

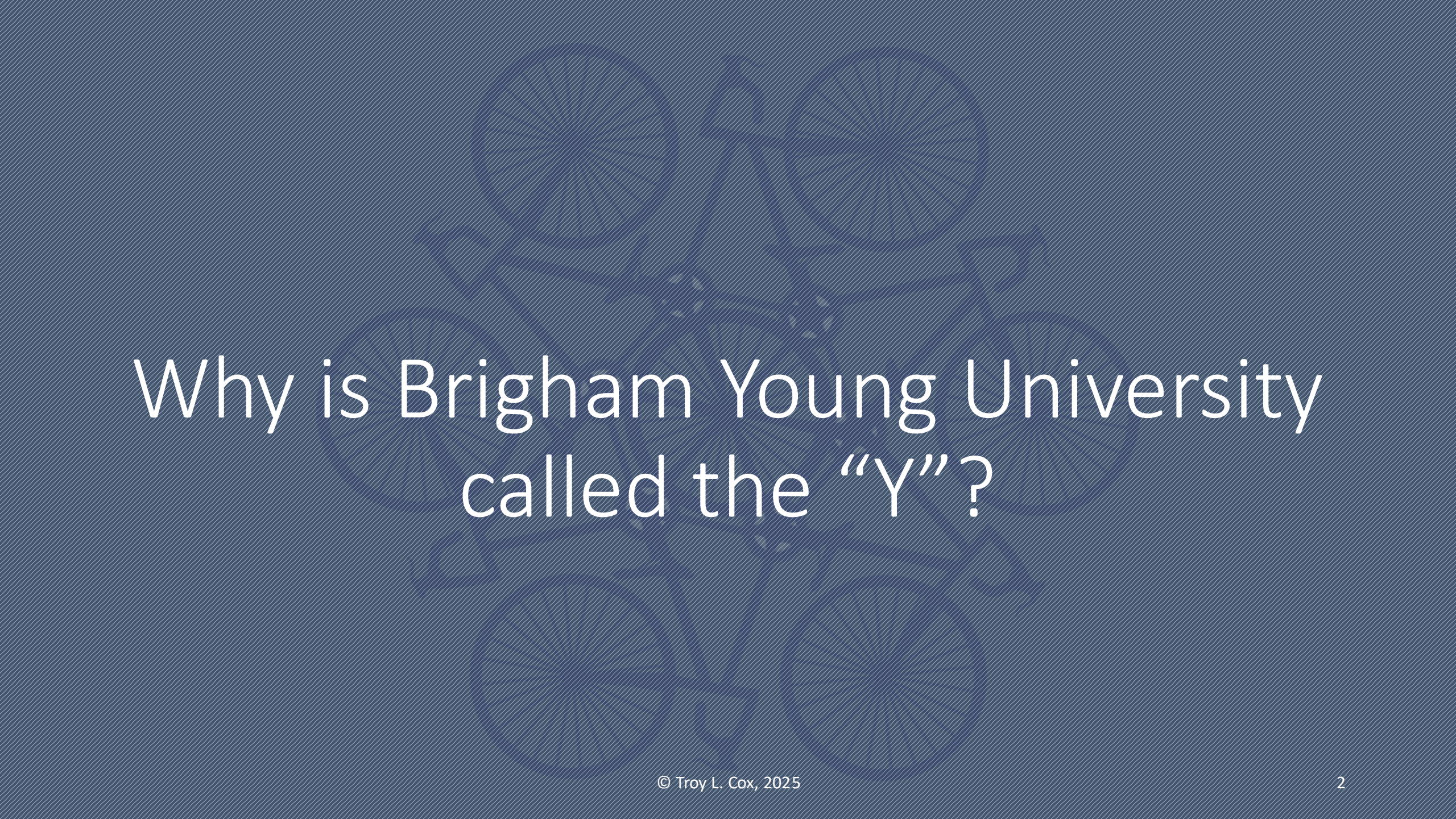
Failing Forward: The Psychology Behind Language Proficiency

Yale Lecture 2025

Troy L. Cox troyc@byu.edu , PhD

Center for Language Studies, BYU



A faint, repeating pattern of bicycles and wheels is visible in the background, rendered in a light blue color against a darker blue background. The pattern is centered and covers most of the slide area.

Why is Brigham Young University called the “Y”?

Rivalry and Laziness





Story Time



MINISTERIO
DEL INTERIOR

DIRECCIÓN GENERAL DE LA POLICIA



POLICIA NACIONAL

Atestado: 23040/24

Instructor: 144944
Secretario:

Atestado nº: 23040/24
Dependencia: MADRID-
CENTRO

DECLARACIÓN PRESTADA POR:

-- Troy Leigh COX

-- En Madrid, siendo las 18 horas 24 minutos del día 17 de mayo de 2024, ante el instructor y el Secretario mencionados, comparece quien otro documento de nº A03973679, acredita ser Troy Leigh COX, país de nacionalidad Estados Unidos America, el día 12/05/1970, hijo de Madrid Ac Hotel Los Vascos, de Madrid,

dependencias para relatar

A faint, repeating pattern of bicycles and wheels is visible in the background, rendered in a light blue color against a darker blue background. The pattern is centered and covers most of the slide area.

Proficiency Matters!

Who is Troy L. Cox?

Professor, Second Language Studies

Associate Director Research and Assessment at Center for Language Studies
(2013-present)

Technology and Assessment Coordinator at the English Language Center
(1996-2013)



Example 1

My name is Troy Cox. I am a professor at Brigham Young University. I have worked here since 1996. I am part of the Center for Language Studies. I am married to Heidi, and we have three children. They are Cameron, Hannah and Millie. We have two dogs: a mother and her son. Her name is JoJo, and his name is Remy. When I don't work, I like to ride my bike, take photos, cook, and practice yoga.

Total word count :	78
Number of different words :	56
Sentence count :	8
Average sentence length (words) :	8.7
Longest sentence (words):	16
Shortest sentence (words):	5

Example 2

My name is Troy Cox, and I've been working full-time at Brigham Young University since 1996. While I am currently in the Center for Language Studies (CLS), the first 17 years of my work at the Y had me at the English Language Center where I worked concurrent with my pursuit of a PhD. After receiving my doctorate, I applied for a faculty position at the CLS as the research and assessment coordinator, was hired, and began working there in 2013. As a scholar, I do research in second language learning, teaching and assessment.

I've been married to the wonderful Heidi Cox for a few months longer than I've been at BYU, and we are the parents of three children: Cameron, Hannah and Millie. We've finally hit empty-nester status and are the owners of a two Boston Terriers, the mother who is named JoJo but has the monicker "the little angel", and her son, Remy who has a striking resemblance to Stitch from the Disney franchise. The byline from my social media account sums my life up fairly well: Disciple; Husband & Father; Amateur Cyclist, Yogi, Cook & Photographer; Professor (Applied Linguistics/Language Testing).

I identify first and foremost as a man of faith and one who loves his family, but when I am not engaged in activities with my church or work, you'll find me road cycling, practicing yoga (power for the most part), cooking or working on my photography skills.

Total word count :	242
Number of different words :	156
Sentence count :	8
Average sentence length (words) :	30.3
Longest sentence (words):	48
Shortest sentence (words):	13

What is the difference between the two introductions?

Example 1

- My name **is** Troy Cox.
- I **am** a professor at Brigham Young University. I **have worked** here since 1996.
- I **am** part of the Center for Language Studies.
- I **am married** to Heidi, **and** we **have** three children. They **are** Cameron, Hannah **and** Millie.
- We **have** two dogs: a mother **and** her son. Her name **is** JoJo, **and** his name **is** Remy.
- **When** I **don't work**, I like to **ride** my bike, **take** photos, **cook**, and **practice** yoga.

Example 2

My name **is** Troy Cox, **and I've been working** full-time at Brigham Young University **since** 1996. **While** I **am** currently in the Center for Language Studies (CLS), **the first** 17 years of my work at the Y **had** me at the English Language Center **where** I **worked** concurrent with my pursuit of a PhD. **After receiving** my doctorate, I **applied** for a faculty position at the CLS as the research and assessment coordinator, **was hired**, and **began** working there in 2013. **As** a scholar, I **do** research in second language learning, teaching and assessment.

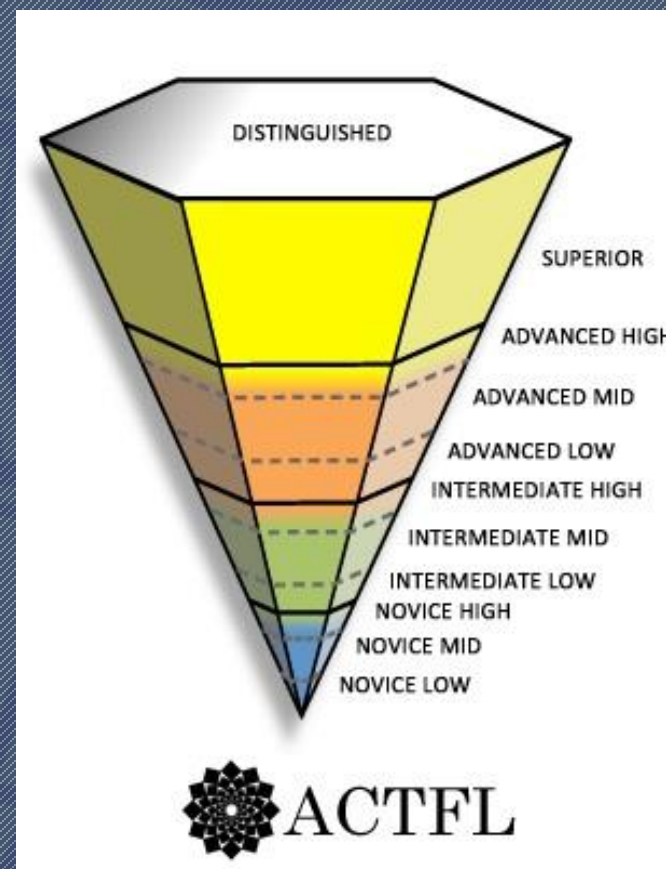
I've been married to the wonderful Heidi Cox for a few months longer **than I've been** at BYU, **and** we are the parents of three children: Cameron, Hannah and Millie. We've finally **hit** empty-nester status and **are** the owners of a two Boston Terriers, the mother **who is named** JoJo but **has** the monicker "the little angel", and her son, Remy **who has** a striking resemblance to Stitch from the Disney franchise. The byline from my social media account **sums** my life up fairly well: Disciple; Husband & Father; Amateur Cyclist, Yogi, Cook & Photographer; Professor (Applied Linguistics/Language Testing).

I **identify first and foremost** as a man of faith **and** one **who loves** his family, **but** when I **am not engaged** in activities with my church or work, **you'll find** me road **cycling**, **practicing** yoga (power for the most part), **cooking** or **working** on my photography skills.

The ACTFL Proficiency Guidelines 2012

- Not what you KNOW about the language, but what you can DO SPONTANEOUSLY in real world situations.
- Five major levels (each subsumes all lower levels) that describe a confluence of:

- **F**unction
- **A**ccuracy
- **C**ontent/context
- **T**ext Type



*Keep your
FACTs straight
and you can
determine the
major level!*

The background of the slide is a solid dark blue color. Overlaid on this background is a repeating pattern of light blue line art. The pattern consists of stylized bicycles and wheels, arranged in a way that they overlap and create a sense of movement. The bicycles are depicted from a side-on perspective, with their wheels, frames, and handlebars clearly visible. The wheels are particularly prominent, with many spokes shown. The overall effect is a subtle, textured background that complements the text.

Think “DO” not “KNOW”



THE GREAT BRITISH BAKE OFF®

APPLY FOR
BAKE OFF

AS SEEN ON



NEWS

RECIPES

YOUR BAKES

THE BAKERS

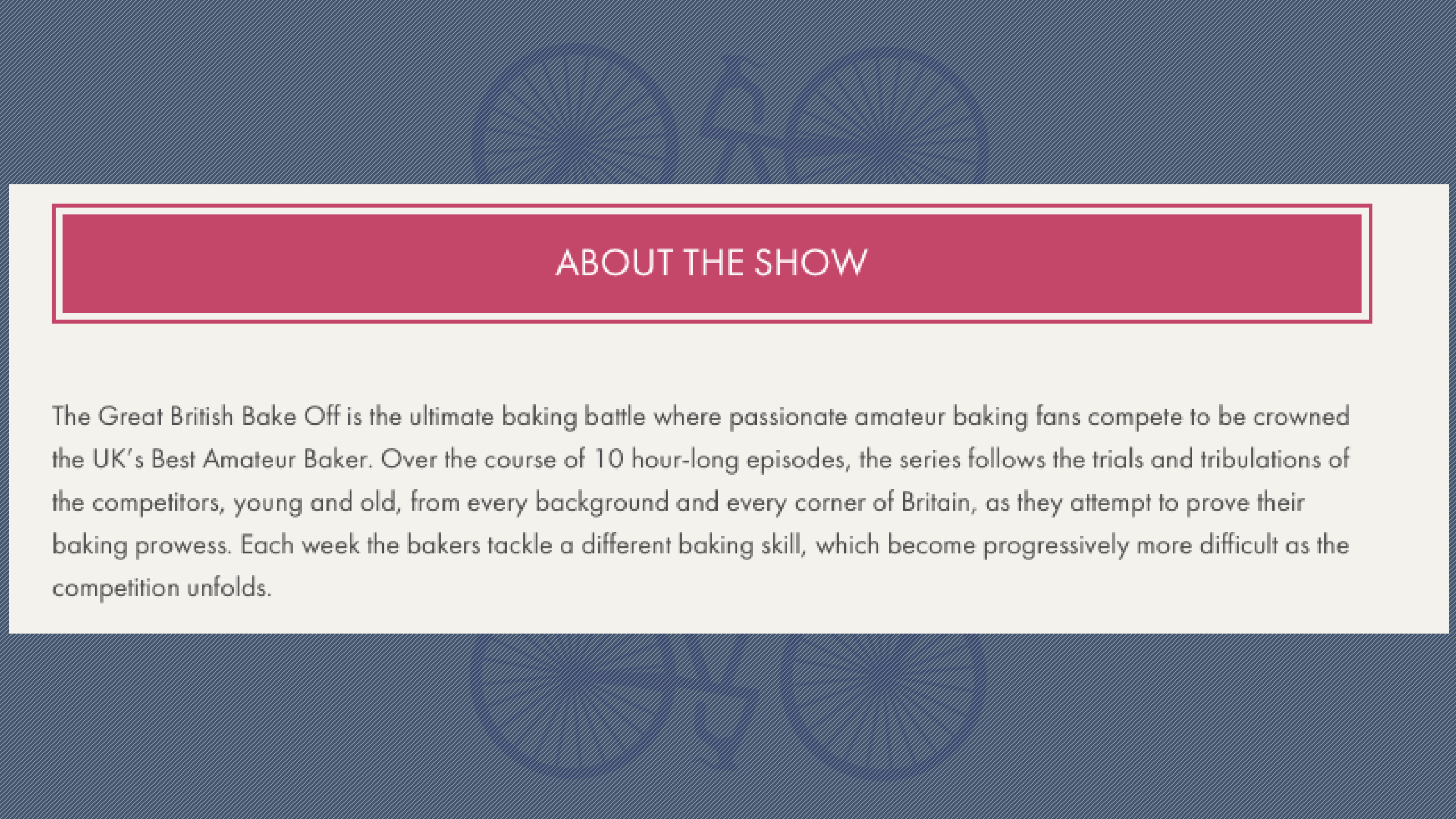
SHOP

AN EXTRA SLICE

ABOUT

CONTACT US





ABOUT THE SHOW

The Great British Bake Off is the ultimate baking battle where passionate amateur baking fans compete to be crowned the UK's Best Amateur Baker. Over the course of 10 hour-long episodes, the series follows the trials and tribulations of the competitors, young and old, from every background and every corner of Britain, as they attempt to prove their baking prowess. Each week the bakers tackle a different baking skill, which become progressively more difficult as the competition unfolds.

Imagine a show in which the bakers sit down and answer the following questions on paper.

What are 3 leavening agents?

What is an enriched dough?

What is the difference between royal icing and buttercream?

THE CHALLENGES

SIGNATURE BAKE



Testing the bakers' personality, creative flair and baking ability, the main challenge here is to produce something cute, rustic and altogether home-made-looking. It's in this test that the Bakers get to show off their tried-and-tested handcooked treats.

TECHNICAL BAKE



This challenge separates the wheat from the chaff. Take one basic recipe, with the same ingredients and instructions, and ask our bakers to produce the finished product... sound easy? Well, any variation on the finished product will be a result of their own technical knowledge and experience – or lack of. Bakers are laid bare in this task and this is where the pressure's really on in the Bake Off.

SHOWSTOPPER BAKE



The oven gloves are off in this final challenge where the bakers are able to showcase their depth of skill and talent. The complexities of this task call for a professional standard in taste and appearance. Are they up to it? The judges will be looking for the most impressive and elaborate creations – that better taste first-class too.

Performance

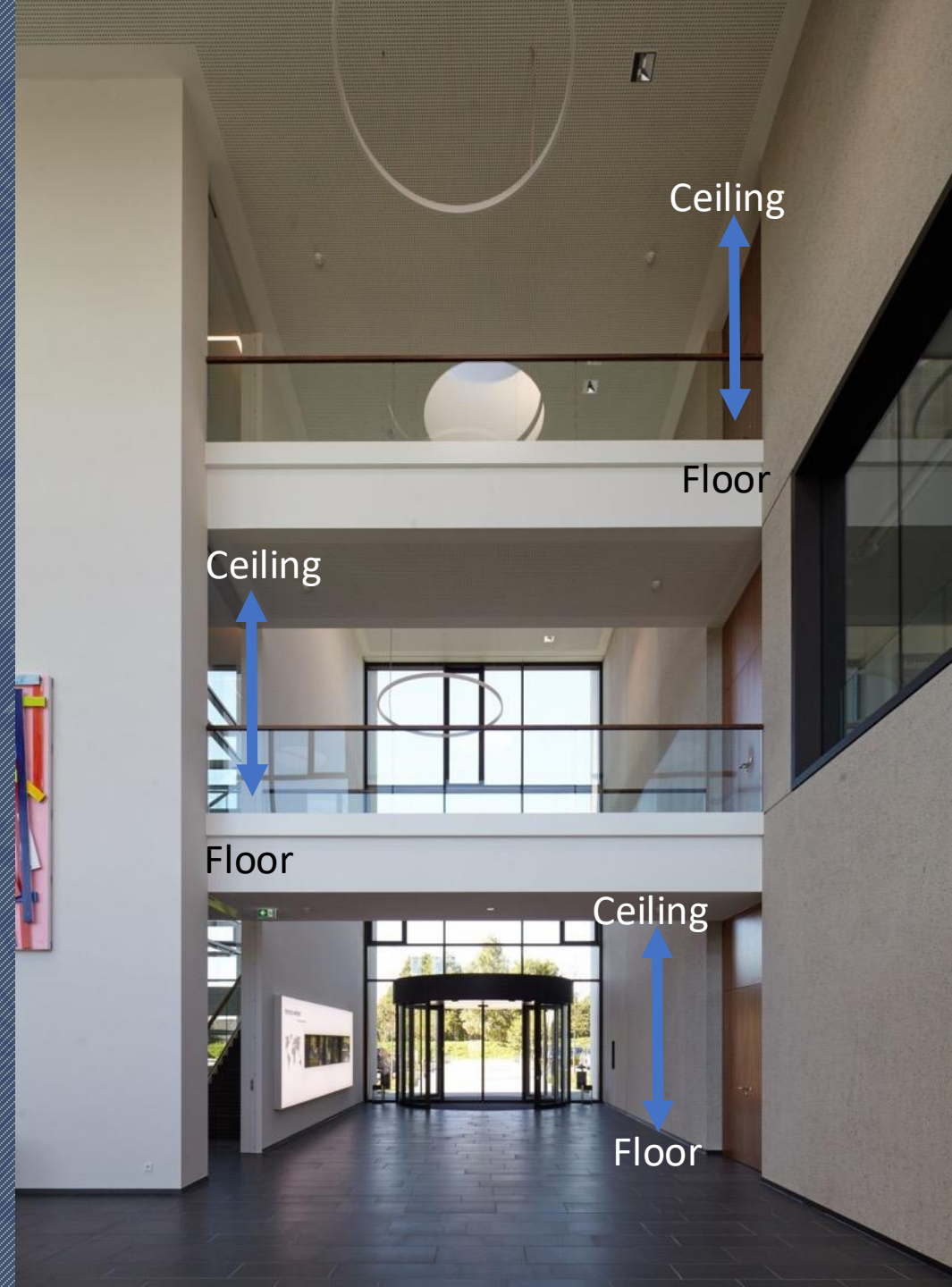
Proficiency

Proficiency Guideline Criteria

Level	Novice/ILR 0	Intermediate/ILR 1	Advanced/ILR 2	Superior/ILR 3
F unctions	- Communicate minimally - Use formulaic utterances - Produce words, lists and phrases	- Create with Language - Participate in Simple Conversations - Ask and Answer Questions - Engage in simple transactions	- Narrate and Describe in All Time Frames - Past - Present - Future - Linguistically negotiate situations with complications	- Discuss Abstract Topics Extensively - Support Opinion with Nuanced Language - Explore hypothetical realities vis-à-vis conjecture
A ccuracy	Only understood by patient, sympathetic listeners accustomed to nonnative speakers	Understood by people accustomed to speaking to nonnative speakers	Can be understood without confusion by monolinguals not accustomed to speaking to nonnative speakers	No patterns of errors in basic structures. Errors virtually never distract or impede communication
C ontent	Self	Self Daily Life	Self Daily Life Non-autobiographical Topics Topics of General Interest	Self Daily Life Non-autobiographical Topics Topics of General Interest Abstract Topics
T ext Type	Words Lists	Sentences Strings of sentences	Paragraphs	Extended Discourse

Keep your FACTs straight and you are at a major level.

- Proficiency Guidelines describe major levels of language development.
- **Floor** describes highest level that can be maintained consistently.
- **Ceiling** describes lowest level in which patterns of breakdown appear.



What is CALF?



- The CALF framework is an extension of an earlier and widely-used triad in second-language (L2) performance research: **CAF** (Complexity, Accuracy, Fluency). In CALF, the “L” stands for **Lexis** (or lexical complexity/use)

CAF Model of L2 proficiency proposed by Skehan (1989)

- Complexity
 - how elaborate, varied and “rich” the learner’s language is in terms of structures, vocabulary, length, subordination etc.
- Accuracy
 - how correct or target-like the learner’s output is (fewer errors, more error-free clauses)
- Fluency
 - how smooth, spontaneous and efficient the output is (speed, pausing, hesitations, reformulations)

Skeehan (2009) proposed adding Lexis to the model

- Researchers noted that “Lexical”/“Lexis” (vocabulary) needed more attention, because complexity (in many studies) focused on structural/grammatical complexity, but vocabulary use is also a major dimension of learner performance.
- Lexis (Lexical)
 - how the learner uses vocabulary: diversity, sophistication, lexical richness, lexical density, lexical sophistication.

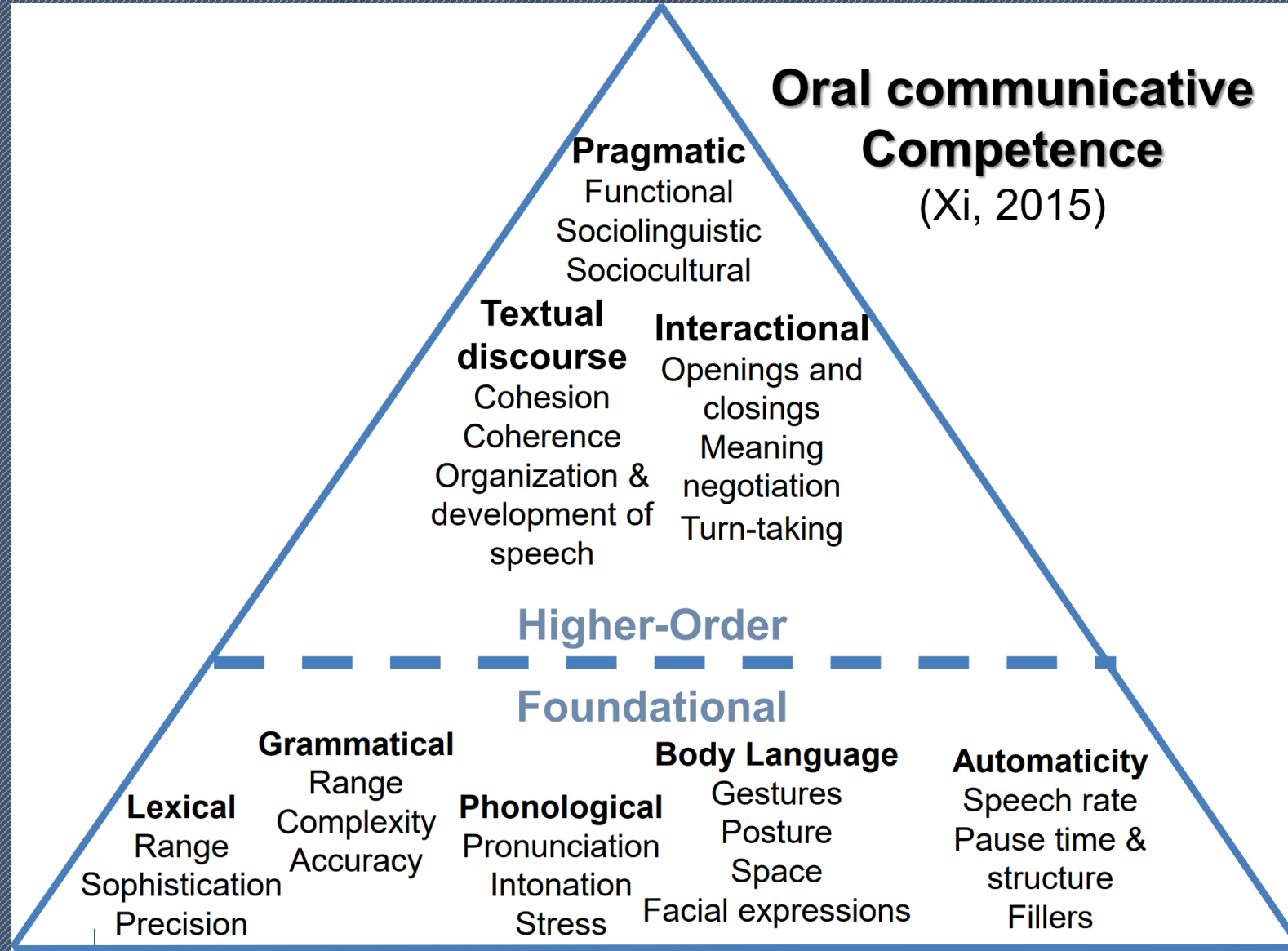
Group Work: How would you predict the CALF model would vary across the FACTs of the ACTFL levels?

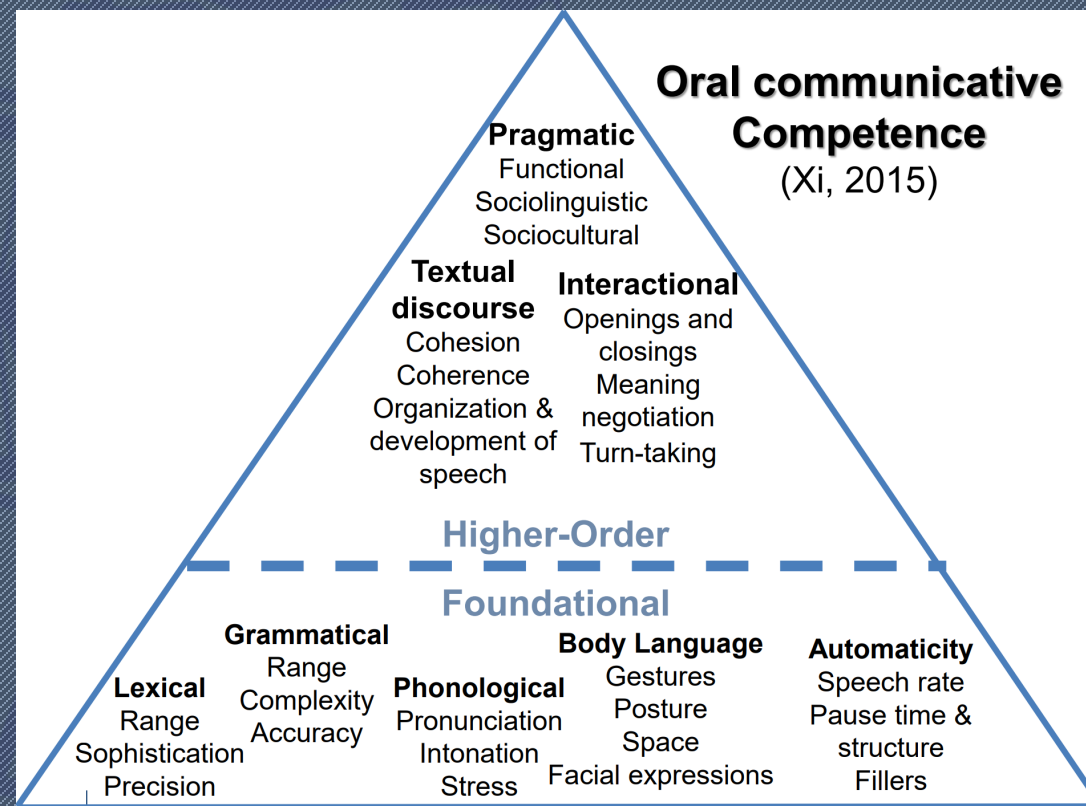
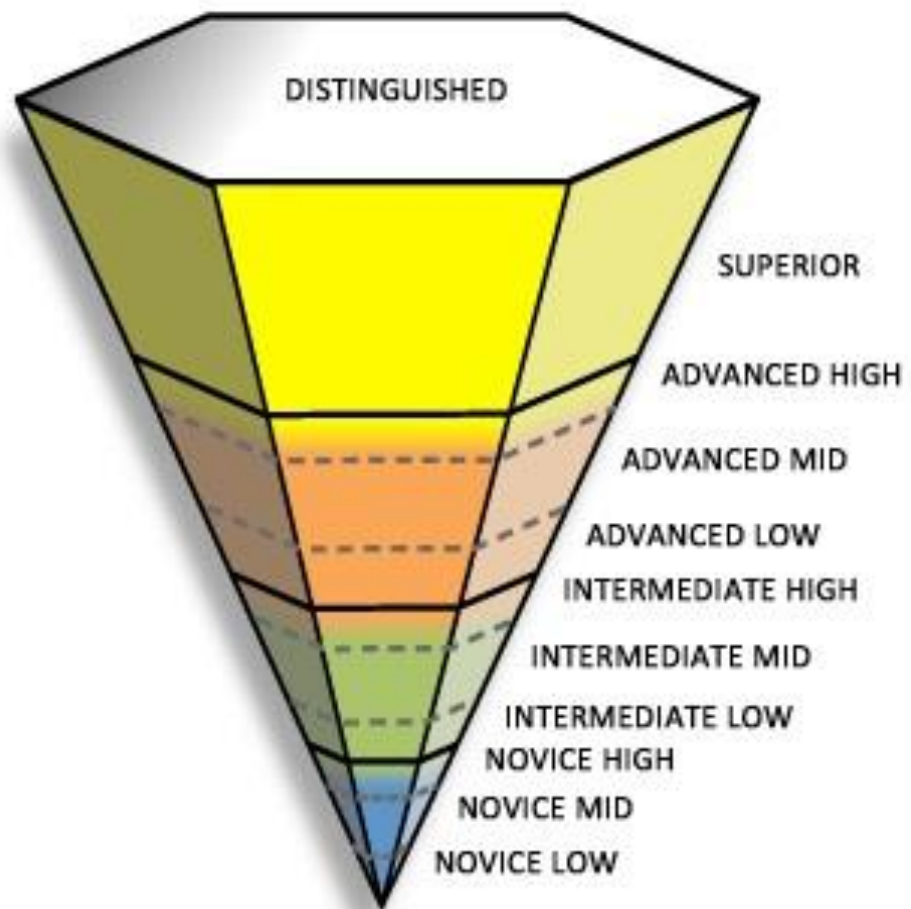
	Novice				Intermediate				Advanced				Superior			
	F	A	C	T	F	A	C	T	F	A	C	T	F	A	C	T
Complexity																
Accuracy																
Lexis																
Fluency																

Troy's Proposed Intersection

ACTFL Levels	CALF Model	Notes
Function	—	With ACTFL, function dictates Accuracy, Content/Context and Text Type
Accuracy	Accuracy	Roughly equivalent
Content/context	Lexis	What is being discussed? With whom?
Text Type	Complexity	What structures are used?
	Fluency	How are those structures articulated/executed?

Oral communicative Competence (Xi, 2015)





Story Time

Brunelleschi's Dome

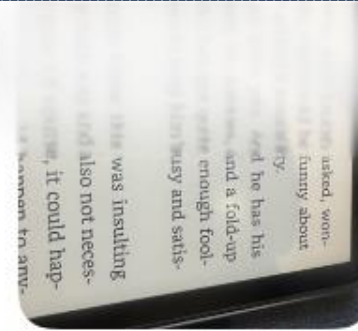


Frans Johansson's *The Medici Effect* (2004)



- Key Principles
 - Breakthrough insights emerge from cross-pollination of knowledge.
 - Encourages breadth of interests as a source of scholarly innovation.

- So, how have yoga, cycling, and Great Britain impacted my scholarship in applied linguistics?



“Leo loves you. And he has his crickets, his hobbies, and a fold-up bicycle; he’s got quite enough foolishness to keep him busy and satisfied.”

So one of the protagonists is losing it and asking her mother if her husband Leo will leave her for a younger woman when she’s in her 50s, and this is her mother’s response. Hard to tell if the writer knows Troy or Will better...



Substitute “yoga” or “telescope”

It’s nice to be of an age where you have “foolishness to be kept busy and satisfied.”

1996

- Attended Barker Lecture and saw Chantal Thompson present on proficiency and authentic material
- Was hired at the English Language Center

2006

- Attended OPI Workshop led by Chantal & Became OPI Tester
- Implemented ACTFL scale with ELC curriculum

Started cycling more seriously

2013-14

- Received PhD
- Moved to the Center for Language Studies
- Assisted with Scandinavian OPI Workshop

Started practicing yoga and incorporating mindfulness

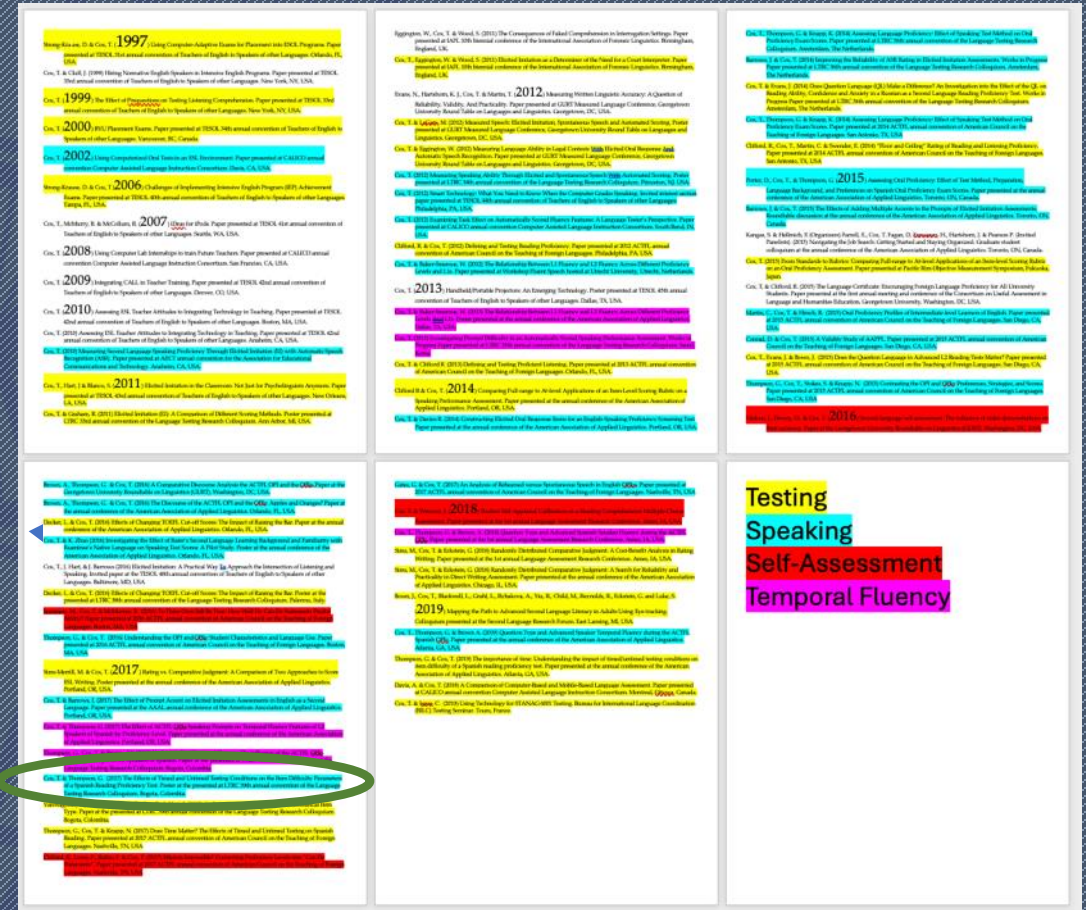
2016

- Under mentorship of Cindy Martin, became an OPI Tester Trainer/Facilitator

Pre-COVID Research Presentations at Academic Conferences

- Testing (R,W, L, and other)—27
- Speaking Assessments—21
- Temporal Fluency—5
- Self-Assessment—4

Cox, T. & Thompson, G. (2017) *The Effect of ACTFL OPIc Speaking Prompts on Temporal Fluency Features of L2 Speakers of Spanish by Proficiency Level*



BYU

BRIGHAM YOUNG
UNIVERSITY

Understanding temporal fluency:
The influence of the ACTFL OPIc speaking prompts
on L2 speakers of Spanish

LTRC
Bogotá 2017

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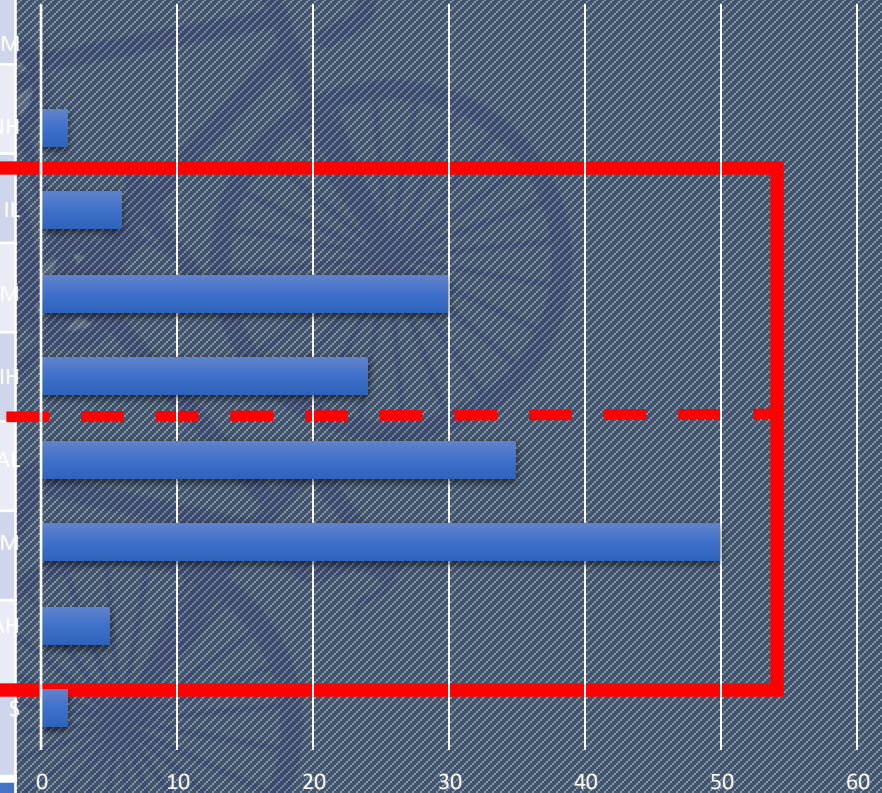


Research Question

- What are the differences in temporal fluency features between examinees rated at different ACTFL levels?
 - articulation rate
 - mean length of run
 - silent pause ratio

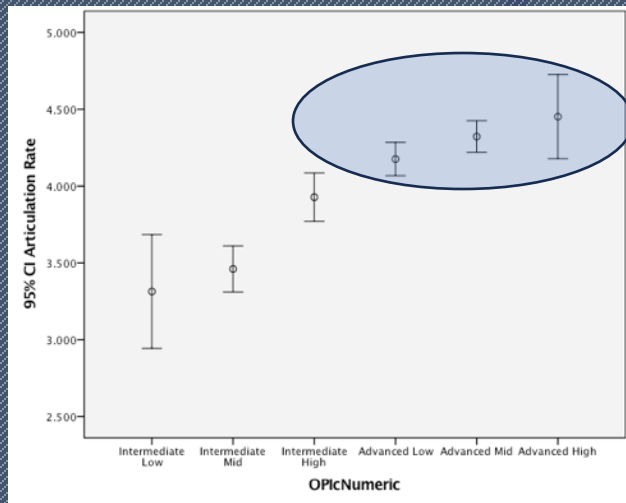
Subjects

OPI Level	Number of Ratings
Novice Mid	0
Novice High	2
Intermediate Low	6
Intermediate Mid	30
Intermediate High	24
Advanced Low	35
Advanced Mid	50
Advanced High	5
Superior	2
Total	154



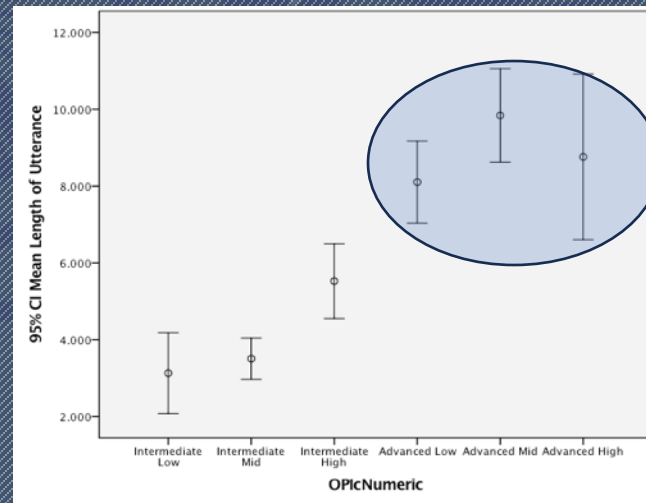
ACTFL Rating and Temporal Fluency

Articulation Rate



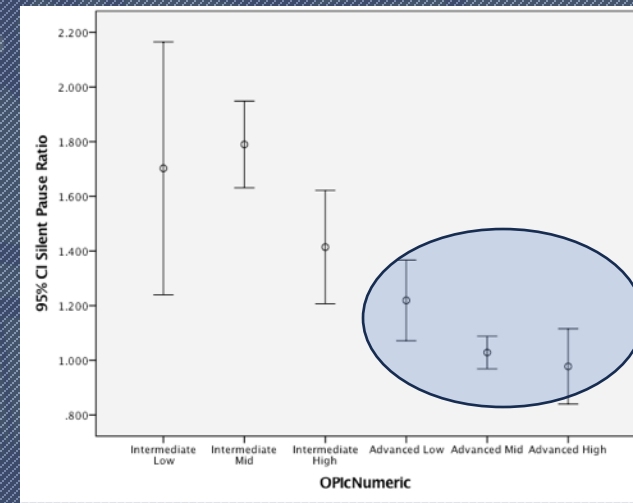
ANOVA $F(5, 143) = 28.37, p < .001$

Mean Length of Utterance



ANOVA $F(5, 143) = 19.73, p < .001$

Silent Pause Ratio

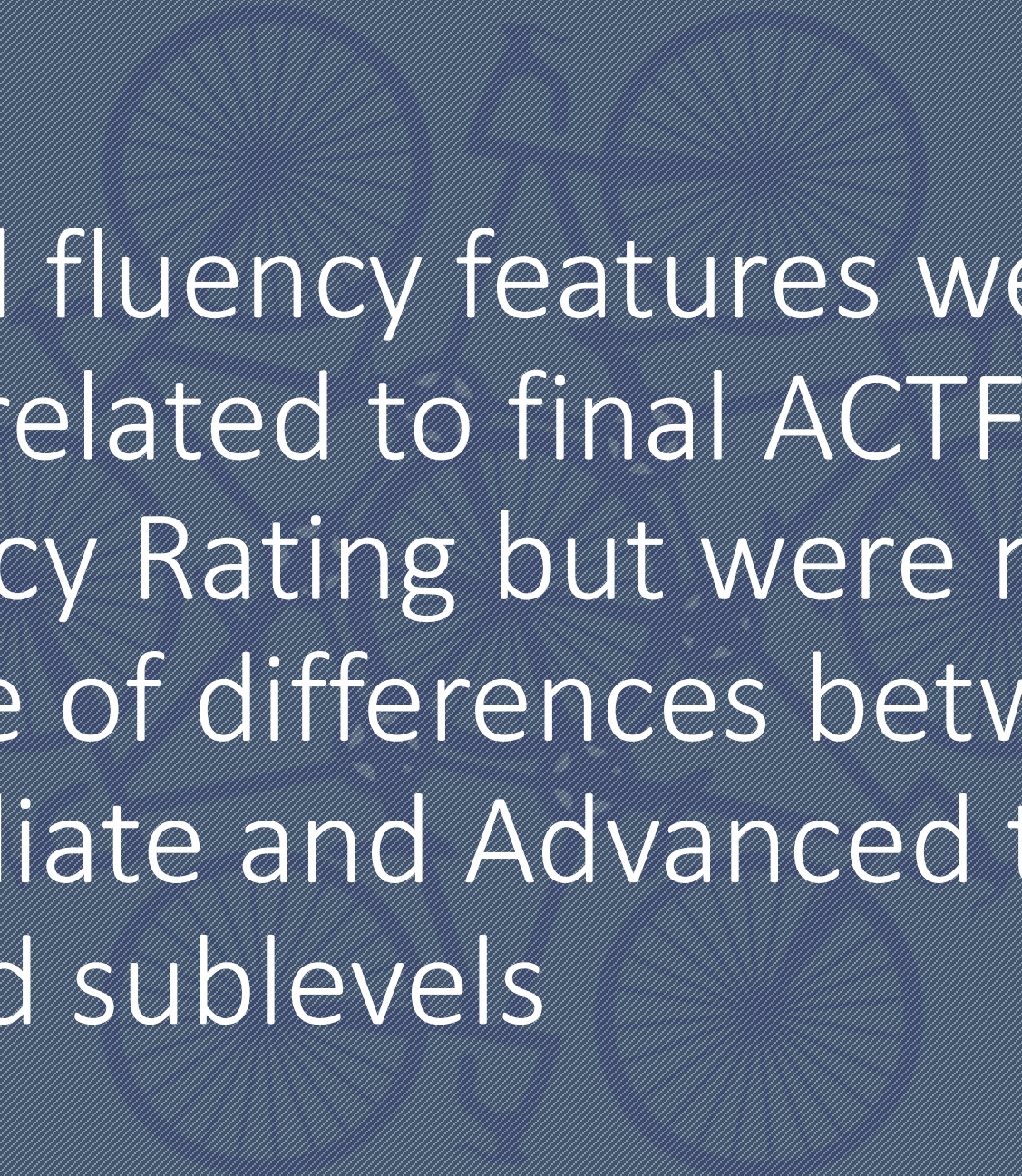


ANOVA $F(5, 143) = 18.15, p < .001$

ACTFL Ratings and Temporal Fluency Features

- The effect size (Cohen's D) is strong (**large**, **medium** and **small**) over the full range of ratings.

	Articulation Rate	MLU	SPR
IL & IM	0.37	0.27	0.20
IM & IH	1.20	1.08	0.82
IH & AL	0.73	0.92	0.43
AL & AM	0.43	0.46	0.60
AM & AH	0.37	0.26	0.25



Temporal fluency features were **strongly** related to final ACTFL Proficiency Rating but were more indicative of differences between Intermediate and Advanced than the Advanced sublevels

Story Time







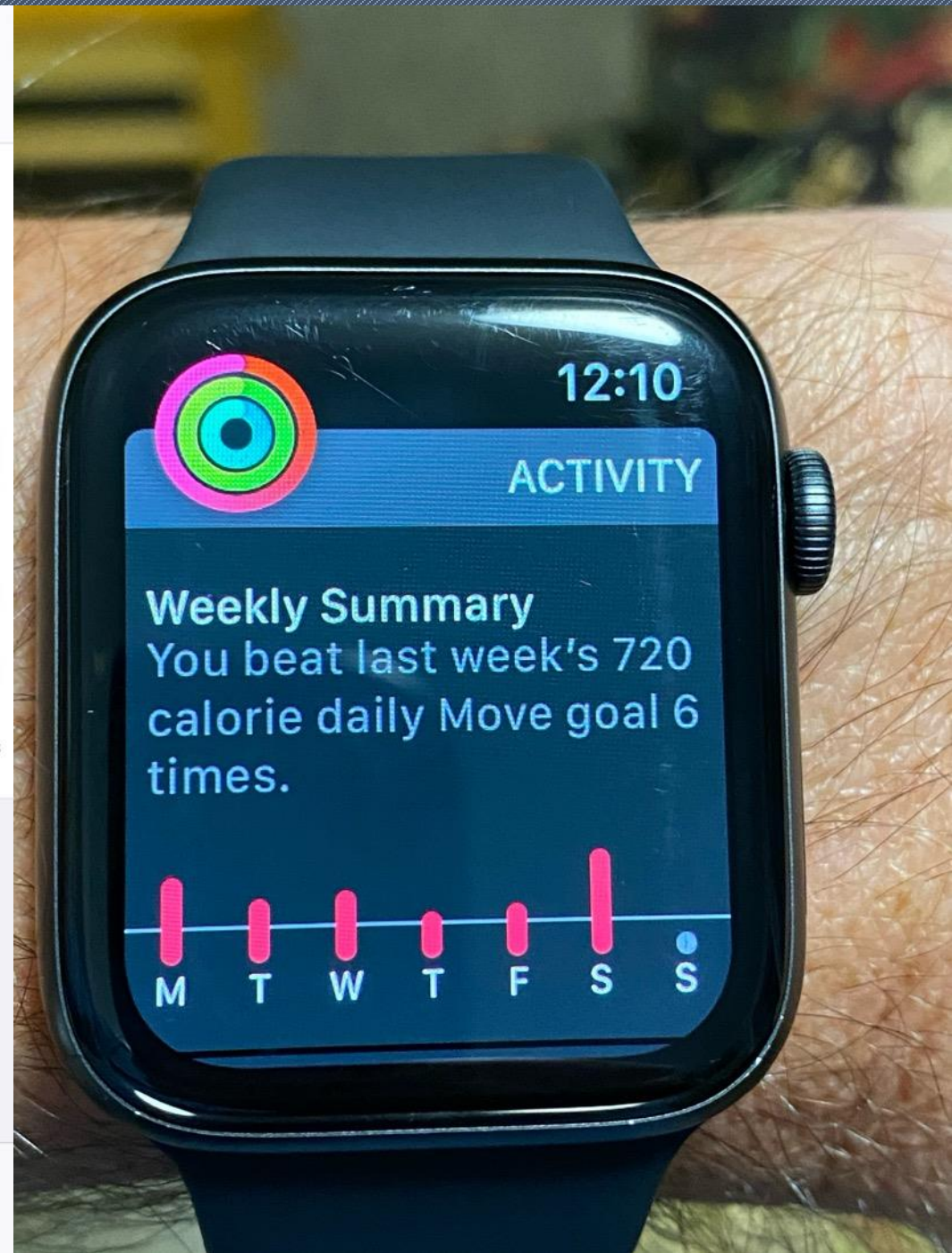






Am I self-aware
and acting on my
own?

Or am I waiting for
someone else to
tell me what to
do?

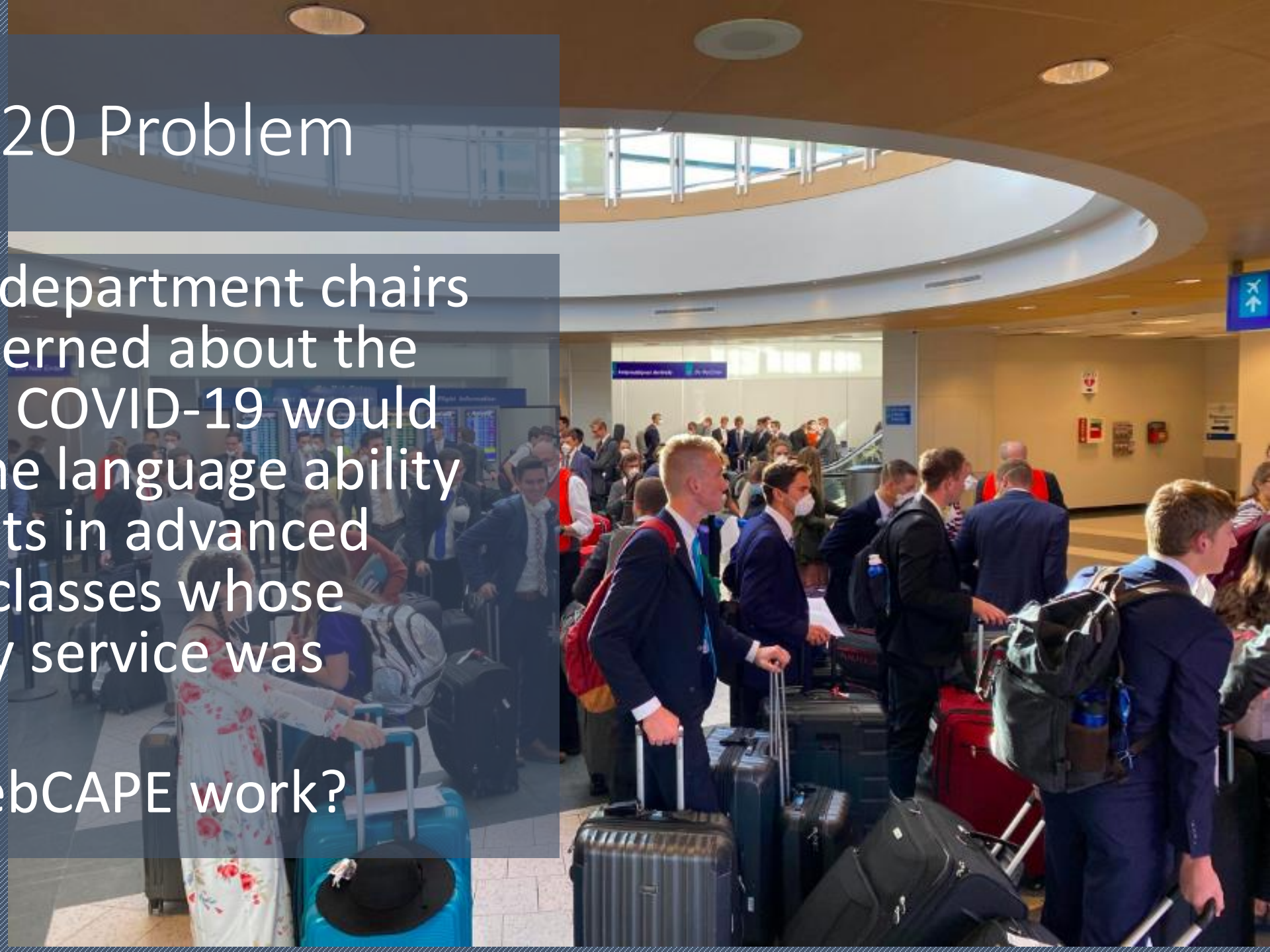


Cox, T. & Peterson, J. (2018) *Student Self-Appraisal Calibration on a Reading Comprehension Multiple-Choice Assessment*.



Spring 2020 Problem

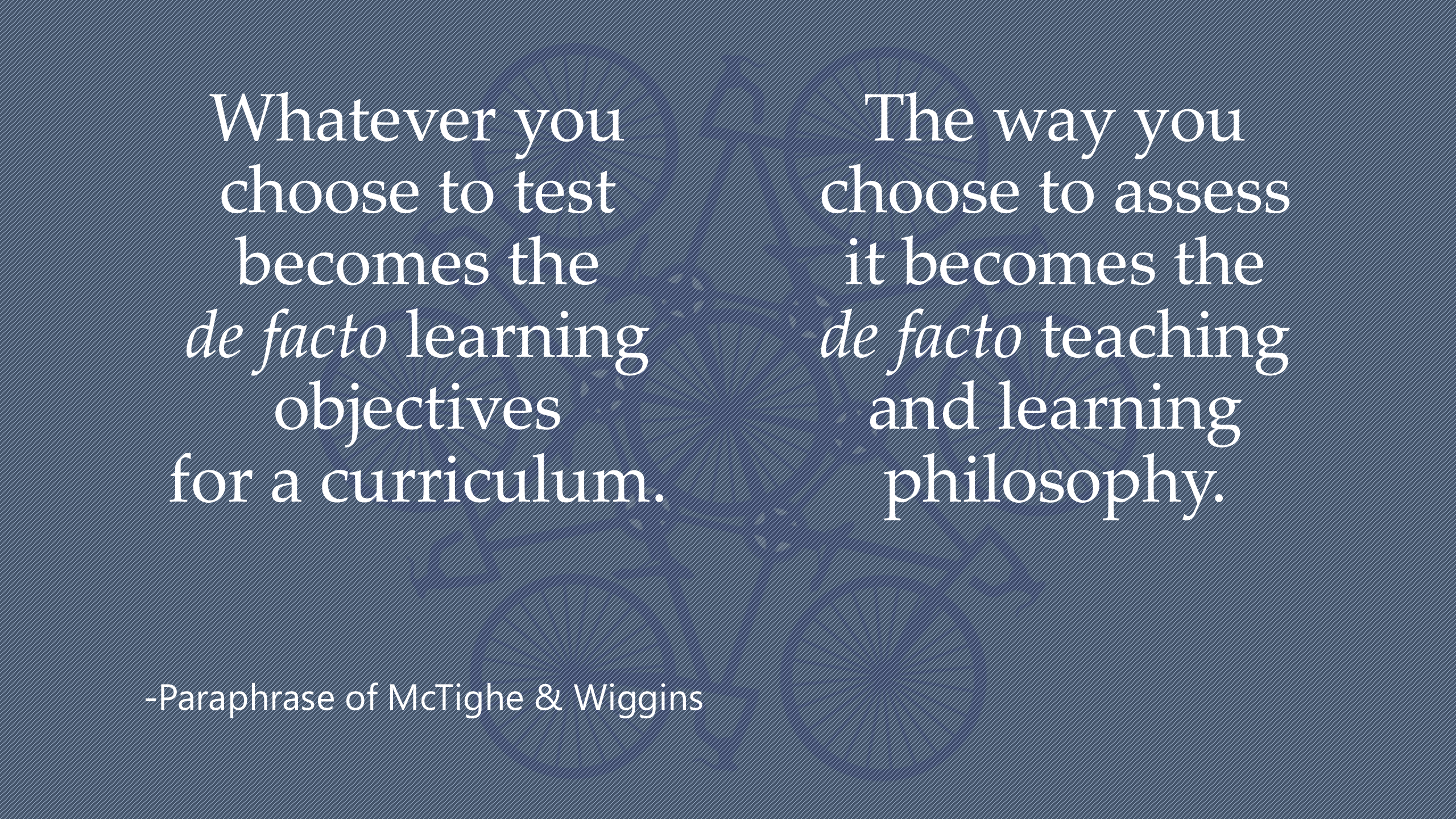
- Language department chairs were concerned about the disruption COVID-19 would have on the language ability for students in advanced language classes whose missionary service was disrupted.
- Would WebCAPE work?



WebCAPE (Web-Computer Adaptive Placement Exam)

- Tests students with MC questions.
- Adaptive algorithm gives each student a unique set of questions at varied difficulty levels to determine score.
- Results are low stake.





Whatever you
choose to test
becomes the
de facto learning
objectives
for a curriculum.

The way you
choose to assess
it becomes the
de facto teaching
and learning
philosophy.

-Paraphrase of McTighe & Wiggins

What's our goal?

- Do we want students that are automatons that need to be told where to go and what to do via external checklists?
- Or do we want to help students become reflective learners that can accurately **self-appraise** their language and choose what's best for them?

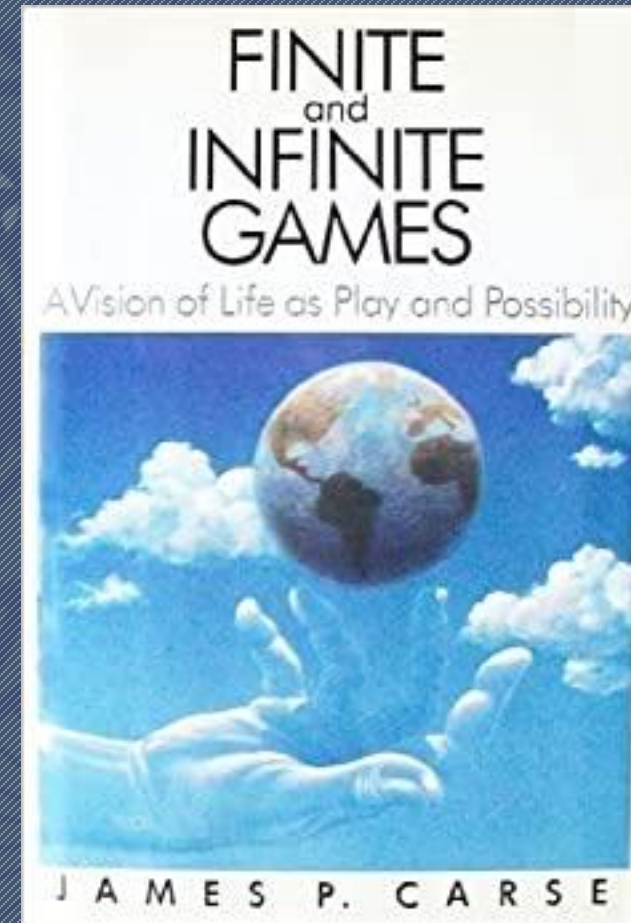
Story Time



Is language learning a finite or an infinite game?

Carse, J. (2011). *Finite and infinite games*. Simon and Schuster.

Sinek, S. (2019). *The infinite game*. Penguin.



THE INFINITE
GAME
**THE INFINITE
GAME**
SIMON
SINEK
THE INFINITE
GAME
THE INFINITE
GAME

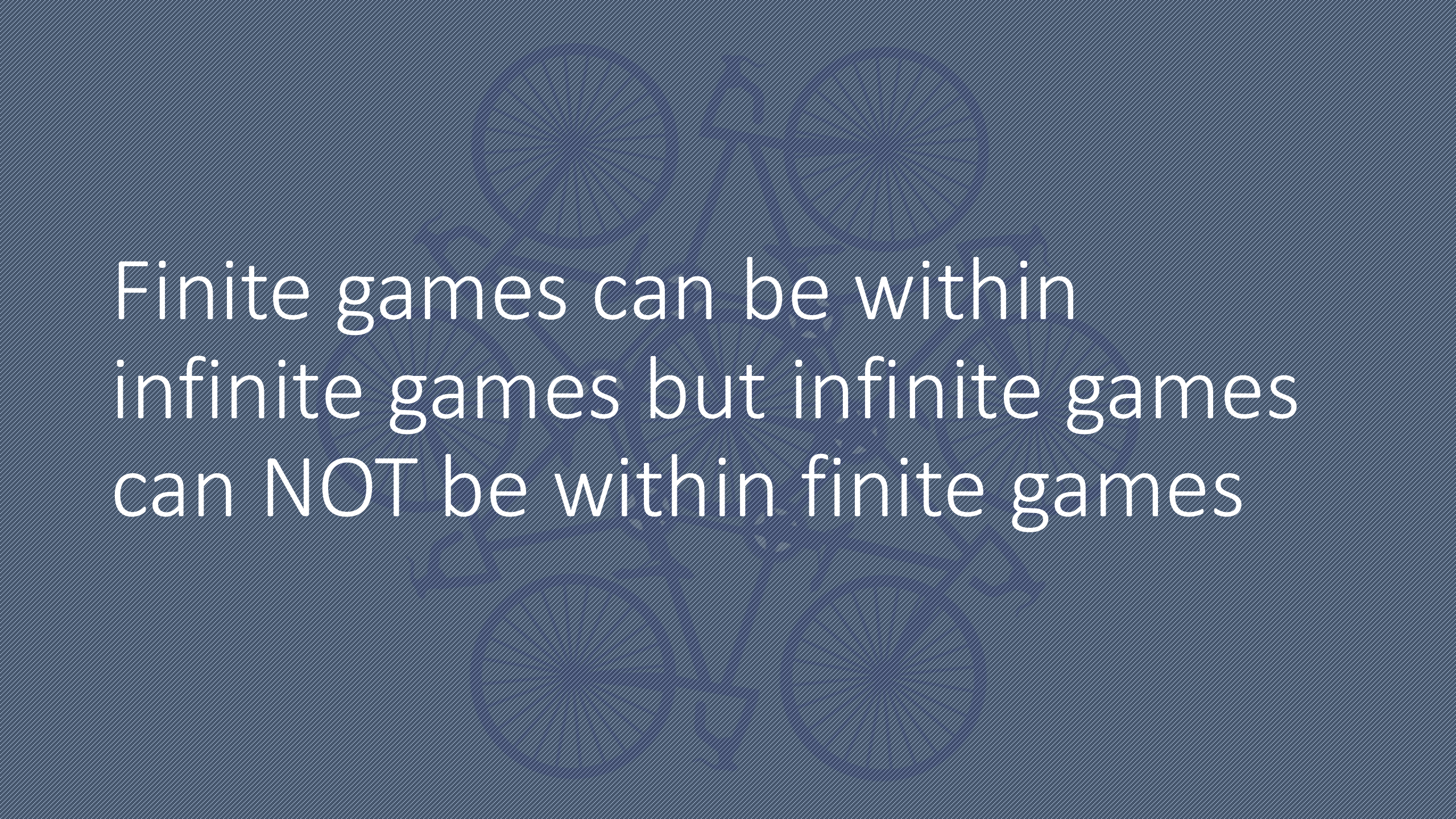
What's the difference between finite and infinite games?

Finite

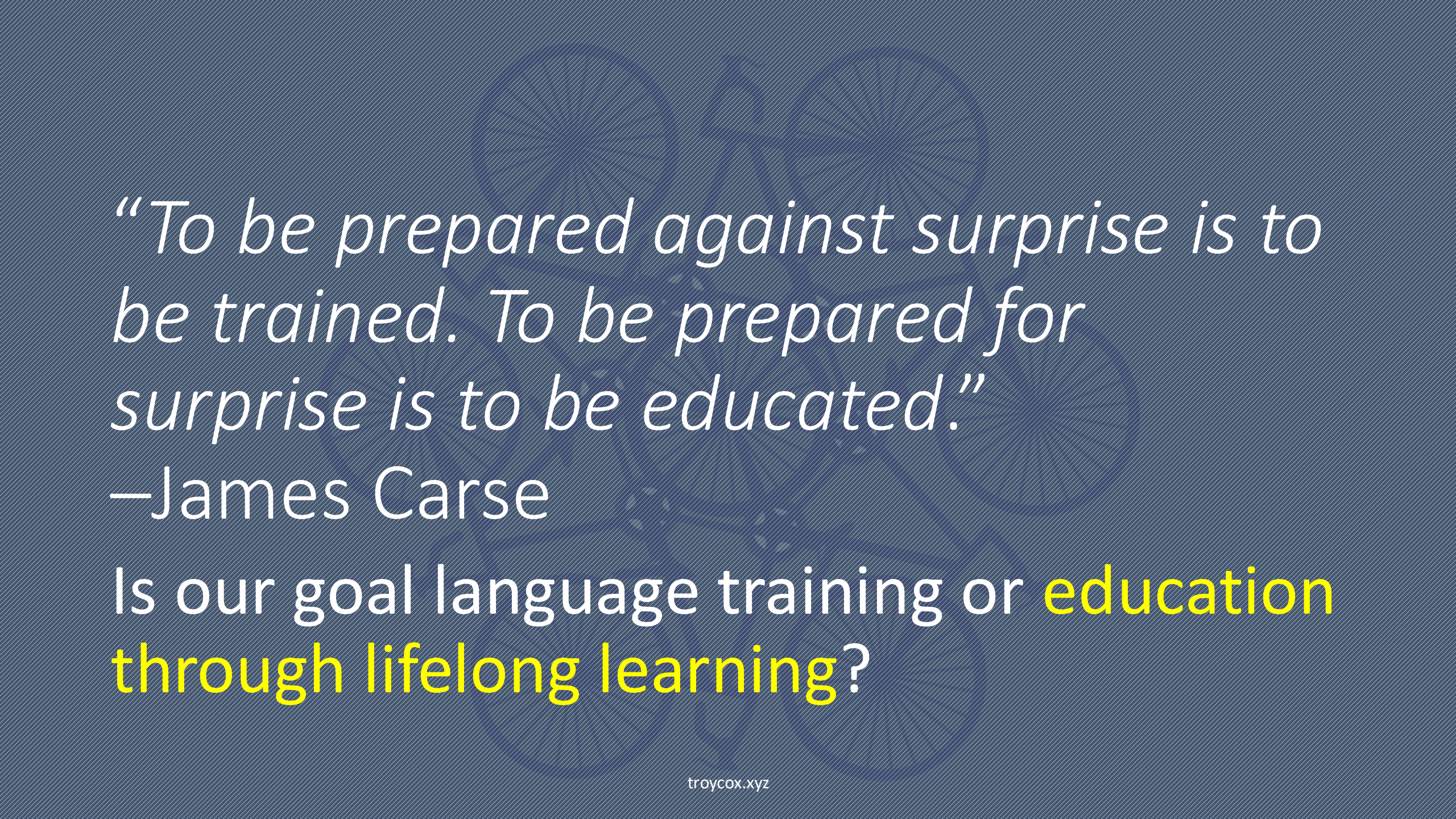
- Played to win
- Externally defined rules
- Limits are predefined
- Players can compete to win within these limits
- Examples:
 - a football match (win/lose)
 - publishing a paper (accept/reject)
 - job interview (hired/not hired)
 - going to church (present/absent)

Infinite

- Played to keep on playing
- Internally defined rules.
- Limits are not defined
- The goal of players is to stay in the game
- Examples:
 - being an athlete for the joy of the game
 - being a scholar for the joy of discovery
 - Having a career that's fulfilling
 - Being a disciple for the purpose of fulfillment

A faint, repeating pattern of bicycles is visible in the background, rendered in a light blue color against a dark blue background. The bicycles are arranged in a grid-like fashion, with some appearing slightly offset from others.

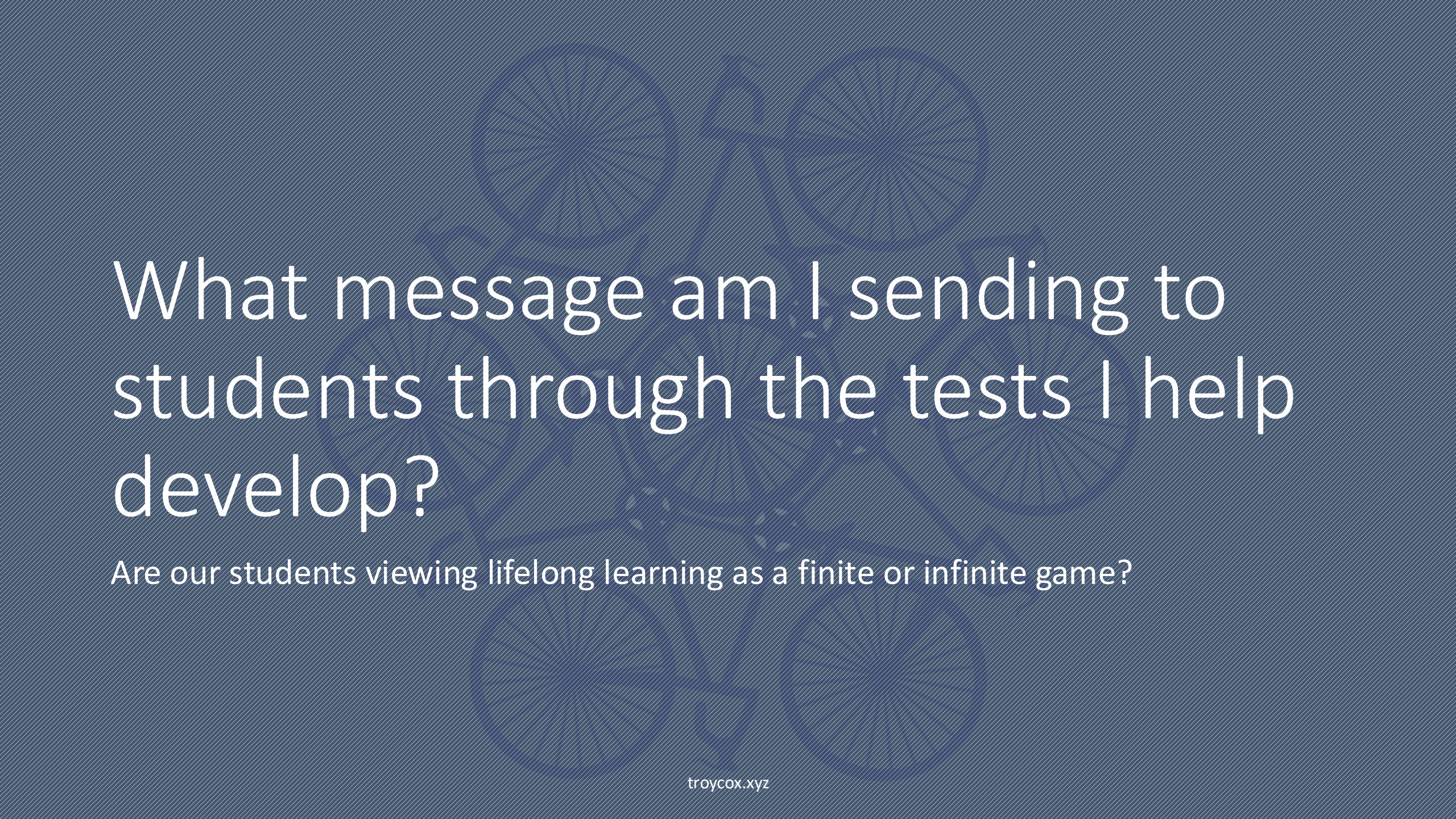
Finite games can be within
infinite games but infinite games
can NOT be within finite games



“To be prepared against surprise is to be trained. To be prepared for surprise is to be educated.”

—James Carse

Is our goal language training or **education through lifelong learning?**

The background of the slide features a repeating pattern of stylized bicycles and wheels in a light blue color, set against a darker blue background.

What message am I sending to students through the tests I help develop?

Are our students viewing lifelong learning as a finite or infinite game?

Bloom's Taxonomy

WebCAPE

	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual	– Factual knowledge of terminology. – Factual knowledge of specific details and elements.					
Conceptual	– Knowledge of classifications and categories. – Knowledge of principles and generalizations. – Knowledge of theories, models, and structures.					
Procedural	– Knowledge of subject-specific skills and algorithms. – Knowledge of subject-specific techniques and methods. – Knowledge of criteria for determining when to use appropriate procedures.					
Metacognitive	– Strategic knowledge. – Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge. – Self knowledge.					

How can we create an instrument that assesses different types of knowledge and higher order skills with positive washback?

Bloom's Taxonomy—Metacognitive

- Strategic knowledge
- **Knowledge about cognitive tasks**, including appropriate contextual and conditional knowledge
- Self knowledge

What did I know at this time?

- Temporal fluency features co-occur with students at the Advanced major level (Intermediate Highs, Advanced Lows, Advanced Mids)
 - Getting speech samples could let us use PRAAT to do an automated rating
 - Speaking and writing with ACTFL leveled prompts is more authentic than MC questions
 - Ergo washback is improved
- Telling students where they are at without helping them metacognitively might negatively contribute to the finite game mindset that exists in much of education

What is the LASER?

- The Language Ability Self-Evaluation Resource is a self-assessment diagnostic tool designed to help students evaluate the strengths and weaknesses of their language proficiency through nationally recognized standards.
- As students improve in their ability to self-assess, they will improve in their ability to grow and develop their language proficiency.



laser.byu.edu

Scale Design and Description

	LASER
Construct	Indirect measure Speaking and Writing proficiency
Format	Section 1 (Fixed form) • Language Learning Background • Willingness to Communicate (26 items (random subset, 100% time scale)) • Language Learning Grit (9 items, 5 pt. scale) • Self-Assessment of Speaking and Writing (24 items, 5 pt. Scale) Section 2 (items targeted at the self assessed level from section 1) • Writing and Speaking
Languages	Can be adapted for most languages
Results	ACTFL scale (10 Point) from NL to S (not official). Self-assess results moderated by language learning background, length of immersion, and distance from English. Sent to both student and instructors who have (hopefully) been trained in the proficiency scale
Delivery	Qualtrics (not proctored) troycox.xyz

Post-COVID Research Presentations at Academic Conferences

- Self-Assessment—10
- Testing (R,W, L, and other)—6
- Willingness to Communicate—2
- Temporal Fluency—1
- Speaking Assessments—0

Cox, T. (2020). Considerations Prior to Deploying Computers in Language Testing. NATO Bureau for International Language Coordination (BILC) Testing Seminar, Virtual (September).

Stangor, D., Cox, T. & Egg, S. (2021). Does Test Entry Method Make a Difference on Chinese Writing Test Scores? Paper presented at the Language Assessment Research Colloquium, Provo, UT.

Cox, T. (2022). Test Rating and Typology. NATO Bureau for International Language Coordination (BILC) Testing Seminar Virtual (September).

Cox, T. (2022). Tactical Considerations Prior to Deploying Computers in Language Testing. NATO Bureau for International Language Coordination (BILC) Annual Conference, Lenoir, Italy (May 22-27).

Miller, M., & Cox, T. (2022). Self-report Proficiency Measures and Machine Learning. Paper presented at the annual conference of the ACTFL annual convention of American Council on the Teaching of Foreign Languages, Philadelphia, PA, USA.

Miller, M., & Cox, T. (2022). Language Proficiency Diagnostic Assessment: A Psychometric Investigation. Paper presented at the annual conference of the American Association of Applied Linguistics, Pittsburgh, PA, USA.

Cox, T. (2022). To What Does Self-Reported Language Proficiency Accuracy Among Advanced Foreign Language Students. Paper presented at the annual conference of the American Association of Applied Linguistics, Pittsburgh, PA, USA.

Cox, T. (2022). To What Does Self-Reported Language Proficiency Accuracy Among Advanced Foreign Language Students. Paper presented at the NATO Bureau for International Language Coordination (BILC) Professional Development Seminar, Provo, UT (October).

Stangor, D., & Cox, T. (2022). Expert Instruction in Foreign Language Self-Assessments: Expanding the Potential of Improving Calibration through Training. Paper presented at the annual Language Assessment Research Conference, Chicago, IL, USA.

Cox, T. (2022). The Language Assessment Self-Evaluation Resource (LASER). Paper presented at the annual Language Assessment Research Conference, Chicago, IL, USA.

Stangor, D., Miller, M., Cox, T., Murphy, D., Hahn, C., & Selley, S. (2022). Using Proficiency Tests to Measure Student Success and Improve Learning: Year Studies and a Discussion of Test Use. Collection presented at the annual Language Assessment Research Conference, Chicago, IL, USA.

Cox, T., Cox, T., & Wilson, M. (2022). Examining the Willingness to Communicate Scale With Advanced Foreign Language Learners. Paper presented at the annual Language Assessment Research Conference, Chicago, IL, USA.

Stangor, D., & Cox, T. (2022). Analyzing the Factors in a Self-Assessment Language Learning Survey: Comparing More and Less Successful Learners. Paper presented at the annual Language Assessment Research Conference, Chicago, IL, USA.

Miller, M., Cox, T., Thompson, G., & Brown, E.K. (2022). Fluency and the Linguistic Complexity of Spanish QCEs by Level: An Exploratory Analysis. Paper presented at the virtual Hispanic Linguistics Symposium.

Stangor, D., Cox, T., & Sel, T. (2020). Determining Factors on Self-Reported Language Learning: Comparing More and Less Successful Learners. Works in Progress presented at the annual conference of the American Association of Applied Linguistics, Portland, OR, USA.

Cox, T. (2020). The Effect of Language Proficiency on Self-Reported Calibration among Advanced Foreign Language Learners. Paper presented at the annual conference of the Language Testing Research Conference, New York, NY.

Bell, T., Cox, T., & Robinson, A. (2023). Issues in ACTFL/CAEP Program Review and Teacher Preparation. Paper presented at the annual conference of the ACTFL annual convention of American Council on the Teaching of Foreign Languages, Chicago, IL, USA.

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Cox, T., & Lopez, C. (2024). Examining the Willingness to Communicate (WTC) Scale With Advanced Foreign Language Learners. Paper presented at the Psycholinguistics of Language Learning (PILL), Madrid, Spain.

Ekstein, G., & Cox, T. (2024). Eye Movements as Proficiency Indicators in Reading Across Four Languages. Paper presented at the 2nd Workshop on Eye Movements and the Assessment of Reading Comprehension, Zurich, Switzerland.

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Testing
Speaking
Self-Assessment
Willingness to Communicate
Temporal Fluency

The background of the slide features a dark blue, textured surface. Overlaid on this is a faint, light blue graphic of a bicycle. The bicycle's wheels are replaced by orange slices, showing the internal segments. The bicycle is oriented diagonally, with the front wheel pointing towards the top right.

GRIT

Do GRIT scores differ significantly across different OPlc levels?

Story Time



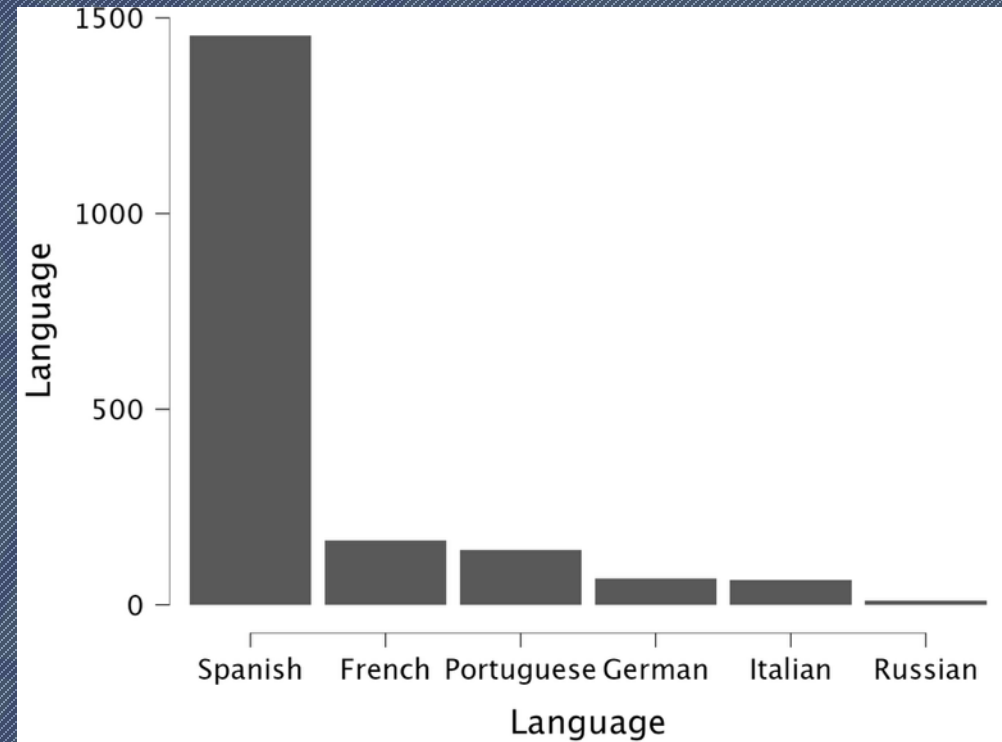
Why include GRIT?

- GRIT is a personality trait reflecting perseverance and passion for long-term goals (Duckworth et al., 2007).
- Includes both sustained effort (perseverance of effort) and enduring commitment (consistency of interest).
- Research shows grit predicts long-term achievement and persistence, even more than short-term performance (Duckworth, Peterson, Matthews, & Kelly, 2007; Credé et al., 2017).
- If we believe GRIT supports learners in persisting through challenges and reaching higher proficiency, then wouldn't we want to foster it?

GRIT Participants

Studying a foreign language at a large US University and took LASER

Language	Frequency	Percent
Spanish	1455	76.5
French	165	8.7
Portuguese	140	7.4
German	68	3.6
Italian	63	3.3
Russian	11	0.6
Missing	0	0
Total	1902	100



GRIT Instruments

- Oral Proficiency Interview-Computer (OPIc)
- GRIT Instrument
 - GRIT section of LASER
 - 9 questions that measured sustained effort and enduring commitment
 - Reliability—McDonalds Omega = .87 for both factors

Language-learning GRIT Scale

GR1 I am a diligent _ language learner.

GR2 My interest in learning the _ language has changed over time.

GR3 When it comes to learning _ language, I am a hard-working language learner.

GR4 I think I may have lost my interest in improving my _ language at some point.

GR5 Once I decided to learn _ language, nothing prevented me from reaching that goal.

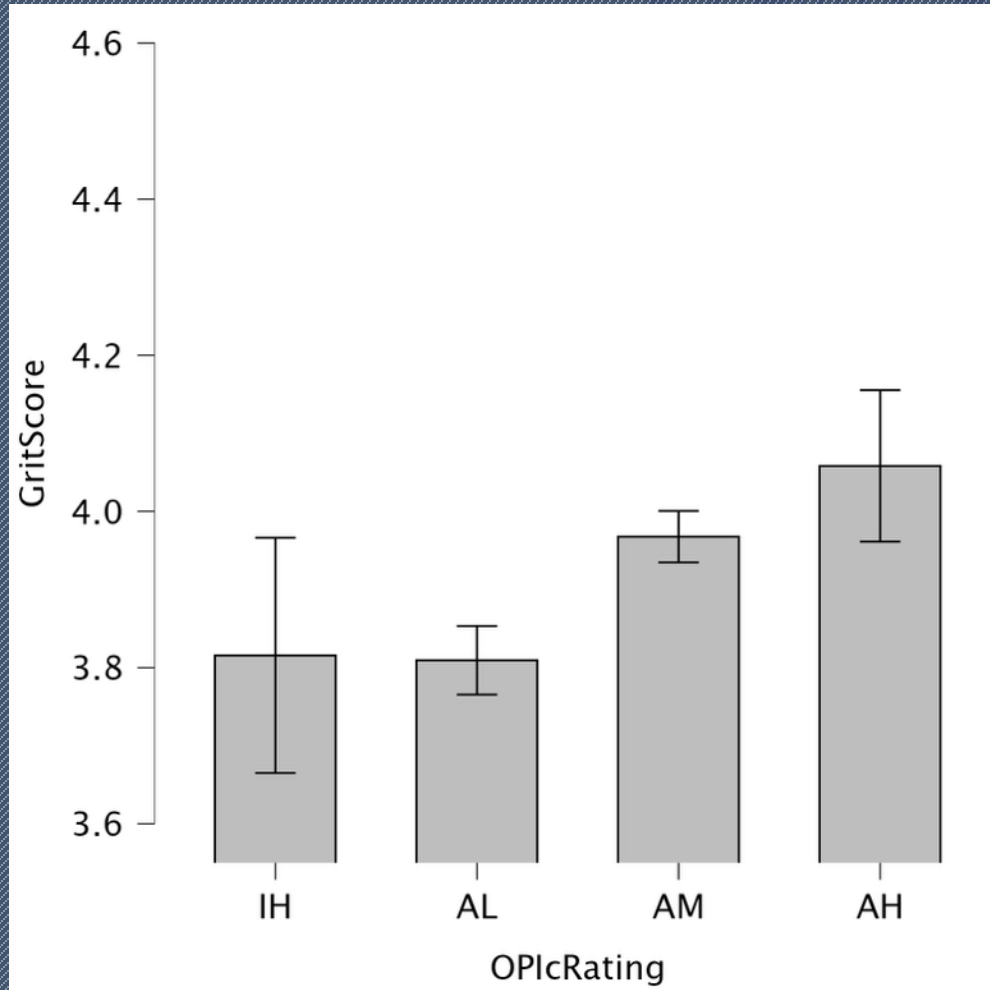
GR6 I did not allow anything to stop my progress in learning _ language.

GR7 I am not as interested in learning _ language now as I used to be.

GR8 I was obsessed with learning _ language early on, but lost interest over time.

GR9 I put much time and effort into improving my weaknesses in _ language.

GRIT and Proficiency



Mean = 3.91, SD .56, n=1,904
[F(3,1900) = 14.51, $p < .001$]

Effect size ($\omega^2 = 0.021$) → The effect is small. OPIc proficiency explains about 2.1% of the variance on the GRIT scale.

Tukey Post Hoc

- AL vs AM → Significant ($p = .001$)

The background of the slide features a repeating pattern of bicycles and orange slices. The bicycles are dark blue outlines, and the orange slices are light blue with darker blue outlines. They are arranged in a way that creates a sense of movement and depth.

Willingness to Communicate (WTC)

Do WTC scores differ significantly across different OPIc levels?



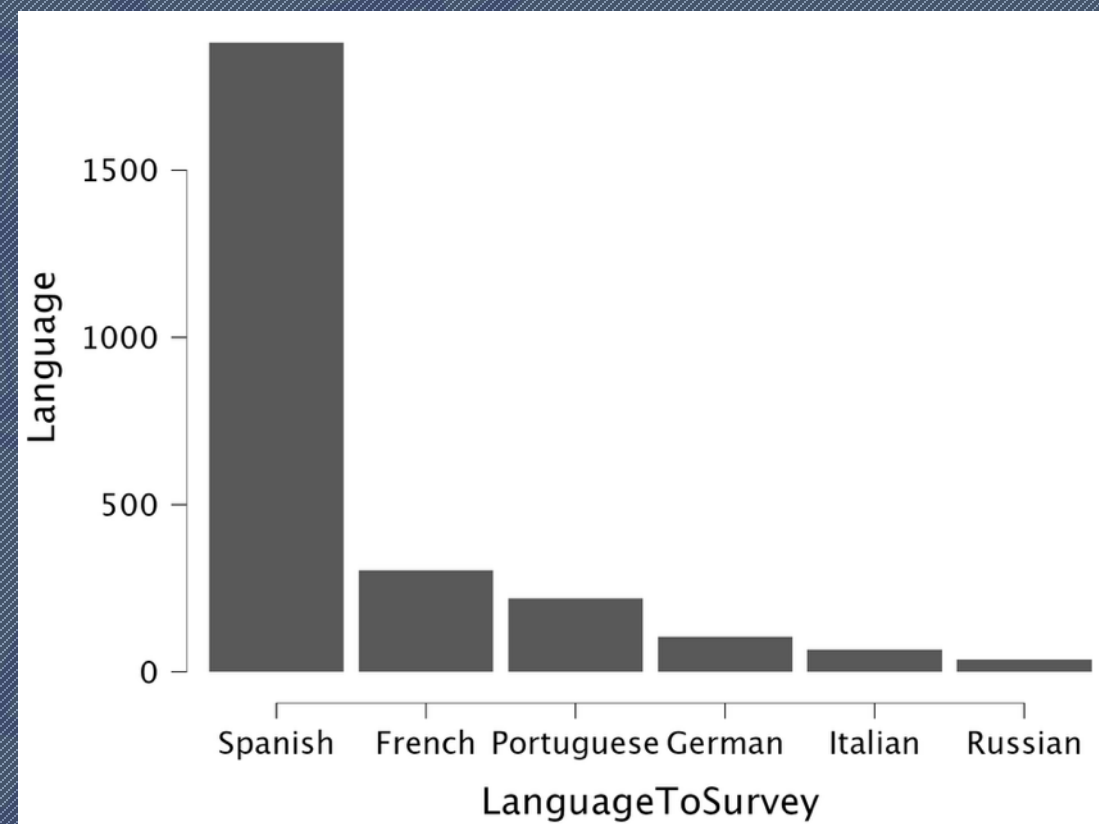
Why include Willingness to Communicate (WTC)?

- WTC is a personality trait that dictates the degree of predisposition to consistently communicate across a variety of different situations (McCroskey & Baer, 1985)
- Includes both long-term, permanent variables (traits) and short-term, dynamic variables (states; MacIntyre et al, 1998)
- If we believe WTC helps with language acquisition, then wouldn't we want to encourage it?

WTC Participants

Studying a foreign language at a large US University and took LASER

Language	Frequency	Percent
Spanish	1,883	72.0
French	304	11.6
Portuguese	220	8.4
German	105	4.0
Italian	67	2.6
Russian	37	1.4
Missing	0	0.0
Total	2,616	100.0



WTC Instruments

- Oral Proficiency Interview-Computer (OPIc)
- WTC Instrument
 - WTC section of LASER
 - Section 1—Speaking with native speakers in the participant's home country (k = 6 of 6)
 - Section 2 (new)—Communicating with native speakers online (k = 4 of 7)
 - Section 3—Speaking with L2 TL speakers in a school setting (k = 3 of 5)
 - Section 4—Speaking with L2 TL speakers abroad (k = 4 of 8)
 - Reliability—Cronbach Alpha= .88

WTC Instrument Items

Item	Statement
1.1	If I encountered some native speakers of [Language] in the street, restaurant, hotel, etc., I hope an opportunity would arise and they would talk to me.
1.2	If I encountered some native speakers of [Language] in the street, restaurant, hotel, etc., I would find an excuse and would talk to them.
1.3	If I encountered some native speakers of [Language] who are facing problems in my country because of not knowing our language, I would take advantage of this opportunity and would talk to them.
1.4	I am willing to accompany some native speakers of [Language] and be their tour guide for a day free of charge.
1.5	I am willing to talk with native speakers of [Language].
1.6	If someone introduced me to a native-speaker of [Language] I would like to try my abilities in communicating with him/her in [Language].

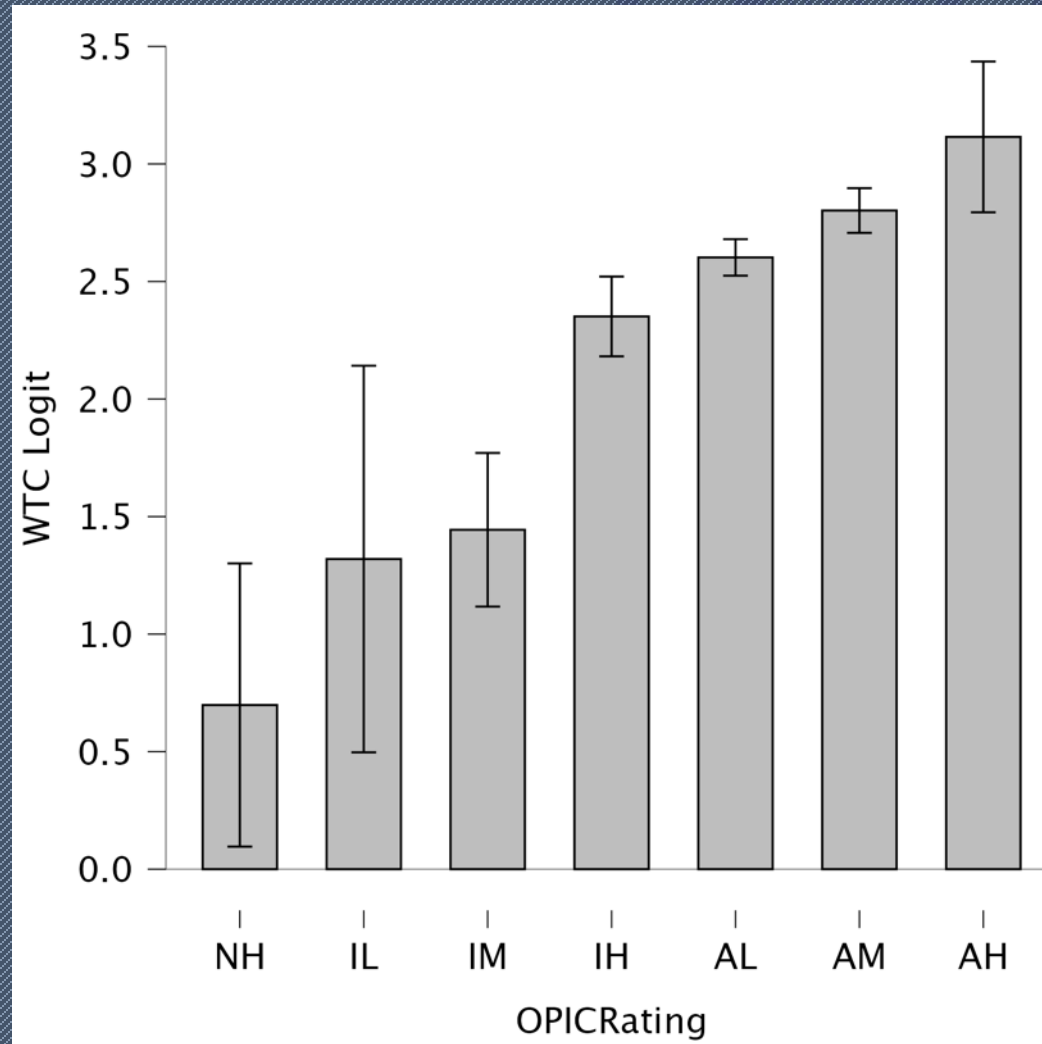
Item	Statement
2.1	If I encountered some native speakers of [Language] in an online forum, I hope an opportunity would arise and they would message me.
2.2	If I encountered some native speakers of [Language] in an online forum, I would find an excuse and would message them.
2.3	If I encountered some native speakers of [Language] who are facing problems online because of not knowing our language, I would take advantage of this opportunity and would message them.
2.4	I am willing to communicate with native speakers of [Language] online.
3.1	In order to practice my [Language], I am willing to talk in [Language] with my classmates outside the class.
3.2	I am willing to ask questions in [Language] in the classes at the university.

WTC Instrument Items

Item	Statement
3.3	I am willing to talk and express my opinions in [Language] in the class when all my classmates are listening to me.
3.4	I am willing to have pair and group activities in the class so that I can talk in [Language] with my classmates.
3.5	In order to practice my [Language] I am willing to talk in [Language] with my professors outside the class.
3.6	I am willing to give a presentation in [Language] in front of my classmates.
3.7	In group work activities in the class when the group is composed of my friends, I am willing to speak in [Language].
3.8	In group work activities in the class when the group is NOT composed of my friends, I am willing to speak in [Language].
4.1	In order to practice my [Language], I am willing to speak in [Language] with native English-speaking missionaries learning [Language].

Item	Statement
4.2	I am willing to ask questions in [Language] in large group settings of other native English-speaking missionaries learning [Language].
4.3	I am willing to talk and express my opinions in [Language] in large group settings of other native English-speaking missionaries learning [Language] that are listening to me.
4.4	I am willing to speak in [Language] in pair and small group settings with other native English-speaking missionaries learning [Language].
4.5	I am willing to teach a lesson in [Language] in front of a large group of other native English-speaking missionaries learning [Language].
4.6	I am willing to speak in [Language] with a group composed of friends that are also [Language] learners.
4.7	I am willing to speak in [Language] with a group NOT composed of friends that are also [Language] learners.

WTC and Proficiency

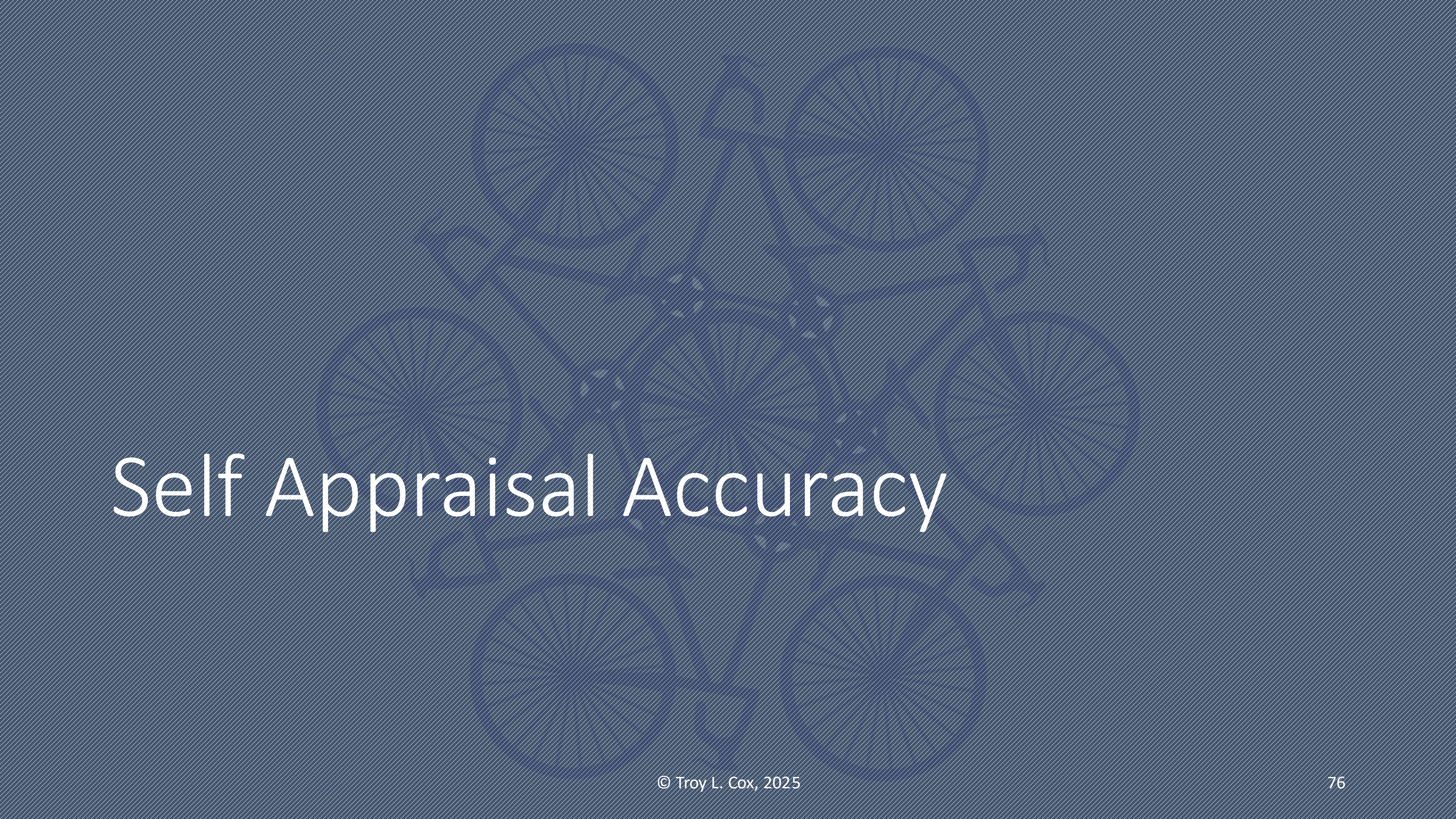


Mean (logits) = 2.61, SD 4.45, $n=2,594$
[$F(6, 2,599) = 39.99$, $p < .001$]

Effect size ($\omega^2 = 0.041$) → The effect is small to moderate. OPIc proficiency explains about 4% of the variance in WTC logits

Tukey Post Hoc

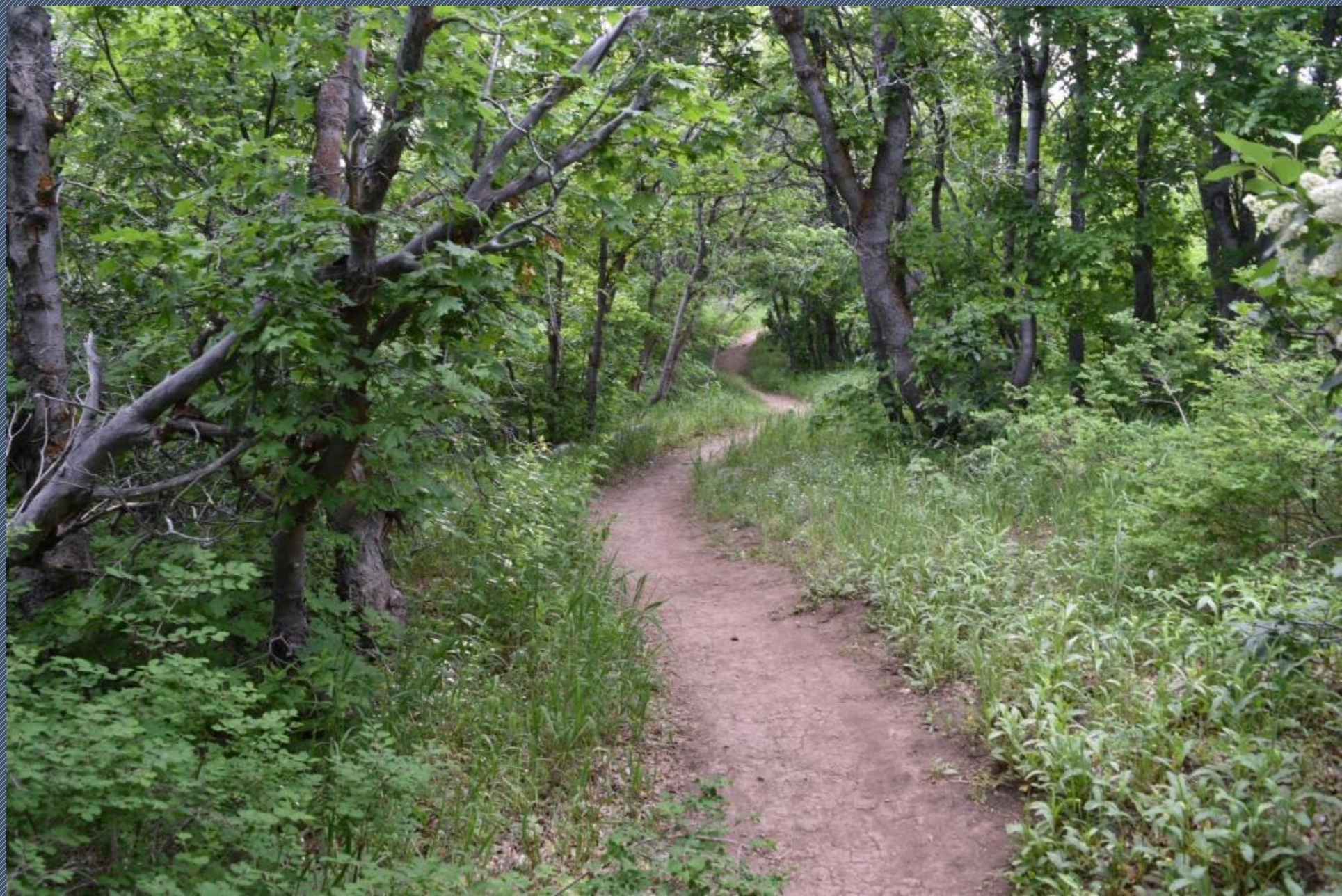
- IM vs IH → Significant ($p < .001$)
- IH vs AL → Marginal ($p = .069$)
- AL vs AM → Significant ($p = .027$)

The background of the slide features a repeating pattern of bicycles and orange slices. The bicycles are depicted in a light blue color, and the orange slices are in a slightly darker shade of blue. They are arranged in a way that creates a sense of movement and repetition across the entire slide.

Self Appraisal Accuracy

Storytime

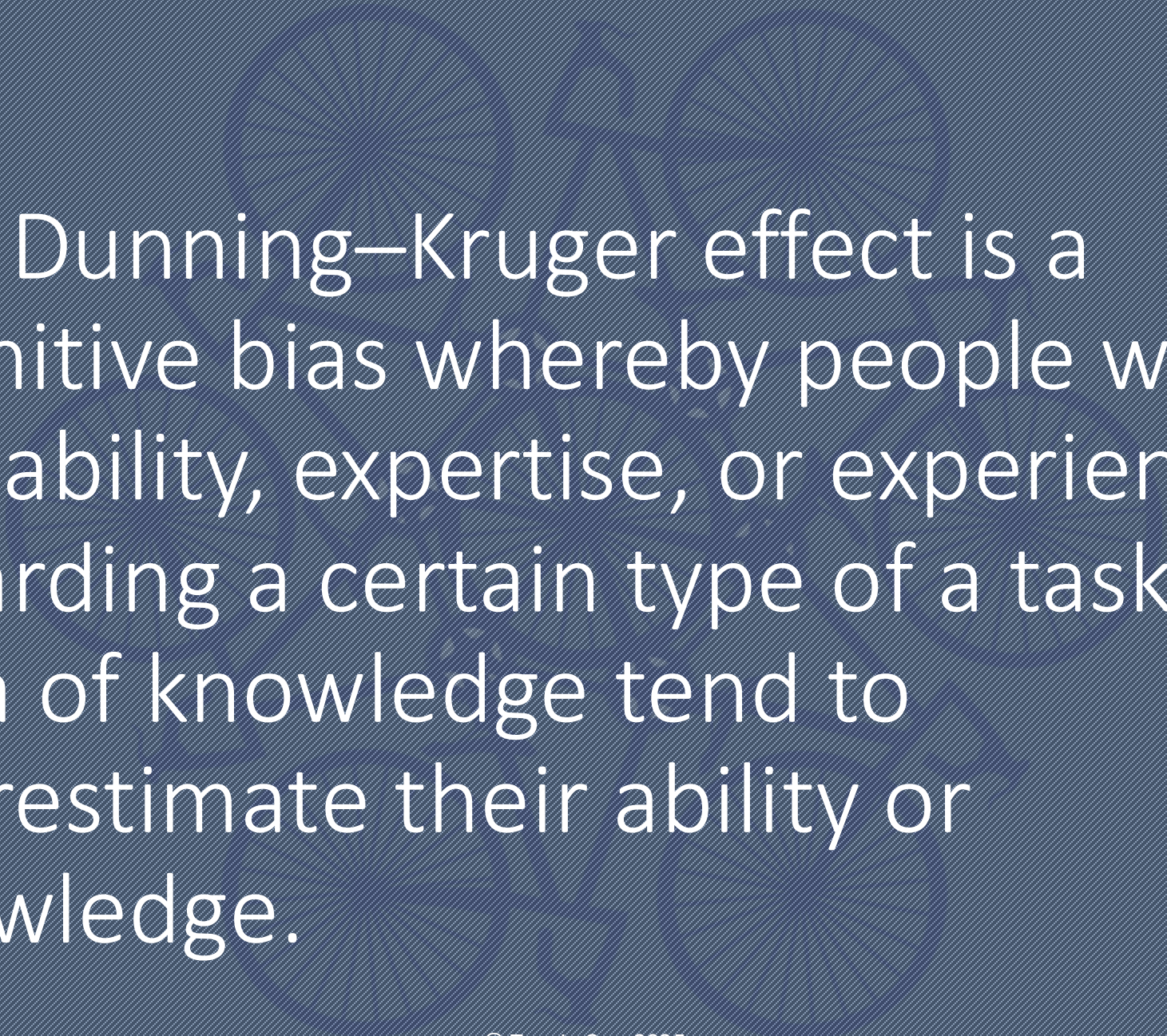






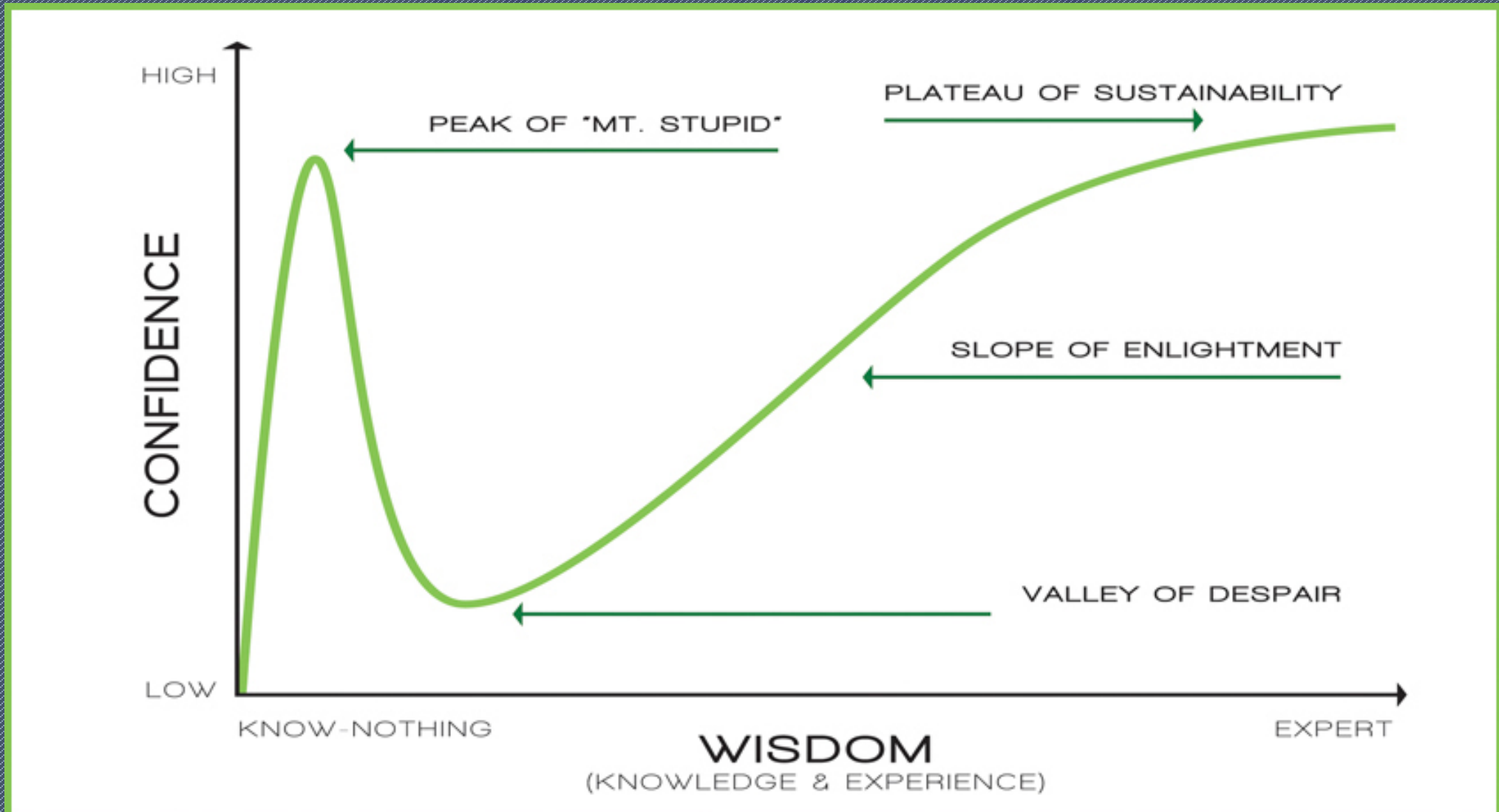
Why Include Self-Appraisal Accuracy?

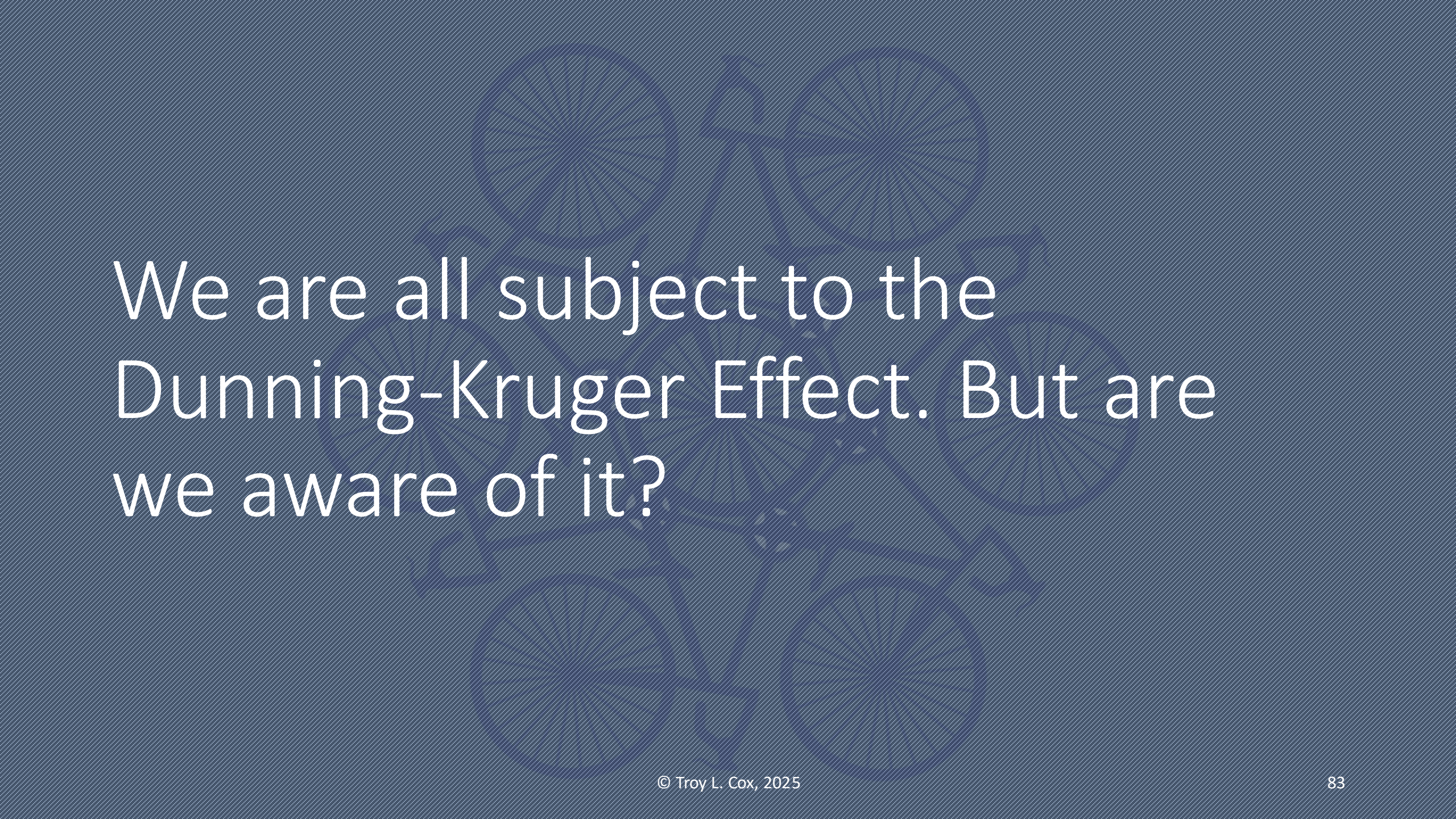
- Self-appraisal accuracy provides insight into learner metacognition—how well students understand their own ability.
- Learners often misjudge their ability due to the Dunning–Kruger effect:
 - Lower-proficiency students lack the knowledge to recognize their limitations and thus overestimate their skills.
 - Higher-proficiency students understand the complexity of mastery and thus often underestimate their skills.
- Encouraging accurate self-appraisal can:
 - Help learners set realistic goals
 - Support better study strategies
 - Reduce frustration by aligning perception with performance
- If we believe accurate self-perception supports sustained growth and motivation, then wouldn't we want to foster it?

The background of the slide features a large, faint, light-blue watermark of a bicycle. The bicycle is oriented horizontally and is centered behind the text. It has a classic diamond frame, two wheels with many spokes, handlebars, a seat, and pedals.

The Dunning–Kruger effect is a cognitive bias whereby people with low ability, expertise, or experience regarding a certain type of a task or area of knowledge tend to overestimate their ability or knowledge.

Surprising? Not Really...



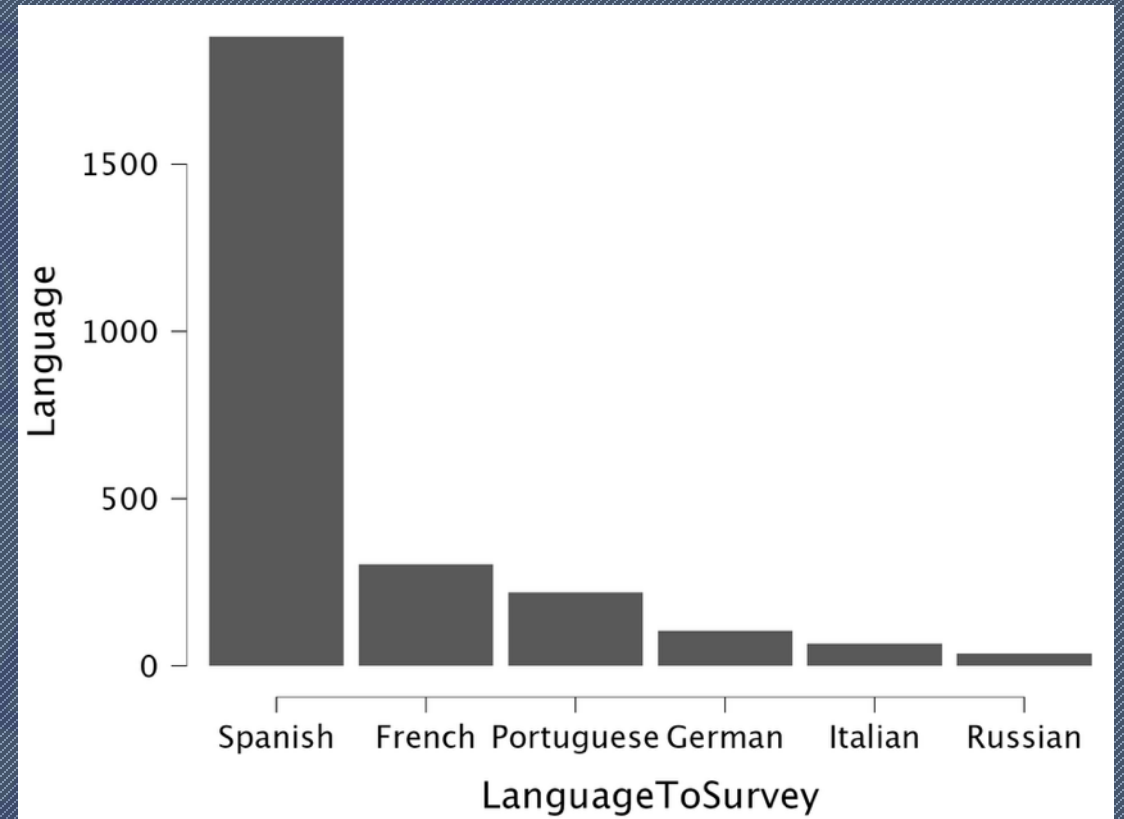
The background of the slide features a repeating pattern of stylized bicycles and wheels in a light blue color, set against a darker blue background. The text is centered and reads:

We are all subject to the
Dunning-Kruger Effect. But are
we aware of it?

Self-Appraisal Accuracy Participants

Studying a foreign language at a large US University and took LASER

Language	Frequency	Percent
Spanish	1,883	72.0
French	304	11.6
Portuguese	220	8.4
German	105	4.0
Italian	67	2.6
Russian	37	1.4
Missing	0	0.0
Total	2,616	100.0



Materials

- LASER-Language Ability Self-assessment Evaluation Resource
 - Speaking Self-Assessment
 - 12 items
 - 3 at each of the 4 levels of proficiency (novice, intermediate, advanced and superior)
 - 5-point scale converted to ACTFL self-assessed rating
 - Reliability—McDonalds Omega > .95
- OPIc- Oral proficiency Interview-computer

Speaking Self-Assessment Statements

Item Label	Statement
NS1	I can name the members of my family to a new friend.
NS2	I can tell my friend the types of activities I do in class/at work.
IS1	I can describe my family's hobbies to a new friend.
IS2	I can ask and answer questions of a new friend to explore what our family members do for their job.
IS3	I can tell my friend what a typical school or workday is like from beginning to end.
IS4	I can ask a teacher/boss a series of questions to clarify how to complete an assignment.
AS1	I can share a long, detailed story with a new friend about a memorable childhood experience such as a favorite vacation or holiday.
AS2	I can tactfully bring a problematic issue to the attention of a customer service representative (hotel clerk, travel agent, etc.) to resolve a complication related to a family vacation/holiday.
AS3	I can tell a classmate/co-worker an experience in detail, so they understand my point of view on a current situation.
AS4	I can negotiate a solution that is mutually agreed with my teacher/boss when I am unable to keep a deadline.
SS1	I can critically evaluate and expound upon the impact of government-sponsored daycare programs on family life and its economic implications in a public forum such as a Parent-Teacher Association or school board meeting.
SS2	I can discuss implications of employee dress and grooming standards on workplace morale, productivity and brand representation in a panel discussion at a professional conference.

Calculating Calibration

- Calibration = OPlc Rating – Self Assessed Rating

Value	Meaning
0	Perfectly calibrated. No difference between perceived and actual ability.
Positive Numbers	Students OVER-estimate their ability.
Negative Numbers	Students UNDER-estimate their ability

Speaking Calibration

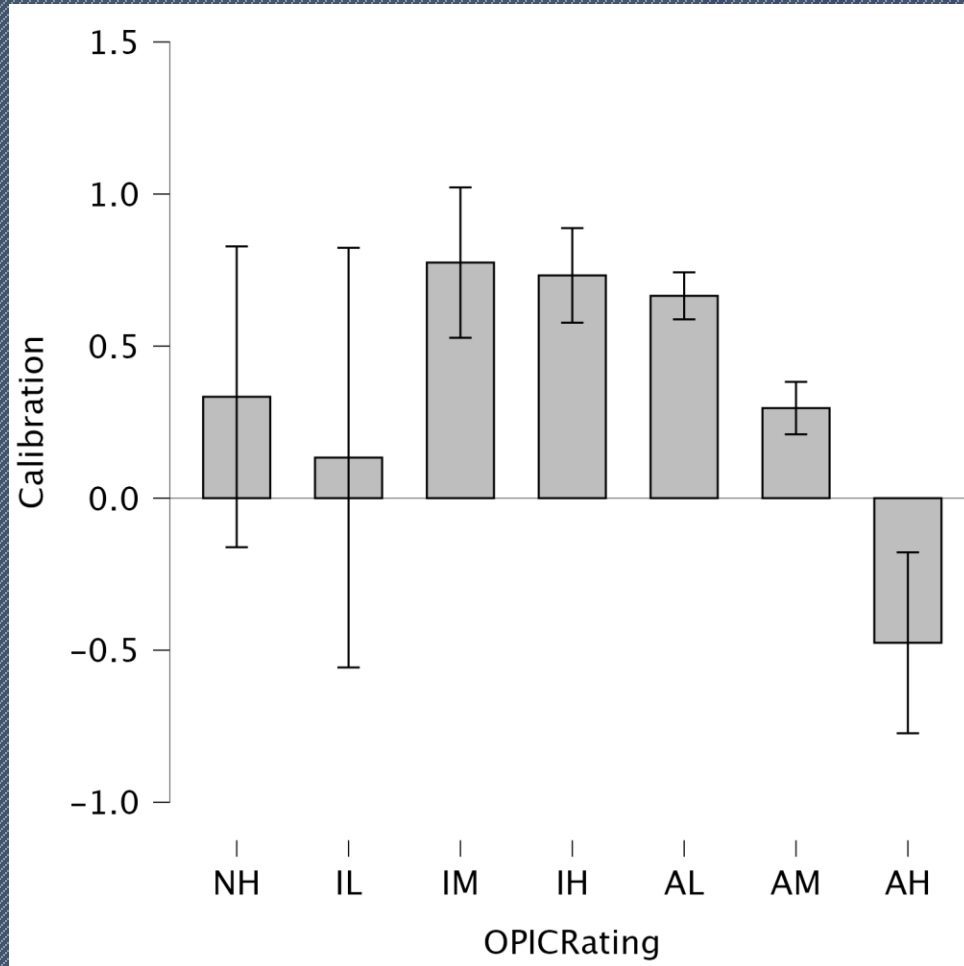
Mean = .52, SD 1.38, n=2,604

$F(6, 2609) = 15.77, p < .001$

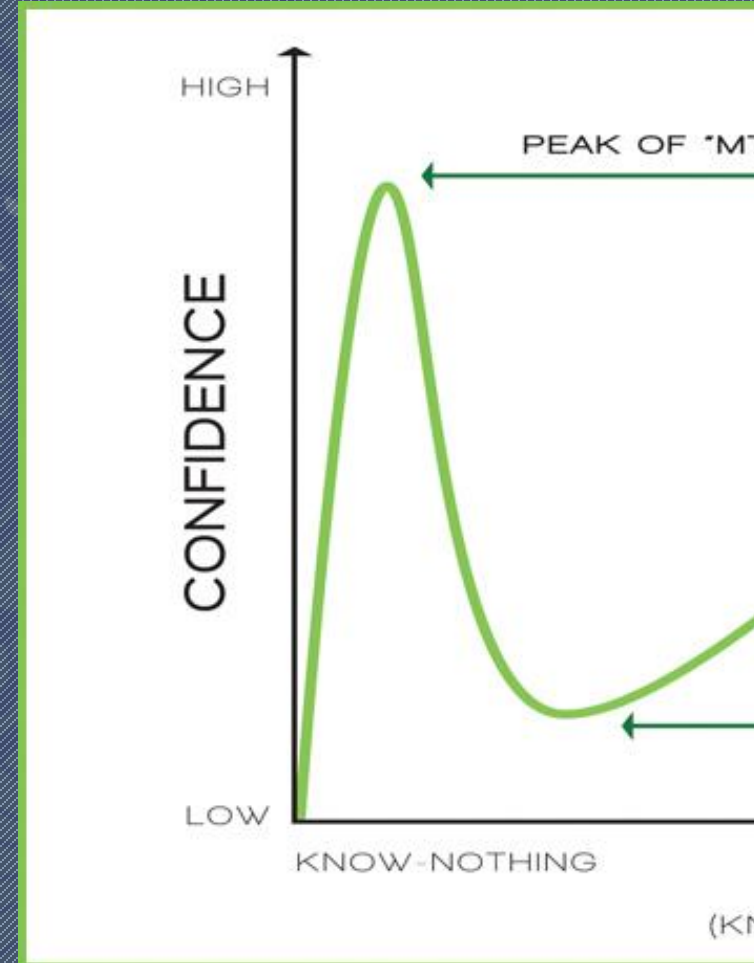
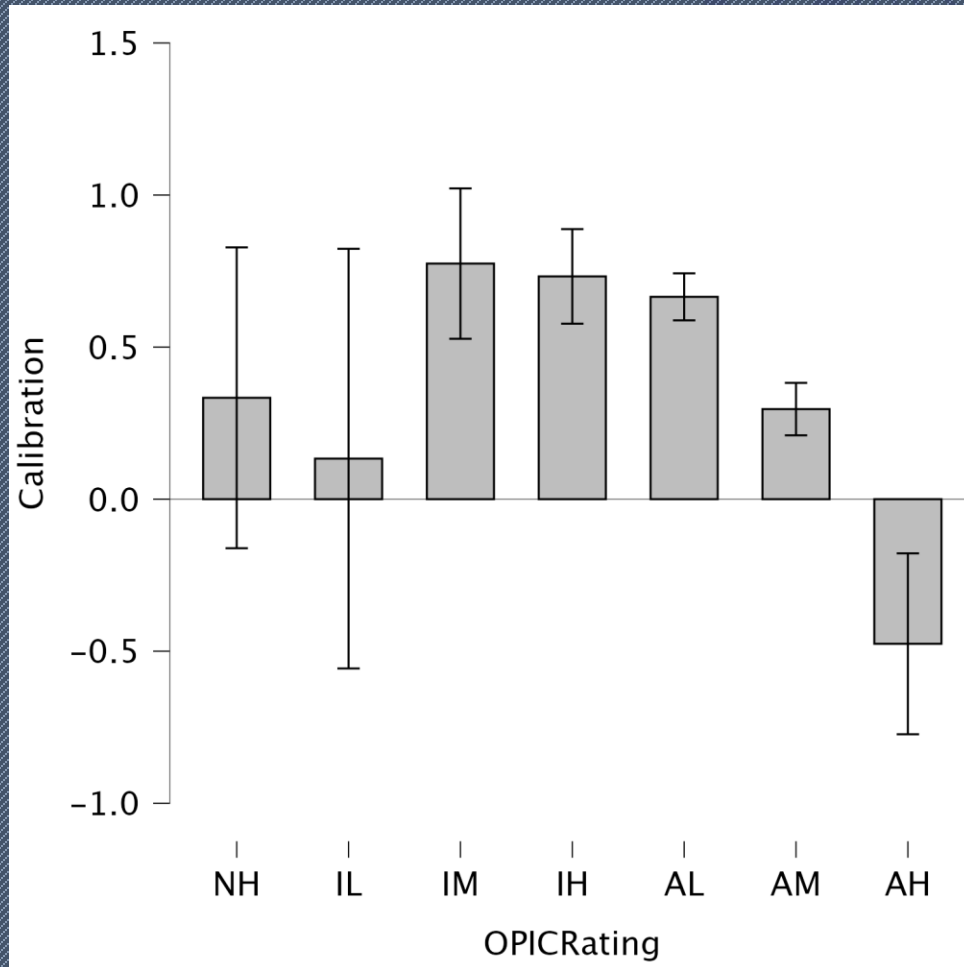
Effect size ($\omega^2 = 0.033$) → The effect is small approaching moderate. OPIc proficiency explains about 3.3% of the variance in calibration

Tukey Post Hoc

- AL vs AM → Significant ($p = .027$)
- AM vs. AH → significant ($p < .001$)



Look familiar?



So, what do we know about these participants that were self-taught (for the most part)?

- Temporal Fluency
 - Living abroad you'll typically at least get up to the Intermediate Mid/High level
- GRIT
 - Everyone's pretty gritty (mean 3.6 on 5-point scale), but the best speakers are the grittiest
- WTC
 - Everyone's pretty willing to communicate (mean logit 2.6 on scale from -6 to +6), but the best speakers are the most
- Self-appraisal
 - Nearly everyone overestimates their ability except the beginner beginners and the most proficient

- So, how have yoga, cycling, and Great Britain impacted my scholarship in applied linguistics?

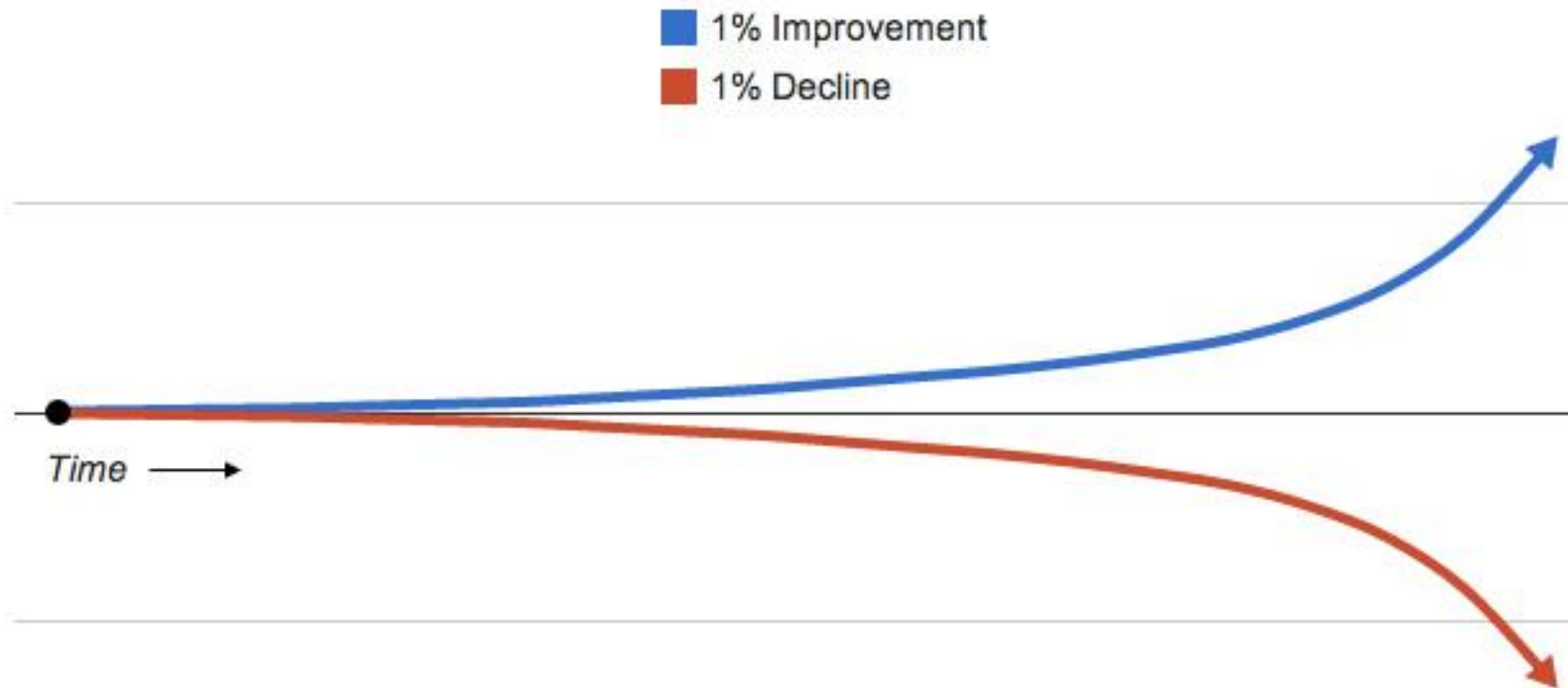


The British Cycling Team and David Brailsford

- Pioneered the "marginal gains" philosophy: Focused on making 1% improvements in every area—nutrition, equipment, sleep, mindset, and more—leading to cumulative performance boosts.
- Developed a high-performance culture: Implemented data-driven training, **personalized** athlete support, and an obsession with excellence in small details (e.g., optimized pillows, handwashing protocols, travel habits).



Aggregation of Marginal Gains



Aggregation of Marginal Gains for Language Learning

- Perhaps there isn't a magic pill or magic bullet that makes the exceptional language learner
- A constellation of
 - Psychology traits
 - Metacognitive awareness

On Polyglots in Adam Grant's book *Hidden Potential*

- The people he references in the book
 - weren't exceptional students in school,
 - nor did they possess exceptionally high IQs.
- Their secret?
 - They sought discomfort.
- The more uncomfortable they were when learning a new language, the more they were learning.
- More discomfort = more mistakes.
- More mistakes equal = learning opportunities and less chance of repeating them.

Language Proficiency Booths

Oral Proficiency Interview Testing



Oral proficiency testing at BYU occurs in an isolation booth. We have 6 booths. The booth is a controlled environment designed to minimize external stimuli, providing a quiet and distraction-free space. It's equipped with either a telephone or laptop for the exams. It offers an ideal setting for individuals to demonstrate their language skills without the interference of external noise or distractions. Test takers can focus solely on their speech and interaction with the examiner, enhancing the accuracy and reliability of the assessment.

During an oral language proficiency test, the examinee enters the isolation booth and a proctor calls the language tester after which the examinee engages in various spoken tasks. For an OPIC, the



Interviews (10-15 minutes) with Advanced High and Superior OPI scorers (Convenience Sampling)

Language	Number
Spanish	15
Chinese	4
French	2
Portuguese	2
Arabic	2

STUDENT ADVICE

Students who scored Advanced High or Superior on their OPI share their personal tips and tricks for success.

SPANISH PORTUGUESE CHINESE FRENCH ARABIC



Ashley Lloyd
Spanish OPI Exam



Christie Juarez
Spanish OPI Exam



Spencer Brown
Spanish OPI Exam



Auzton Stutts
Spanish OPI Exam



Kent Garner
Spanish OPI Exam



Josh Klingensmith
Spanish OPI Exam



Jeffrey Walch
Spanish OPI Exam



Tyler Webb
Spanish OPI Exam



Ely Glenn
Spanish OPI Exam



Josephine Bateman
Spanish OPI Exam



Jay Halterman
Spanish OPI Exam



Mary Watson
Spanish OPI Exam



Bryn Stewart
Spanish OPI Exam



J. Michael Moeller
Spanish OPI Exam



Joseph Cantrell
Spanish OPI Exam

STUDENT ADVICE

Students who scored Advanced High or Superior on their OPI share their personal tips and tricks for success.

SPANISH PORTUGUESE CHINESE FRENCH ARABIC



Trevor Pettit
Portuguese OPI Exam



Rex Tippetts
Portuguese OPI Exam

STUDENT ADVICE

Students who scored Advanced High or Superior on their OPI share their personal tips and tricks for success.

SPANISH PORTUGUESE CHINESE FRENCH ARABIC



Mark Ensign
Chinese OPI Exam



Margaret Davis
Chinese OPI Exam



Brenden Bakker
Chinese OPI Exam



Rachel Weyland
Chinese OPI Exam

STUDENT ADVICE

Students who scored Advanced High or Superior on their OPI share their personal tips and tricks for success.

SPANISH PORTUGUESE CHINESE FRENCH ARABIC



Jake McCoy
French OPI Exam



Tobias Cook
French OPI Exam

STUDENT ADVICE

Students who scored Advanced High or Superior on their OPI share their personal tips and tricks for success.

SPANISH PORTUGUESE CHINESE FRENCH ARABIC



Caleb Dewey
Arabic OPI Exam



Rachel Gammon
Arabic OPI Exam

Advanced High & Superior Students' Advice

- Immerse yourself: use music, media, and real-world input daily
- Take risks: Don't be afraid to make mistakes and push beyond comfort
- Stay motivated: set clear goals and connect learning to personal purpose
- Practice consistently: speak often and keep a regular routine
- Seek feedback: work with conversation partners or native speakers
- Reflect & adjust: monitor progress and adapt strategies

Advanced High & Superior Students' Advice-Categorized

- Input
 - Immerse themselves: use music, media, and real-world input daily
- Willingness to Communicate
 - Take risks: Don't be afraid to make mistakes and push beyond comfort
- GRIT
 - Stay motivated: set clear goals and connect learning to personal purpose
 - Practice consistently: speak often and keep a regular routine
- Self-Appraisal
 - Seek feedback: work with conversation partners or native speakers
 - Reflect & adjust: monitor progress and adapt strategies

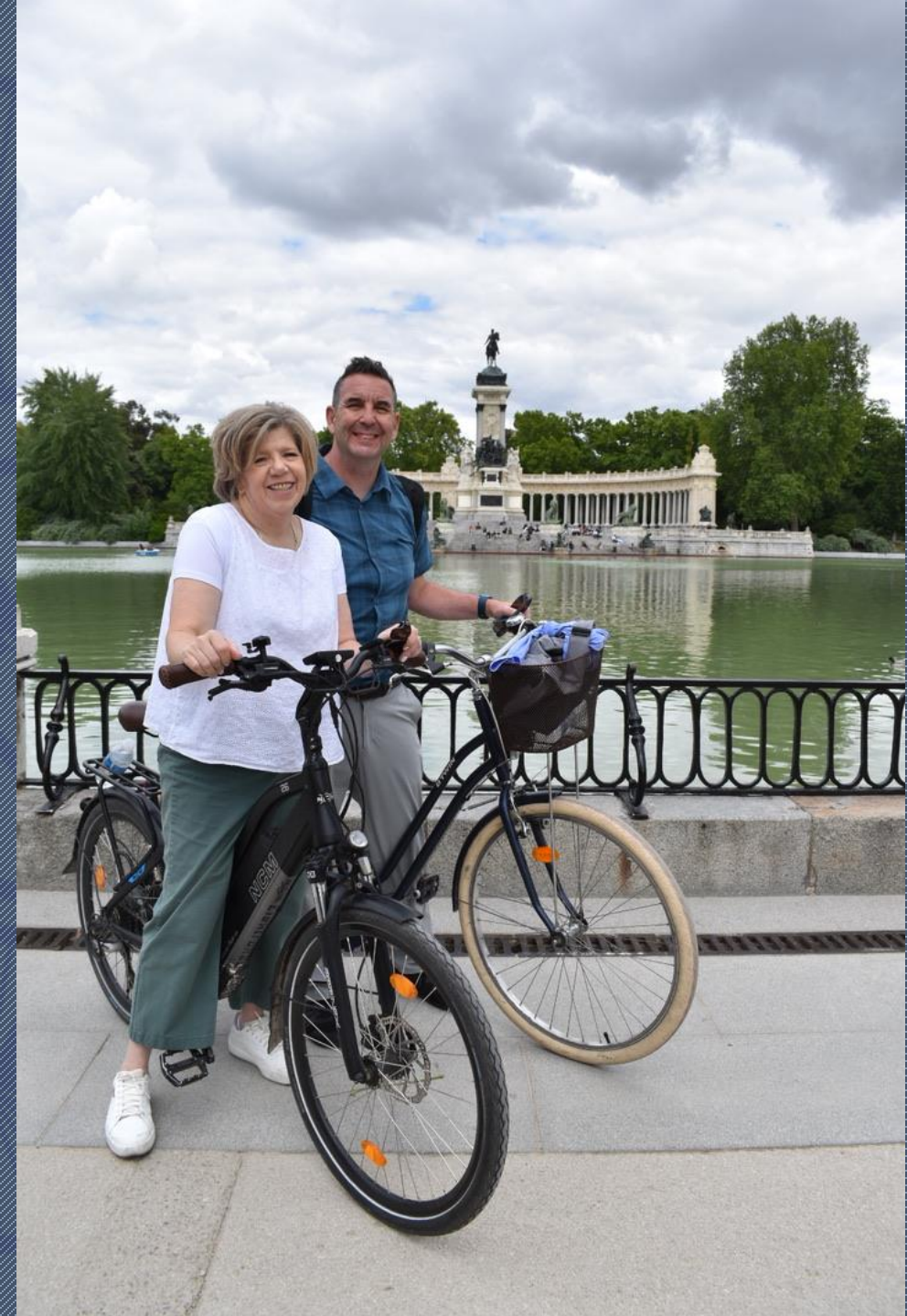
Does the LASER work?

- I hope so
- I hope there is a positive washback that instructors can use so students can take responsibility to become a lifelong learner
- At least, I think it does no harm

Questions?









© Troy L. Cox, 2025



Which run should I try?

Sitting on the lift at Sundance, I'm reflecting on how growth often means stepping outside your comfort zone—but let's face it, failing on a black diamond has higher stakes! As a middle-aged guy trying to balance pushing myself with staying safe, I'm debating how much risk I should take.

Skiing reminds me of the language proficiency scale I often teach. Just like the baby hill and greens align with novice criteria, black diamonds, double blacks, or backcountry terrain align with advanced or superior proficiency. Every slope offers its own unique challenge: vertical drops, moguls, or obstacles like trees. The less groomed a trail is, the more it aligns with those higher proficiency levels of skiing.

I'd self-assess as an Intermediate-Mid skier. I do well on groomed slopes, even steep ones. But the only way to progress to the next level is to start tackling some advanced runs.

Should I take the plunge on this black diamond? Or stick to something more familiar?

Back in high school, I had expert skier friends who shepherded me down tough runs they believed I could conquer. Since then, I've only skied a handful of times. This year, though, I decided to get a season pass so I could improve my skills.

There's something freeing about skiing solo—carving my own path and zipping down the mountain at my pace. The downside? You don't get expert advice. It's up to me to assess my limits.

One thing's for sure: progress happens when we embrace a bit of risk.

Just a few thoughts from this cold, beautiful morning on my first solo visit to my local ski resort.

[#SundanceSkiing](#) [#ChallengeYourself](#) [#GrowthMindset](#) [#SkiLife](#) [#MiddleAgedAndMoving](#)
[#SkiGoals](#) [#ACTEL](#)



Troy Cox

February 25 · 👤



In case you're wondering, SLOW signs won't necessarily slow you down.

It was the last run of the day. I hadn't really pushed myself too much—mostly sticking to intermediate runs. But as I rode up Jake's lift, I could hear Nathan's voice in my head: "Bishop's Bowl on the far side is one of the easier black diamonds."

So when I got off the lift, I skied over to check the map. And I decided to SEND IT. I successfully skied Bishop's Bowl (Photo 2).

What I DIDN'T do was check what run to take after Bishop's Bowl. I assumed it led all the way to Flathead lift, but instead, I found myself staring at an array of black diamond options with no clue how technical they were.

Tombstone sounded a little ominous (Photo 3). But when I looked down Badlands, I could at least see the bottom of the run with Jake's lift in the background. I inched my way across the moguls until I reached a steep but smooth section and started skiing again.

What happened next is a bit of a blur. I just know that suddenly, I was sliding headfirst down the mountain, unable to get my skis around in time. And I was heading straight for the sign. As I tumbled and eventually crashed head first into the the sign and knocked it over, I thought about those lessons on choice and accountability—you can't always choose your consequences after you've made the choice. "Maybe you should have paid better attention to the map."

At least I hope I provided some quality entertainment for the skiers coming down Bear Claw and those riding the chairlift up. One woman even stopped to check if I was okay as I trudged up the mountain to retrieve the skis I left behind.

Fortunately, my only injury is a bruised ego.

But it was a beautiful day.



👍😄❤️ Dustin John Hemsath, Jade Gunça and 20 others

4 comments