

# OECD-GEIS Seminar on Translating and Adapting Instruments in Large Scale Assessments





**“If we spoke a  
different language,  
we would perceive a  
somewhat different  
world.”**

**- Ludwig Wittgenstein**  
*Austrian-British philosopher*

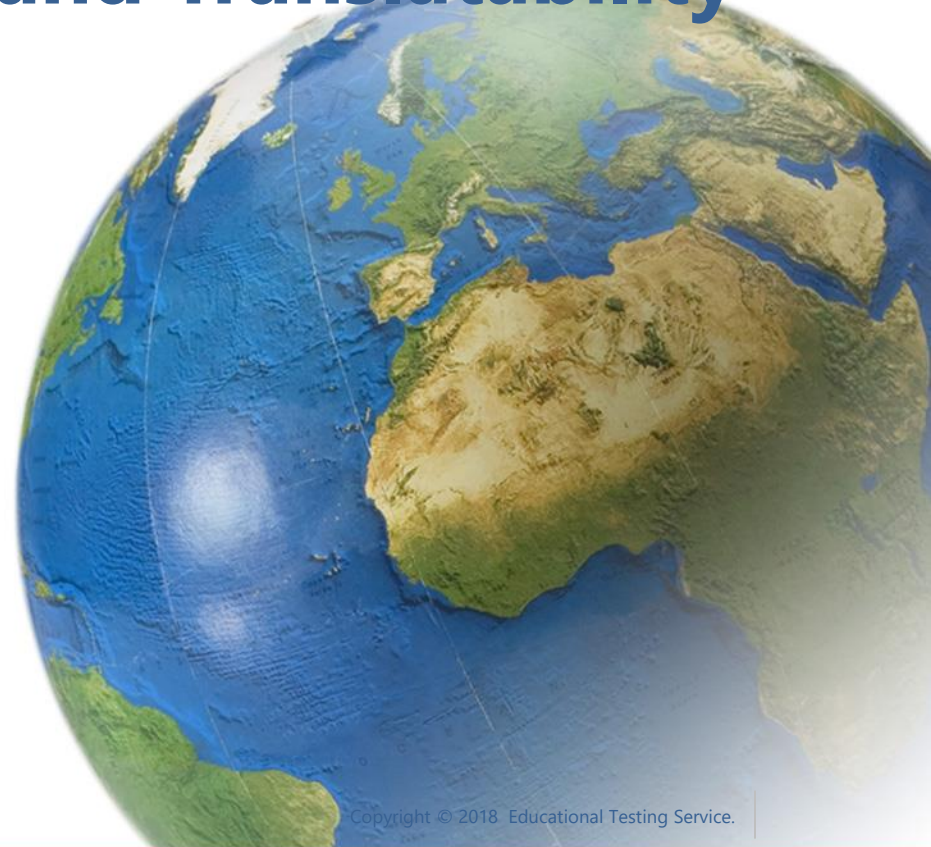


# Insights on the ITC Guidelines on Language- and Culture-Sensitive Instrument Development in Support of Comparability, Cultural Relevance, and Translatability

**International Guidelines vs.  
Implementation in  
Countries and by  
Translators**

Paris, France

June 7, 2018



# **ITC Guidelines for the Large-Scale Assessment of Linguistically and Culturally Diverse Populations**



# Motivation

- Comprehensive document addressing development and adaptation issues across all aspects of tests that may impact fairness and validity when assessing linguistically and culturally diverse populations
- Complement existing guidelines such as ITC Guidelines on
  - Test Use
  - Adapting Tests
  - Computer-Based Testing
  - ... and other guidelines that focus on quality control, test security, test disposal





- Created to inform test developers, psychometricians, test users, and policymakers of considerations relevant to the assessment of test takers in linguistically and culturally diverse countries or regions
- Help ensure test fairness and validity of score-based inferences to support score comparability and meaningful score-based inferences in linguistically diverse contexts



# Premise behind the Guidelines

## Scope and Purpose

- Linguistic diversity is common, yet many aspects of linguistic and cultural diversity differ across countries → impact on assessment
- Specific topics
  - the status and degree of codification of languages
  - the amount of resources available for adapting tests across languages



# Development

- Developed by an international committee comprised of test developers, researchers in universities and testing centers
- Contributors: Avi Allalouf, Sydell Carlton, Thomas Eckes, Paula Elosua, Molly Faulkner-Bond, Ron Hambleton, Dragoș Iliescu, Rene Lawless\*, Maria Elena Oliveri\*, Stephen Sireci, Fons van de Vijver, Alina von Davier & April Zenisky.
- Reviewed by Cathy Wendler & Robert Mislevy





## Review (4<sup>th</sup> Official Draft)

- Reviewed by the ITC Council
- ITC general membership; organizations: CApStAn, Instituto de Evaluacion e Ingenieria Avanzada, S.C., National Center on Educational Outcomes, cut-e, Gartner (CEB), The British Psychological Society, and City University of New York
- Researchers and academics (UK, US)



# Organization of the Guidelines

1. Test Development and Adaptation\*
2. Validity, Reliability, and Fairness
3. Scoring Essays and CRs
4. Test Administration Procedures & Accommodations
5. Score Interpretation & Reporting
6. Quality Control
7. Test Preparation



# Guidelines 1: Test Development & Adaptation

- Consider the linguistic differences between the source and target languages
  - Why? For construct comparability
- Suggest
  - Including different linguistic groups in the design of items and test to be adapted to foresee translation hurdles
  - Conducting sensitivity reviews of all test materials, including items, instructions, and figures.
  - Documenting all adaptations



# General Considerations

- Are the instructions clear?
  - Are the instructions available in multiple languages?
    - ☆ Can they be delivered orally in those languages?
- Does the targeted population have experience with all of the item formats contained in the test?



# Linguistic Considerations for Developers/Reviewers

- Use language that is accessible for all groups; avoid...
  - Regional or sensitive vocabulary
  - Words with multiple meanings or that are ambiguous
  - Unnecessarily complex words that are not part of the construct
  - Use of construct-irrelevant product names, geography, currency, etc.



# Design Considerations

- Design
  - Test instructions to maximize clarity
  - Items using simple sentence structure
  - Items that have similar levels of readability and layout
  - Select common scenarios & topics, figures, and images that are not offensive or derogatory for any language group





# Considerations for Translators

- Review to ensure the translation preserves the meaning of the construct across languages
  - Same length, number of options, register, level of difficulty
- Avoid word-for-word translations



# Common phrases could present problems: “blustery day”

English: “Blustery day”



Spanish: “*dia violento?*”



Common phrases could present problems: “blustery day”



# Collocations and Idioms – Problem!



English: Make the bed

Spanish: Hacer la cama

French: Faire son lit



# Perseverance

Að jenna (Icelandic) – ability or willingness to persevere through tasks that are hard or boring.

# Communication

Ah-un (阿吶) (Japanese) – unspoken communication between close friends.

# Anticipation

Iktsuarpok (Inuit) – Anticipation one feels when waiting for someone, and keeps checking if they're arriving

# Leisure

Flâner (French) – leisurely strolling the streets.



# What is Missing: Use of Tools to Supplement Guidelines

- Use of Natural Language Processing tools to help
  - Detect unnecessarily complex words, sentence structure, and language in the source version
  - Modify the source version to meet desired design and development goals



# Example of NLP Tool: TextEvaluator

- Ask: is the text *below*, *within* or *above* the targeted standards or language level?
- Analyze
  - Vocabulary Difficulty – are words expected to be more or less familiar to students (U.S.)?
  - Syntactic Complexity – how complex are the sentences?
  - Concreteness – are words more or less concrete or abstract?
  - Cohesion – word overlap across adjacent sentences?



## Example from the Green Islands



Move the magnifying glass to the red dots to see different parts of the island close-up.



# Identification of Text that is Too Complex for Grade

Results: 5<sup>th</sup> Grade reading level; Syntactic complexity is “Very Challenging”

## Reading Passage

I think you can guess that fish living in shallow water where there are lots of birds hunting them will have a better chance of escaping if they are the same color as the bottom. You will see these examples in the Green Islands, as well as many other places around the world where fish live near bird colonies.

Difficulty Relative to Target Grade						
Dimension of Variation/Component Score	Value	3	4	Target Grade: 5	6	7
<b>Sentence Structure</b>						
Syntactic Complexity (Higher Values Indicate Higher Complexity)	90	⬆	⬆	⬆	⬆	⬆
<b>Vocabulary Difficulty</b>						
Academic Vocabulary (Higher Values Indicate Higher Complexity)	18	●	●	●	●	●
Word Unfamiliarity (Higher Values Indicate Higher Complexity)	28	●	●	●	●	●
Concreteness (Lower Values Indicate Higher Complexity)	62	●	●	●	●	●
<b>Connections Across Ideas</b>						
Lexical Cohesion (Lower Values Indicate Higher Complexity)	48	⬆	⬆	⬆	●	●
Interactive/Conversational Style (Lower Values Indicate Higher Complexity)	34	⬆	⬆	⬆	⬆	⬆
Level of Argumentation (Higher Values Indicate Higher Complexity)	7	●	●	●	●	●
<b>Organization</b>						
Degree of Narrativity (Lower Values Indicate Higher Complexity)	4	●	●	●	●	●
<b>Overall Text Complexity</b>		Within	Within	Within	Below	Below

All component scores are reported on a scale that ranges from 1 to 100. Overall text complexity scores are reported on an alternative

# A Sentence with Multiple Dependencies

Fish [living in shallow water] [where there are lots of birds hunting them] will have a better chance of escaping [if] they are the same color as the bottom.

Fish

will have a better chance of escaping

Living in shallow water

where there are lots of birds  
hunting them

if

they are the same color as the bottom.

# Words with SFI < 50 are More Difficult

SFI	No. of Words	Sample Words
0 - 10	3	ectotherm, endotherm
11 - 20	4	ectotherms, endotherms
31 - 40	30	stubby, gills, anatomical
41 - 50	92	adaptation, offspring, colonies
51 - 60	279	rocks, wings, birds
61 - 70	359	living, ready, probably
71 - 80	429	some, all, people
81 - 90	247	and, the, of, to
Total	1,444	

# Analysis of a Text Targeted at Struggling Readers

(The text falls below the Standards for Students at Grade 2)

## The Text

### Rainbow Crab

I am a crab. I have a very short tail. I am covered with a thick shell. I have five pairs of legs. The first pair are claws. My claws help me eat. They also help me protect myself. I can breathe underwater and in the air. I eat small animals such as fish.

## Legend

⬆	Very Challenging for Targeted Grade
⬆	Somewhat Challenging for Targeted Grade
•	Not Challenging for Targeted Grade

## TextEvaluator Output Summary

Difficulty Relative to Target Grade						
Dimension of Variation/Component Score	Value	Target Grade: 2	3	4	5	6
Sentence Structure						
Syntactic Complexity (Higher Values Indicate Higher Complexity)	14	●	●	●	●	●
Vocabulary Difficulty						
Academic Vocabulary (Higher Values Indicate Higher Complexity)	15	●	●	●	●	●
Word Unfamiliarity (Higher Values Indicate Higher Complexity)	18	●	●	●	●	●
Concreteness (Lower Values Indicate Higher Complexity)	93	●	●	●	●	●
Connections Across Ideas						
Lexical Cohesion (Lower Values Indicate Higher Complexity)	64	●	●	●	●	●
Interactive/Conversational Style (Lower Values Indicate Higher Complexity)	5	●	●	●	●	●
Level of Argumentation (Higher Values Indicate Higher Complexity)	7	●	●	●	●	●
Organization						
Degree of Narrativity (Lower Values Indicate Higher Complexity)	48	⬆	⬆	⬆	⬆	⬆
Overall Text Complexity		Below	Below	Below	Below	Below

# What is Missing: Focus of Guidelines is on Cognitive Tasks

- Considerations for translation of survey instruments and background questionnaires
- Response style differences; impact on interpretation of scores & responses





# What is Missing: Focus of Guidelines is on Cognitive Tasks

- Development of tests for other (noncognitive) constructs is increasing
- 21<sup>st</sup> century skills: collaborative problem solving, cross-cultural competence, interactive communication
- Questions beyond language: cultural norms related to interaction, pragmatics calling for cross-disciplinary collaboration and research



**Thank you  
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