



Guillermo Solano-Flores

Professor of Education

Graduate School of Education

 Curriculum Vitae available Online

CONTACT INFORMATION

- **Admin. Support**

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Bio

BIO

Dr. Guillermo Solano-Flores is Professor of Education at the Stanford University Graduate School of Education. He specializes in educational assessment and the linguistic and cultural issues that are relevant to both international test comparisons and the testing of cultural and linguistic minorities. His research is based on the use of multidisciplinary approaches that use psychometrics, sociolinguistics, semiotics, and cognitive science in combination. He has conducted research on the development, translation, localization, and review of science and mathematics tests. He has been principal investigator in several National Science Foundation-funded projects that have examined the intersection of psychometrics, semiotics, and linguistics in testing. He is the author of the theory of test translation error, which addresses testing across cultures and languages. Also, he has investigated the use of generalizability theory—a psychometric theory of measurement error—in the testing of English language learners and indigenous populations. He has advised Latin American countries on the development of national assessment systems. Also, he has been the advisor to countries in Latin America, Asia, Europe, Middle East, and Northern Africa on the adaptation and translation of performance tasks into multiple languages.

ACADEMIC APPOINTMENTS

- Professor, Graduate School of Education

Research & Scholarship

RESEARCH INTERESTS

- Assessment, Testing and Measurement
- Diversity and Identity
- International and Comparative Education
- Leadership and Organization
- Literacy and Language
- Standards

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Current research projects examine academic language and testing, formative assessment practices for culturally diverse science classrooms, and the design and use of illustrations in international test comparisons and in the testing of English language learners.

Teaching

COURSES

2022-23

- Introduction to Data Analysis and Interpretation: EDUC 200A (Aut)
- Language Issues in Educational Research and Practice: EDUC 223 (Spr)
- Proseminar 3: EDUC 325C (Spr)
- Using International Test Results in Educational Research: EDUC 203 (Win)

2021-22

- Introduction to Data Analysis and Interpretation: EDUC 200A (Aut)
- Language Issues in Educational Research and Practice: EDUC 223 (Spr)
- Proseminar 3: EDUC 325C (Spr)
- Using International Test Results in Educational Research: EDUC 203 (Win)

2020-21

- Foundational Course in Testing: EDUC 142 (Win)
- Proseminar 3: EDUC 325C (Spr)
- Re-Examining Special Education through Multiple Lenses: EDUC 440 (Win)

2019-20

- Foundational Course in Testing: EDUC 142 (Win)
- Using International Test Results in Educational Research: EDUC 203 (Win)

STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Hsiaolin Hsieh

Master's Program Advisor

Maho Kohga, Hongjiao Li, Maria Popo

Doctoral (Program)

Hsiaolin Hsieh, Roza Nalbandyan, Julian Siebert

Publications

PUBLICATIONS

- **Long-term English learners' mathematics course trajectories: downstream consequences of early remediation on college preparation** *International Multilingual Research Journal*
Biernacki, P. J., Altavilla, J., Kanopka, K., Hsieh, H., Solano-Flores, G.
2022
- **Academic achievement in a language revitalisation context: a study on the influence of language and socioeconomic factors** *JOURNAL OF MULTILINGUAL AND MULTICULTURAL DEVELOPMENT*
Altavilla, J., Elosua, P., Solano-Flores, G.
2021
- **Testing across languages in international comparisons: cultural adaptation of consensus-based test translation review procedures** *JOURNAL OF MULTILINGUAL AND MULTICULTURAL DEVELOPMENT*

Zhao, X., Solano-Flores, G.
2020

- **Boolean Analysis of Interobserver Agreement: Formal and Functional Evidence Sampling in Complex Coding Endeavors** *EDUCATIONAL MEASUREMENT-ISSUES AND PRACTICE*
Solano-Flores, G.
2020
- **Design and use of pop-up illustration glossaries as accessibility resources for second language learners in computer-administered tests in a large-scale assessment system** *INTERNATIONAL MULTILINGUAL RESEARCH JOURNAL*
Solano-Flores, G., Chia, M., Kachchaf, R.
2019; 13 (4): 277-93
- **International Test Comparisons: Reviewing Translation Error in Different Source Language-Target Language Combinations** *INTERNATIONAL MULTILINGUAL RESEARCH JOURNAL*
Zhao, X., Solano-Flores, G., Qian, M.
2018; 12 (1): 17-27
- **International Test Comparisons: Reviewing Translation Error in Different Source Language-Target Language Combinations** *International Multilingual Research Journal*
Zhao, X., Solano-Flores, G., Qian, M.
2018; 12 (1): 17-27
- **International semiotics: Item difficulty and the complexity of science item illustrations in the PISA-2009 international test comparison** *International Journal of Testing*
Solano-Flores, G., Wang, C., Shade, C.
2016; 16 (3): 205-219
- **Assessment capacity, cultural validity and consequential validity in PISA** *RELIEVE*
Solano-Flores, G., Milbourn, T.
2016; 22: M12
- **Language shift and the inclusion of indigenous populations in large-scale assessment programs** *International Journal of Testing*
Solano-Flores, G., Backhoff, E., Contreras-Niño, L. A., Vázquez-Muñoz, M.
2015; 15 (2): 136-152
- **Complexity of Illustrations in PISA 2009 Science Items and Its Relationship to the Performance of Students from Shanghai-China, the United States, and Mexico.** *Teachers College Record*
Solano-Flores, G., Wang, C.
2015; 117 (1): n1
- **The effects of content, format, and inquiry level on science performance assessment scores** *APPLIED MEASUREMENT IN EDUCATION*
Stecher, B. M., Klein, S. P., Solano-Flores, G., McCaffrey, D., Robyn, A., SHAVELSON, R. J., HAERTEL, E.
2000; 13 (2): 139-160
- **On the development and evaluation of a shell for generating science performance assessments** *INTERNATIONAL JOURNAL OF SCIENCE EDUCATION*
Solano-Flores, G., Jovanovic, J., SHAVELSON, R. J., Bachman, M.
1999; 21 (3): 293-315
- **Toward a science performance assessment technology** *7th EARLI Conference*
SHAVELSON, R. J., Solano-Flores, G., Ruiz-Primo, M. A.
PERGAMON-ELSEVIER SCIENCE LTD.1998: 171-84
- **Gender and racial/ethnic differences on performance assessments in science** *EDUCATIONAL EVALUATION AND POLICY ANALYSIS*
Klein, S. P., Jovanovic, J., Stecher, B. M., McCaffrey, D., SHAVELSON, R. J., HAERTEL, E., SOLANOFLORES, G., Comfort, K.
1997; 19 (2): 83-97