 Council on Licensure,
Enforcement and Regulation

DENVER

2009 Annual Conference
September 10 - 12

**Cross-Cultural
Testing**
Issues and Practice

Presenters: John Weiner, PSI
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Lisa Incremona, Pearson VUE
Linda Waters, Prometric

Promoting Regulatory Excellence

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Introduction

- Labor markets are becoming more diverse & multi-lingual.
- Growing demand for assessment programs to accommodate multiple languages
- Today's panel will explore considerations, challenges and best practices for adapting assessment programs across cultures


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5 Topic Areas

- Trends
- Design
- Approaches & Methods
- Issues
- Conclusion & Future Considerations

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Trends

- How is demand for test adaptation changing?
- What are the drivers and demographic trends?
- What trends are you seeing?

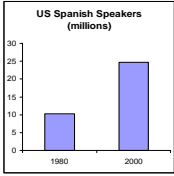
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US Language Trends


J. Weiner

- Employers are encountering growing numbers of bilingual (ESL) job candidates in the US
- Spanish use, in particular, has increased dramatically in the US
 - 242% increase in Spanish speaking Hispanics between 1980–2000: from 10.2 to 24.7 million*
 - 46% of 25 million Hispanic adults are Spanish/English bilingual**

*US Census Bureau (2003)
**Pew Hispanic Center/Kaiser Family Foundation (2002)

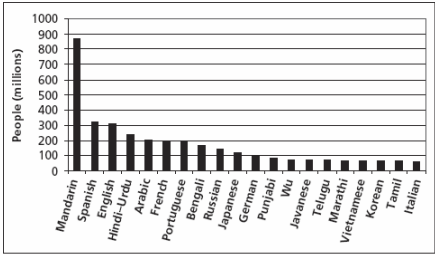


Year	Speakers (millions)
1980	10.2
2000	24.7

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Global Language Trends

J. Weiner



Language	People (millions)
Mandarin	900
Spanish	300
English	250
Hindi-Urdu	200
Arabic	180
French	150
Portuguese	150
Bengali	150
Russian	150
Japanese	120
German	100
Punjabi	100
Wu	80
Javanese	80
Telugu	80
Marathi	80
Vietnamese	80
Korean	80
Tamil	80
Italian	80

Figure 10.1 The twenty most common spoken languages (www.ethnologue.com. Downloaded August 5, 2008).

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Trends

L. Waters, N. Eatchel

Trends in test adaptation approaches internationally (versus the within the U.S.) include a higher emphasis both on the volume of language adaptation as well as a variety of presentation styles.


- Larger number of languages offered per exam
- Oral voiceovers as well as visual presentation
- Computer-based and paper-based presentations
- Split-screen, multi-language presentation

Larger numbers of adaptations per exam and increased methodologies for language presentations adds additional complexity to the validity issues surrounding the adaptation of testing programs.

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Feasibility & Design

- What are the considerations for planning cross-cultural adaptation of tests?


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Feasibility & Design

R. Rodgers

Entry-Level Requirements


- Do candidates seeking testing in other languages meet same entry requirements?
- Are eligibility criteria similarly understood for English and target language candidates?
- What other differences may be undetected or less apparent for target language candidates?

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Feasibility & Design

R. Rodgers

- *What is required to validate a translated exam?*
 - Test references & training materials in each target language to validate content & prepare candidates
 - Warning labels & safety standards in each target language to meet health & safety requirements
 - Understanding regional/cultural differences in how profession is practiced
 - Clear understanding of language used on the job – “Shop Spanish” vs. classroom Spanish

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Feasibility & Design

R. Rodgers

*What are the **practical** considerations when designing a translation project?*

- *Blending content experts with translator & teaching content knowledge in target language*
- *Test security and impersonation risks*
- *Must proctors speak all target languages?*


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Feasibility & Design

L. Waters, N. Eatchel

*What are the **business** considerations when designing a translation project?*

- *Allowing additional time in the development cycle for each language added to the program*
- *Ensuring appropriate funding and resources for the ongoing development, validation, and monitoring of each adapted exam*
- *Ensuring appropriate team for addressing the inevitable patterns that emerge in the differential analysis of adapted exams*


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Feasibility & Design

R. Rodgers

Protecting public health and safety

- *Should limits be set on practice for candidates licensed with a translated test?*
- *Monitoring and controlling risks of cheating & impersonation for translated tests*
 - *Organized "harvesting" of test content*
 - *Impersonation services*


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Feasibility & Design

L. Waters, N. Eatchel

Candidate Fairness


- *Are qualified candidates being measured on constructs unrelated to the domain in question?*
- *Is each item presented providing an equitable opportunity for candidates in each language to truly display their knowledge?*

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Administrative Considerations

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- **Occupational language requirements**
 - *What is the primary operating language required?*
 - *Under what circumstances, if any, can alternative languages be used?*
 - *What communication modes are required (reading, writing, listening, speaking)?*
- **Language proficiency**
 - *What level of language proficiency is required in each mode?*
- **Implementation**
 - *Establish policies and processes: When and how will candidates be offered assessments in alternative languages?*

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Translation Approaches

- *What methodologies do you use for test translation and adaptation?*
- *What is needed to preserve measurement quality?*
- *What resources are needed ?*


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Strategies for Cross-Cultural Deployment

J. Weiner

1. *Determine job language requirements: consider business requirements and allowable alternatives.*
2. *Understand the labor market: what are the predominant languages?*
3. *Use assessments that are well suited for translation and multicultural application.*
4. *Use professionally translated tools: there are many nuances to translation that an untrained eye will not catch.*
5. *Localize content when possible: conduct focus group reviews to ensure that translated content applies to regionalisms of the language.*
6. *Delivery software requires translation too: user interfaces must also be translated and adapted as an integral part of the assessment.*
7. *Gather normative data: benchmark translated assessments to your labor market to provide a framework for interpreting scores in different markets.*
8. *Design sensible administrative processes: ensure that the carefully designed assessment system is used consistently and appropriately.*

Reynolds & Weiner, 2009


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Steps for Cross-Cultural Adaptation

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- **Specification:**
 - *Guidelines for translator*
 - *Difficulty factors*
- **Content Conversion:**
 - *Professional translation*
 - *Back translation?*
- **Expert Review:**
 - *Localization, regionalisms*
- **Data Collection:**
 - *Norms*
 - *Bilingual adjustment*
 - *Equivalence*

Reynolds & Weiner, 2009

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Translation Review Guidelines

J. Weiner

Example:
Review Guidelines

- The terms, phrasing, and examples used in the translated version are meaningful and commonly understood in the culture.
- The translated test version does not contain language that might be considered offensive in the culture.
- Each translated question requires the test taker to perform substantially the same task as the original question. Make sure the process or strategy used to determine the correct answer in the translated version is the same as that used in the original version.
- Each translated question is the same difficulty level as the original question. For example, check to see that:
 - there are not fewer ways to derive an answer in the translated questions than in the original questions;
 - the translated questions do not make any of the answers more obvious.


Reynolds & Weiner, 2009

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Translation Considerations

L. Incremona


- *Translate test vs. translate items*
- *In what language is the knowledge acquired?*
- *Are translated references available?*
- *Are there terms or acronyms that are not translated but are referred to only in English?*
- *What about dialects?*
- *Is this a start-up program or an existing English-language exam being considered for translation?*

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Translation Practical Issues

L. Incremona

- *Who will do the translation?*
- *Quality control steps for production*
- *Will candidates be able to view items in both English and the target language?*
- *Are there any required supplemental materials?*
- *What take-aways need to be delivered and in what language?*

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International Translation Guidelines

L. Waters, N. Eatchel

Example:
International Review Guidelines


- Test developers should provide evidence that item content and stimulus materials are familiar to all intended populations.
- Test developers should implement systematic judgmental evidence, both linguistic and psychological, to improve the accuracy of the adaptation process and compile evidence on the equivalence of all language versions.
- Test developers should ensure that the data collection design permits the use of appropriate statistical techniques to establish item equivalence between the different language versions of the instrument.
- Test developers/publishers should apply appropriate statistical techniques to (1) establish the equivalence of the different versions of the instrument, and (2) identify problematic components or aspects of the instrument which may be inadequate to one or more of the intended populations.

International Test Commission, 2000

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Issues

- *What are the typical pitfalls to avoid when translating/adapting exams?*
- *What steps can be taken to avoid problems?*
- *What are the industry standards?*

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Issues: Potential Pitfalls

L. Waters, N. Eatchel

The largest risk within the translation process is the potential of errors in translation – resulting in incorrect or inconsistent items delivered to the candidate population.


Sample: Test Translation Error Dimensions

Item Design

Format The format or visual layout of the translated item differs from the original. Error types: *change of size, style, or position of tables, graphs, or illustrations; change of font style; use of narrower or wider margins; omission of graphic components; insertion of graphic components; other.*

Conventions The translation of the item is not in accord with accepted item writing practices in the target language or country or with basic principles of item writing. Error types: *grammatical inconsistency between stem and options in multiple choice items; inappropriate use of punctuation to denote continuity between stem and options; change in the order of options; grammatical inconsistency between options; inappropriate use of uppercase letters at the beginning of options; other.*

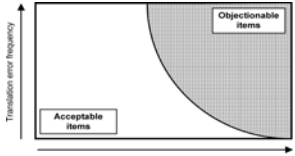
Solano-Flores, Guillermo, Backhoff, Eduardo and Contreras-Niño, Luis Ángel (2009).

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Issues: Potential Pitfalls

L. Waters, N. Eatchel

Ensuring accuracy in language adaptation is an ongoing Process that involves multiple validation and review steps along the way.



Solano-Flores, Guille (2009)


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Issues: Avoiding Errors in Adaptation

L. Waters, N. Eatchel

Test Development

- Start with a credentialed translation company
- Ensure forward and back translation is a standard part of the process
- Include multiple reviews by appropriate expertise throughout the development and process (e.g., professional translators, content experts, psychometricians, etc.)
- Conduct appropriate, ongoing psychometric analysis of adapted exams


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Issues: Avoiding Errors in Adaptation

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Beyond the Test

- Ensure all appropriate materials are translated (e.g., preparation materials, tutorials, introductory screens/pages)
- Establish administrative and operational protocols for adapted programs (assuming interaction and implementation with candidates from the designated populations)
- Provide an easily accessible feedback loop for all candidates to comment on both the content of the exam and the overall testing experience.

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Examples – Idiomatic Phrases

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- “*spend time*”
- “*easy going*”
- “*fall into place*”

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Issues

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- **Establishing equivalence**
 - *Semantic concerns*
 - *Construct concerns*
 - *Complex research designs:*
 - native speakers, bilinguals
- **Technology challenges**
 - *Candidate touch points*
 - *Administration functions*
 - *End user functions*
 - reporting, data management, system design, support

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Industry Standards

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Cross-Cultural Testing Standards Summary

Standards for Educational and Psychological Testing

- Reliability and validity should be established for translated tests; evidence of comparability should be reported.


Principles for the Validation and Use of Personnel Selection Procedures

- Global selection systems should consider locally accepted practices.

ITC Guidelines on Adapting Tests

- Adaptation process should account for cultural differences in target markets.
- Test content and methods should be familiar to target markets.
- Appropriate research and statistical techniques should be applied to establish the equivalence of the language versions of the test.
- Score differences among samples should not be taken at face value; further work is required to understand them.
- Expert judgments should be compiled to improve adaptation accuracy.

Reynolds & Weiner, 2009

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Conclusions & Future Trends


- *What issues and trends lie ahead for test translation?*

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Conclusions & Future Trends

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- Increasing diversity in the US will lead to more demand for test adaptation & translation in domestic programs
- Technology will lead more organizations to go "global" – engage in global markets
- Testing professionals face continued challenges to preserve measurement quality & sound practices


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Conclusions & Future Trends

L. Waters, N. Eatchel

- International clients will continue to push the envelope on adaptation activities
- Methodologies for delivering adapted exams will continue to expand and add complexity to adapted programs
- Psychometric evaluation of adapted exams will need to expand to consider not only performance across the multiple languages but also by various delivery options available

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Thank you


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