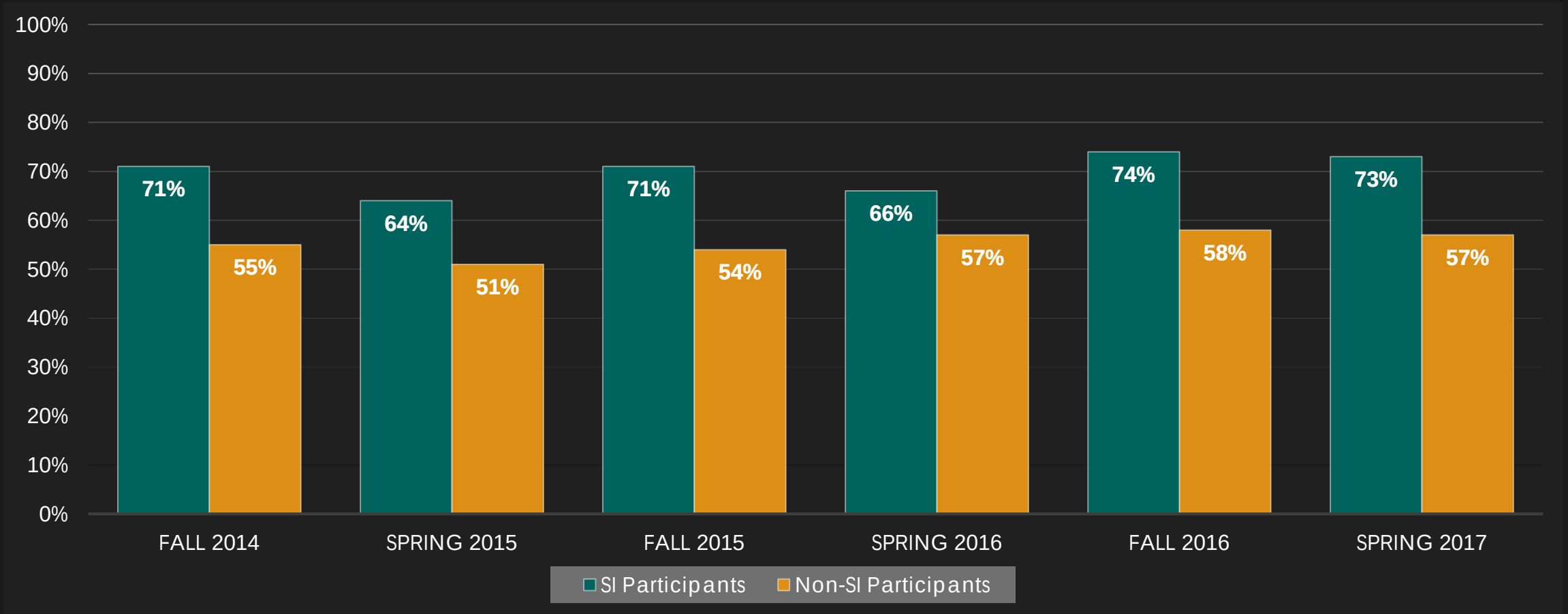
The Magic Ingredient: Faculty Buy-In

- Faculty participation essential to success of SI
  - Marketing sessions
  - Validating “expertise” of SI Leader
  - Two-way communication
  - Promoting SI to their colleagues
- How we got our UHD faculty on board:
  - Found an advocate in each department
  - Data from past semesters
  - Pre-semester networking session
  - “Grant” restrictions

SI Data

Fall 2015 – Spring 2017

Overall Results



ABC Rate Comparison: Section by Section Developmental Co-Requisite Math Courses

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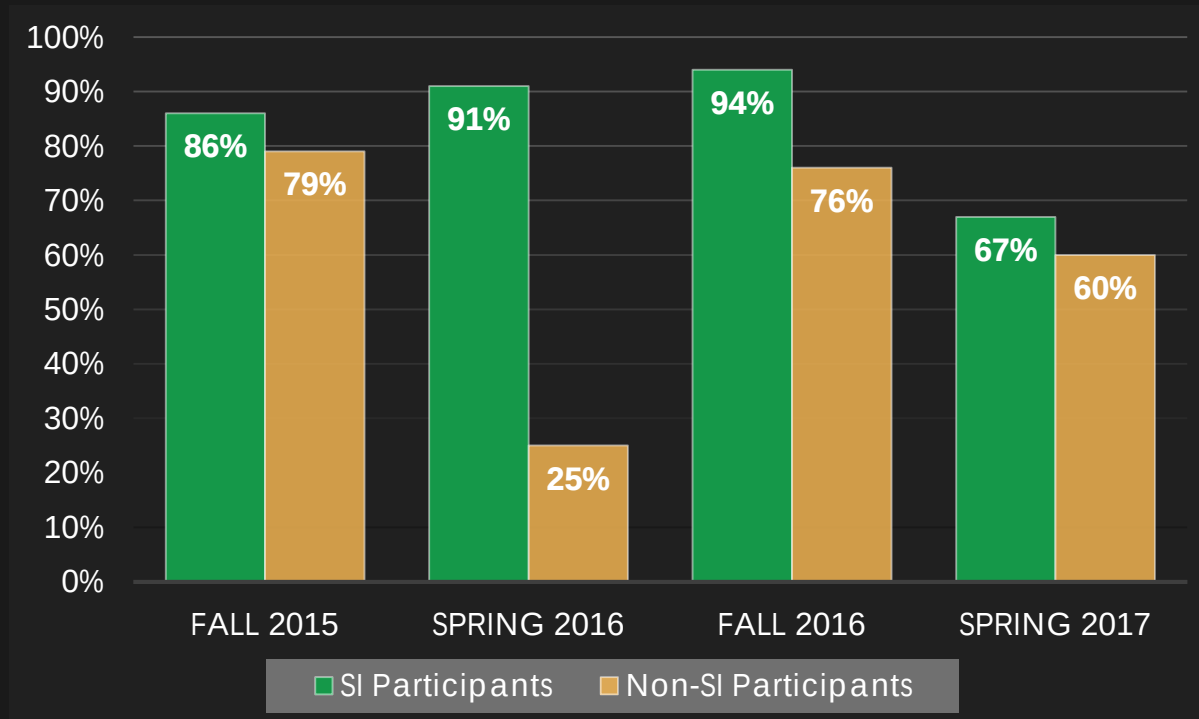
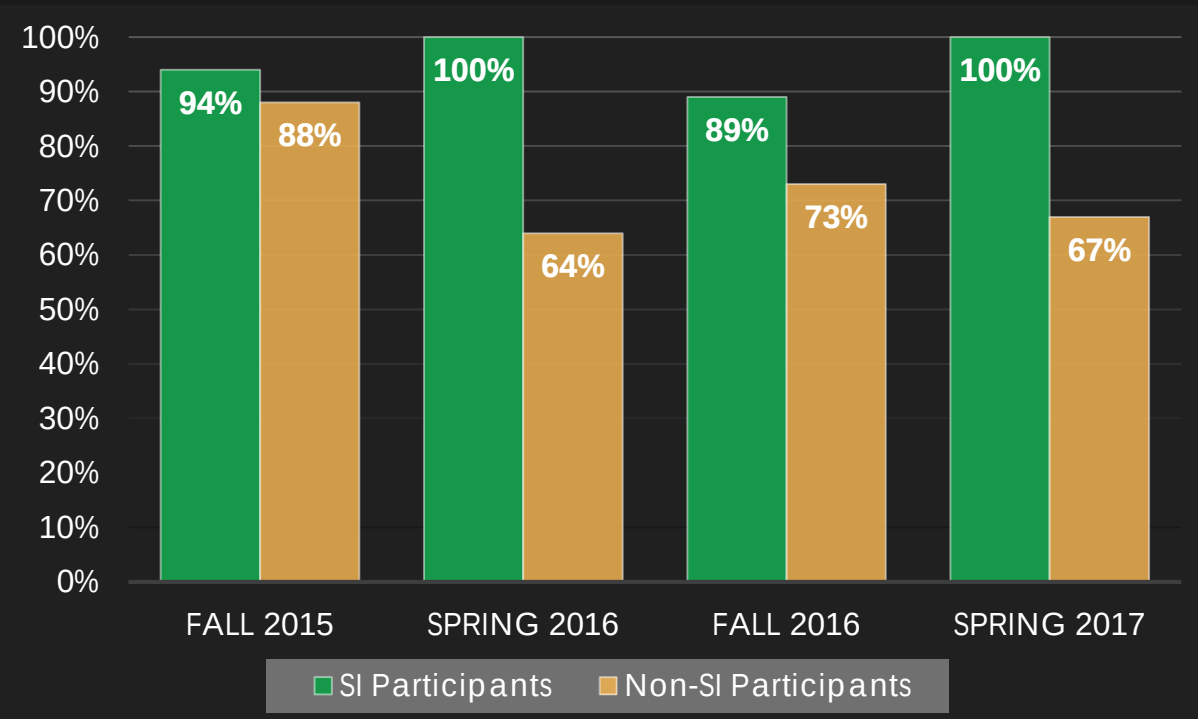
Beginning Algebra



Overall ABC Rate: 54% (Fall 2013) → 70% (Fall 2016)

Intermediate Algebra



Overall ABC Rate: 49% (Fall 2013) → 66% (Fall 2016)

ABC Rate Comparison: SI Participation Developmental Co-Requisite Math Courses

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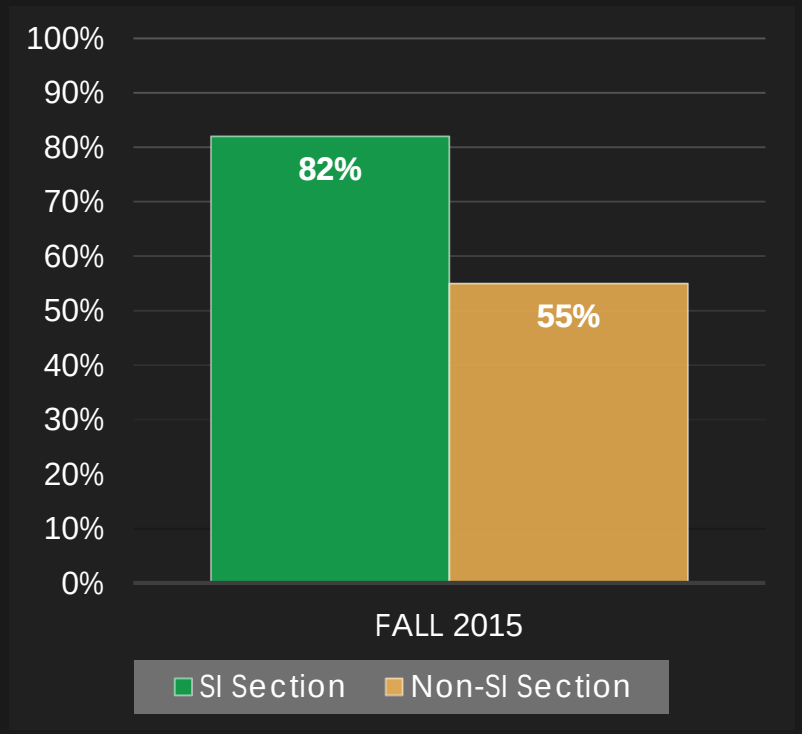
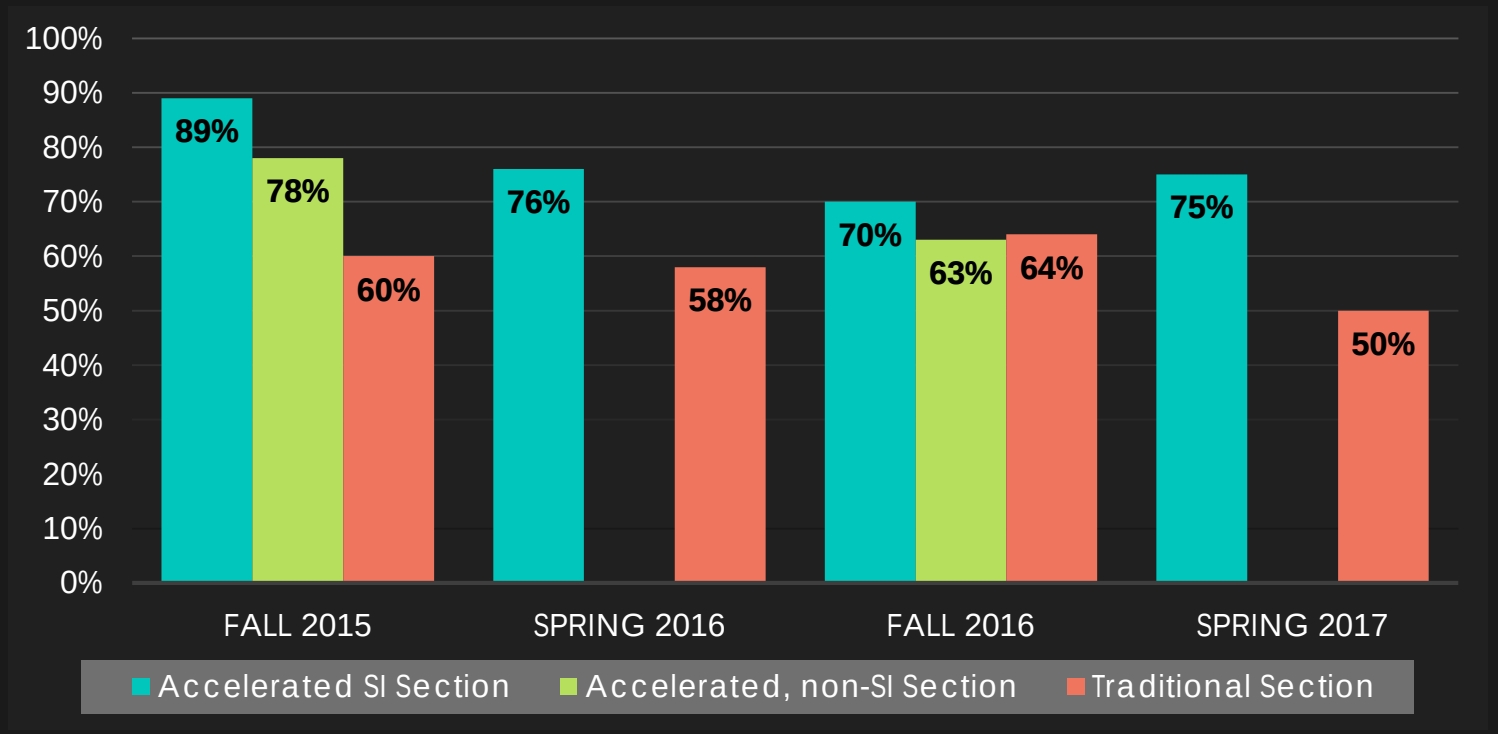
Beginning Algebra



Intermediate Algebra



SI Session Example

Intermediate Algebra

Have you tried embedded tutoring in your classroom?

Did it work? Why or why not?

Planning Activity

How might this look at your institution?

Thank you!

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