



ADULT LITERACY
RESEARCH CENTER

Writing Behaviors Relation to Literacy and Problem Solving in Technology Rich Environments: Results from the 2012 and 2014 U.S. PIAAC Study

IRIS FEINBERG, ELIZABETH L. TIGHE, AMANI TALWAR, & DAPHNE GREENBERG
ADULT LITERACY RESEARCH CENTER
GEORGIA STATE UNIVERSITY

AIR PIAAC RESEARCH-TO-PRACTICE CONFERENCE
DECEMBER 6, 2018

ACKNOWLEDGEMENT: AMERICAN INSTITUTES FOR RESEARCH (AIR) AND NATIONAL CENTER FOR EDUCATION STATISTICS (NCES) FOR THEIR GENEROUS FUNDING AND SUPPORT OF THIS PROJECT



Purpose

To examine the relations between **reading and writing behaviors at home and at work** for **lower- and higher-skilled** adults in PIAAC **Literacy** and **Problem-Solving in Technology Rich Environments (PSTRE)** domains

- Overall Reading and Writing Indices
- Functional Writing Behaviors (writing letters, emails, or memos and filling in forms)
- Differences by key demographics (native language status, age, race, job category)





Importance of Writing

Writing is a fundamental skill for adults to function in society

- Job Applications, Resume
- Education including passing the high school equivalency test

Studies with children suggest a strong relation between reading and writing skills.

Little is known about daily functional reading and writing behaviors that adults engage in (e.g., filling in a form, reading directions, writing emails).





Why Focus on Writing?

Writing is a vehicle for learning

Meta-analysis across domains: writing-to-learn tasks resulted in academic achievement gains

Institutions of higher education have recognized importance of writing in academic and professional settings

- Prevalence of remedial programs to address writing gaps
- Writing centers and individualized writing assistance
- Course development with a discipline-specific writing competency component



Writing and Digital Environments

With technological advances, and the shift toward functional writing behaviors (emails, filling in forms) moving to online platforms, it is also important to understand the relations between writing and digital technologies.

Among studies with children and adolescents (ages 7-16), greater engagement with social media and blogs leads to increased writing frequency.

Currently no evidence of a link between PSTRE and writing behaviors for adults



Our Questions

What are the relations among the writing behavior indices (home/work) and the reading behavior indices (home/work) for the general population of working adults (ages 16-74) as well as low-skilled adults in Literacy?

Do the relations of functional writing behaviors (e.g., writing letters, emails or memos) vary by demographic characteristics for adults with lower and higher Literacy and PSTRE skills?

Are reading behaviors, Literacy and PSTRE predictive of writing behaviors at home/at work for adults? Is the reading behavior/writing behavior relation moderated by Literacy level?





Method

Writing Indices

- Continuous Index derived from individuals' responses to writing activities both at home and at work
- Functional writing questions:
 - Writing letters, emails, or memos
 - Filling in forms
- Five frequency responses:
 - Never
 - Less than Once a Month
 - Less Than Once a Week, but More than Once a Month
 - At least Once a Week but Not Every Day
 - Every Day



Literacy and PSTRE Levels

LITERACY (Above /Below 276)

- Low Skilled (Below Level 3)
- Higher Skilled (Level 3 and Above)

PSTRE (Above/Below 291)

- Low Skilled (Below Level 2)
- Higher Skilled (Level 2 and Above)





Background Demographics

Native Language

Age (10-Year Bands)

Race

Job Category

- Skilled Occupations
- Semi-Skilled White Collar Occupations
- Semi-Skilled Blue Collar Occupations
- Elementary Occupations



ADULT LITERACY
RESEARCH CENTER



Reading & Writing Indices: All Adults/**Low-Literacy Adults**

Correlations Between Overall Reading and Writing Indices

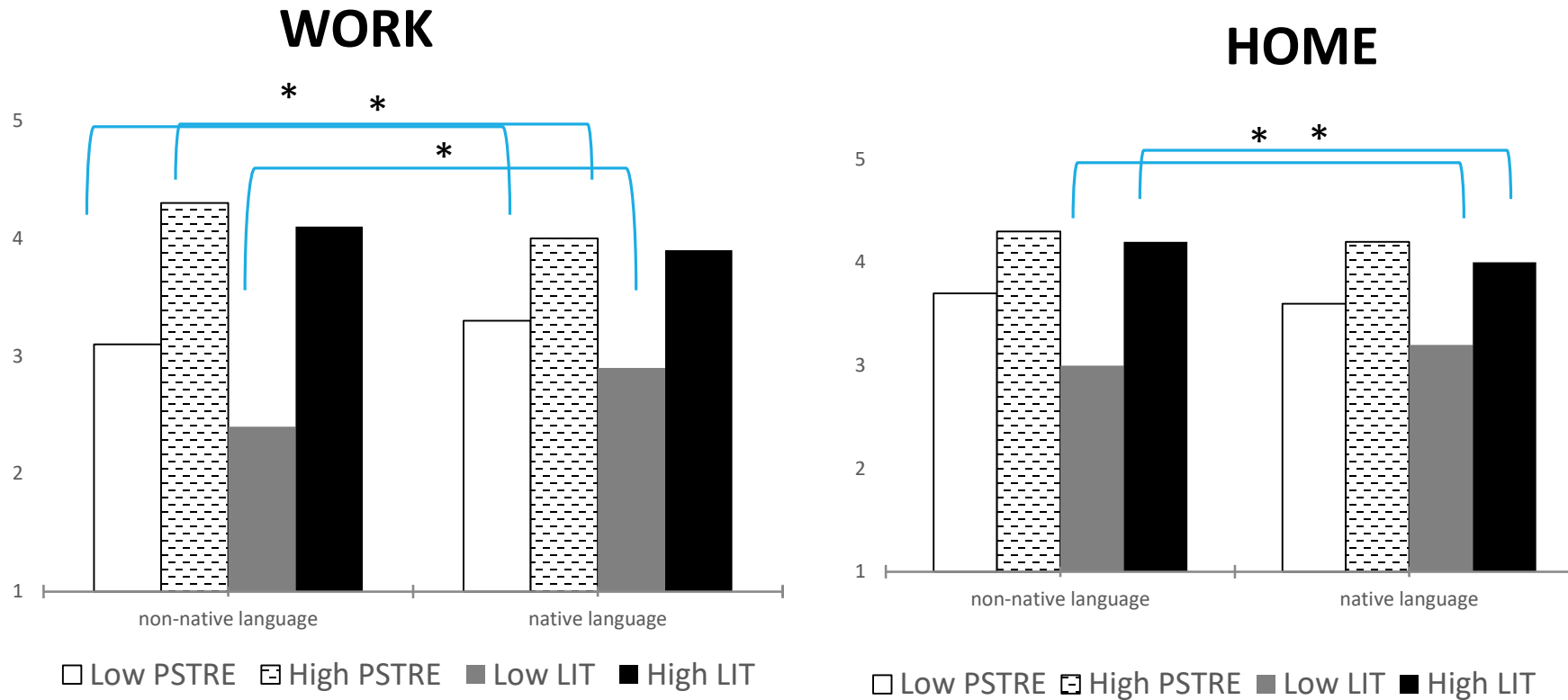
	Writing at Home	Writing at Work	Reading at Work	Reading at Home
Writing at Home	1	.18* / .18*	.19* / .20*	.44* / .42*
Writing at Work		1	.50* / .50*	.19* / .22*
Reading at Work			1	.37* / .41*
Reading at Home				1

* statistically significant, $p < .05$



Functional Skills: Native Language

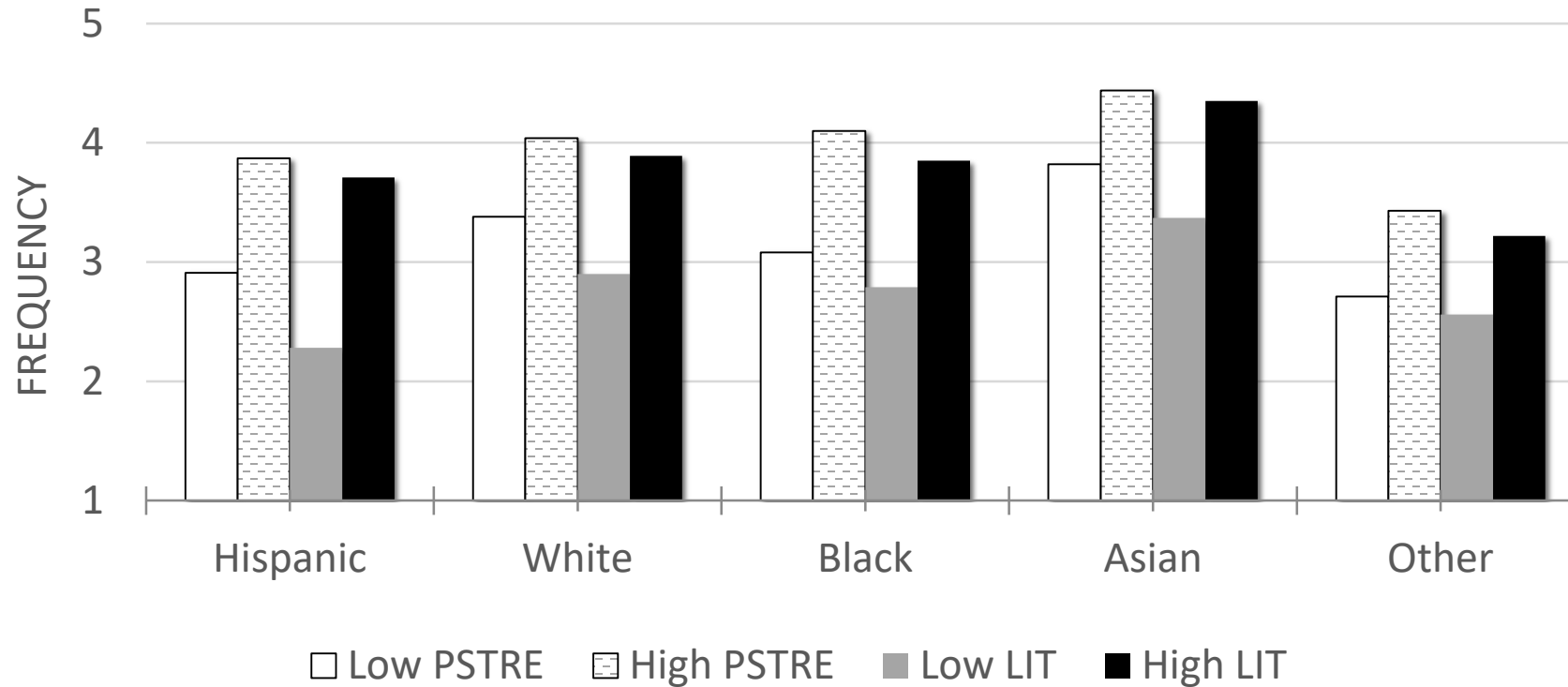
Writing Letters, Emails, or Memos





Functional Skills: Race

Writing Letters, Emails, or Memos at Work





Predicting Writing Behavior Indices at Home/Work

Predictor	Beta (Home)	Beta (Work)
Literacy	.06	-.06
PSTRE	.11*	.13*
Reading at Home	.43*	.00
Reading at Work	.01	.51*

These 4 variables accounted for 23% of the variance of writing behaviors at home and 27% of the variance of writing behaviors at work.





Conclusions

Relations exist between reading and writing behaviors at home and at work for working adults and for low-skilled adults in Literacy.

Important differences noted among groups on writing letters, emails, or memos at work

- Differences within and between low- and high-skilled native and non-native speakers (Lit and PSTRE)
- Across all racial categories and age bands, low-skilled adults reported lower frequencies

PSTRE and Reading Behaviors are predictive of Writing Behaviors





Policy/Practice Implications

Strengthening reading and writing skills together in adult education may help improve academic outcomes.

Improving low-skilled adults' writing behaviors may help them achieve stronger economic outcomes.

Developing technology as tools for writing instruction can help adults at varying Literacy and PSTRE levels increase their academic and workplace skills.





CONTACT

Iris Feinberg, PhD
Associate Director
Adult Literacy Research Center
Georgia State University
ifeinberg2@gsu.edu
404-394-8333



ADULT LITERACY
RESEARCH CENTER