

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

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Introduction: This study focuses broadly on the relations of writing behaviors at home and at work to adults' performance on the Literacy and Problem Solving in Technology Rich Environments (PSTRE) domains. In particular, we addressed three aims: (1) understanding the relations among writing and reading behaviors at home and at work for the overall population and for low-skilled adults, (2) exploring potential differences in functional writing behaviors (e.g., writing emails) by demographic characteristics (e.g., race) for adults with lower and higher skills, and (3) examining the relations of reading behaviors, Literacy, and PSTRE to writing behaviors at home and at work for the overall population.

Reading and writing are fundamental skills for adults to function in society. Research with children suggests a strong relation between reading and writing skills; however, very little is known about the functional reading and writing behaviors that adults engage in (e.g., filling in a form, reading directions, writing emails). A recent meta-analysis reports that engaging in writing-to-learn tasks that are impromptu and help students think through key ideas results in academic achievement gains, and that institutions of higher education also recognize the importance of writing in academic and professional settings. With technological advances and the shift to writing moving to online platforms, it is important to also understand the relations between writing and digital technologies. Data shows that reading and writing are correlated for children; our study further shows that this may also be true for adults, in particular, when reading and writing are within the same context such as writing and reading at work.

Findings: Our findings for Aim 1 indicate that there are positive relationships between reading and writing behaviors at home and at work; and that these relationships are of similar magnitudes for the overall population and adults with low literacy skills. In particular, reading and writing behaviors at work exhibited the strongest correlation. Our findings for Aim 2 suggest some important differences among demographic characteristics and among proficiency groups in reported frequencies of writing behaviors at home and at work. Broadly, there were many differences in writing frequencies between low-skilled and high-skilled adults (Literacy and PSTRE) by age, race, native language status, and job categories, with higher-skilled adults always reporting more frequent writing engagement. More specifically, within the low-skilled Literacy group, adults who were non-native English Speakers or who identified as Hispanic reported the lowest frequencies of writing behaviors. Our findings for Aim 3 reveal that PSTRE and reading behaviors at home were most predictive of writing behaviors at home for the overall population. Similarly, PSTRE and reading behaviors at work were most predictive of writing behaviors at work.

Policy Implications: There is a relationship between reading and writing behaviors on the job and at home on the same task, thus strengthening reading and writing skills simultaneously in adult education classrooms may help low-skilled adults improve literacy outcomes. Those in higher skilled occupations write more frequently; improving low-skilled adults' writing behaviors may help them achieve stronger economic outcomes. Digital technology continues to replace pencil and paper; developing technology as tools for writing instruction can help adults at varying literacy and PSTRE levels increase their academic and workplace skills.