

**HUMBOLDT  
STATE UNIVERSITY**

# **Embedded Supplemental Instruction at Humboldt State University**

**Arianna Thobaben, M.A. Ed. & MS Credential,  
Supplemental Instruction Coordinator  
& Faculty in Education**

**Su Karl, M.S. Ed., Learning Center Director**

**CSU Math Council (MC<sup>2</sup>) Colloquium, January 29, 2021**



# Big Picture: HSU Learning Center Peer-to-Peer Support

**Connected  
Tutoring**

**Academic  
Peer  
Coaching**

**Writing  
Studio**

**Math  
Tutoring Lab**

**Supplemental  
Instruction**



# Overview of SI at Humboldt State

- Offered for high DFW & equity gap classes
- It is a 1 unit, CR/NC class
- Sessions held 2x a week for 50 minutes
- Voluntary participation
- A place where students practice & learn content using active & collaborative approaches



# History of SI at Humboldt State

## SI Established at HSU

SI established in **1996** by Biol faculty through grant for science courses. Program moved to Learning Center in **2008**.

## Formally establish SI as Math 198 course

Structure of math/stats courses did not easily fit our SI model

Participation low for category 3 & 4 students

## Expand Embedded SI to other online Math courses

Equitable solution - SI came to the students

1996 2008

2018

2020

2016

## Piloted SI for Precalculus as drop-in model

Students did well, but participation was low

2019

## Piloted Embedded SI for one supported algebra course

Partnership between Math Dept, Learning Center, and EOP/SSS



# SI Impact

Enrolling in and passing Supplemental Instruction at HSU has a highly significant predicted\* effect of increasing course grade by 0.49 GPA!

\* Results modeled using a Linear Mixed-Effects Regression with Term and Course as random effects and the following as covariates: High School GPA, AP Units earned in High School, Firstgen status, PBLC Participation, Remedial Level (Not Remedial, Math, English, or Both), URM status, PELL Recipient status, Credits Enrolled at HSU

*Analysis by S. Margell, HSI STEM Evaluator*



**HUMBOLDT**  
STATE UNIVERSITY

**Supplemental Instruction vs.  
Embedded Supplemental  
Instruction**



# Commonalities: SI & Embedded SI

- Active & collaborative learning
- Leader-created lesson plans
- Content review
- Transferable study/learning strategies
- Community-building activities
- Leader-access to parent course LMS (Canvas)
- Leaders host open review sessions before exams out of class



Supplemental Instruction at HSU	Embedded Supplemental Instruction at HSU
Typically for <b>large course</b> sections (50+ students)	Typically for <b>smaller course</b> sections (~25 students)
Students take <b>initiative</b> to join	SI leader is <b>embedded</b> in parent course
<b>Does not assist</b> faculty in parent class	<b>Assists faculty</b> when needed
Leader <b>may attend parent class</b> but doesn't interact with students	SI leader attends parent class and <b>leads activities that they planned for all</b>
<b>No additional</b> study sessions	SI leader hosts <b>additional study sessions</b>
Meets/ <b>communicates with faculty once a week</b>	Meets/ <b>communicates with faculty more often</b>
Does <b>not share observations</b>	<b>Shares observations</b> about student understanding in class



# SI Leader Training & Professional Development

## Pre-semester training

### Week long training

- Layered (All Peer Educators > SI leaders only > Embedded SI)

## Bi-Weekly training & Saturday training

Coordinator & Senior SI leaders observe sessions and give feedback

All leaders also observe each other's sessions and give feedback

New leaders shadow experienced leaders

## Self reflection tools

- Professionalism rubric
- [Spring 2021 SI Professional Growth Rubric Revised.xlsx](#)
- Equitable practices rubric
- Self evaluations



# Pre-Semester Training Topic Highlights



**Training sessions mirror how leaders should design and lead their sessions and are easily transferable to what they can do with their students**

- How to create lesson plans= Bloom's Taxonomy- goals and learning objectives
- Community building + why - supports student retention
- Creating ground rules and safe learning spaces
- Active & collaborative learning - about, examples of, how they supports brain growth & equity
- Opening & closing activities, lesson timing
- Organization & learning strategies including retrieval
- Grouping strategies, facilitation strategies
- Mental health
- Effective mock SI Sessions
- SI Showcase



# Supplemental Instruction Showcase

[SI Showcase Activity Lesson Plan - Google Docs](#)

[https://docs.google.com/presentation/d/1UP8qzk3arUhxcJBz1woQa\\_YvRgouHJD1LwZRY0iV9IU/edit?ts=60144806#slide=id.p](https://docs.google.com/presentation/d/1UP8qzk3arUhxcJBz1woQa_YvRgouHJD1LwZRY0iV9IU/edit?ts=60144806#slide=id.p)



**HUMBOLDT**  
**STATE UNIVERSITY**

**How is Embedded SI  
Going?**



# Input from Students

“ I enjoyed breakout sessions, Jeopardy, and general going over problems.”

“ I enjoyed the set up of the Zoom meetings, it was effective and I was encouraged to engage.”

“I don't think any changes are needed. The embedded SI leader was available to help us in class, had a review session once a week, and was available plenty of time outside of class. She was knowledgeable and friendly and therefore helped to break things down a lot.”

“I really liked our review sections every week. I found it helpful when she'd add in ways to study more effective online as well. ”

“ I enjoyed when we would do the Friday activities. to me these activities was very interesting and i felt engaged the whole time.”

“I was the most engaged on our Friday zoom meetings with Liz. These were really fun because we were able to review and debrief what we had learned throughout the week. ”

# I asked the faculty, “How is Embedded SI Working?”

Responses from Michelle Gledhill, Math Department Faculty

## How did embedded SI work for your class?

I used a flipped class and gave the SI leader 50 mins on Fridays to do her activity. We called it “**Workshop Fridays.**” Before the semester started **I thought it would require more time** of me, **but it didn’t.**

## How did students respond?

Positively, **students saw a “friend”** in the SI Leader. Someone who they could talk to - fostered a positive relationship. My particular leader was approachable inside & outside of class. She offered to meet with the students a 4th day to watch videos with them



# Faculty Feedback cont.

## Benefits?

The leader **facilitated** with **online class management** - especially with monitoring the **chat**.

Helped students to acclimatize with zoom, and helped me with **tips and tricks**. Tech support.

Aware about the internet access of folks and **access issues**.

## Challenges?

**If I did not post lecture videos**, and have a **stretched class**, I don't know if I could have given up a day of instruction

**Other observations:** The SI leader went above and beyond to **foster relationship** and assist with **outside of class to answer questions**. Relationship are so important for students and she carved the space and time for this. She was **well trained**. Overall, having an embedded SI leader was a very positive experience. **I recommend keeping the model.**

# Input from Embedded SI Leaders

## What are strengths of this model?

- It doesn't single out any individual. It's there **for anyone in the class**. A resource that is for all students, whether they are confident in their abilities and just need clarification or if they are less confident and need help understanding concepts.
- Time outside of class allows us to expand on what the professor was talking about in class. We were in class with them and **know exactly where and what topic** in the book they were talking about.

## Do you like it?

- It may not be exactly professional to say it like this, but hell yes I like this! Not only because it's my job but also because **as a student this is an amazing program!** I would have loved to have this in my first semester at HSU, or even now in my upper division classes. Having a resource that is there for the sole purpose of helping you pass the class **is invaluable**, especially if they **let you have a say in** when their study **session hours** are AND are **in the class** with you following along.

# Is Embedded SI Impactful?

- No real data yet
- Seems successful, all parties happy about this experience
- It's an EQUITABLE way to offer academic support!

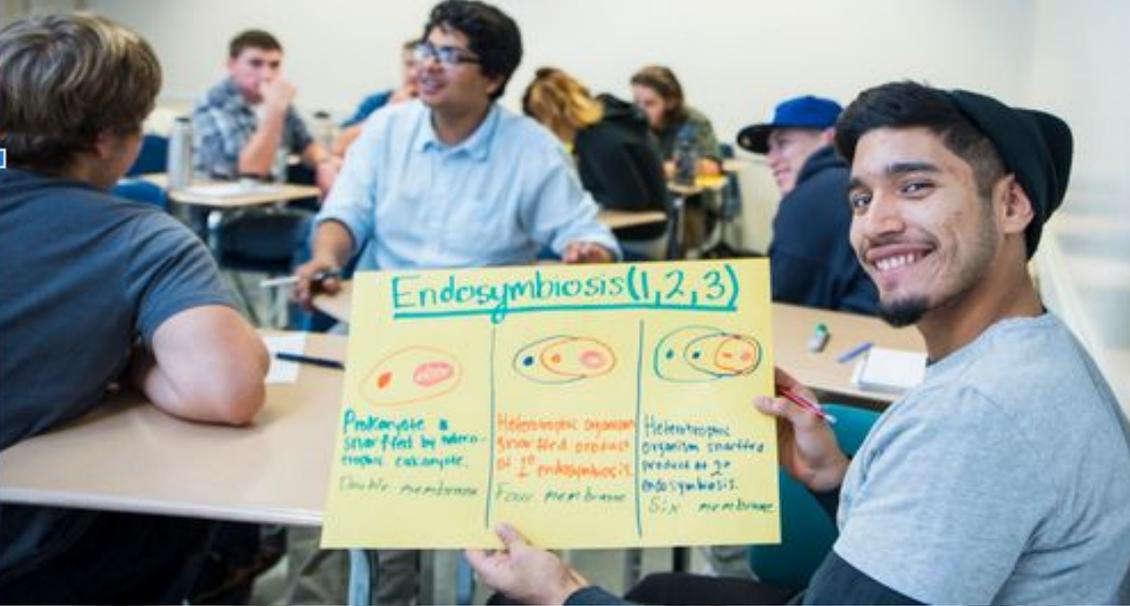
Challenges... Time

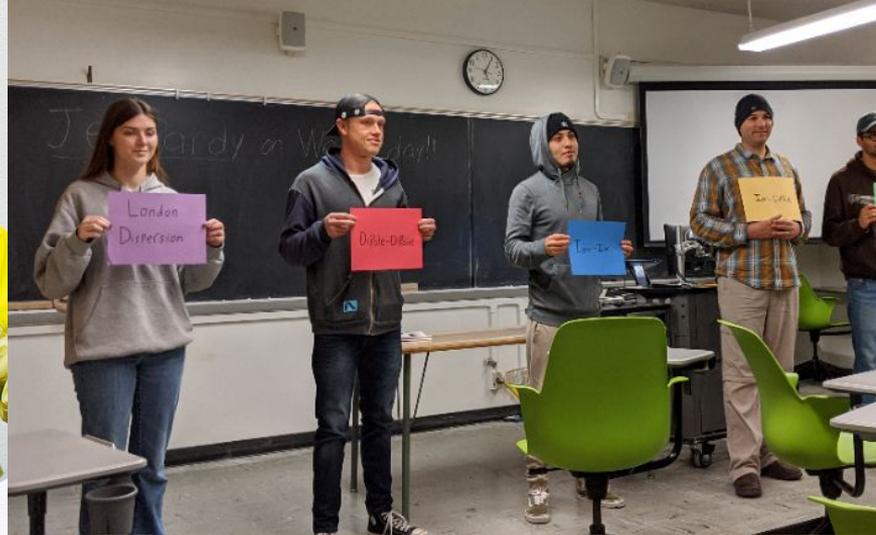
- Initial Coordination time
- Faculty may not be willing to give up instructional time
- 10-15 min. not enough time to do a good activity = Leader frustration

What's next?

Try it again next fall, more assessment







**HUMBOLDT**  
STATE UNIVERSITY

QUESTIONS?

