Empowering Student Support Programs Through Data Analytics: A Collaborative Approach at CSUSB

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Who are we?

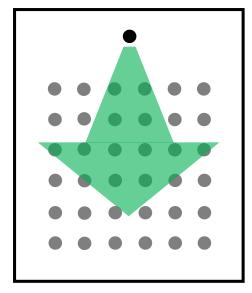




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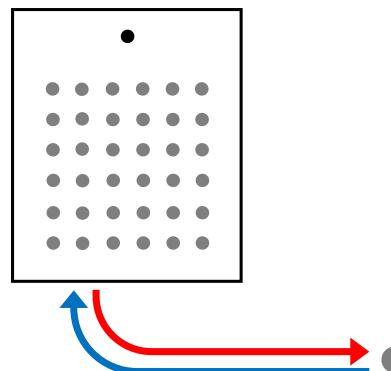
Lecture







Lecture



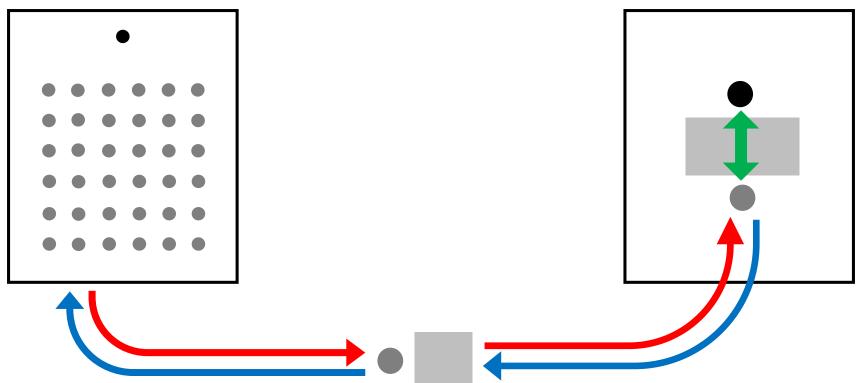




Lecture

What is SI?

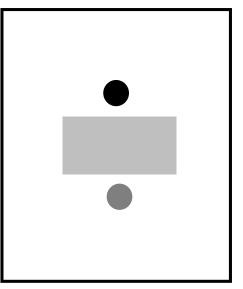
Tutoring / Office Hours

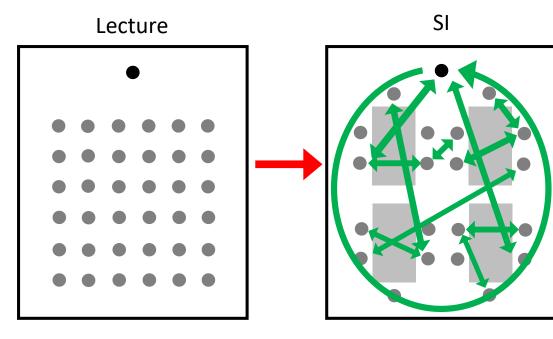






Tutoring / Office Hours





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Learning strategies typically used in SI sessions:

- Identifying Key Concepts
- Paired Problem Solving
- Teaching to Learn
- Visual Mapping
- Informal Quizzes
- Note Processing

- Sequencing
- Jigsaw Text Review
- Interactive Games
- Study Planning and Techniques
- Practical Application and Associative Learning

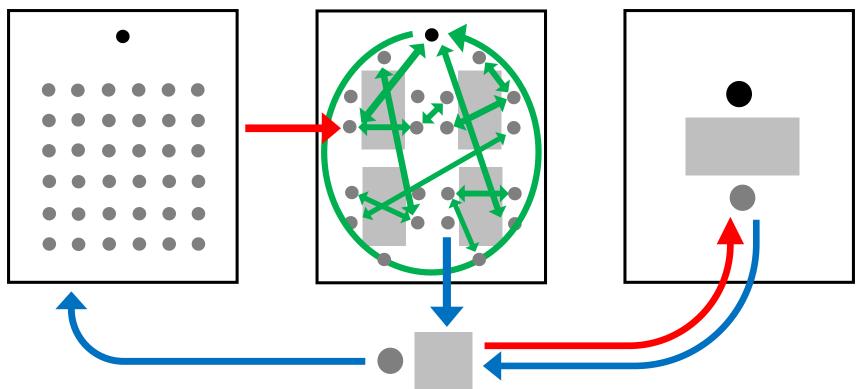




Lecture

What is SI?

Tutoring / Office Hours



SI



Course Lecture

- Presentation of course content
- All course concepts addressed
- Up to 4 hours per week
- Assignments and evaluation
- Large group environment often limits collaborative learning opportunities

Professor / Instructor

- Content Expert
 - Master Educator
 - Office hours for student support

Supplemental Instruction

Strategic review of course content • Key / challenging concepts addressed •

- 2 hours per week •
- Study strategies and exam prep •
- Small group environment supports collaborative learning opportunities

SI Leader

- Study / Learning Specialist •
- Content Knowledgeable •
- Works closely with course instructor and SI Senior Leader



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Qualifying courses may be characterized by:

- High D, F, W, and I rates (especially those 30% or higher)
- Infrequent examinations that focus on higher cognitive levels
- High student to instructor ratio (student has little opportunity for interaction with the professor or the other students)
- Those serving as a gateway or key sequence course
- Large amounts of weekly readings from both difficult textbooks and secondary library reference works
- Faculty or academic department identification as exceptionally challenging within a major course of study





Common Questions

- Are DFWI rates for SI participants lower than non-SI students?
- Aren't students who participate in SI students who would receive an A or B without the support?
- Is SI more effective for some courses than others?





Let's examine the data together and see if we can find the answers



iDashboards

Admissions + Official + Student Progress Indicators + Course Bottlenecks + Campus Metrics + Enrolment Management + High Schools & Colleges +

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Supplemental Instruction (SI) Data

· Course BIOL100 BIOL ·

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DFWI Rates by SI Sessions Attended THE OWNER ADDRESS BPMI Cos DPWI Rate 27 26% 37 24% 10% 21 32 6% 10 25 18% 11 15 20% 12 274% 13 26 4% 14 29 15% 15 22 5% 19 16 16% 17 29 2% 18 23 0% 19 0% 14 20 33% ۲

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Grade	Distribution	(SI Participants)

Term Al

Course	Enrolled	*	1.0	C	Other Pass	DPWE	GRA
BIOL100	57	26%	39%	21%	9%	4%	2.87
BIOL200	55	9%	24%	27%	4%	36%	1.91
BIOL201	28	4%	36%	54%	0%	7%	2.36
BIOL220	29	10%	28%	24%	3%	34%	1.98
BIOL223	84	11%	33%	32%	5%	18%	2.24
GEOL101	54	20%	41%	20%	7%	4%	2.81
MATH110	137	32%	22%	24%	0%	22%	2.44
PSCI208	77	45%	36%	8%	3%	6%	0.21
P5YC100	72	19%	42%	15%	3%	11%	2.77
PSYC210	29	21%	48%	24%	0%	7%	2.80

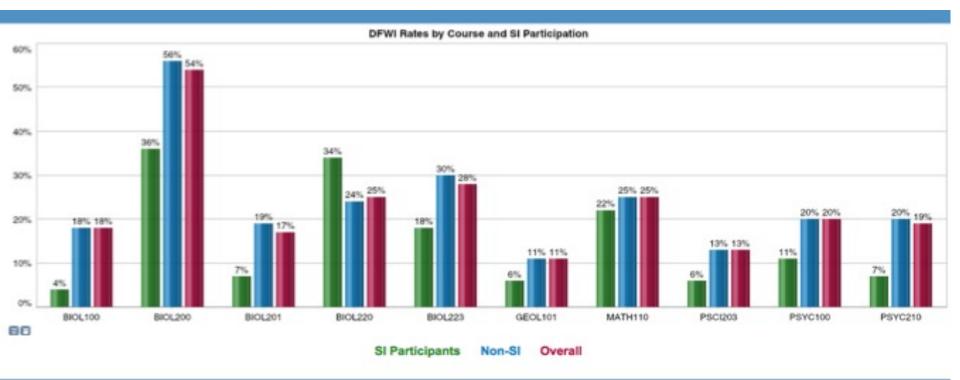
	Grade Distribution (non-5i)						
Course	Enrolled	x		C	Other Fase	DPWI	GPA
BIOL100	1,078	9%	05%	0.2%	6%	18%	2.82
BIOL200	373	3%	14%	18%	6%	56%	1.29
BIOL201	181	9%	31%	40%	0%	19%	2.21
8104,220	161	22%	28%	20%	5%	24%	2.30
8101223	351	7%	24%	27%	11%	30%	1.82
GEOL101	765	30%	34%	20%	4%	11%	2.77
MATH110	1,959	23%	25%	25%	0%	25%	2.20
PSO(298	1,905	28%	39%	14%	7%	10%	2.71
PSYC400	1,175	11%	25%	17%	6%	20%	2.19
PSYC210	261	16%	36%	23%	4%	20%	2.34



Start of Term GPA (SI Participants)

Course	SB GPA
BIOL100	2.91
B#OL200	2.93
BIOL201	2.89
BIOL220	2.75
BIOL223	3.05
GEOL101	2.86
MATH110	2.64
PSCI208	2.92
PSYC100	2.74
PSYC210	2.85







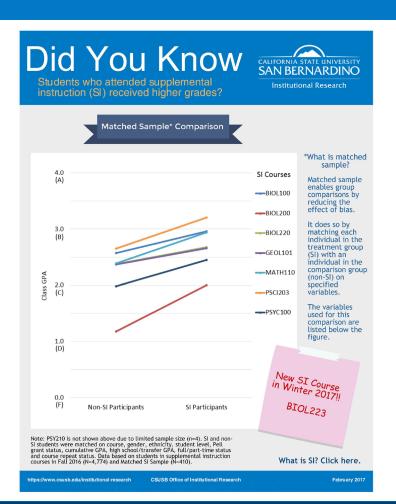
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 Were SI participants "better" students?



- Course
- Gender
- Ethnicity
- Student Level
- Pell Grant Status
- Cumulative GPA
- High School/Transfer GPA
- Full-/Part-Time Status
- Course Repeat Status







- Fall 2016 SI data
- SI participation pattern
 - Decrease in 2nd half
 - More
 - Female
 - PELL recipient
 - Full-time student
 - Course repeater
 - Sophomore and Junior
 - No ethnic difference

- Impact of SI
 - More As and Bs
 - Less DFWIs
 - Higher average grades
 - Even better outcomes for consistent participation



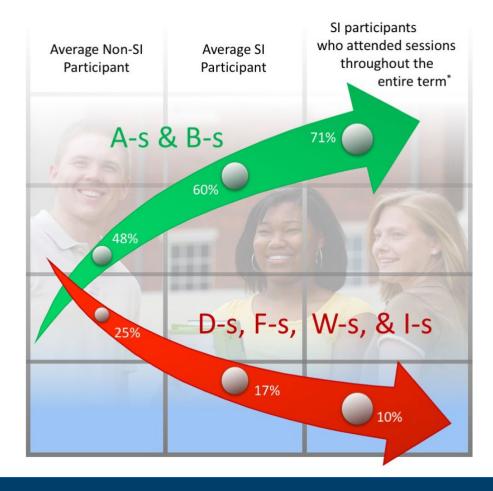


How can we continue to use the data?

- Participatory Action Research
 - Discovery: Examined available data from multiple sources
 - Measurable Action: Co-constructed a data infographic that was shared with faculty and students.
 - Reflection: In progress



How can we continue to use the data?





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What happens next?

- Examine measures of learning
- Map outcomes in course sequences
- Explore with colleagues other variables which are indicators of student success and challenges in SI courses

