Cybernetic Illiteracy: A New Dimension of Social Inequality in Latin America

by

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ABSTRACT

According to the Organization for Economic Co-operation and Development (OECD) the Internet is rapidly becoming a key ingredient in our economic infrastructure – akin to electricity and roads – as well as our social structures. As Latin America seeks to establish itself as a significant and important region in the global economic system, it is important to understand and help avoid an unequal diffusion of this new electronic medium or risk deepening the existing social inequalities within the various segments of its population.

In 2000, ten percent or less of households in Mexico, Belize, and Panama report having a computer, while Argentina, Chile, and Costa Rica all report higher levels of computer and Internet adoption. Using the 2005 Mexican National Study of Adolescence and census data from each of these countries we will investigate the diffusion of computer and Internet use among youth aged 12-29. In Mexico, we find that among this population approximately 31% report having a computer at home, but only 21% report having Internet at home. Of those that have ever attended school, 62% of them report being exposed to a computer in that setting, while only 46% of this same group reports being exposed to Internet in the classroom.

Using a series of logistic and fixed-effects regression models we examine these differences and others. More specifically, we will focus on estimating the probability of having a computer and the Internet at home in relation to associated independent variables and when the data permit we will explore the differences in usage at home and at school among young people age 12-29 focusing on gender and age differences.

EXTENDED ABSTRACT

Introduction

According to the Organization for Economic Co-operation and Development (OECD) the Internet is rapidly becoming a key ingredient in our economic infrastructure – akin to electricity and roads – as well as our social structures. And its significance is poised to dramatically increase as we usher in a new information era enabling global digital exchange of information and views. Electronic commerce is expected to be a central element in our networked world for sustainable economic growth, more and better jobs, expanding world trade, and improved social conditions. As Latin America seeks to establish itself as a significant and important region in the global economic system, it is important to better understand and thus help avoid an unequal diffusion of this new electronic medium or risk deepening the existing social inequalities.

Having a computer in the home is likely to benefit most, if not all, of the household members. Among adults, a computer at home provides an opportunity to develop skills that can improve employability (Noble 1984), especially for older adults who completed their schooling before computers were incorporated into the school curriculum. In the case of children, previous research suggests that the presence of a computer in the home affects how likely they are to use computers at school and what their attitudes will be towards computers in the future (Chambers and Clarke 1987).

This notion of an accumulative computing effect is corroborated by Edward McQuarrie (1985), who suggests that commitment to future computing is often a result of the value placed on computing and the momentum that accumulates from previous computing behavior. As noted by Douglas Noble (1984) and more recently Alan Krueger (2000), computer access and thus computer literacy are important not because being knowledgeable about computers necessarily

leads to higher wages, but because computer literacy has become another qualification by which employers assess employability. Thus, in an effort to be truly an "information society," one that includes *all* of society and not just certain groups, it is important to understand why these observed disparities exist.

In 2000, ten percent or less of households in Mexico, Belize, and Panama report having a computer, while Argentina, Chile, and Costa Rica all report higher levels of computer and Internet adoption. Using the Mexican 2005 National Study of Adolescence and census data from each of these countries we will investigate the diffusion of computer and Internet usage among youth aged 12-29. In Mexico for example, we find that among its population approximately 31% report having a computer at home, but only 21% report having Internet at home. Of those that have ever attended school, 62% of them report being exposed to a computer in that setting, while only 46% of this same group reports being exposed to Internet in the classroom.

Gender, age, and current school enrollment are also important stratifiers by which to understand the differences in computer and Internet usage. Among the Mexican youth, approximately 35% of young men report having a computer at home compared to 27% of young women. By age, the highest percentage of households with computers (40%) is found for young men aged 20-24, while for women (31%) is found among a younger age group, 15-19 years of age. Moreover, approximately 40% of those currently enrolled in school report having a computer at home compared to only 23% of those not currently enrolled. These differences are further exacerbated when we look at them by age and gender; in particular young men are much more likely than similarly positioned women to report having a computer at home.

Computer ownership also appears to vary significantly by metropolitan area – again focusing on Mexico approximately 47% of the youth in the three most important Mexican metropolitan areas report having a computer, while only 25.9% outside of these areas report having a computer. More specifically, nearly 50% (49.8%) of young people in Mexico City, 42.7% in Guadalajara, and 42.6% in Monterey 42.6%, aged 12-29, report having a computer at home.

Data & Methods

Using a series of logistic and fixed-effects regression models we examine these differences and others. We focus on estimating the probability of having a computer and the Internet at home in relation associated independent variables and when the data permit we explore the differences in usage at home and at school among young people age 12-29 focusing on gender and age differences.

By using the 2005 National Study of Adolescence as our frame of reference, we are able to investigate the diffusion of computer and Internet access and usage among a very important generation of Mexican youth. This generation, born between 1976 and 1993 is an important group to study because for this age group both the personal computer and the Internet have been available for most, if not all, of their years of schooling. Similarly, we will take the censuses from Belize, Panama, Argentina, Chile, and Costa Rica and explore these same relationships among this age group.

Expected Findings

At this point very little is known about computer and Internet access and usage in Mexico and the other Latinoamerican countries (Curry and Kenney 2006), thus our work is mostly

exploratory in nature. However, based on previous research, mostly from outside of the Latin American context, we expect to find significant differences in both computer and Internet access and usage to be associated with age, gender, school enrollment, SES, and metropolitan area. These findings, however exploratory, are an important set of indicators to establish as Latin America as a region contends with its cybernetic presence, or lack thereof, in the global economy. Given the relatively young age structure of this region, it is important that this form of inequality be recognized as an important factor in any conversation and effort to combat poverty and improve education.

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