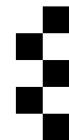


# S-DAT: A Multilingual, GenAI-Driven Framework for Automated Divergent Thinking Assessment

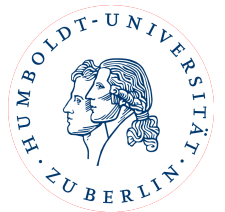
Jennifer Haase, Paul. H. Hanel & Sebastian Pokutta

MIC Conference 2025, Bolzano, Italy



University  
of Essex

weizenbaum  
institut



Where do we start?



# Where do we start?

- Core “issue” of creativity measurements





# Where do we start?

- Core “issue” of creativity measurements
  - hard to assess fairly, fast, and across languages



# Where do we start?

- Core “issue” of creativity measurements
  - hard to assess fairly, fast, and across languages
  - most tools are labor-intensive, culturally biased, and English-centric



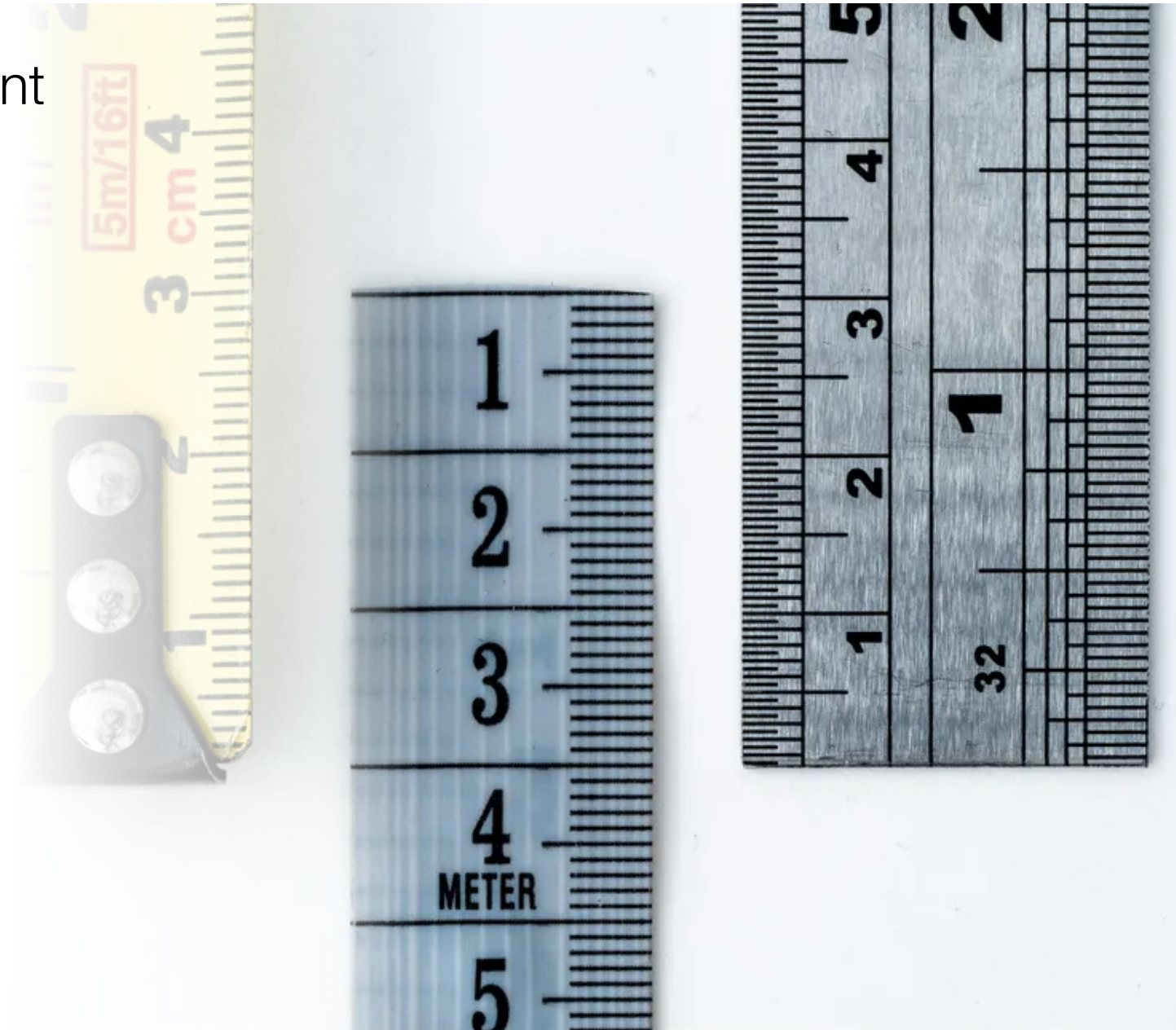
# Where do we start?

- Core “issue” of creativity measurements
  - hard to assess fairly, fast, and across languages
  - most tools are labor-intensive, culturally biased, and English-centric
- LLMs have already been used successfully to run and score creativity tests





# The Problem with Current Creativity Assessments



# The Problem with Current Creativity Assessments

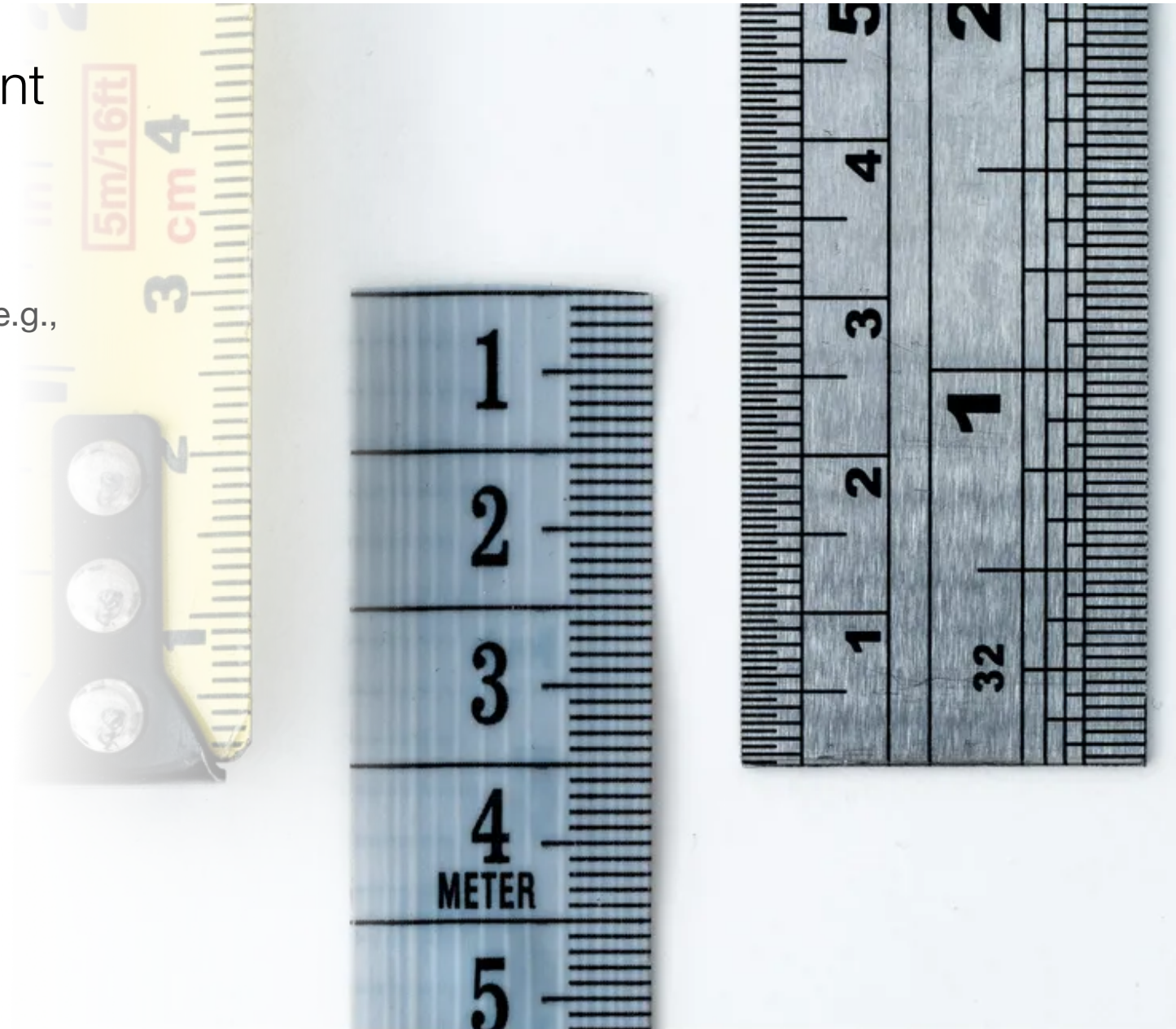
- **Traditional tools:**





# The Problem with Current Creativity Assessments

- **Traditional tools:**
  - Require mostly manual scoring (e.g., CAT method)



# The Problem with Current Creativity Assessments

- **Traditional tools:**
  - Require mostly manual scoring (e.g., CAT method)
  - They are slow and costly to apply at scale (e.g., TTCT)





# The Problem with Current Creativity Assessments

- **Traditional tools:**

- Require mostly manual scoring (e.g., CAT method)
- They are slow and costly to apply at scale (e.g., TTCT)
- Are biased toward English and Western contexts





# The Problem with Current Creativity Assessments

- **Traditional tools:**
  - Require mostly manual scoring (e.g., CAT method)
  - They are slow and costly to apply at scale (e.g., TTCT)
  - Are biased toward English and Western contexts
- **Cross-cultural assessment** is difficult with static or English-only tools



# The Problem with Current Creativity Assessments

- **Traditional tools:**
  - Require mostly manual scoring (e.g., CAT method)
  - They are slow and costly to apply at scale (e.g., TTCT)
  - Are biased toward English and Western contexts
- **Cross-cultural assessment** is difficult with static or English-only tools
- We need tools that are:
  - **Fast** (low burden)
  - **Fair** (language-agnostic)
  - **Comparable** (across cultures)





Why Leverage LLMs and  
GenAI for Creativity Measures?





# Why Leverage LLMs and GenAI for Creativity Measures?

- For **AUT**, LLM evaluation models correlate with human judges up to  $r = .813^1$
- LLMs yield **high inter-model agreement** on creativity ratings



# Why Leverage LLMs and GenAI for Creativity Measures?

- For **AUT**, LLM evaluation models correlate with human judges up to  $r = .813$ <sup>1</sup>
- LLMs yield **high inter-model agreement** on creativity ratings
- LLMs **automate evaluation** in real time—ideal for large-scale, multilingual creativity studies



<sup>1</sup> OCSAI tool for AUT; Organisciak, Acar, Dumas, & Berthiaume (2023)



Divergent Association Task (DAT): A  
Simple Test for Divergent Thinking





# Divergent Association Task (DAT): A Simple Test for Divergent Thinking

- Developed by Olson et al. (2021)

<sup>1</sup> <https://www.datcreativity.com/>



[Home](#) [Take the test](#) [About](#) [FAQ](#) [Team](#)

## Instructions

Please enter 10 words that are as **different** from each other as possible, in all meanings and uses of the words.

## Rules

1. Only **single words** in English.
2. Only **nouns** (e.g., things, objects, concepts).
3. **No proper nouns** (e.g., no specific people or places).
4. **No specialised vocabulary** (e.g., no technical terms).
5. Think of the words **on your own** (e.g., do not just look at objects in your surroundings).

## Consent

Contribute your anonymous responses to our research?

- ☐ Yes  
☐ No

## ► Study details

## Enter words

1.
2.

# Divergent Association Task (DAT): A Simple Test for Divergent Thinking

- Developed by Olson et al. (2021)
- Score = average semantic distance between word pairs

<sup>1</sup> <https://www.datcreativity.com/>



[Home](#) [Take the test](#) [About](#) [FAQ](#) [Team](#)

## Instructions

Please enter 10 words that are as **different** from each other as possible, in all meanings and uses of the words.

## Rules

1. Only **single words** in English.
2. Only **nouns** (e.g., things, objects, concepts).
3. **No proper nouns** (e.g., no specific people or places).
4. **No specialised vocabulary** (e.g., no technical terms).
5. Think of the words **on your own** (e.g., do not just look at objects in your surroundings).

## Consent

Contribute your anonymous responses to our research?

- ☐ Yes  
☐ No

## ► Study details

## Enter words

1.
2.

# Divergent Association Task (DAT): A Simple Test for Divergent Thinking

- Developed by Olson et al. (2021)
- Score = average semantic distance between word pairs
- Uses **GloVe embeddings** to calculate distance

<sup>1</sup> <https://www.datcreativity.com/>



[Home](#) [Take the test](#) [About](#) [FAQ](#) [Team](#)

## Instructions

Please enter 10 words that are as **different** from each other as possible, in all meanings and uses of the words.

## Rules

1. Only **single words** in English.
2. Only **nouns** (e.g., things, objects, concepts).
3. **No proper nouns** (e.g., no specific people or places).
4. **No specialised vocabulary** (e.g., no technical terms).
5. Think of the words **on your own** (e.g., do not just look at objects in your surroundings).

## Consent

Contribute your anonymous responses to our research?

- ☐ Yes  
☐ No

## ► Study details

## Enter words

1.
2.



# Divergent Association Task (DAT): A Simple Test for Divergent Thinking

- Developed by Olson et al. (2021)
- Score = average semantic distance between word pairs
- Uses **GloVe embeddings** to calculate distance
- Strengths:
  - Fast
  - Low writing demand

<sup>1</sup> <https://www.datcreativity.com/>



[Home](#) [Take the test](#) [About](#) [FAQ](#) [Team](#)

## Instructions

Please enter 10 words that are as **different** from each other as possible, in all meanings and uses of the words.

## Rules

1. Only **single words** in English.
2. Only **nouns** (e.g., things, objects, concepts).
3. **No proper nouns** (e.g., no specific people or places).
4. **No specialised vocabulary** (e.g., no technical terms).
5. Think of the words **on your own** (e.g., do not just look at objects in your surroundings).

## Consent

Contribute your anonymous responses to our research?

- ☐ Yes  
☐ No

## ► Study details

## Enter words

1.

2.

# Divergent Association Task (DAT): A Simple Test for Divergent Thinking

- Developed by Olson et al. (2021)
- Score = average semantic distance between word pairs
- Uses **GloVe embeddings** to calculate distance
- Strengths:
  - Fast
  - Low writing demand
- Limitations:
  - English-only embeddings
  - Static, context-insensitive vectors
  - No cultural adaptability

<sup>1</sup> <https://www.datcreativity.com/>



[Home](#) [Take the test](#) [About](#) [FAQ](#) [Team](#)

## Instructions

Please enter 10 words that are as **different** from each other as possible, in all meanings and uses of the words.

## Rules

1. Only **single words** in English.
2. Only **nouns** (e.g., things, objects, concepts).
3. **No proper nouns** (e.g., no specific people or places).
4. **No specialised vocabulary** (e.g., no technical terms).
5. Think of the words **on your own** (e.g., do not just look at objects in your surroundings).

## Consent

Contribute your anonymous responses to our research?

- ☐ Yes  
☐ No

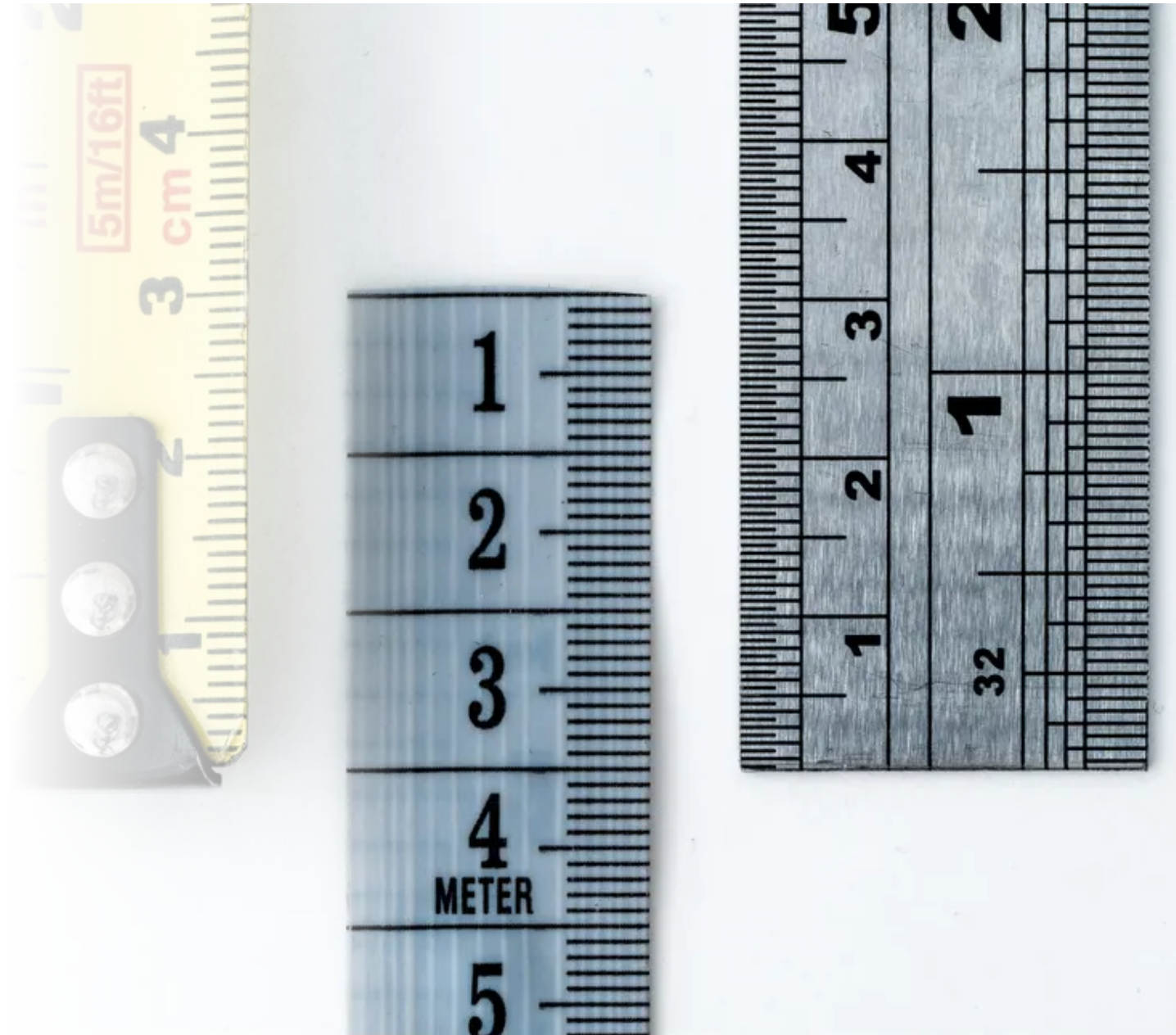
## ► Study details

## Enter words

1.

2.

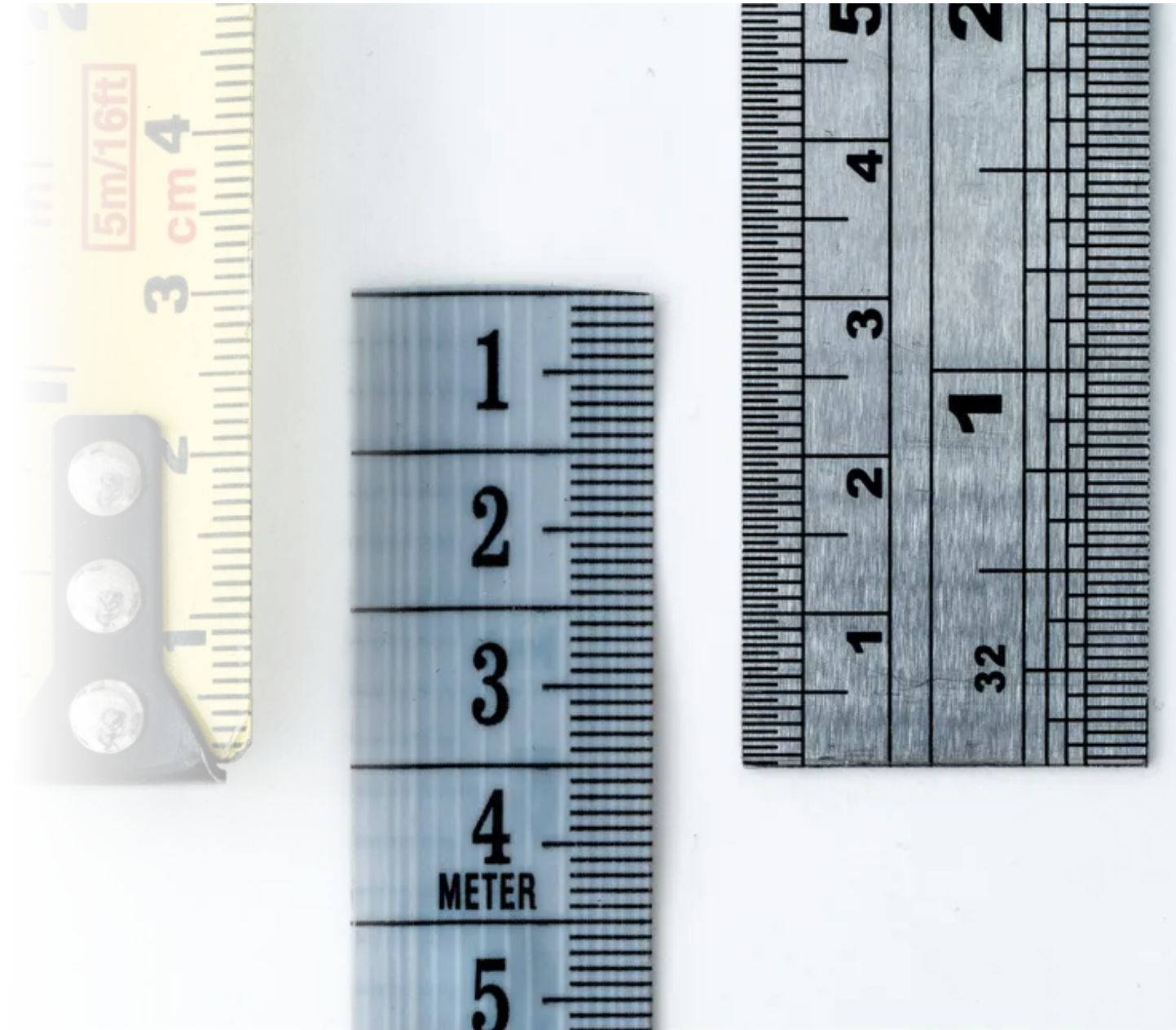
# S-DAT: DAT-inspired Multilingual Scoring





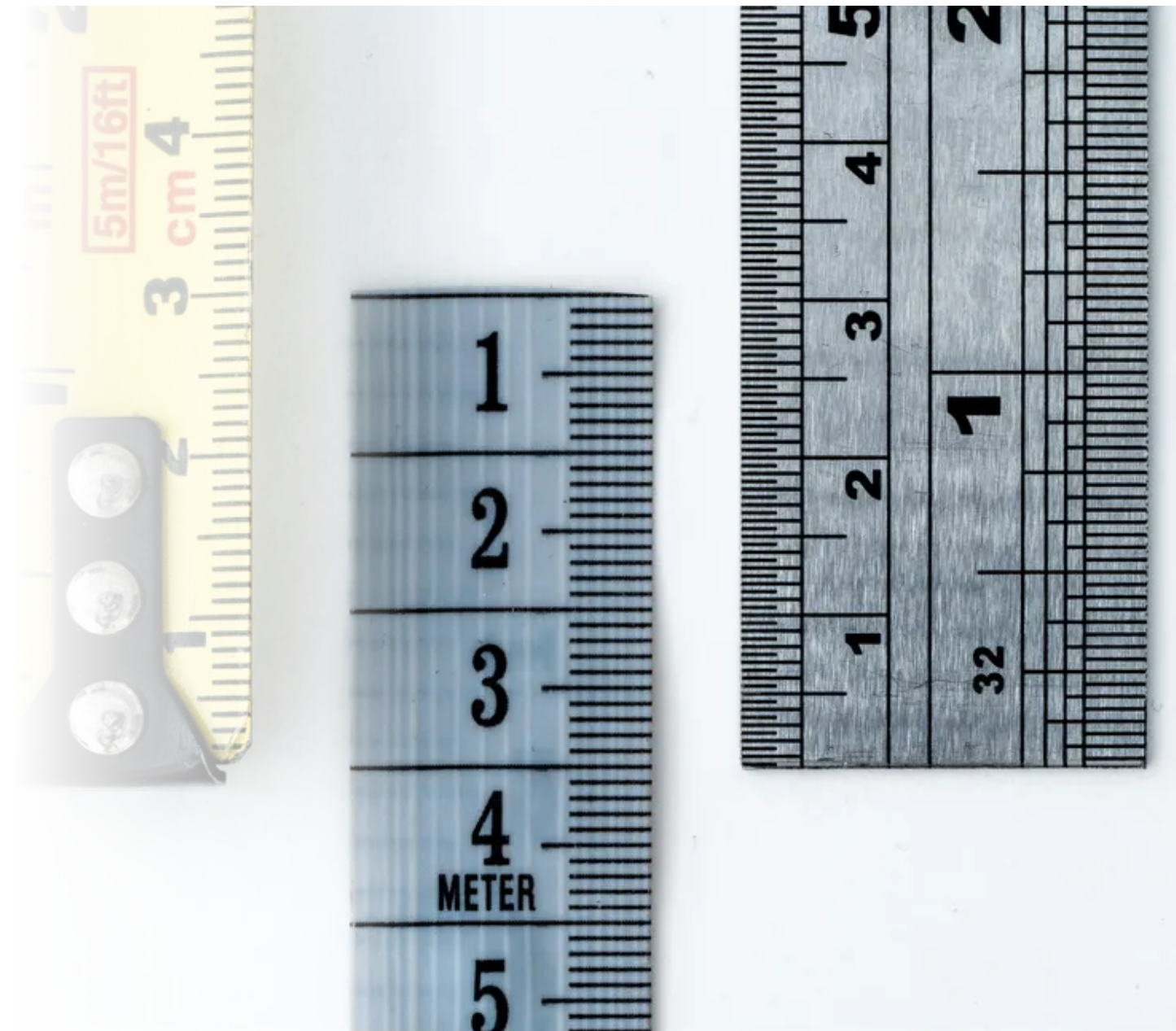
## S-DAT: DAT-inspired Multilingual Scoring

- **Same core task as DAT:** “Name 10 unrelated words”



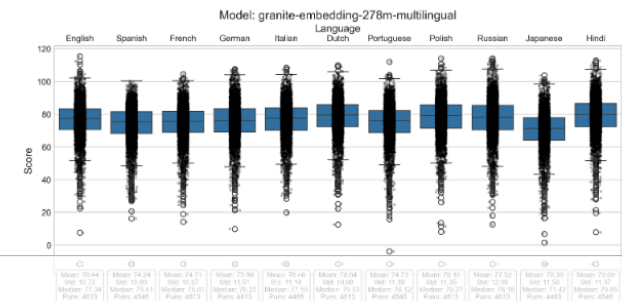
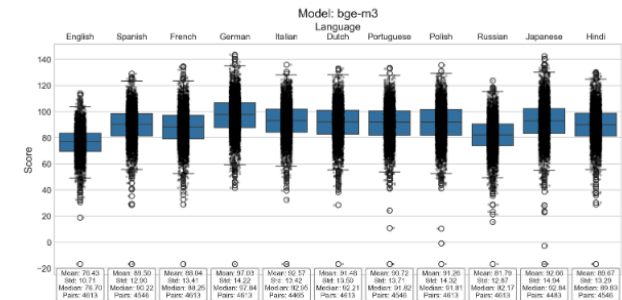
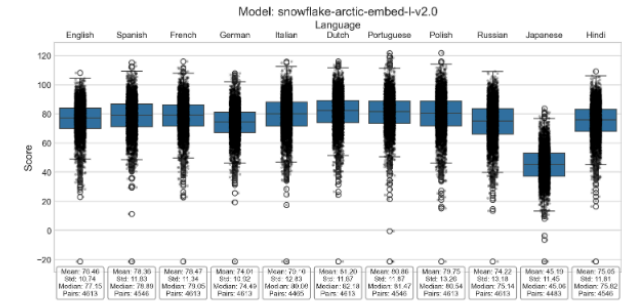
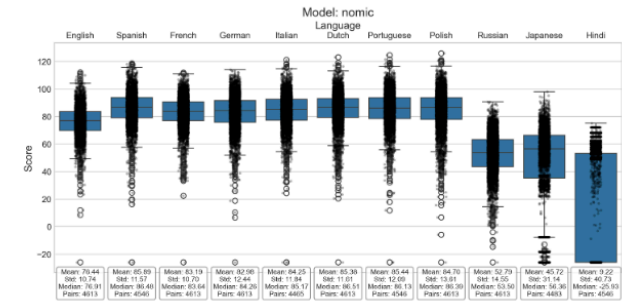
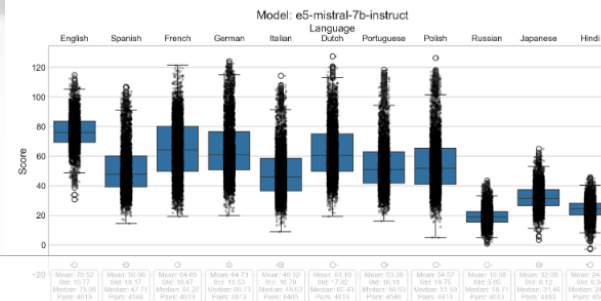
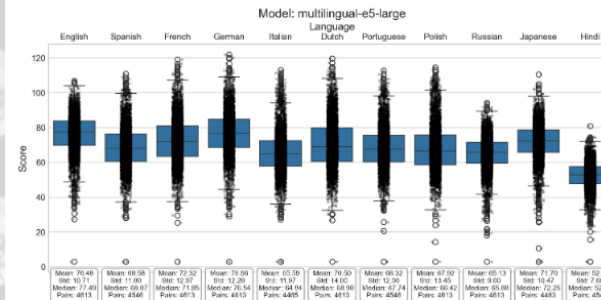
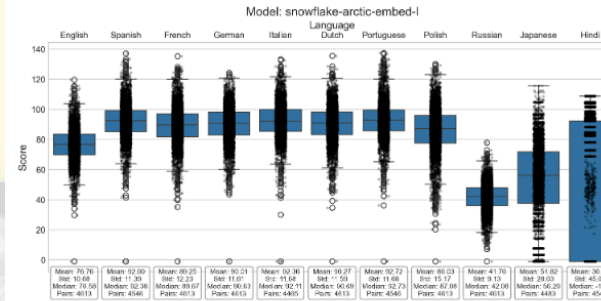
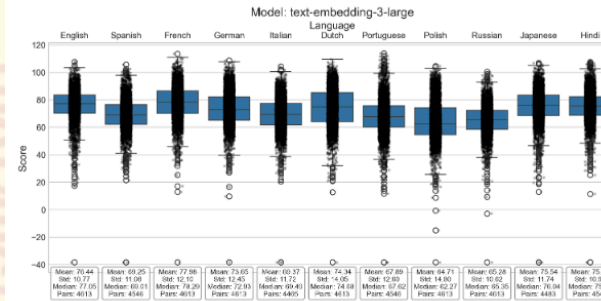
# S-DAT: DAT-inspired Multilingual Scoring

- **Same core task as DAT:** “Name 10 unrelated words”
- Semantic distance calculated by multilingual, transformer-based embeddings (currently we use IBMs granite-embedding-278m-multilingual model)



# S-DAT: DAT-inspired Multilingual Scoring

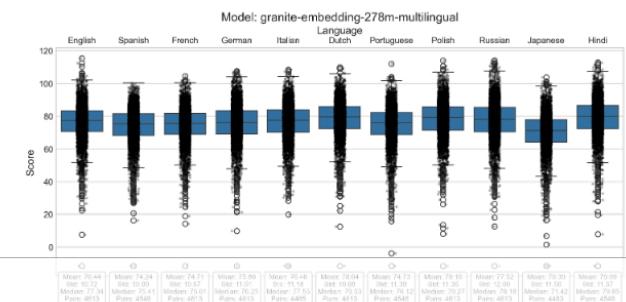
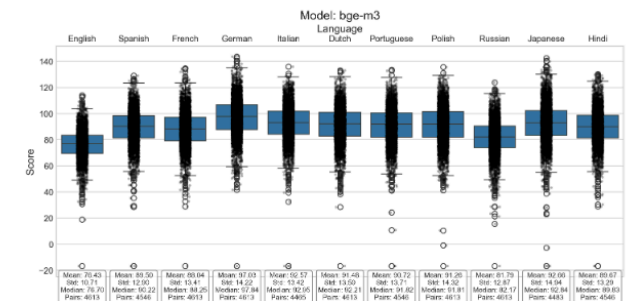
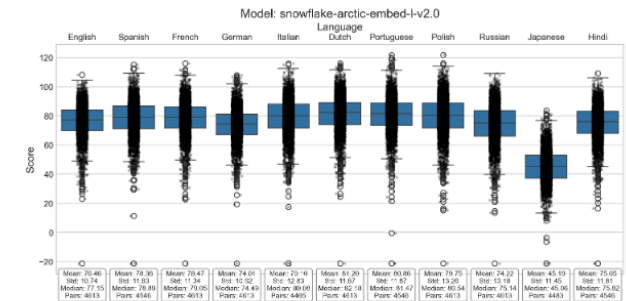
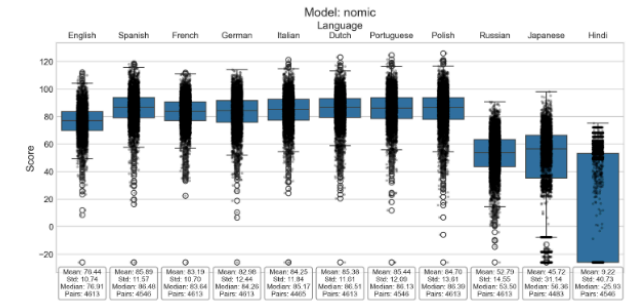
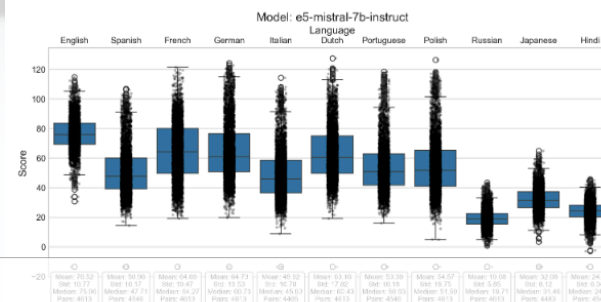
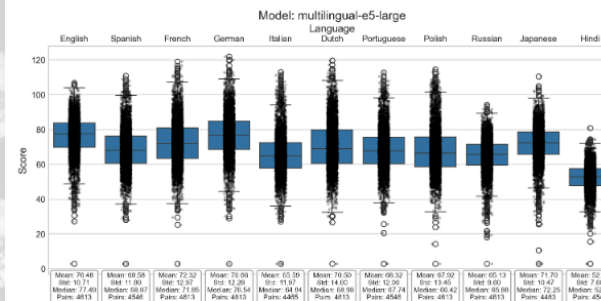
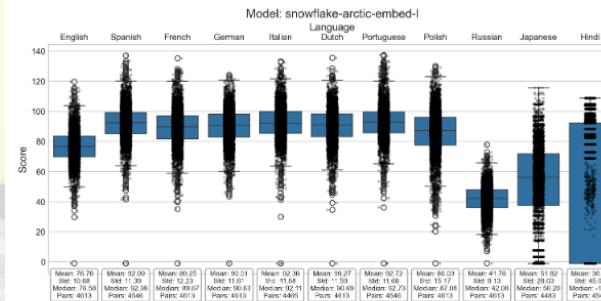
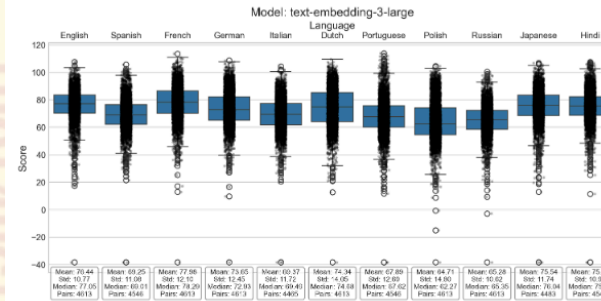
- **Same core task as DAT:** “Name 10 unrelated words”
- Semantic distance calculated by multilingual, transformer-based embeddings (currently we use IBMs granite-embedding-278m-multilingual model)
- **Works natively in 12 fine-tuned languages**— including English, Hindi, Japanese, Korean, Arabic, Chinese, and Russian



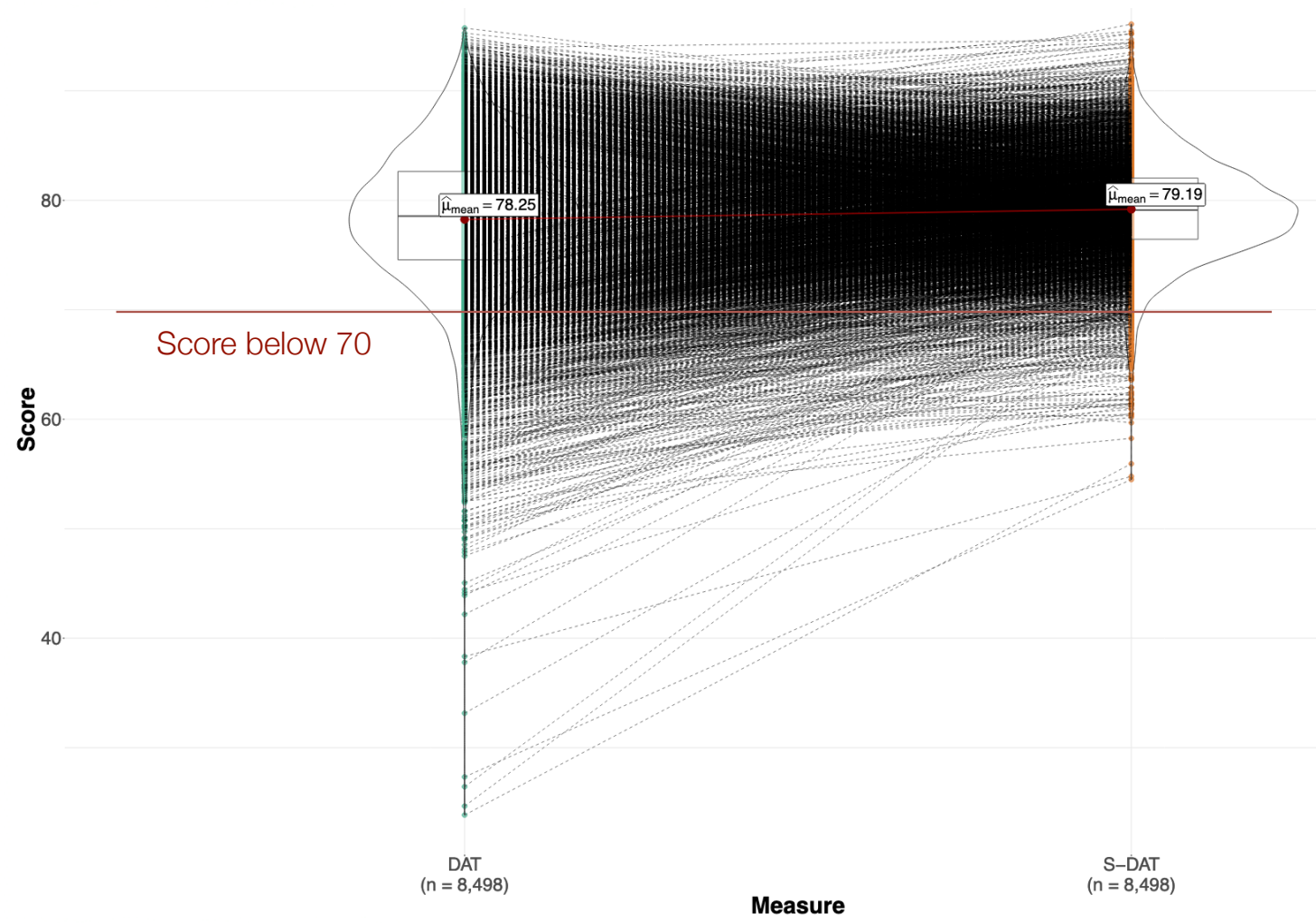


# S-DAT: DAT-inspired Multilingual Scoring

- **Same core task as DAT:** “Name 10 unrelated words”
- Semantic distance calculated by multilingual, transformer-based embeddings (currently we use IBMs granite-embedding-278m-multilingual model)
- **Works natively in 12 fine-tuned languages**— including English, Hindi, Japanese, Korean, Arabic, Chinese, and Russian
- Works even across languages in one entry

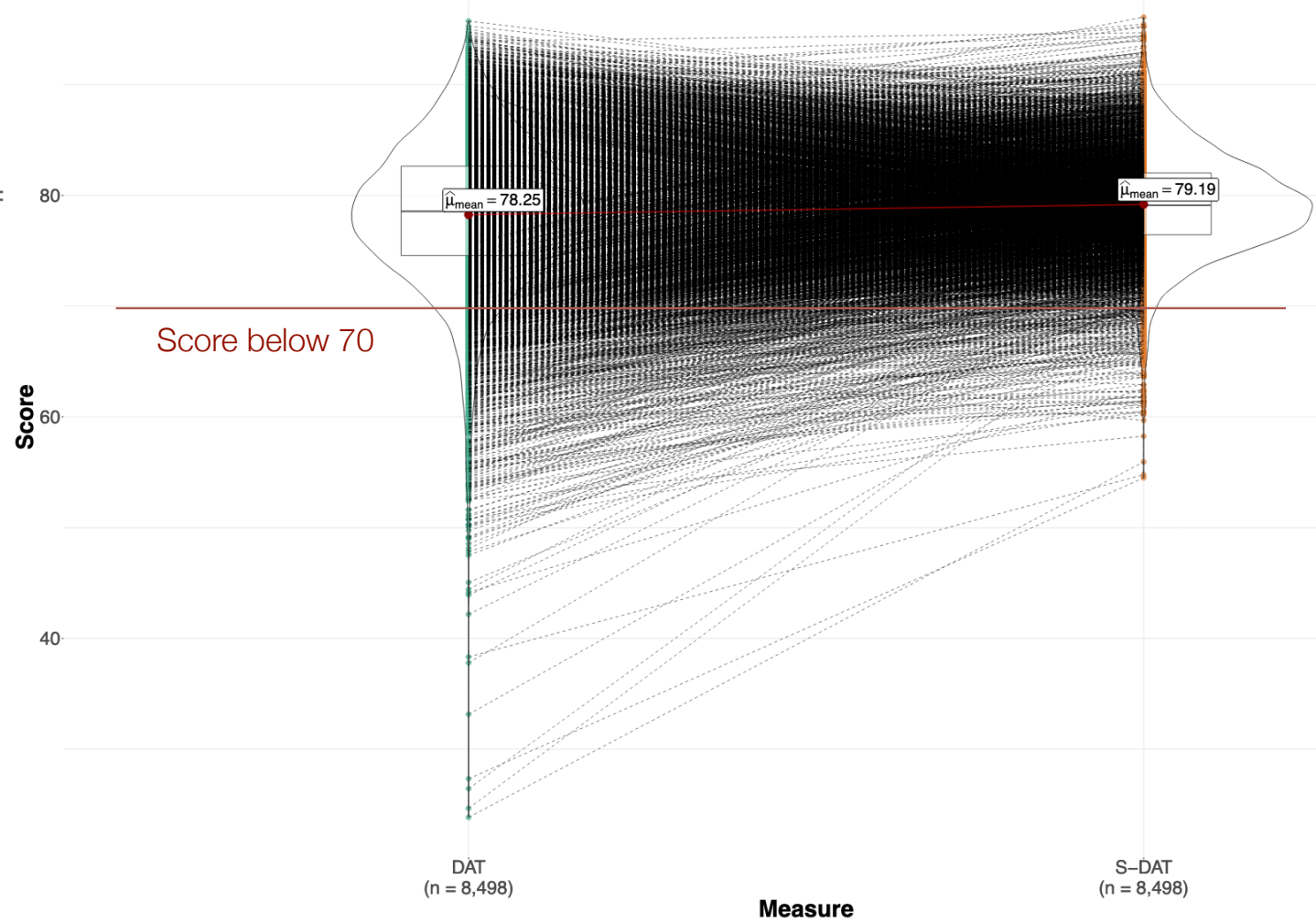


S-DAT: in Calibration to the DAT



# S-DAT: in Calibration to the DAT

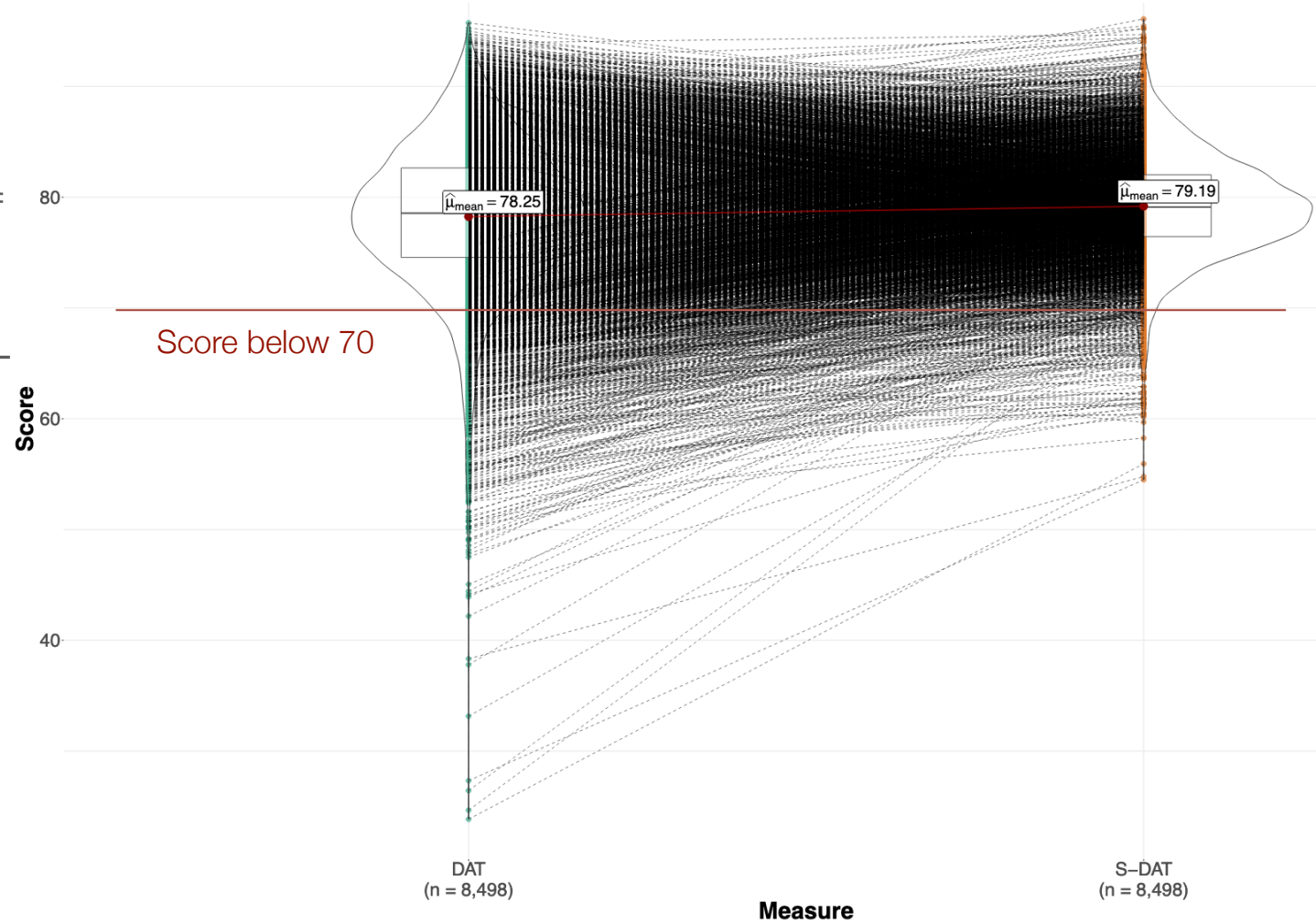
- Based analysis on original Olson et al (2021) data, Study 2 with  $n = 8,498$  entries





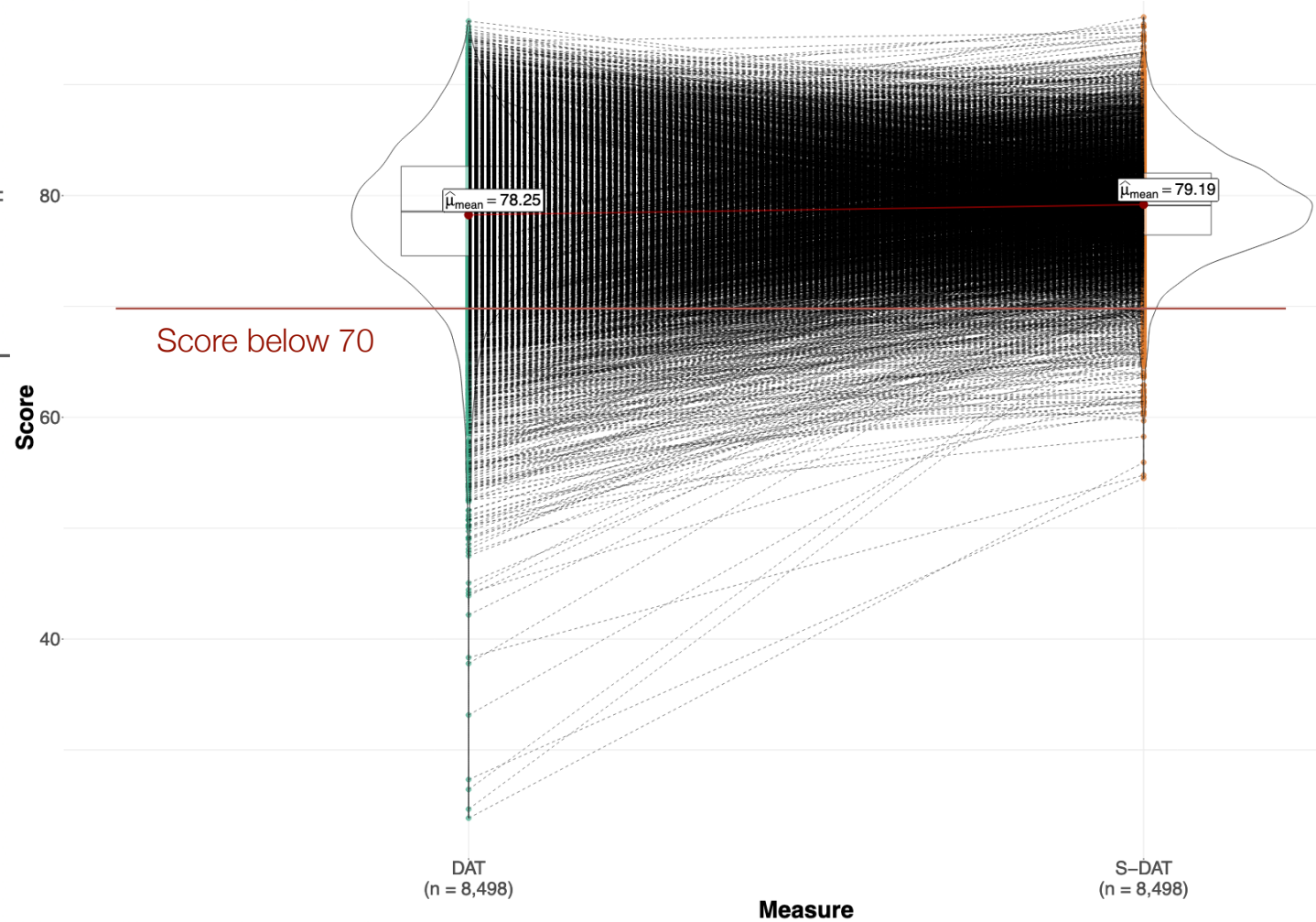
# S-DAT: in Calibration to the DAT

- Based analysis on original Olson et al (2021) data, Study 2 with  $n = 8,498$  entries
- S-DAT distribution a bit steeper — scores below 70 are “noise”



# S-DAT: in Calibration to the DAT

- Based analysis on original Olson et al (2021) data, Study 2 with n = 8,498 entries
- S-DAT distribution a bit steeper — scores below 70 are “noise”
- Only normed for English yet



## S-DAT: in Comparison to other C-measures

Study	Measure	DAT	S-DAT
<b>Olson et al. Study 1a (ns = 138–141)</b>			
	DAT		.67*** [.56, .75]
	AUT: Originality	.32*** [.16, .46]	.17* [–.00, .17]
	AUT: Flexibility	.34*** [.18, .48]	.19* [.03, .35]
	AUT: Fluency	.22** [.06, .37]	.14* [–.03, .30]
	Bridge-the-Associative-Gap Task	.22** [.06, .38]	.11 [–.06, .28]
<b>Olson et al. Study 1b (ns = 205–284)</b>			
	DAT		.60*** [.52, .67]
	AUT: Originality	.32*** [.20, .43]	.24*** [.11, .36]
	AUT: Flexibility	.35*** [.23, .46]	.27*** [.15, .39]
	AUT: Fluency	.30*** [.17, .41]	.16** [.03, .28]
	Bridge-the-Associative-Gap Task	.23*** [.10, .36]	.08 [–.06, .22]
<b>Olson et al. Study 2 (ns = 355–8,498)</b>			
	DAT		.65*** [.64, .66]
	AUT: Originality	.13** [.03, .23]	.13** [.02, .23]



# S-DAT: in Comparison to other C-measures

- Bridge-the-Associative-Gap Task = RAT-extension = convergent thinking

Study	Measure	DAT	S-DAT
<b>Olson et al. Study 1a (ns = 138–141)</b>			
	DAT		.67*** [.56, .75]
	AUT: Originality	.32*** [.16, .46]	.17* [–.00, .17]
	AUT: Flexibility	.34*** [.18, .48]	.19* [.03, .35]
	AUT: Fluency	.22** [.06, .37]	.14* [–.03, .30]
	Bridge-the-Associative-Gap Task	.22** [.06, .38]	.11 [–.06, .28]
<b>Olson et al. Study 1b (ns = 205–284)</b>			
	DAT		.60*** [.52, .67]
	AUT: Originality	.32*** [.20, .43]	.24*** [.11, .36]
	AUT: Flexibility	.35*** [.23, .46]	.27*** [.15, .39]
	AUT: Fluency	.30*** [.17, .41]	.16** [.03, .28]
	Bridge-the-Associative-Gap Task	.23*** [.10, .36]	.08 [–.06, .22]
<b>Olson et al. Study 2 (ns = 355–8,498)</b>			
	DAT		.65*** [.64, .66]
	AUT: Originality	.13** [.03, .23]	.13** [.02, .23]

# S-DAT: in Comparison to other C-measures

- Bridge-the-Associative-Gap Task = RAT-extension = convergent thinking
- Relatively low correlations with AUT

Study	Measure	DAT	S-DAT
<b>Olson et al. Study 1a (ns = 138–141)</b>			
	DAT		.67*** [.56, .75]
	AUT: Originality	.32*** [.16, .46]	.17* [−.00, .17]
	AUT: Flexibility	.34*** [.18, .48]	.19* [.03, .35]
	AUT: Fluency	.22** [.06, .37]	.14* [−.03, .30]
	Bridge-the-Associative-Gap Task	.22** [.06, .38]	.11 [−.06, .28]
<b>Olson et al. Study 1b (ns = 205–284)</b>			
	DAT		.60*** [.52, .67]
	AUT: Originality	.32*** [.20, .43]	.24*** [.11, .36]
	AUT: Flexibility	.35*** [.23, .46]	.27*** [.15, .39]
	AUT: Fluency	.30*** [.17, .41]	.16** [.03, .28]
	Bridge-the-Associative-Gap Task	.23*** [.10, .36]	.08 [−.06, .22]
<b>Olson et al. Study 2 (ns = 355–8,498)</b>			
	DAT		.65*** [.64, .66]
	AUT: Originality	.13** [.03, .23]	.13** [.02, .23]

# S-DAT: in Comparison to other C-measures

- Bridge-the-Associative-Gap Task = RAT-extension = convergent thinking
- Relatively low correlations with AUT
- Better discriminant validity for convergent thinking

Study	Measure	DAT	S-DAT
<b>Olson et al. Study 1a (ns = 138–141)</b>			
	DAT		.67*** [.56, .75]
	AUT: Originality	.32*** [.16, .46]	.17* [–.00, .17]
	AUT: Flexibility	.34*** [.18, .48]	.19* [.03, .35]
	AUT: Fluency	.22** [.06, .37]	.14* [–.03, .30]
	Bridge-the-Associative-Gap Task	.22** [.06, .38]	.11 [–.06, .28]
<b>Olson et al. Study 1b (ns = 205–284)</b>			
	DAT		.60*** [.52, .67]
	AUT: Originality	.32*** [.20, .43]	.24*** [.11, .36]
	AUT: Flexibility	.35*** [.23, .46]	.27*** [.15, .39]
	AUT: Fluency	.30*** [.17, .41]	.16** [.03, .28]
	Bridge-the-Associative-Gap Task	.23*** [.10, .36]	.08 [–.06, .22]
<b>Olson et al. Study 2 (ns = 355–8,498)</b>			
	DAT		.65*** [.64, .66]
	AUT: Originality	.13** [.03, .23]	.13** [.02, .23]



## S-DAT: Examples for its Stability

---

# S-DAT: Examples for its Stability

- Using ultra-rare words

## Enter 10 Words

Word 1	astrolabe	Word 6	griffin
Word 2	oubliette	Word 7	halberd
Word 3	tincture	Word 8	ziggurat
Word 4	grimoire	Word 9	miasma
Word 5	plinth	Word 10	vellum

## Demographics

Age	Sex	Country	Evaluation Model
30	none	US	SDAT-1

Contribute to research?

☒ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 78.98

Percentile: 49.21%

# S-DAT: Examples for its Stability

- Using ultra-rare words
- Using very niche words, e.g. from Harry Potter universe

## Enter 10 Words

Word 1	Thestrals	Word 6	Arithmancy
Word 2	Pensieve	Word 7	Wizengamot
Word 3	Horcrux	Word 8	Boggart
Word 4	Nargle	Word 9	Howler
Word 5	Muggle	Word 10	Remembrall

## Demographics

Age	Sex	Country	Evaluation Model
30	none	US	SDAT-1

Contribute to research?

☒ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 81.65

Percentile: 72.75%



# S-DAT: Examples for its Stability

- Using ultra-rare words
- Using very niche words, e.g. from Harry Potter universe
- Language-Hopping (= language-independent representation)

## Enter 10 Words

Word 1

fjord

Word 2

龍

Word 3

samba

Word 4

क़िला

Word 5

わさび

Word 6

جمل

Word 7

kukkakaali

Word 8

поёт

Word 9

kitaplık

Word 10

ngoma

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

Contribute to research?

☒ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 85.70

Percentile: 92.95%

# S-DAT: Examples for its Stability

- Using ultra-rare words
- Using very niche words, e.g. from Harry Potter universe
- Language-Hopping (= language-independent representation)

## Enter 10 Words

Word 1

glacial sea inlet

Word 2

dragon

Word 3

samba

Word 4

fortress

Word 5

wasabi

Word 6

camel

Word 7

cauliflower

Word 8

robot

Word 9

bookshelf

Word 10

drum

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

Contribute to research?

☒ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 91.51

Percentile: 99.63%

# S-DAT: Examples for its Stability

- Using ultra-rare words
- Using very niche words, e.g. from Harry Potter universe
- Language-Hopping (= language-independent representation)
- Misspellings

## Enter 10 Words

Word 1	color	Word 6	clr
Word 2	colour	Word 7	colorrrr
Word 3	colur	Word 8	callor
Word 4	collor	Word 9	clour
Word 5	colore	Word 10	kolor

## Demographics

Age	Sex	Country	Evaluation Model
30	none	US	SDAT-1

Contribute to research?

☒ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 48.51

Percentile: 0.00%





# IOL Lab at ZIB and TUB

English

English

Arabic

Deutsch

Français

Italiano

Japanese

Turkish

Your submitted data will only be used for research purposes if you explicitly consent to it. It does not include any personal information (no IP addresses, no names, no email addresses) and as such no personal information will be shared with third parties.

[ZIB's Privacy Policy and Imprint]

## Research supported by



## Powered by



## Multi-Lingual Divergent Association Task

### How creatively do you think?

The Divergent Association Task (DAT) is a quick, research-based test that gives you insight into your creative potential.

**Your task:** Enter 10 words—each as different in meaning and association as possible. The more unrelated the words, the better.

### Why it works:

The DAT measures divergent thinking, a core aspect of creativity. It does this by analyzing the semantic distance between the words you provide. Greater distance suggests greater cognitive flexibility—a key trait in creative thought.

#### Good to know:

The DAT works in multiple languages! Basically, any language and script is supported, although results might vary across languages due availability of training data.

Ready to explore how your mind makes connections?

Give it a try below!

Read more (english only)

## Submit Your Words

### Enter 10 Words

Word 1	Word 6
<input type="text"/>	<input type="text"/>
Word 2	Word 7
<input type="text"/>	<input type="text"/>
Word 3	Word 8
<input type="text"/>	<input type="text"/>
Word 4	Word 9
<input type="text"/>	<input type="text"/>
Word 5	Word 10
<input type="text"/>	<input type="text"/>

### Demographics

Age	Sex	Country	Evaluation Model
<input type="text" value="30"/>	<input type="text" value="none"/>	<input type="text" value="US"/>	<input type="text" value="SDAT-1"/>
Contribute to research?			
<input type="text"/>			
<input type="button" value="Submit Words"/>			



# IOL Lab at ZIB and TUB

English

English

Arabic

Deutsch

Français

Italiano

Japanese

Turkish

Your submitted data will only be used for research purposes if you explicitly consent to it. It does not include any personal information (no IP addresses, no names, no email addresses) and as such no personal information will be shared with third parties.

[ZIB's Privacy Policy and Imprint]

## Research supported by



## Powered by



## Multi-Lingual Divergent Association Task

### How creatively do you think?

The Divergent Association Task (DAT) is a quick, research-based test that gives you insight into your creative potential.

**Your task:** Enter 10 words—each as different in meaning and association as possible. The more unrelated the words, the better.

### Why it works:

The DAT measures divergent thinking, a core aspect of creativity. It does this by analyzing the semantic distance between the words you provide. Greater distance suggests greater cognitive flexibility—a key trait in creative thought.

#### Good to know:

The DAT works in multiple languages! Basically, any language and script is supported, although results might vary across languages due availability of training data.

Ready to explore how your mind makes connections?

Give it a try below!

Read more (english only)

## Submit Your Words

### Enter 10 Words

Word 1	Word 6
<input type="text"/>	<input type="text"/>
Word 2	Word 7
<input type="text"/>	<input type="text"/>
Word 3	Word 8
<input type="text"/>	<input type="text"/>
Word 4	Word 9
<input type="text"/>	<input type="text"/>
Word 5	Word 10
<input type="text"/>	<input type="text"/>

### Demographics

Age	Sex	Country	Evaluation Model
<input type="text" value="30"/>	<input type="text" value="none"/>	<input type="text" value="US"/>	<input type="text" value="SDAT-1"/>
Contribute to research?			
<input type="text"/>			
<input type="button" value="Submit Words"/>			



<https://sdat.iol.zib.de/>



**IOL Lab**  
at ZIB and TUB

English

English

Arabic

Deutsch

Français

Italiano

Japanese

Turkish

We aim to add more  
languages!

Your submitted data will only be used for research purposes if you explicitly consent to it. It does not include any personal information (no IP addresses, no names, no email addresses) and as such no personal information will be shared with third parties.

[ZIB's Privacy Policy and Imprint]

Research supported by



University  
of Essex



Weizenbaum  
Institut



Powered by

**RiSE**  
powered by Zuse Institute Berlin

## Multi-Lingual Divergent Association Task

### How creatively do you think?

The Divergent Association Task (DAT) is a quick, research-based test that gives you insight into your creative potential.

**Your task:** Enter 10 words—each as different in meaning and association as possible. The more unrelated the words, the better.

**Good to know:**  
The DAT works in multiple languages! Basically, any language and script is supported, although results might vary across languages due availability of training data.

Ready to explore how your mind makes connections?  
Give it a try below!

Read more (english only)

### Submit Your Words

#### Enter 10 Words

Word 1

Word 6

Word 2

Word 7

Word 3

Word 8

Word 4

Word 9

Word 5

Word 10

#### Demographics

Age

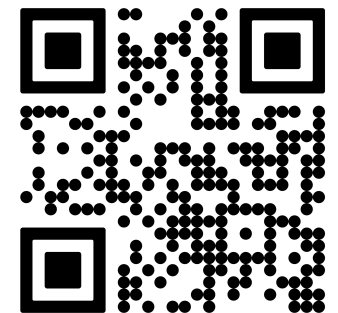
Sex

Country

Evaluation Model

Contribute to research?

Submit Words



S-DAT

<https://sdat.iol.zib.de/>





English  
English  
Arabic  
Deutsch  
Français  
Italiano  
Japanese  
Turkish

We aim to add more languages!

Your submitted data will only be used for research purposes if you explicitly consent to it. It does not include any personal information (no IP addresses, no names, no email addresses) and as such no personal information will be shared with third parties.

[ZIB's Privacy Policy and Imprint]

Research supported by



Powered by



## Multi-Lingual Divergent Association Task

### How creatively do you think?

The Divergent Association Task (DAT) is a quick, research-based test that gives you insight into your creative potential.

Your task: Enter 10 words—each as different in meaning and association as possible. The more unrelated the words, the better.

Good to know:  
The DAT works in multiple languages! Basically, any language and script is supported, although results might vary across languages due availability of training data.

Ready to explore how your mind makes connections?

Give it a try below!

Read more (english only)

Adaptation to “things” to better fit asian languages?

### Submit Your Words

#### Enter 10 Words

Word 1	Word 6
<input type="text"/>	<input type="text"/>
Word 2	Word 7
<input type="text"/>	<input type="text"/>
Word 3	Word 8
<input type="text"/>	<input type="text"/>
Word 4	Word 9
<input type="text"/>	<input type="text"/>
Word 5	Word 10
<input type="text"/>	<input type="text"/>

#### Demographics

Age	Sex	Country	Evaluation Model
<input type="text" value="30"/>	<input type="text" value="none"/>	<input type="text" value="US"/>	<input type="text" value="SDAT-1"/>
Contribute to research?			
<input type="text"/>			
<input type="button" value="Submit Words"/>			



<https://sdat.iol.zib.de/>

## S-DAT: Gaming the System

---

# S-DAT: Gaming the System

- Other languages allow to create high scores easily —> e.g., due to compound words, e.g., in German, Finnish

## Enter 10 Words

Word 1

Donaudampfschiffahrtsgesellschaftskapitänsmütze

Word 2

Rindfleischetikettierungsüberwachungsaufgabenübertragungsgesetz

Word 3

Weltuntergangsprophezeiunganhängerbewegung

Word 4

Solarstromanlagenwartungsdienstleistervertrag

Word 5

Kindergarteneinschulungsvorbereitungskonferenzprotokoll

Word 6

Weihnachtsbaumbeleuchtungsausfallnotfallplan

Word 7

Kunststofffensterrahmenisolierungsdichtungsbandhersteller

Word 8

Weltraumforschungsexperimentdatenanalyseverfahren

Word 9

Meerschweinchenzüchtervereinsjahreshauptversammlung

Word 10

Führerscheinwerbsprüfungsangstbewältigungsseminar

## Demographics

Age

30

Sex

none


Country

US

Evaluation Model

SDAT-1

Contribute to research?

 No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 119.65

Percentile: 100.00%

# S-DAT: Gaming the System

- Other languages allow to create high scores easily —> e.g., due to compound words, e.g., in German, Finnish
- Suffix-chaining to create rare words, e.g., Turkish

## Enter 10 Words

Word 1

elmayiyenikırmızıgüzelkız

Word 6

hayalperestşemsiyeplanlayıcısı

Word 2

uzaygemisürüşöğretmeni

Word 7

bilgisayardondurmaprogramı

Word 3

kahvekoyunüncörapfabrikası

Word 8

tavşancıkterlikykamaistasyonu

Word 4

balıkesirkarpuzsalatasıraporu

Word 9

yıldıztozuhamurkarıştırıcısı

Word 5

kitapdostudondurmaçubuğu

Word 10

kaplumbağatelgraftelsizhattı

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

?

Contribute to research?

✗ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 90.84

Percentile: 99.42%



# S-DAT: Gaming the System

- Other languages allow to create high scores easily —> e.g., due to compound words, e.g., in German, Finnish
- Suffix-chaining to create rare words, e.g., Turkish

## Enter 10 Words

Word 1

the pretty girl who didn't eat the apple

Word 6

dreamer umbrella planner

Word 2

space vehicle driving instructor

Word 7

computer ice cream software

Word 3

coffee sheep wool sock factory

Word 8

bunny slipper washing station

Word 4

Balikesir watermelon salad report

Word 9

stardust dough mixer

Word 5

book-loving ice cream stick

Word 10

turtle telegraph wireless line

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

?

Contribute to research?

✗ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 111.89

Percentile: 100.00%

# S-DAT: Gaming the System

- Other languages allow to create high scores easily —> e.g., due to compound words, e.g., in German, Finnish
- Suffix-chaining to create rare words, e.g., Turkish
- Mix between Scripts within a language, e.g., Japanese

## Enter 10 Words

Word 1

龍

Word 6

かもめ

Word 2

オーロラ

Word 7

忍者

Word 3

おにぎり

Word 8

メトロノーム

Word 4

微積分

Word 9

つむじかぜ

Word 5

ヘッドホン

Word 10

幽霊

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

?

Contribute to research?

✗ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 80.11

Percentile: 60.25%

# S-DAT: Gaming the System

- Other languages allow to create high scores easily —> e.g., due to compound words, e.g., in German, Finnish
- Suffix-chaining to create rare words, e.g., Turkish
- Mix between Scripts within a language, e.g., Japanese

## Enter 10 Words

Word 1

りゅう

Word 6

かもめ

Word 2

おーろら

Word 7

にんじゃ

Word 3

おにぎり

Word 8

めとろのーむ

Word 4

びせきぶん

Word 9

つむじかぜ

Word 5

へっどほん

Word 10

ゆうれい

## Demographics

Age

30

Sex

none

Country

US

Evaluation Model

SDAT-1

?

Contribute to research?

✗ No, do not use my data for research

Submit Words

Submission successful!

## Results

Score: 59.68

Percentile: 0.04%

# Looking for Collaboration!

---



<https://sdat.iol.zib.de/>





# Looking for Collaboration!

---

- Join S-DAT Validation Project



<https://sdat.iol.zib.de/>



# Looking for Collaboration!

---

- Join S-DAT Validation Project



<https://sdat.iol.zib.de/>



# Looking for Collaboration!

---

- Join S-DAT Validation Project
  - Add a Language
  - Assess Data for Validation
- Just approach us or via email:  
[jennifer.haase@hu-berlin.de](mailto:jennifer.haase@hu-berlin.de)



<https://sdat.iol.zib.de/>





# Literature

---

1. Haase, J., Hanel, P. H. P., & Pokutta, S. (2025). S-DAT: A Multilingual, GenAI-Driven Framework for Automated Divergent Thinking Assessment (No. arXiv:2505.09068). arXiv. <https://doi.org/10.48550/arXiv.2505.09068>
2. Olson, J. A., Nahas, J., Chmoulevitch, D., Cropper, S. J., & Webb, M. E. (2021). Naming unrelated words predicts creativity. *Proceedings of the National Academy of Sciences*, 118(25), e2022340118. <https://doi.org/10.1073/pnas.2022340118>
3. Organisciak, P., Acar, S., Dumas, D., & Berthiaume, K. (2023). Beyond Semantic Distance: Automated Scoring of Divergent Thinking Greatly Improves with Large Language Models. *Thinking Skills and Creativity*, 101356. <https://doi.org/10.1016/j.tsc.2023.101356>

