

Abstract

This study's objectives are to examine the strengths of the relationships between "informal education" (comprised of the four variables "open or distance learning," "on-the-job training," "participation in private lessons," or "seminar participation) and achievements in three competencies (literacy, numeracy, and problem-solving in a digital environment (digital) both among natives and immigrants adults. The relationships are analyzed in a comparative study of 13 OECD countries using data from the PIAAC Survey. The quantitative research method includes a "multi-level models" regression analysis, both at the individual and country levels, presenting the results achieved by natives and immigrants. The research hypotheses are that positive relationships between informal studies and the three competencies will be found. The study further hypothesizes that differences will be found in the relationships between informal studies and performance by natives compared to immigrants so that the natives' achievements will be higher than the immigrants'. The research findings affirm these hypotheses.

The relationships between informal education and the accomplishments in literacy, numeracy, and digital, both at the individual and country level, are positive at a statistically significant level. Another primary finding is that the strengths of the relationships are higher among natives when compared to immigrants. Additionally, the study found that the natives' achievements are higher when compared to the immigrants' in every country and each of the examined competencies. The multi-level model explains the source of the differences in achievement in each of the three competencies. A significant percentage of the variance in accomplishments is derived from the variance between the countries, which is caused, for example, by cultural differences between countries, differences in investment in informal education between countries, socio-demographic differences, and others.

The study's contribution has two anchors that add to the existing literature about informal education and achievements. The first anchor is the examination of the relationships between informal education and digital competency. While the current literature looks at the relationships between informal education and literacy and numeracy, this study also examines another relationship – between informal education and digital. The second anchor is the international comparison. This study compares 13 countries. While the research examining these relationships focuses on intrastate differences (Annen, 2019), this study compares the countries. The countries selected to participate in the study are defined as "developed countries" with high immigration rates relative to the OECD, following the Comparative International Education Research Theory, and are comparable countries. The multi-level model layers the achievements into an individual-level achievements layer and a country-level achievements layer. By layering the model, one can answer what causes the differences in achievements.

The consequences for the countries that follow from these findings are that they should provide a more comprehensive solution to improve the skills and competencies of adults in the labor force by expanding informal education opportunities. Thus, the countries will create a system of informal training that will increase productivity, production capacity, and boost their competitiveness in the global economy. Moreover, taking an intrastate view, raising the number of informal education possibilities will improve the country's human capital, reduce educational gaps, and decrease intrastate economic and social gaps both among natives and between natives and immigrants. The immigration policy should consider that immigrants' average competency level is lower than the natives' average level. An informal-education solution should be provided in the immigrants' native language. Additionally, the immigrants' cultural customs should be considered in order to train immigrant instructors who will serve as the backbone of informal education training for immigrants.