

**THE MEASUREMENT, EVALUATION, STATISTICS, AND ASSESSMENT  
DEPARTMENT**

Invite you to Attend the Final, Public Dissertation Defense for:

**Shiya Yi**

Titled:

**ADULT EDUCATION AND FULL-TIME PROFESSIONALS' PROBLEM SOLVING  
SKILLS: INSIGHTS FROM THE SURVEY OF ADULT SKILLS**

The defense will be held on

**Monday, March 9th at 4 PM**

in

**Campion 329**

Dissertation Committee:

**Dr. Henry Braun (Chair), Dr. Laura O'Dwyer (reader), Dr. Michael Martin  
(reader), Dr. Irwin Kirsch (reader)**

Abstract:

Sponsored by OECD, PIAAC represents the first attempt to assess problem solving proficiencies in technology environments (PS-TRE) on an international scale that are comparable cross-culturally and cross-nationally. The objectives of this study are to understand (1) the distributions of PS-TRE proficiency scores across 14 selected countries and (2) within each country, the association between PS-TRE proficiency scores and the different formats of adult education and training (AET) participation. Using data of full-time professionals (at least 25 years old) from these countries, propensity score methods were applied to estimate the association between the different formats of AET participation and their PS-TRE proficiency scores. To test the robustness of the estimates, parallel analyses were conducted – one with the sample of full-time associates in the 14 selected countries and the other with full-time professionals' Literacy and Numeracy proficiency scores.

The results showed that countries differed considerably in the relationships between the different formats of AET participation and PS-TRE proficiency scores. In Denmark, both formats of AET participation (vs. None) is significantly and positively associated with full-time professionals' PS-TRE proficiency scores and their probability of scoring in the top quartile of the PS-TRE distribution ( $p < .01$ ). For Danish full-time associates, participating in Formal or Non-formal AET programs (v.s. None) is also significantly and positively associated with their probabilities of scoring in the top quartile of the PS-TRE score distribution ( $p < .01$ ).

In the United States, full-time associates who participated in Formal AET programs are estimated to score significantly higher than non-participants with similar propensity scores for Formal AET participation and Non-formal AET participants with similar propensity scores for Non-formal AET participation ( $p < .01$ ). What is more, the probabilities of scoring in the top quartile of the PS-TRE score distribution for Formal AET participants are significantly higher than Non-formal AET participants with similar propensity scores for Non-formal AET participation ( $p < .01$ ). By contrast, there is no significant relationship between AET participation (either Formal or Non-formal) and full-time professionals' PS-TRE proficiency in the United States. The same lack of significant results at the .01 level was also observed between AET participation (either Formal or Non-formal) and full-time professionals' Literacy and Numeracy proficiency.