How Do Learning Assistants Spend Their Time During Class?

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Introduction

There is substantial evidence that active learning is more beneficial for students than traditional lecture. However, how can an instructor implement active learning? One method is using Learning Assistants (LAs). North Dakota State University, University of Colorado Denver, and Florida International University have teamed together to research what LAs do and how they help facilitate active learning.
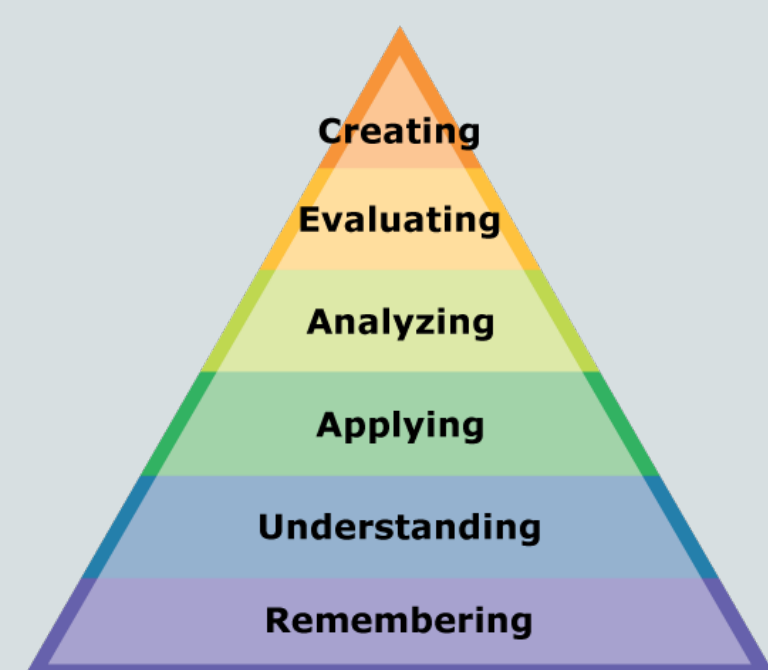
Research Question:
How Do Learning Assistants Spend Their Time During Class?

Definitions

Active Learning – System of teaching
Achieved via:
* Discussion
* Worksheets
* Group Activities

Reaching top tiers of Bloom's Taxonomy

Learning Assistants – High-achieving undergraduates chosen by faculty that:
* Facilitate peer discussion
* Guide students during group work
* Encourage reasoning skills

COPUS (Classroom Observational Protocol for Undergraduate STEM) - Protocol for measuring what is going on in class

TPI (Teaching Practices Inventory) - Survey for instructors to gauge various classroom activities

LA Daily Logs - Survey for LAs to gauge classroom activities

Methods

Data Sources
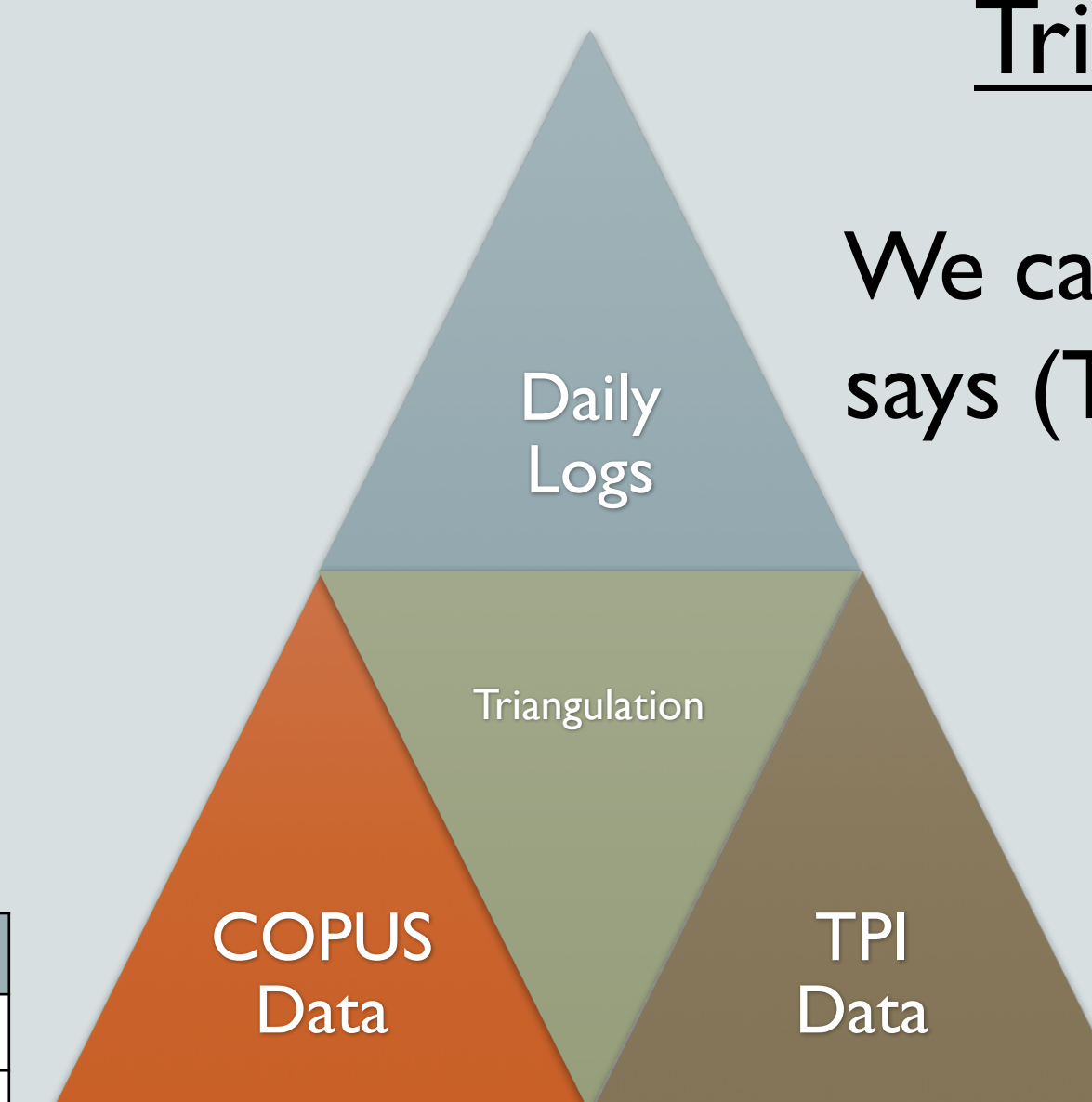* COPUS Data
* LA Daily Logs
* TPI Data

Analysis
* Analyzed LA daily logs - looked for trends in the amount of minutes spent on activities
* Created course descriptions based on COPUS data
* Identified COPUS Profiles based on COPUS data
* Looked at time LAs spent with students in both the COPUS and the TPI

COPUS

Time	Students doing												Instructor doing													LA(s) doing											
	L	Ind	CG	WG	OG	AnQ	SQ	WC	Prd	SP	T/Q	W	O	Lec	RtW	Fup	PQ	CQ	AnQ	MG	IoI	D/V	Adm	W	LaI	O	L	Lec	RtW	PQ	AnQ	MG	IoI	Adm	LaLa	LaI	W	O
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Triangulation

We can verify what the instructor says (TPI) with:
* What the observer sees (COPUS)
* What the LAs see (Daily Logs)

Results
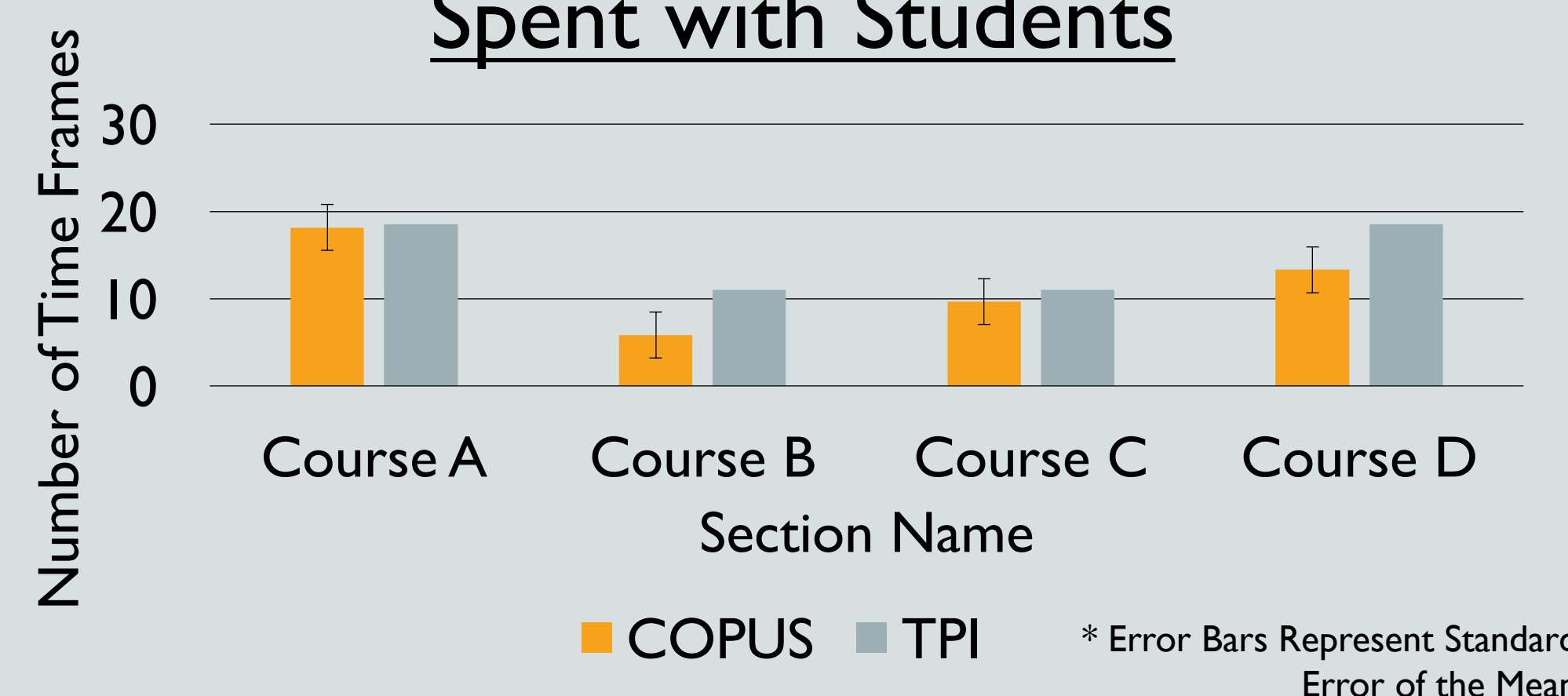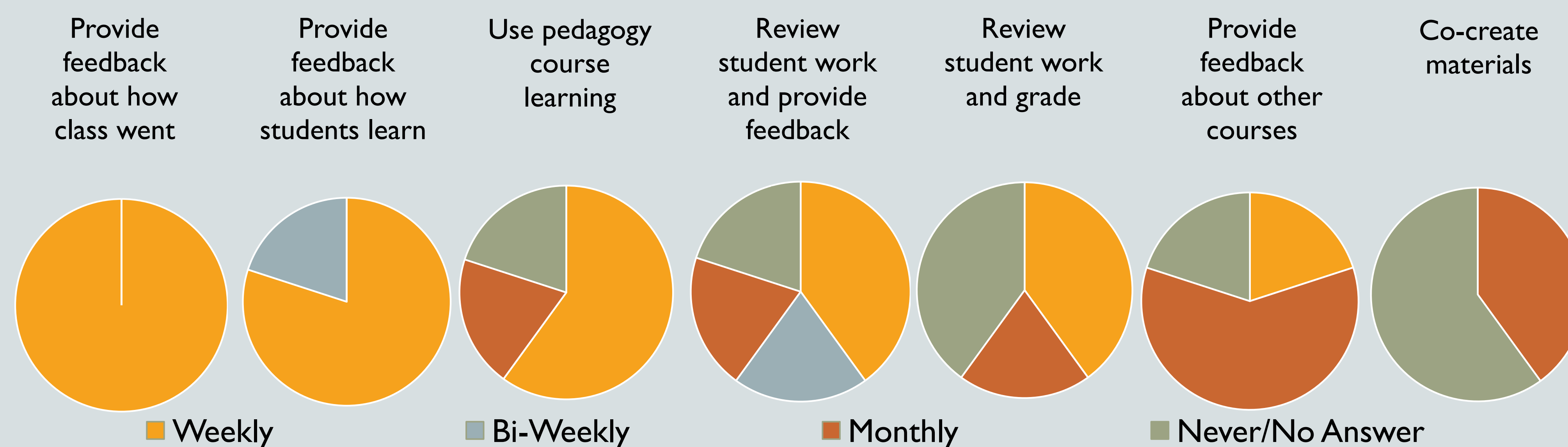
Course Descriptions
* Description of active learning activities done in class, what the LAs do in the classroom, as well as what the instructor does during active learning frames and traditional lecture frames.
* Helps view classes in a concise, simple format.

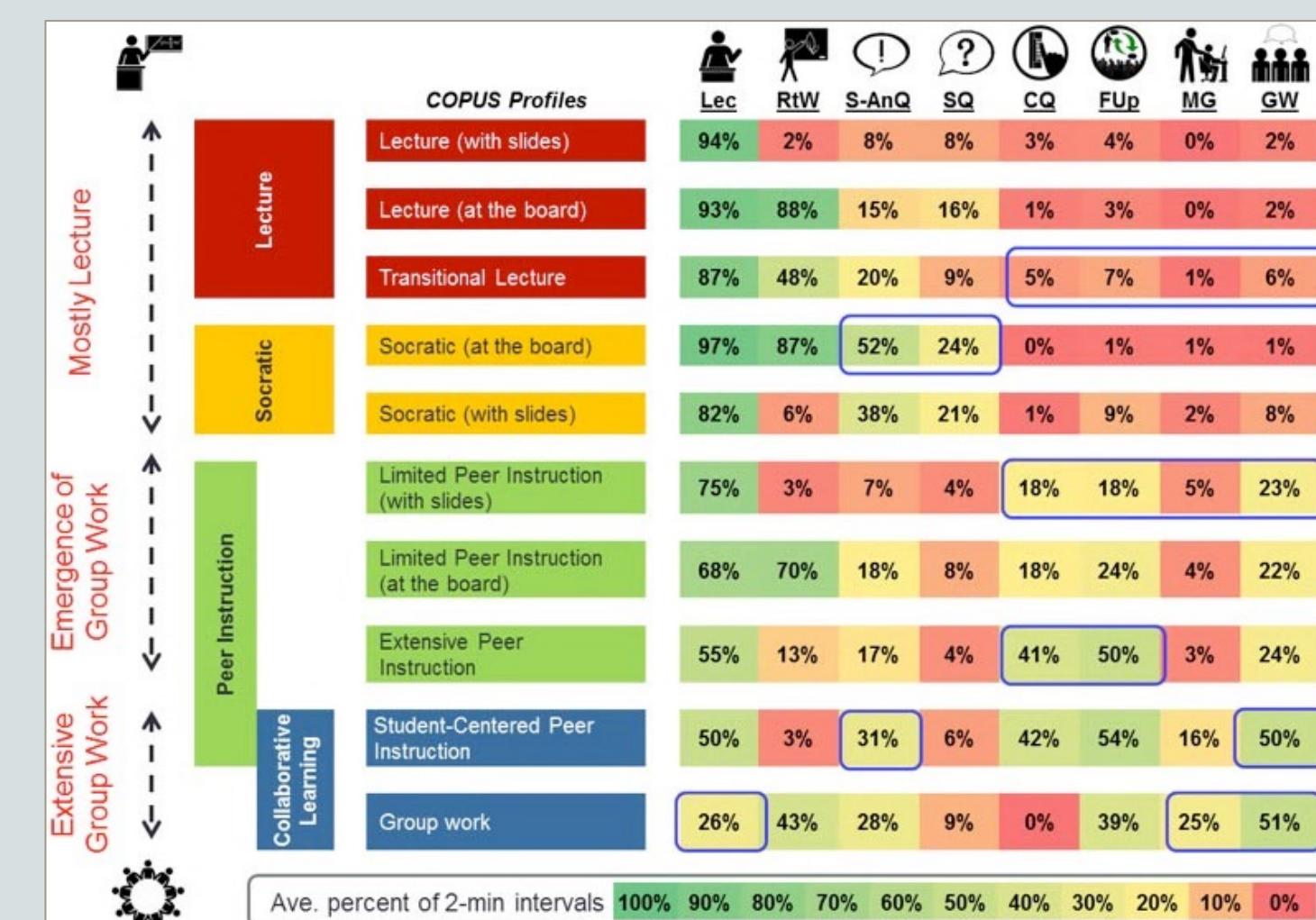### Amount of Time Frames LAs Spent with Students

* Error Bars Represent Standard Error of the Mean

What LAs Do in the Classroom

Provide feedback about how class went · Provide feedback about how students learn · Use pedagogy course learning · Review student work and provide feedback · Review student work and grade · Provide feedback about other courses · Co-create materials

■ Weekly ■ Bi-Weekly ■ Monthly ■ Never/No Answer

COPUS Profiling

Created using ten COPUS codes: Clicker Groups (CG), Worksheet Groups (WG), and Other Groups (OG) combine to Group Work (GW)

Course	COPUS Profile
A	Group Work
B	Transitional Lecture
C	Student-Centered Peer Instruction
D	Student-Centered Peer Instruction

Conclusions

LAs With Students:
* The TPI slightly overestimated the amount of time frames LAs spent with students in comparison to the COPUS.
* Most LAs spend their time in the classroom working one on one with students or walking around the room.
* Occasionally, LAs spend time in the classroom simply waiting, which can be correlated to standing by as the instructor gives instructions or other administrative tasks.

LAs In The Classroom:
* The most important function of the LA is to provide feedback about how class went and how students learn.
* The least common activity for LAs is to co-create materials.

Future Work

* Revise the LA Daily Log to capture more information on what LAs are doing in class
* Continue with course descriptions and COPUS profiling
* Work with LA Cams (cameras placed on LAs to capture what is going on in class)
* Gauge faculty perceptions of LAs

References

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