PimpmyUSB

Computer education and cultural capital in a Central American shantytown

Keywords: technology, education, culture, migration, cultural capital, technodispositions

Abstract:

It is a challenge to provide quality computer education equally across all sectors of an increasingly diversified society. In the immigrant shantytown of La Carpio, Costa Rica's largest binational community where this research was conducted, new communications technologies connect this socially and geographically peripheral community to the core. On one hand, this empowered students to resist and re-author the roles that society had prescribed for them. Conversely, the hidden curriculum in computer classes and negative cultural capital threatened to reproduce and perpetuate class inequalities in which the students were embedded.

Author: Brendan Blowers

Date: February 8, 2014

Presentation Date/Time: SfAA 2014 Meeting: Studies in Technology, Equality, and

Power. Sat, March 22 – 3:30-5:20

[SLIDE 1 – INTRODUCTION]

[SLIDE 2 – COMPUTER LITERACY AS CULTURAL CAPITAL]

Introduction:

"PimpmyUSB" is a program that allows a user to "pimp out" (personalize) the appearance of the files and folders on a flash drive by customizing the icons and backgrounds. In a youth club at a Costa Rican shantytown where this research was conducted, the "PimpmyUSB" program was a favorite of one of the main computer lab supervisors from the community. When the principal researcher asked why the supervisor installed this program on all his USB flash drives, he responded –*para que otras personas se queden picadas* – a colloquial expression meaning "so other people are so impressed they're jealous."

Observing the role of technological education in one of the country's most infamous slums helped connect it with the unique social and cultural context in which the effects of modernization were being lived out. The use of the program "PimpmyUSB," for example, revealed interesting insights about the symbolic significance of technology in the slum. It was clear from many students' tastes and interests that technology gave them new ways to distinguish themselves socially in their community – in part because of the knowledge capital they developed, and in part because of the special access they had to commercialized entertainment.

[SLIDE 3 – EDUCATION AS PART OF A SOCIAL AND CULTURAL CONTEXT]

In order to look more closely at the observable material reality of the service sector that exists behind the technological layer of today's global cities, this research

project studied the role of educational technology in *La Carpio*, one of Costa Rica's most notoriously dangerous *barrios* and the country's largest binational community that sprang up in the most recent surge of immigration from Nicaragua during the 1990s. It was part of a practicum that, while seeking to actively address the issue of educational inequality for Nicaraguan immigrant children, also sought to better understand the material, social, and symbolic role that technology and education played in the community. The reality of educational challenges in an informal settlement like La Carpio had to be understood holistically, meshed within the political, social, and cultural fabric of Costa Rican life, which has a strengthening link with Nicaraguan immigrants from the north and new communications technologies on the global market.

Context of work

Researchers studying computer classes in the United States have identified the importance of defining computer literacy (familiarity and competence on a computerized machine) "as cultural capital in order to examine the broader issue of educating children to live in an increasingly technological environment" (Emihovich 1990:228). Students learning computer literacy in a classroom context are being taught how to use those computer skills in the labor market for self-expression, communication with others, and in order to get access to information that will benefit them. As a form of cultural capital, computer literacy can be understood educationally in terms of power and resource distribution. Less affluent school districts are at a disadvantage in the distribution of computers in the classroom, and

even where computer instruction is available in less advantaged districts, "use of computers does not prepare the user to understand computers or use them independently" (Jungck 1987:476).

Serious concerns have been raised about the role of technological modernization in developing countries (Everett 1998). Critiques of development seek to identify ways that Internet connectivity and access to technology actually create dependence in nations struggling to meet basic social needs, and these perspectives suggest that these same modernization advances may serve to further exacerbate inequalities and augment unequal growth. It may be that technology is simply replicating deeply entrenched practices of injustice and inequality.

In Costa Rica these issues are currently of great importance. The country faces problems with an increasingly divided labor market and an educational system that continues to fuel a socioeconomic divide. Added to this are problems of unequal technology access. Issues of poverty and unequal access to social services are closely related to Nicaraguan immigration, which peaked in the '90s and leveled off at about 300,000 by 2005 (Marquette 2006:2). 30% of Nicaraguan families in Costa Rica live below the poverty line, compared to 20% of Costa Rican families (12). In Costa Rica, quality in education varies significantly according to socioeconomic class, and public schools "are so bad that upper- and upper-middle-class parents wouldn't dream of sending their children there" (Biesanz 1999:211). The quality and availability of education for immigrant children is of particular concern. In an executive summary of a report prepared for the World Bank in 2006, one of the author's conclusions is that "education is… a more critical area of concern

than health in terms of improving [Nicaraguan immigrants'] social service access and ultimately economic and poverty outcomes" (Marquette 2006:11).

[SLIDE 5 – COMPUTER USE]

Internet connectivity is still a novelty in La Carpio, the owner of one of the community's three Internet cafés said. The Internet café owner also teaches computer classes in the primary school across the street. The school has had computers for 10 years, he said, but Internet just arrived in the past six months [Interview, 11/9/2011]. His comment was consistent with observations in the computer classes where the principal researcher taught at the *Nuevos Horizontes* supplemental educational program. By installing time tracking software on the computers in the lab, statistics indicated that 57% of computer use time was spent on the Internet. Of that Internet time, the largest chunk was spent on gaming, followed by Facebook and then Youtube. Classes in 3D programming with an educational program called StarLogo TNG occupied 25% of their time. Entertainment in the form of gaming and music/videos (on Youtube) accounted for 32% of the total. Facebook accounted for 10% of the total time. In the computer lab, then, educational use (25%) sat below entertainment (32%) but above social networking sites (10%).

Schools and supplementary technology classes can help compensate for the gap in cultural transmission of important competencies related to the use of information and communications technologies. Ideally, formal education can be used as a calculated intervention to help fill that gap. It is not sufficient, however, to

simply offer computer classes in technical competencies without also consciously addressing the implicit curriculum that is being taught.

[SLIDE 6 – BRICOLEUR VS ENGINEER]

The two tracks in computer classes

By showing how computer literacy can be understood as a form of cultural capital, and how computer curriculum is taught differently to different groups of students, Emihovich (1990) and Jungck (1987; 1990) show how the hidden curriculum in computer classes sets up students for predetermined futures in designated labor markets based on the way they are taught to relate with technology. That is, what are learned in computer classes are not just explicit techniques of using computers and software, but also implicit cultural lessons on how one ought to relate to computer technology. Jungck (1990:288) describes how "curriculum that prepares students to fit, without questioning, into what is perceived to be a determined labor market limits the options, expectations, and possibilities for technological and social influence, particularly for certain students."

The informal settlement where the research was conducted had no local high school and a deficiently resourced primary school. Thus, the main strategy for the computer classes was to compensate for inadequate computer training the students received in public schools in order to prepare them for employment. The goal was to equip students to learn skills important in the labor market, mainly in secretarial positions using word processing and spreadsheet software or as computer repair technicians. Thus, they were being socialized to become competent *users* and *fixers* of the technologies but not *controllers, programmers,* or *decision makers.* In other

words, they were being trained to be subservient in relation to technology rather than engineers of technology.

Targeting computer classes completely towards the labor market fails to address a number of important educational objectives. Specifically, students do not learn knowledge that is transferable or applicable, they do not learn how to control or guide their own learning, and they do not engage in diverse forms of cognitive processing. Many of the computer skills learned are not applicable in their homes and neighborhoods. What they learn is designed to be utilized (and/or exploited) by someone else, not used in creative ways for projects in which they have ownership. Consequently, the topic is boring and tedious, and personal motivation is low. In addition, there is very little "take-away" from class lessons that they can use immediately in the home.

It might be assumed that a computer lab project can be successful by simply equipping a computer lab with computers and teaching students typing, word processing, and spreadsheet skills. This is not the case. The importance of considering socioeconomic factors and cognitive learning processes relating to "successful intelligence" as described by Sternberg (2002) show that stronger impact can be made by incorporating more diverse teaching strategies. Students must be taught not just how to operate computers and how to internalize CAI (computer aided instruction), but more importantly, how to relate with technology as a subservient tool or an instrument for engineering or creativity. Instead of leaving it up to the computer to teach them, they must understand how they control the computer.

[SLIDE 7 – CONCLUSIONS]

Concluding Remarks

The research project successfully elucidated insights into technology use in the peripheral parts of a Costa Rican global city facing a recent surge in immigration, while simultaneously actively seeking to address issues of unequal educational opportunities in computer literacy, a key area of cultural capital. The method of ethnographic immersion shed insight into what factors affected school attendance for students, and the use of continuous monitoring (by way of time tracking software on the computers) helped reveal quantitatively how the computers in the *Nuevos Horizontes* classroom were being used.

In places like the La Carpio informal settlement, formal education plays an important role in compensating for under resourced communities and a gap in cultural transmission. In addition, fitting computer classes appropriately into the social reality of immigrant students is important in order to adequately address the unique challenges facing them and their families.

Works Cited

Biesanz, Mavis Hiltunen, Richard Biesanz, and Karen Zubris Biesanz
1999 The Ticos: culture and social change in Costa Rica. London, Lynne Rienner Publishers, Inc.

Emihovich, Catherine
1990 Technocentrism Revisited: Computer Literacy as Cultural Capital. Theory into Practice, 19(4): 227-234.

Everett, Margaret
1998 Latin America On-Line: The Internet, Development, and Democratization. Human Organization, 57(4): 385-393.

Jungck, Susan
1987 Computer Literacy in Practice: Curricula, Contradictions, and Context. *In* Interpretive ethnography of education: At home and abroad. Spindler, George and Louise Spindler, eds. Pp. 475-493. Hillsdale, NJ: Eribaum.
1990 Viewing Computer Literacy Through a Critical, Ethnographic Lens. Theory into Practice, 19(4): 283-289.

Marquette, Catherine M.
2006 Nicaraguan Migrants in Costa Rica. Población y Salud en Mesoamérica 4(1).