Welcome to COGS 153: Language Comprehension
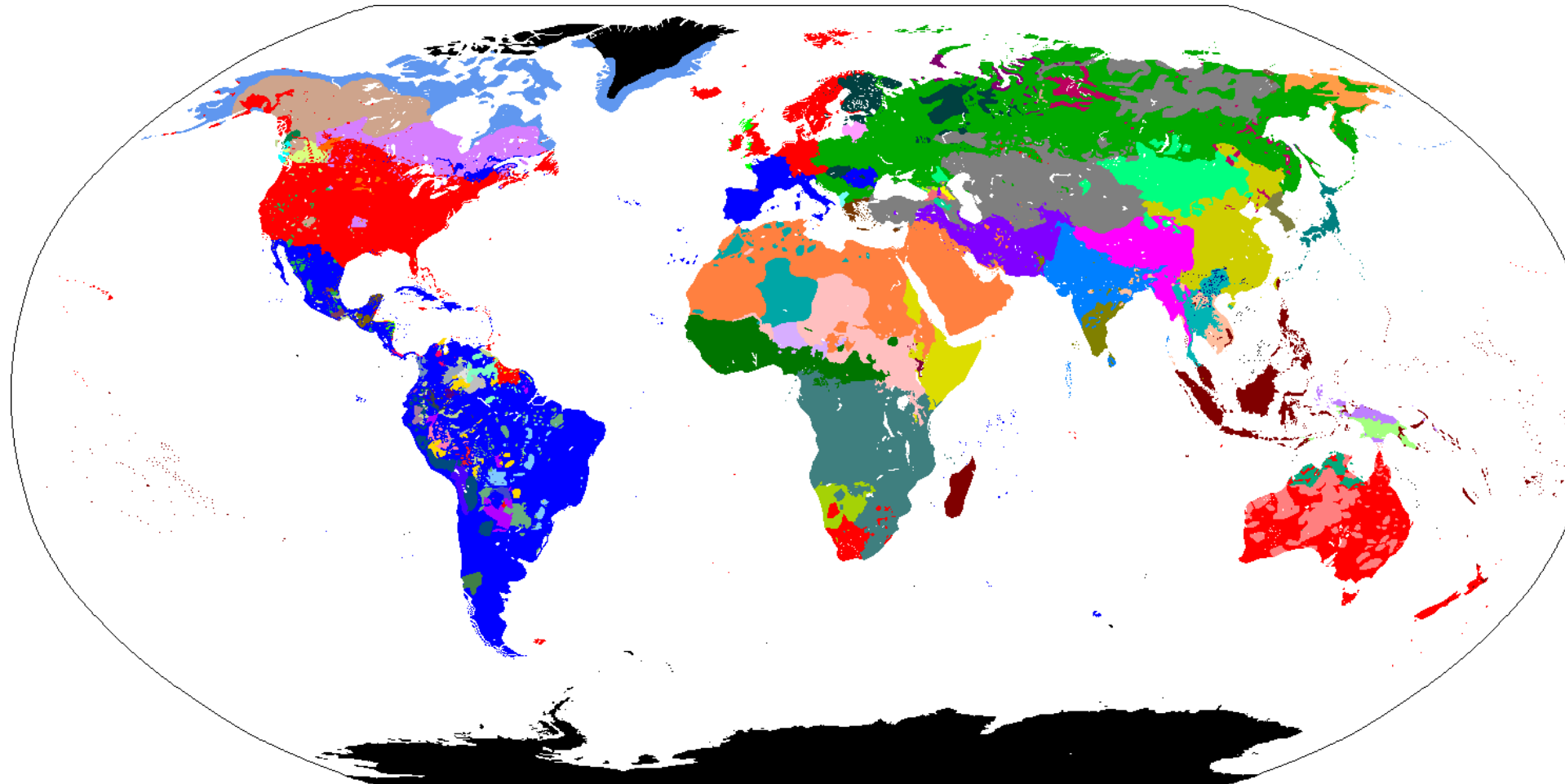
Lecture 1

Why study language?

- Language is everywhere
- Learn about human development

- Language is everywhere
- Learn about human development
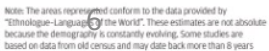- Tied to Identity and Culture

Human Language Families

- Uninhabited
- Afro-Asiatic
  - Berber
  - Chadic
  - Cushitic
  - Omotic
  - Semitic
- Algic
- Altaic
  - Japanic (possibly Altaic)
  - Koreanic (possibly Altaic)
  - Mongolic
  - Tungusic
  - Turkic
- American Indian (several families)
- Araucanian
- Arawakan
- Arawan
- Australian (several families)
- Austro-Asiatic
- Austronesian
- Aymaran
- Barbacoan
- Basque (isolate)
- Bora-Witóto
- Cariban
- Caspian
- Chibchan
- Choco
- Chukotko-Kamchatkan
- Dené-Yeniseian
- Dravidian
- Eskimo-Aleut
- Guajiboan
- Hmong-Mien
- Indo-European
  - Albanian
  - Armenian
  - Baltic
  - Celtic
  - Germanic
  - Greek
  - Indic
  - Iranian
  - Romance
  - Slavic

- Jivaroan
- Kartvelian
- Khoisan
- Macro-Jê
- Mataco-Guaicuru
- Mayan
- Misumalpan
- Niger-Congo
  - Bantu
- Nilo-Saharan
- Nivkh (isolate)
- Papuan (several families)
- Pama-Nyungan
- Panoan
- Pontic
- Oto-Manguean
- Quechuan
- Saliban
- Salishan
- Sino-Tibetan
  - Sinitic
  - Tibeto-Burman
- Siouan
- Tacanan
- Tai-Kadai
- Trans-New Guinea
- Tsimshianic
- Tucanoan
- Tupian
- Uralic
  - Finno-Ugric
  - Samoyedic
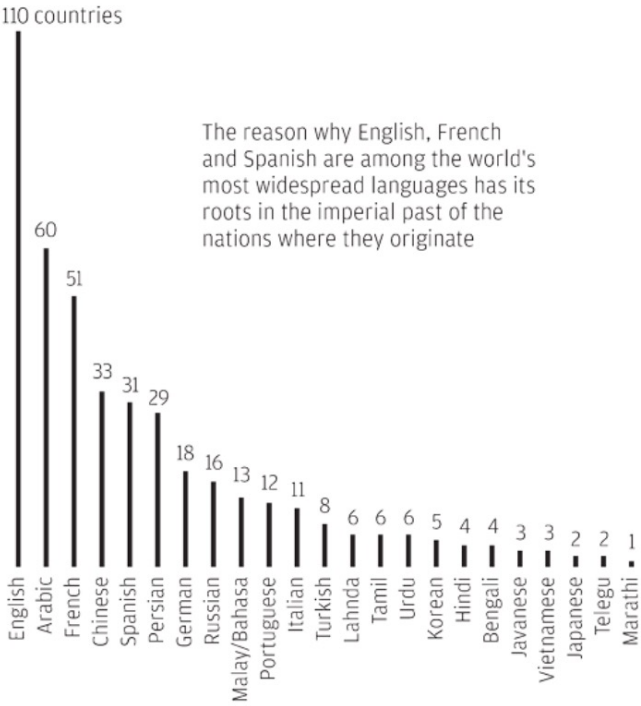- Uto-Aztecan
- Wakashan
- Yanomaman
- Yukaghir
- Zamucoan

5

"There are at least 7102 known languages alive in the world today. 23 of these languages are a mother tongue for more than 50 million people. The 23 languages make up the native tongue of 4.1 billion people.

We represent each language within black borders and then provide the numbers of native speakers (in millions) by country.

The color of these countries shows how languages have taken root in many different regions."
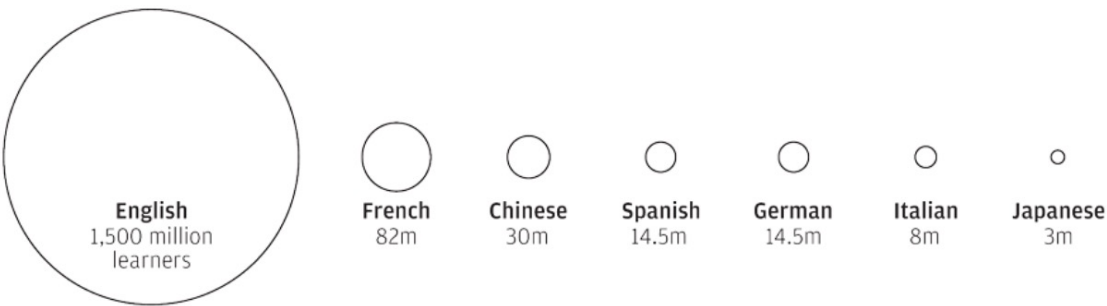

A world of languages

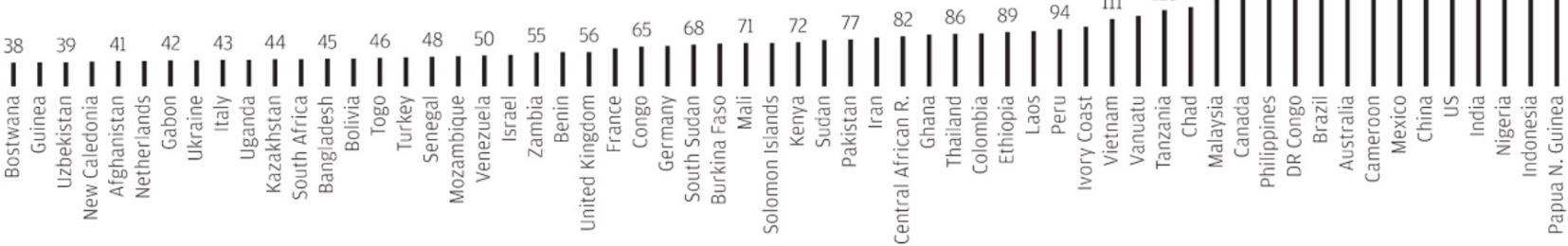## Number of countries in which this language is spoken

110 countries

The reason why English, French and Spanish are among the world's most widespread languages has its roots in the imperial past of the nations where they originate

Language	Count
English	110
Arabic	60
French	51
Chinese	33
Spanish	31
Persian	29
German	18
Russian	16
Malay/Bahasa	13
Portuguese	12
Italian	11
Turkish	8
Lahnda	6
Tamil	6
Urdu	6
Korean	5
Hindi	4
Bengali	4
Javanese	3
Vietnamese	3
Japanese	2
Telugu	2
Marathi	1

Most popular languages being learned around the world

- English — 1,500 million learners
- French — 82m
- Chinese — 30m
- Spanish — 14.5m
- German — 14.5m
- Italian — 8m
- Japanese — 3m

Distribution of living languages by country

The total count of living languages used as a first language in 60 countries

839 languages
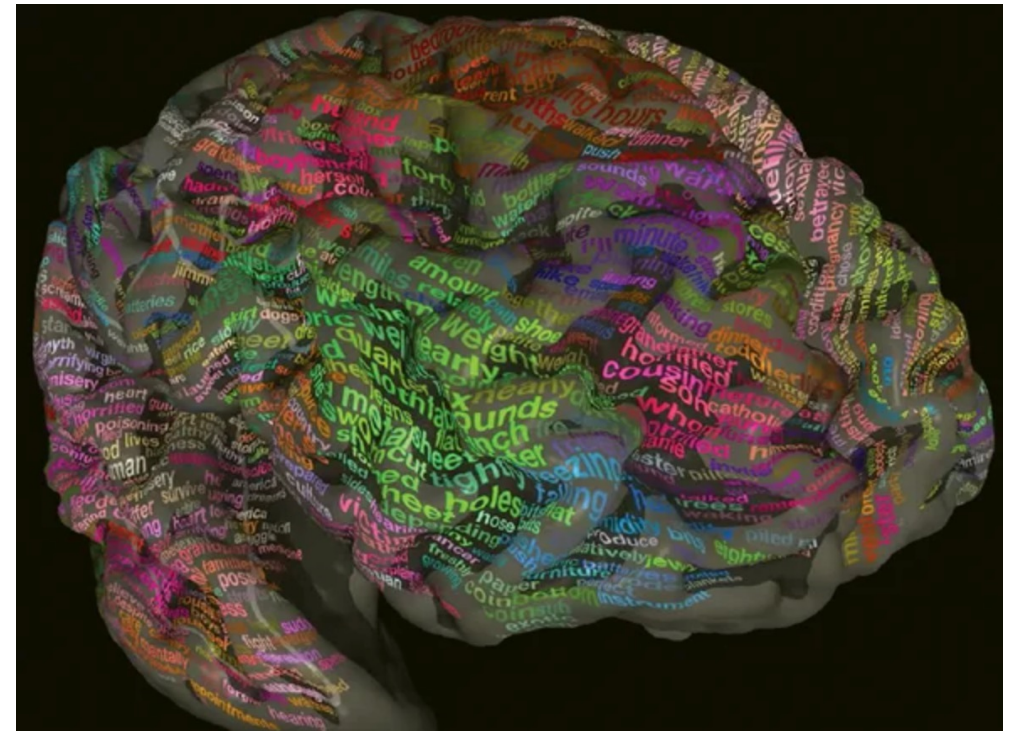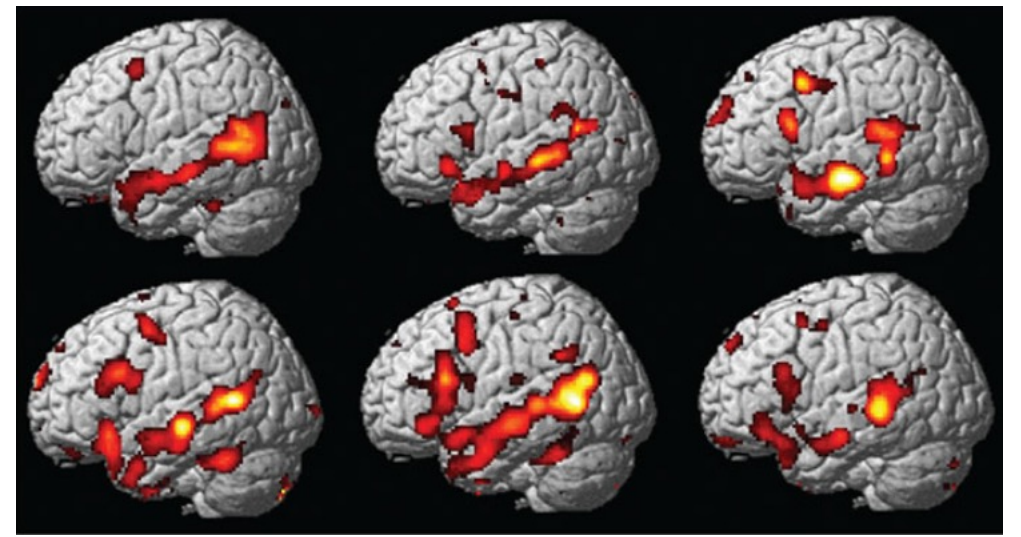
Country	Count
Bostwana	38
Guinea	39
Uzbekistan	39
New Caledonia	41
Afghanistan	42
Netherlands	42
Gabon	43
Ukraine	44
Italy	44
Uganda	45
Kazakhstan	45
South Africa	46
Bangladesh	46
Bolivia	48
Togo	50
Turkey	50
Senegal	55
Mozambique	56
Venezuela	56
Israel	65
Zambia	65
Benin	68
United Kingdom	71
France	72
Congo	77
Germany	82
South Sudan	86
Burkina Faso	89
Mali	94
Solomon Islands	111
Kenya	126
Sudan	146
Pakistan	193
Iran	229
Central African R.	281
Ghana	300
Thailand	422
Colombia	454
Ethiopia	526
Laos	707
Peru	839
Ivory Coast	
Vietnam	
Vanuatu	
Tanzania	
Chad	
Malaysia	
Canada	
Philippines	
DR Congo	
Brazil	
Australia	
Cameroon	
Mexico	
China	
US	
India	
Nigeria	
Indonesia	
Papua N. Guinea	

7

- Language is everywhere

- Learn about human development

- Tied to Identity and Culture

- Learn from linguistic diversity

- Conservation of endangered languages

- Improve how we learn new languages

- Language is everywhere

- Learn about human development

- Tied to Identity and Culture

- Learn from linguistic diversity

- Conservation of endangered languages

- Improve how we learn new languages

- Uncover complex cognitive processes in the brain

- Develop therapy options for people with impaired language abilities

Huth et al. , 2016; Price et al., 2014

Aims of the course

We will...

- Identify major topics of research, questions of debate, and working theories in the study of language comprehension

- Recognize and use appropriate technical vocabulary to describe concepts in the cognitive science of language

- Learn about the methods and experimental techniques used in language research

- Summarize and interpret classic and recent empirical findings from the field

Aims of the course

More generally, we aim to:

- Think critically about the information presented

- Practice integrating new knowledge with concepts previously learned from other courses

- Be curious and ask questions

- Have thoughtful discussions with peers & gain self-confidence

- Learn something interesting :-)

Teaching Team

Instructor: Tania Delgado (tadelgad@ucsd.edu)
                  Office hours: Wednesdays at 4pm

Tania (tawn-yah), she/her
PhD student in Cog Sci

Research interests: neurolinguistics, evolution of language & cognition, multimodal communication

BS in Neurobiology & Physiology (University of Maryland, College Park)
MSc in Linguistics (University of Edinburgh)

Teaching Team

TA: Harshada Yadav (hyadav@ucsd.edu)
        Office hours: Mondays at 10am

Harshada, she/her
- PhD student in Cog Sci

Research interests: conceptual representations, semantics, EEG

Course Components

Workshop Participation	Homework	Quizzes	Course Reflection Essay	Final Project	Extra Credit	98 - 100% A+ 93 - 97% A 90 - 92% A- 87 - 89% B+ 83 - 86% B
10% (2% x 5)	30% (10% x 3)	30% (10% x 3)	5%	25%	2%	80 - 82% B- 77 - 79% C+ 73 - 76% C 70 - 72% C- 60 - 69% D Below 60% F

Course Components

- Quizzes
  - 3 quizzes, 10 questions each
  - Window to start quiz will be open from Fridays until Mondays
  - 30min to complete
- Course Reflection Essay
  - Short essay to reflect on what you've learned and give feedback
  - written informally
- Final Project
  - Experiment proposal
  - Individually or in groups

Our Canvas homepage

Summer II 2024

Home

Announcements

Zoom

Piazza

Grades

Assignments

Quizzes

People

Modules

Syllabus

Academic Support

Academic Integrity

Library Resources

Media Gallery

Collapse All

▾ **Syllabus & Class Resources**

📎 **Syllabus & Schedule**

🔗 Pre-class Survey ↪

🔗 Sign-up sheet for Project Groups ↪

🔗 Methods Guide ↪
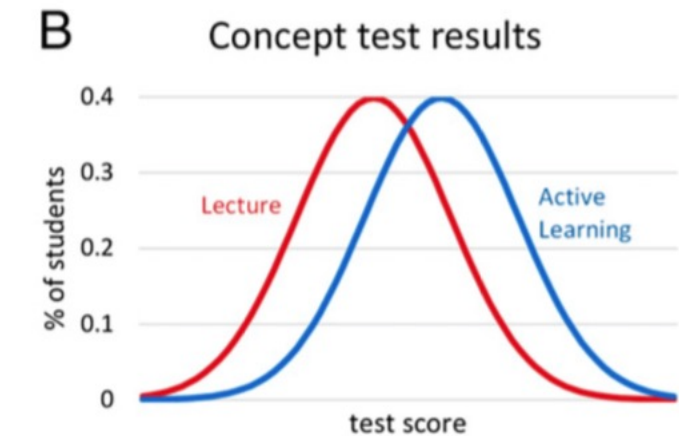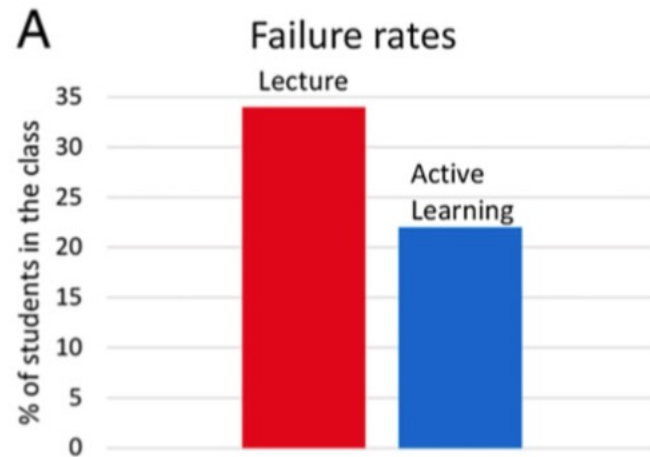
▾ **Week 1**

Lecture Slides

Homework

- Homework 1: Annotated Bibliography
  - Completed individually
- Homework 2: Forming a Research Question
  - Can be completed individually or in groups
- Homework 3: Designing an Experiment
  - Can be completed individually or in groups

- Homework designed to help with final project

Workshops – at 5pm!

1. How to read & write a scientific article

2. How to form & motivate a research question

3. How to design an experiment

4. How to visualize & interpret results

5. Peer Feedback on final project drafts

- Workshops designed to help with homework/final project

- Check syllabus for specific dates

- Half credit for submitting workshop activity without attendance

  - email instructor if you have a documented need to complete workshop asynchronously
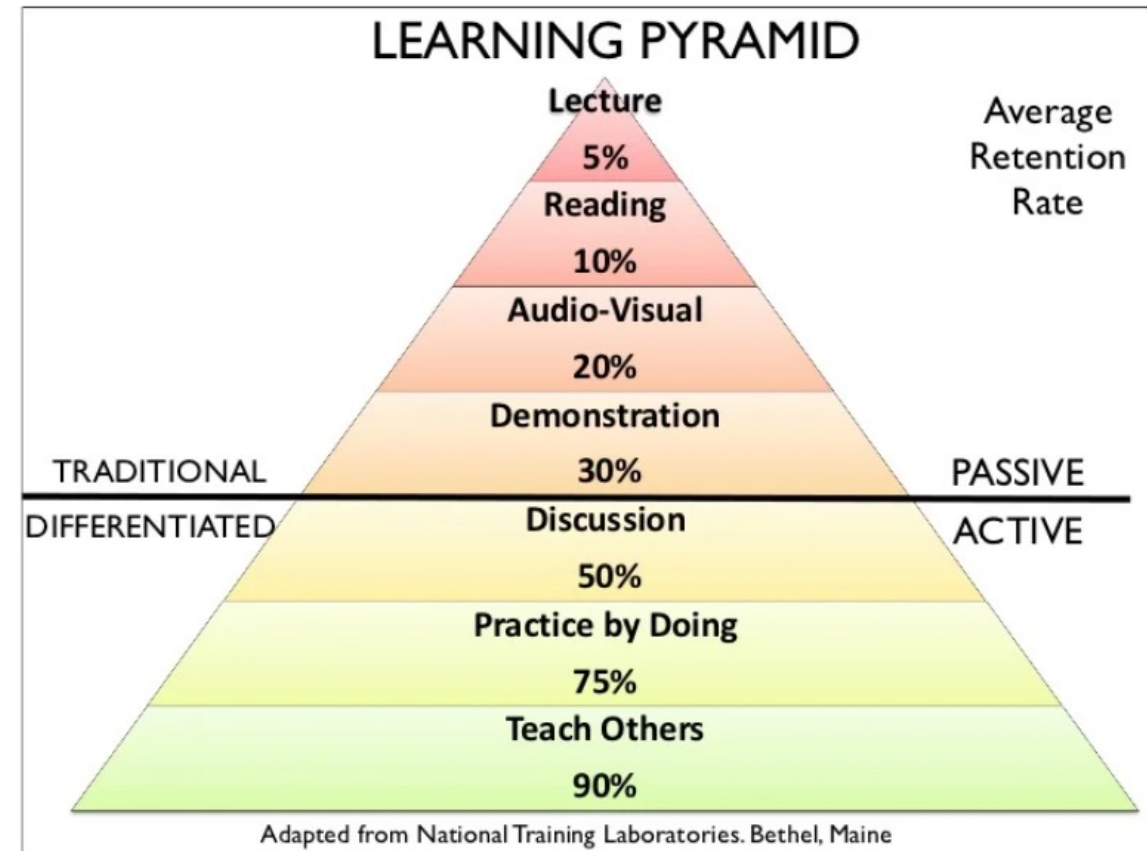
Why active learning?

- Because active learning leads to better learning outcomes!

Wieman, 2014; Freeman et al., 2014

Why active learning?

Types of activities that support engaged learning include…
- In-class discussions
- Peer instruction
- Surveys of opinions
- Videos
- Use of images and/or artifacts
- Brainstorming

- Workshops will promote discussion, practice by doing, & teaching others!

LEARNING PYRAMID

Lecture
5%

Reading
10%

Audio-Visual
20%

Demonstration
30%

Discussion
50%

Practice by Doing
75%

Teach Others
90%

Average Retention Rate

TRADITIONAL   PASSIVE

DIFFERENTIATED   ACTIVE

Adapted from National Training Laboratories. Bethel, Maine

Course schedule

Week	Day	Lecture #	Topic	Assignment Due
1	Mon 8/5	1	Course Introduction	
		2	Concepts & Categorization	
		3.1	Embodiment, Pt 1	
	Wed 8/7	3.2	Embodiment, Pt 2	
		4	Understanding Abstract Concepts	
		5	Framing	
2	Mon 8/12		*5pm Workshop: Dissecting Research Articles*	Quiz 1
		6	Co-speech Gesture	
		7	Linguistic Relativity	
	Wed 8/14	8	Speech Perception & Word Recognition	
		9	Sentence Processing	
3	Mon 8/19		*5pm Workshop: Forming a Research Question*	Quiz 2 HW1: Annotated Bibliography
		10	Bilingualism	
		11	Language Development	
	Wed 8/21	12	Communication Disorders	
		13	Individual Differences	
4	Mon 8/26		*5pm Workshop: Designing an Experiment*	Quiz 3 HW2: Research Question
		14	Joke Comprehension	
		15	Language processing in Schizophrenia, Aphantasia, & Synesthesia	
	Wed 8/28		*5pm Workshop: Visualizing Results*	HW3: Experiment Design
		16	Large Language Models	
			1-on-1 meetings	
5	Mon 9/2		*Labor Day Holiday – No Class*	
	Wed 9/4		*5pm Workshop: Rubric & Peer Feedback Activity*	
			1-on-1 meetings	
	Sat 9/7			Final Project
	Sun 9/8			Course Reflection Essay

1-on-1 meetings
- between individual/group and an instructor
- get feedback on experiment ideas
- optional to sign-up for, but strongly recommended