Title: Home Environments and the Development of Online Skills: Variations in Skills and Outcomes of Technology Usage among Latino Youth.*

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Abstract

This study examines how five Latino youths used digital technology at home for developing new media skills and gaining social, cultural, and economic capital. The analysis focuses on two dimensions of the home environment: parenting styles and technology infrastructure. By analyzing the characteristics of those dimensions, I reveal how variations in new media skills and outcomes of technology usage, were shaped by social stratification. Although research on digital inequalities has traditionally looked at gaps in access to technology, and more recently at the disparities in skills, this study also considers differences in capital enhancing activities. Resources available at the home environment, particularly in terms of social support, allow youth to develop robust new media skills and improve the outcomes of technology usage. I draw on qualitative data that I helped collect during an ethnographic study conducted at a large, minority-majority, public school in Austin, Texas.

Keywords
New media skills, home environments, digital inequality, latino youth, working class, immigrants.

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1. **Introduction**

Quantitative studies indicate that Latino youth in the United States are increasingly connected to the Internet, and are avid users of new media technologies. As the digital divide, at the level of material access to technology, has been narrowing in the past decade for Latino/Hispanics (Brown, Lopez, and Lopez, 2016), more households have gained Internet connectivity and computer power, and more youth have become owners of smartphones and mobile devices (Lenhart, 2015; Lopez, Gonzales-Barrera, and Patten, 2013). According to the "Teens, Social Media & Technology" report by the Pew Research Center, Latino youth (ages 13-17) are going online with greater frequency than white teens, and are active users of Facebook, Instagram, and Snapchat (Lenhart, 2015). In another study, developed by the Kaiser Family Foundation, researchers found that Latino youth are heavy consumers of entertainment, and are spending more time than their white and asian peers with each form of media (TV, movies, video games, music, computer, smartphone) except print (e.g., books, magazines) (Rideout, Foehr, and Roberts, 2010; Rideout, Lauricella, and Wartella, 2011).

Although recent qualitative studies have started to reveal the nuances of Latino youths' new media practices (Katz, 2010; Lee and Barron, 2015; Tripp, 2011; Tripp and Herr-Stephenson, 2009), little is known about the kind of new media skills they are developing, and the tangible outcomes of their digital technology use. These skills and outcomes are developed across specific contexts such as homes, schools, and local community spaces. The different social, technological, cultural, and economic resources youth can access and mobilize in these contexts shape the new media practices youth develop and their new media ecologies (Hargittai, 2010; Livingstone and Helsper, 2007; Seiter, 2008; Robinson, 2009; Watkins, 2012).

The case of Latino youth from working-class backgrounds in the U.S. offers a unique opportunity for understanding the variations in new media skills and outcomes of technology usage, and how they are related to structural social inequalities. These youth are part of the largest minority group in the country (Latinos/Hispanics became the largest minority in 2001) and are at the cusp of the United States' 21st century demographic shift. Latino youth are reshaping the face of public schools in the country and in states such as Texas and California, from 2010 on, they have become the majority of the K12 student population (Carr, 2016; Castro, 2013; Kane, 2010; Krogstad & Fry, 2014). Moreover, in the contemporary U.S. context, where

disparities in educational attainment, income, health, occupation, and technology have become pervasive, the Latino group systematically appears at the bottom of the scale.[1]

Based on ethnographic fieldwork conducted in an Austin, Texas public high school, in this article I present a study of five Latino youth with working class backgrounds, and try to understand how the context of the home shapes youths' new media practices.[2] My analysis focuses on how specific features of the home environment, such as parenting styles and technology infrastructure, influence youths' development of new media skills and the outcomes of technology usage, particularly in terms of earning cultural, social, and economic capital.

2. Understanding Home Environments

Youth engagement with new media technologies is distributed among multiple settings where they access technological, social, cultural, and economic resources (Barron, 2004, 2006; Barron, et al., 2009; Ito et al., 2010; Livingston, 2002). From the home to the school, to the community library, youth access digital tools and engage in media practices across multiple contexts. Each of those settings, according to an ecological and sociocultural framework (Bronfenbrenner, 1979; Tudge, 2008; Weisner, 2002), can be understood as an environment. That is, a particular setting where youth develop, socialize, and learn as they interact with a range of tools (e.g., language, technologies) and people (e.g., parents, peers, teachers). The various contexts of activity where youth interact constitute what Bridget Barron calls "learning ecology" (Barron, 2004, 2006).

The home environment represents the setting in where youth live. Sometimes also understood as the family context, this environment is composed by a series of features that, interacting in complex ways, influence youths' development and learning. Such factors include socio-economic facets such as parental income, social class, and level of education; cultural aspects of the family such as language spoken at home, literacy practices (e.g., parental reading to children, singing songs, playing games), ethnicity, and parenting styles; technological elements such as access to old and new media; and physical features such as the availability of dedicated spaces for communal and personal activities.

Home environments are diverse, vary in quality, and offer different kinds of opportunities to youth, including the possibility of interacting with technologies and developing new media skills. As several researchers have noted in their studies of parental roles and family dynamics in the U.S. and U.K., the home environment is crucial for the development of new media practices,

[1] For historical, cultural, and geographical reasons, the most popular destination states for Mexican immigrants are California and Texas. In these states they are the dominant group of the total hisopanic population. According to a Pew Hispanic Center report from 2016, Hispanics of Mexican origin constituted 87% of a total of the10,405,000 Hispanics living in Texas (Stepler and Lopez, 2016).

[2] This paper is based on the second chapter of my doctoral dissertation: "Networked and disconnected: Latino/Hispanic immigrant youths, digital media, and assimilation into the U.S" (2015).

technological fluencies, and skills (Barron, 2004, 2006; Barron, et al. 2009; Ito et al., 2010; Livingstone, 2002; Rideout and Katz, 2016; Takeuchi, 2011; Tripp and Herr-Stephenson, 2009; Tripp, 2011). Not only is the home environment one of the most important settings for accessing technology and engaging in new media practices, but it is also one of the main settings for accessing social support, cultural resources, and mentorship.

Although one can analyze home environments in relation to a wide array of factors, in this study I focus on domestic technological infrastructure and parenting styles. The domestic technological infrastructure, or home media ecology, refers to the quality and quantity of media technologies available at home. In contrast, parenting styles represent the practices and roles parents develop as they take care of their children and homes. Both conditions are shaped by socioeconomic status, and the cultural, economic, educational, and social resources parents have.

3. Parenting Styles

Similar to the research findings of scholars studying print literacy practices in the home environment, recent studies on children and youth offer empirical evidence about the influence of parents' practices and backgrounds on the development of new literacies and technological fluencies (Barron et al., 2009; Ito et al., 2010; Lee and Barron 2015; Livingstone and Sefton-Green, 2016; Plowman, McPake, and Stephen, 2008; Rideout and Katz, 2016; Tripp and Herr-Stephenson, 2009; Tripp, 2011). As parents provide technological resources, offer social support and mentorship, and participate in joint activities with their children, they support learning and the acquisition of new literacies at home.

Researchers have analyzed the different roles that parents play when supporting the development of technological fluencies among children. Plowman, McPake, and Stephen (2008) conducted twenty four case studies of families with low and high socioeconomic status in the UK. They found that by engaging in media activities in front of children, equipping the home with technology, and providing guidance to children in the form of media use, promoted interest in computing activities among preschool-aged children.

In their study of eight middle-class families in Northern California, Bridget Barron and her collaborators documented six different roles that parents play when supporting the development of children’s (12-13-years old) technological fluencies: (1) teachers, (2) collaborators on hands-on projects, (3) providers of nontechnical support, (4) brokers of learning opportunities, (5) providers of learning resources, and (6) employers of children to assist with technical projects (Barron et al. 2009). Many of these roles do not require parent technical expertise but rely on the ability to provide social support, spend time together, and offer opportunities for applying the new skills.

The different roles parents play in the development of youths' technological fluencies are shaped by parents' income, educational level, and occupation. As scholars researching family dynamics in the U.S. have argued, social class determines particular types of parenting styles (Lareau, 2003; Clark, 2013).

Sociologist Annette Lareau, in her seminal work *Unequal Childhoods* (2003), explained that parenting styles of working and middle-class U.S. families are different. While middle-class parents develop "concerted cultivation," working-class parents practice "accomplishment of natural growth" (Lareau, 2003). In the former, parents assume greater responsibility in structuring childhood activities and managing their time, and "deliberately try to stimulate their children's development and foster their cognitive and social skills" (Lareau, 2003, p. 5). In the latter, children are expected to grow up more naturally, without the constant monitoring and periodic intervention of parents, and are expected to independently navigate their relationships with institutions and peers.

Similarly, in her research of U.S. families and digital media use, media and communication scholar Lynn Schofield Clark identified two different types of parenting styles that were shaped by social class. According to her, middle and upper class families develop an "ethic of expressive empowerment" in which parents encourage media use for learning, expression and personal development, while discouraging media use that promotes distraction or time-wasting. In contrast, low income and working class families develop an "ethic of respectful connectedness" in which parents emphasize respectful, compliant, and family-focused use of media technologies (Clark, 2013).

The differences in parenting styles have implications for the kind of opportunities youth encounter across multiple dimensions of social life, as well as for the attitudes and dispositions that youth develop. Such disparities impact the reproduction of social inequalities. The "concerted cultivation" style of middle and upper class families in the U.S., as Lareu has argued, contribute to foster a "sense of entitlement" that give youth a position of "advantage" in society. Similarly, the "ethic of expressive empowerment" Clark describes supports attitudes such as competition and individualism that are valued by the mainstream U.S. society, and can help to situate youth in better positions of power.

4. Data and Methods

This study draws from qualitative data that I helped collect as a member of the Digital Edge, a three-year research project which aimed to understand Black and Latino youth media ecologies

and learning environments.[3] Our team consisted of six graduate students (research assistants) who spent time observing two technology elective classes and two after-school programs in a public high school, conducted home visits, and interviewed a total of 18 high school students, 15 parents, and two teachers.

Our research design relied on multiple qualitative methods that included classic ethnography, participant observation, informal and semi-structured interviews, focus groups, and action research. A qualitative approach was appropriate for examining young people's new media ecologies and their participation in digital media cultures. It allowed us to gain a nuanced understanding of the characteristics of the multiple technologies that youth access in specific contexts and their interconnection with their wider media ecologies. The qualitative approach also allowed us to examine how youth exercised their agency as they participated in digital media cultures and developed new media practices and skills.

One of the main qualitative methods used by the Digital Edge project was classical ethnography (Rubin and Rubin, 2005; Spradley, 1979). After establishing an initial rapport, we conducted semi-structured in-depth interviews with students, teachers, and parents during the academic year (2011-2012) and follow-up interviews with 10 from this pool the following two years (2012-2014). During the academic year we also conducted participant observation of two elective technology classes (Video Game Design, and Technology Applications), and one after-school program (Digital Media Club), and visited students' homes.

Our goal was to document the nuances of young people's new media and learning ecologies over an extended period, and to develop a series of ethnographic case studies for each of our participants, families, and settings. We were able to create a "thick description" (Geertz, 1973) of the school, after-school, and home environments that youth inhabited and their cultures. The quality, quantity, and frequency of interviews during the extended period also allowed us to construct vivid and nuanced analysis of the youth's new media ecologies and practices, their family dynamics, and activities on social media networked spaces.

Each member of our team was matched with two to five students (14-18 years old) across all grades (n = 18) that we followed for a year. We conducted approximately 12 semi-structured in-depth interviews with each student (206 interviews in total). Furthermore, researchers conducted in-home interviews with most of the students' parents during the home visits (15 interviews in total).

[3] The Digital Edge project was a three-year research initiative funded by the XXXX Foundation. The project was led by Professor XXXX and had a team of seven research assistants from the Media Studies, Information Science, and Sociology departments at the University of Texas.

All interviews and focus groups were recorded digitally, transcribed, and coded by the researchers from the Digital Edge team (including me). Moreover, we also analyzed the field notes that each member of the team produced, and a range of participant-generated data such as photographs, domestic media ecology maps, and social media journals.

We used Dedoose software, a mixed methods data management and analysis tool that facilitates collaborative work, to code the interviews. The team developed a list of analytical codes that helped us to identify and analyze all meaningful interview segments. The codes corresponded to several themes and topics. For the purposes of this paper, I focused my analysis on codes related to 1) home environments (language, race and ethnicity, religion, media consumption, literacy, family, class, socio-economic status, peer relationships), 2) digital inequalities (equity, access to technology, lack of guidance, money, computers, mobile devices, participatory cultures), and 3) new media practices (media production, social network sites, online information search).

4.1. The Site

The Digital Edge project primarily conducted the research at Freeway High School (FHS), a large-scale public school on the edge of the Austin metropolitan area, near what could be considered the urban fringe. Our research also included visits to students homes. Most students lived in households close to the school, in a neighborhood that offered few public recreational spaces, and limited access to commercial amenities and grocery stores. Surrounded by highways and large warehouses, this area had become, in the last decade, one of the fastest growing Latino clusters in Austin and had transformed from a middle-class suburb into a working-class neighborhood.

The majority of the FHS population was minority (88.8%) and economically disadvantaged (61.7%). Latino made up 47.5% of a total of 2,002 students, whites 11.2%, Asians 13.3%, and African-Americans 24.2% (Texas Education Agency, 2011-2012). Because of the school's minority-majority student population breakdown, its location at the margins of the city, digital media after-school programs and elective classes, and students' socioeconomic backgrounds, FHS offered a unique opportunity for investigating digital inequalities and Latino youths' new media practices and ecologies.

4.2. The Sample

The project selected a sample of participants[4] based on a combination of theoretical, snowball, and convenience sampling. We recruited half of the students with the help of Freeway High School teacher Mr. Lopez, our main point of entry into FHS. Lopez initially identified several

[4] All participants and school names, including students, teachers, and parents, are pseudonyms and have been changed in order to protect their privacy and maintain anonymity and confidentiality.

students from his video technology elective classes who were potentially interested in participating. Drawing up this group of students helped us to develop our understanding of diverse youths' new media ecologies.

In choosing our sample, we tried to reflect the demographic characteristics of FHS. Ten students were Latino/Hispanics (six boys and four girls), two white males, three African Americans (two girls and one boy), and three multiracial females. Most of them had working-class socioeconomic backgrounds, and only a few were from middle-class families. They ranged in age from 14-18, and were enrolled in different grades.

For this article, I chose a subsample of five students from the eighteen participants of the Digital Edge project. I relied on theoretical sampling for selecting my subjects. Guided by a particular theoretical orientation (digital inequalities), I selected participants who were second and 1.5-generation Latino immigrants and with Mexican origins.[5] All of them were also from working-class socioeconomic backgrounds and spoke both English and Spanish. Their parents were immigrant laborers who had primarily low-skilled jobs and low educational attainment (usually high school or less).

Table 1 below presents a demographic summary of the five participants, providing information about their age, immigrant generation, citizenship status, parents (occupation, educational attainment, place of origin), language spoken at home, and family size.

Name (pseudonym)	Age	Grade	Immigrant generation	Citizenship status	Parents Occupation	Parents Educational Attainment	Parents Place of Origin	Parents Citizenship Status	Language Spoken at Home	Family Size
Antonio Chapa	17	12th	2nd	U.S. citizen	Housekeeper and Construction worker	Elementary school	San Luis Potosi, Mexico	U.S. Resident and Citizen	Spanish	5
Gabriela Garcia	14	10th	2nd	U.S. citizen	Small business owners	High School and Some college	Nuevo Laredo, Mexico	U.S. Citizens	English	4
Inara Aguirre	18	12th	2nd	U.S. citizen	Nurse and Gardener	Middle School and some College	Coahuila, Mexico.	U.S. Citizens	Spanish	5
Miguel Flores	14	10th	1st	Undocumented	Unemployed and Cook	Elementary and Middle School	Ciudad de Mexico, Mexico	Undocumented	Spanish	6
Sergio Martinez	18	12th	1.5	Resident	Cleaner	Middle School	Veracruz, Mexico	US. Citizen	Spanish	7

Table 1. Participant Profiles.

5. Results

[5] Scholars have identified several immigrant generations on the basis of nativity, nativity of the parents, and age of arrival. Native-born with at least one immigrant parent are second-generation; and foreign-born are considered first-generation if they entered the host country after their adolescence, or 1.5 generation if they immigrated before their teenage years (Portes and Rumbaut, 2001).

Gabriela (14), Inara (18), Miguel (14), Antonio (17), and Sergio (18) were members of immigrant families. All of their parents migrated to Texas from Mexico in search of economic opportunities, hoping to become part of the U.S. labor force, and dreaming of improving their lives. Like many of the Mexican immigrants who have arrived in the U.S. during the last four decades, they worked in low-skilled jobs.[6]

During our ethnographic fieldwork, these families were in the midst of assimilating to their new life in the United States, changing culturally, economically, and socially. Their children had been attending local public schools in the U.S., and with the exception of one family (Miguel's), both parents (mother and father) were employed and contributing income to the household. Parents joined the U.S. labor force as gardeners, construction workers, nurses, cooks, and even small business owners, such as Gabriela's father. According to the resources parents had brought, cultivated, and mobilized, the five Latino immigrant families incorporated into the U.S. working-class.

5.1. Mapping Domestic Media Ecologies

The five Latino youth spent a considerable part of their everyday life at home. None of them were engaged in "street culture;" nor did they spend time in parks, malls, or on neighborhood corners. During the free time they had after formal school classes and extra-curricular programs at Freeway High School, they hung out in their bedrooms and families' living rooms, interacting with a range of technologies that were part of their domestic media ecologies.

The immigrant parents of the five Latino youth made investments in new media technologies for their homes as part of their efforts to assimilate to U.S.culture and society. These parents had joined the low-skilled working force, moved to big 1970s style suburban houses in the northern Austin metropolitan area, and set up domestic media ecologies according to some of the standards of a high-tech hyper-mediated society. By leveraging their earning capacity and building domestic media ecologies, they developed their own versions of a safe, modern, and high-tech twenty-first century American "dream home."

During our home visits and interviews, it became clear that the Latino immigrant parents valued new media technologies. They had invested in computers, televisions, hi-fi stereos, smartphones, video game consoles, and Internet connectivity. The parents of Gabriela, Inara, Sergio, Antonio, and Miguel believed that new media technologies, particularly the computer, were important for

[6] Data from 2009 showed that Mexican immigrants are overwhelmingly represented in jobs that are low skilled, including construction, transportation, and service occupations (Brick et al., 2011). Compared with other immigrants, Mexicans have the lowest levels of formal education. According to a report from 2011, 65% of Mexican immigrants 25 and older have less than a high school degree compared to 32% of all other foreign-born adults (Brick et al. 2011).

their children's education, development, and life in the U.S. Influenced by public discourses about the urgency of closing the digital divide, and by the desire of their children to access computers and the Internet at home, these parents made efforts to build networked domestic media ecologies. Despite having little knowledge of how digital tools and networks functioned, all believed that computers were essential for their children's education — more specifically, for doing school work at home.

During our home interview with Antonio's parents, for instance, they clearly articulated that they bought a computer because it was a necessary "tool" for doing homework. They explained:

FATHER: The kids needed the computer for their homework. (...) That's why we bought it because they needed it for their homework.
MOTHER: They have many projects which need a computer.
FATHER: Yes, it was a need, and we had to buy it.
Q: But before that, had you ever thought about buying a computer?
FATHER: Maybe, but no — - we didn't buy one, until we needed it.

In order to meet their children's needs immigrant parents made investments in a range of media technologies and services. Those needs, however, were not only educational, but also cultural and social. Access to technology at home allowed Latino youth to engage with U.S. consumer culture, practice the English language, and socialize with their peers. As Table 2 shows, all five families had access to media ecologies that were networked and, particularly, rich in screen-entertainment media. Although the quality of technology access was low (except for Gabriela's home), these media ecologies offered youth a range of media choices where they could exercise their own agency and develop new media practices and skills.

Home	Computers	Videogame Consoles	Mobile Devices	Smart Phones	Musical Instruments	Cameras	TV	Audio	Internet
Antonio Chapa	1 Dell Inspiron laptop, 1 broken laptop, 1 broken desktop	1 Nintendo NES, 1 Nintendo GameCube	1 iPod touch	5 Samsung Android	2 guitars (electric, acoustic)	1 broken analogue photo camera	3 TV screens, 1 direct-broadcast satellite service, 1 broken TV, 1 DVD, 1 VCR	1 Radio	wi-fi DSL
Gabriela Garcia	4 Mac laptops	1 wii, 1 Xbox	2 iPod touch	4 iPhones 4S	1 piano, 1 flute	1 digital video, 2 digital photo	4 TV screens, 1 direct-broadcast satellite service, 1 DVD	1 HiFi Stereo	wi-fi DSL
Inara Aguirre	1 Dell Inspiron laptop	1 Wii	none	3 Samsung Android	none	none	2 TV screens, broadcast	1 HiFi Stereo	wi-fi DSL
Miguel Flores	1 Optiplex desktop	1 Wii, 1 Xbox	1 Nintentdo DS	1 Android	none	none	2 TV screens, 1 direct-broadcast satellite service, 2 DVDs	1 HiFi Stereo, 4 radios	wi-fi DSL
Sergio Martinez	1 Dell desktop	1 Wii, 1 Play Station, 1 Xbox	none	none	none	none	5 TV screens, 1 direct-broadcast satellite service, 4 DVDs, 1 DVR, 2 VCR	1 HiFi Stereo, 1 radio	wi-fi DSL

Table 2. Media Domestic Ecologies

The differential quality of technology access at home among the five families was largely determined by the economic, social, and cultural resources that parents had brought with them and gained while living in the U.S. Given the richer economic resources of Gabriela's parents, the Garcias' home media ecology had a higher quality in terms of connectivity, computer power, multiplicity of devices, and individual ownership.

The four members of the Garcia family had personalized access to last generation Macbook laptops, multimedia software, iPhones, and Wi-Fi Internet connection at home. In a clear sign of assimilation into the U.S. consumer culture and willingness to transition to the middle-class, Mr. Garcia explained to us that his income allowed him to make a "nice living," buy "lots of stuff," and have a "happy family." Regarding the decision to buy new laptops for each family member, he saidt:

"it was easier when they [Gabriela and her sister] got their own laptops. They kind of asked and I got them. (...) It becomes handy. And it keeps everybody happy."

In contrast to the Garcias, the families of Inara, Sergio, Antonio, and Miguel, confronted more limitations at the moment of setting up their domestic media infrastructure. As a result of having fewer economic resources, these families experienced lower quality of material access to new media technology at their households. Home computers, for instance, were outdated, lacked multimedia software, had small screens (12-16") and were shared among several members of the family. In the Martinez household, for instance, Sergio had to share an old desktop computer (with a 16"screen monitor) with his mother, his sister, his two nieces (ages 12 and 14), and little nephew (age 8).

Lower quality and quantity of material access, as Ellen Seiter (2008) has argued in "Practicing at Home: Computer, Pianos, and Cultural Capital,"affects the development of "digital literacy skills that are robust and confident"(32). Old computers and few hours of practice limit the kinds of activities that youth can do as well as their disposition toward technology. As a result of low quality and quantity of material access, usage quality decreases, and developing new media skills, both technical and sociocultural, becomes difficult.

Such challenges were confronted by youth such as Miguel, Sergio, and Antonio, whose interest in gaming and audiovisual production required high-quality technology access. Antonio, for instance, expressed his desire to have a better computer at home in the following way:

"I really want to get a Mac, because they're faster, they're good for what I'm interested in, I can do that on that. Most PCs are slow and you can't really do most of the stuff I want to do."

Low quality and quantity of access directly undermined the possibility of acquiring the disposition for using new media beyond casual and recreational modes. In the four working class families with fewer economic resources, the rapid obsolescence of new media created barriers for a sustained development of skills. As software and hardware quickly became obsolete, the lack of resources for updating to new systems directly affected youths' patterns of technology usage and skill development.

5.2. New Media Skills: Transmedia Navigation and Distributed Cognition

Leveraging the domestic media ecologies that their parents helped to build, the five Latino youth became engaged in a range of new media practices at their immigrant homes. Gabriela, Inara, Sergio, Miguel, and Antonio used digital tools and networks in various activities such as completing school homework, socializing with peers on social media (Facebook), and downloading and streaming music and videos from YouTube and other platforms. While doing so they developed several new media skills such as transmedia navigation, networking, distributed cognition, and appropriation. According to Jenkins et al. (2016) these skills, among with a few others, are the "new media literacies" or sociocultural competencies needed for participating in contemporary culture and society.

The five youth gained "transmedia navigation" skills through their media consumption practices, particularly of American popular culture. They searched for music and audiovisual content on the Web, downloaded it, streamed it, and re-circulated on their favorite social media platform (Facebook). Transmedia navigation, as Jenkins et al. (2006) have explained, consists in "the ability to deal with the flow of stories and information across multiple modalities". In the context of home, these youth used their mobile devices, videogame consoles, home computers, and TVs, to connect to the networked communication environment, and to hunt and gather cultural content from a variety of sources. According to their personal interests, youth assembled the pieces of information they collected, gave them meaning, and incorporated them as part of their identities.

In relation to music consumption, the transmedia navigation skill helped all five Latino immigrant youths to listen to English-language tunes from a variety of genres according to their interests and the ones of their peer group. Miguel, for instance, listened to death metal and scream (a subgenre of emo and post-hardcore); Antonio listened to dubstep and film soundtracks; and Sergio, Inara, and Gabriela developed an eclectic taste that included hip hop, indie rock, pop, techno, reggae, country and also latin music. Hence, especially for the youths with eclectic taste, the transmedia navigation skill allowed them to embrace a bicultural identity. As Inara explained in one of our interviews:

"Music is very important in my life. It's everywhere. Especially since I guess you could say I have two lives, a Hispanic life and also an American life. If I would be living in Mexico (...) I

would just listen to nothing but Hispanic music, which is reggaeton, salsa, merengue, cumbias. (...) But now since I live here I can listen to anything. Techno, what else? Hip-hop, rock, reggae. I listen to country music. I love country music."

The five Latino youth also developed the "distributed cognition" skill, and gained the ability to expand and augment their cognitive capacities (Jenkins et al., 2006). Using the Google search engine and browsing the World Wide Web, the five youth were able to complete school assignments at home. Gabriela, for instance, noted"if I need help on math I would go on Google... It helps me get the homework done." Similarly, Antonio said, "I usually just use Google and I'll just go through it for whatever I need, I just get a little information of everything."

The "distributed cognition" skill they developed through was not very robust and tended to rely heavily on the technical skill of searching the World Wide Web. Given the fast results they obtained from the search practice, and the impressive power of Google search engine's PageRank algorithm for retrieving information from all over the web, it was not surprising that Sergio claimed, "If it's not on the first page of Google I'll never find it."

His statement shows the limitations of "distribution cognition" development. By relying so much on the searchability affordance of the web, Sergio, and the other four youth, tended to focus their homework practice on just the technical action of searching, and did not develop other social and cultural aspects of the "distribution cognition" skill such, as "tapping social institutions and practices or remote experts whose knowledge may be useful in solving a particular problem" (Jenkins et al., 2006: 37).

Although the five youth cultivated several new media skills at home, not all were able to hone them in a robust and advanced manner. They primarily developed these skills based on casual media consumption, homework assignments, and social sharing, with little support and scaffolding. Only one youth, Gabriela, was able to develop some of her new media skills in a deeper way, while also engaging in a more sustained media production practice at home. She honed skills like transmedia navigation to a level where she felt confident participating in specialized online communities, and publishing her media creations online. Compared to the other young participants, Gabriela found greater support and resources at home that helped her to delve deeper in her digital photography practice and to actively participate in specialized online platforms. She not only had access to more high-quality digital tools at home, but also access to parents who played multiple roles in supporting her engagement with technology.

5.3. Differential Outcomes of Technology Usage: The Importance of Parents Roles and Support

Thanks to multiple roles that her parents played in the home environment, Gabriela was also engaged in capital enhancing activities that improved her social, cultural, and economic status. These types of activities allow users to benefit from online engagement, offering them opportunities for upward mobility and translating their technology usage into tangible outcomes (Hargittai and Hinnant, 2008; Hargittai, 2010; van Deursen and Helsper, 2015).

In contrast, the other four Latino youth were engaged in media practices at home that had little impact in terms of enhancing their social, cultural, or economic capital. Although their media practices allowed them to develop some level of new media skills, they were basic and limited. Sergio made visual memes, and Inara collected fashion images from the web that they only shared with a few friends on Facebook; Miguel played networked videogames but did not join any gamer group or guild; and Antonio produced computer music tracks that he never published online nor circulated beyond the living room. None of them became active members in specialized online communities, nor distributed their media productions beyond peer groups. Because their peer groups were mainly composed of other youth of similar socio-economic status, educational attainment, and race/ethnicity , their social networks were homogenous and limited their access to information and opportunities.

Inara, Antonio, Miguel, and Sergio developed their new media practices with little parental support. Aside from being providers of the main forms of technology these youth used, Inara, Antonio, Sergio, and Miguel's parents did not play any other role in the development of their children's technological fluencies and new media skills. Their parenting styles resembled the "accomplishment of natural growth" approach that Lareau (2003) found in low-income and working class families. In this mode of parenting, children are expected to grow up naturally, without the constant monitoring and periodic intervention of parents, and youth must independently navigate their relationships with institutions and peers.

The Latino immigrant youth who grew up in home environments characterized by the "accomplishment of natural growth" parenting style did not talk with their parents about their new media practices and did not share with them the media products they created at home. Antonio, for instance, who was able to engage in music production by leveraging the laptop he could access in his home living room, never talked to his parents about his creative work; he assumed that they did not understand how computers worked. As Antonio explained when I asked him about what his parents thought about the use of the home computer for making music:

"They've seen it a couple times but I don't think they actually know what it is, because they're from Mexico, they grew up with very little technology."

Antonio's parents, Ms. and Mr. Chapa migrated to the U.S. from rural Mexico in the early 1990s, bringing with them few social, cultural, and economic resources. Both had only attained elementary school-level education in their home country, and did not have any knowledge of the English language when they arrived in the U.S. They were able to assimilate to the U.S. working class by finding low-skilled jobs in the housekeeping and construction sectors, learning some English, and becoming U.S. citizens. They practiced the "accomplishment of natural growth" parenting style and did not monitor, or intervene in, Antonio's digital media activities. Ms. and Mr. Chapa had limited knowledge of new media and did not use computers or the Internet at work. Despite believing that technology and the Internet were important for the education of their children, they did not have the motivation,time, or the knowledge to foster the development of Antonio's new media skills.

Like Antonio's parents, the parents of Inara, Sergio, and Miguel had also assimilated to the U.S. working class and worked hard in low-skilled jobs. Given the intensity of their labor (some worked double shifts), their low educational attainment (none had finished high school), and their limited knowledge of the English language, they also encountered few opportunities to use computers and the Internet at home or work. Their parenting style also matched the "accomplishment of natural growth" and they did not play multiple roles in their children's development of new media skills.

In opposition to the working class parenting style of Inara, Antonio, Sergio, and Miguel's parents, Gabriela's parents' approach was much more engaged in their daughter's day-to-day life. Instead of limiting their role to simply being the providers of technology in the home, Ms. and Mr. Garcia played multiple roles, such as collaborators in hands-on projects, providers of non-technical support, and brokers of learning opportunities. Their parenting style had the characteristics of the middle-class approach that Lareau (2003) described as "concerted cultivation," and Clark (2013) identified as "ethic of expressive empowerment." Practicing this approach, Ms. and Mr. Garcia assumed greater responsibility structuring Gabriela's activities and managing her time, fostered her social and cognitive skills, and encouraged her to use media for learning and creative expression.

The middle-class parenting style fit well with Ms. and Mr. Garcia efforts to move upward in U.S. society. Although they had incorporated to the U.S. working class, they actively cultivated and mobilized social, cultural, and economic resources in order to improve their socioeconomic status. Thanks to social connections in the U.S. (extended family), some knowledge of the English language, and high school degrees, both Ms. and Mr. Garcia were able to start their own small businesses after several years of working in low-skilled jobs. At the moment of our fieldwork, Mr. Garcia had a managerial position in his own window repair business, and Ms. Garcia worked independently as a personal chef (catering service), and a housekeeper in an

exclusive neighborhood in the south west of the city. Both of them used computers and the Internet at work and had email and social media accounts (Facebook and Twitter).

Gabriela, therefore, developed new media practices at a home environment where she could access more support and guidance. She learned digital photography, and through this practice, developed new media skills such as transmedia navigation, networking, and judgement. At home, she was able to experiment with two digital cameras (one compact and one SLR), mess around with her personal Macbook laptop's Photoshop software, and receive informal lessons from her uncle, who was a professional photographer. Moreover, she published and circulated her photographs both online (e.g., Flickr) and offline in her aunt's wedding cake company's brochure.

Gabriela's parents played several roles that fostered not only the development of new media skills and technological fluencies but also the application of those skills for earning social, economic, and cultural capital. Mr. Garcia, for instance, acted as a non-technical supporter as he accompanied Gabriela in photography trips around the Austin metropolitan area, driving her to various locations where she could take pictures. Moreover, he also played the role of resource provider, buying professional and educational equipment she could use for developing her digital photography practices (digital cameras, computer equipment, software, and specialized books).

Furthermore, Gabriela's parents facilitated the access to extended family support that helped her to thrive in photography and engage in capital enhancing activities. They invited an uncle who lived in San Francisco and was a young professional photographer to visit their home several times; he played the role of a mentor and gave Gabriela informal lessons about lighting and composition. Gabriela's parents also connected her with one of her aunts who lived in the Austin metropolitan area and had a wedding cake business. The aunt offered Gabriela the opportunity to work as a photographer for her company and receive monetary compensation. As Gabriela explained, this opportunity allowed her to publish her photos in a portfolio that was shown to a wider audience. She said:

"I took pictures of her cakes, because she does that for weddings. I helped her with her portfolio for her cakes, and she made an album out of the pictures I took that she shows to her clients. She put my name on it."

The outcomes of new media practices and engagement with technology, therefore, were different for Gabriela, in comparison to those of the other four Latino youth. While she was able to produce tangible outcomes from technology usage at home, the other four did not engage in capital enhancing activities in this context. For Gabriela, the outcomes included developing a career aspiration as a photographer (in one of our interviews she said, "I want to start my own business, like, for wedding photography"); publishing creative media creations in a specialized

online community and connecting with photographers beyond her network of peers (Flickr platform); obtaining public recognition as a photographer (printed business portfolio); and getting paid for doing media production work. Such outcomes allowed Gabriela to not only earn social, economic, and cultural capital but to also boost her confidence and self-efficacy.

Discussion

The case of the five Latino youth from working-class immigrant families reveals some of the ways in which home environments shape youths' new media skills and outcomes of technology usage. Home environments provide a range of social, economic, cultural, and technological resources that allow youth to engage in different types of media practices and forms of engagement with technology.

Youths' new media skills development, and outcomes of technology usage vary according to differences in parenting styles and domestic media ecologies. Those differences are primarily determined by social stratification. Home environments with high-quality domestic media ecologies and middle-class parenting styles provide youth with more resources and support for developing robust new media skills and earning social, cultural, and economic capital. In these types of environments, parents play multiple supportive roles that go beyond the mere provider of technology resources.

As I have demonstrated through my analysis, only Gabriela, who grew up in a home environment characterized by a middle-class parenting approach and a high quality media ecology, was able to develop new media skills at a higher level of expertise and engage in capital enhancing activities at home. Gabriela's parents practiced the "concerted cultivation" (Lareau 2003) and "ethic of expressive empowerment" (Clark 2013) middle-class approach to childrearing, offering Gabriela greater support and guidance for her new media practices. In addition to providing access to media technologies, Gabriela's parents were also collaborators in hands-on projects, providers of non-technical support, and brokers of learning opportunities.

In contrast, the parents of the other four youth practiced a working-class parenting style characterized by a hands-off approach towards media practices and limited their roles to that of technology provider. As a result of the lack of support and the low-quality media ecology they accessed at home, Inara, Antonio, Miguel, and Sergio did not fully develop their new media skills or leverage technology to cultivate different forms of capital.

Analyzing Latino youths' outcomes of technology usage and development of new media skills in the home context reveals that digital inequalities evolve in complex ways in the United States. Although more youth have connected to the Internet and are using digital tools in their everyday lives, their forms of engagement with technology vary according to social stratification and

broader structural inequalities. Policy makers, educators, and other stakeholders working on bridging digital divides need to consider the home environment as an important site of intervention. This context of activity is central for youths' development of new media skills and participation in capital enhancing activities. In order to build more equitable futures, stakeholders should support working-class minority parents through training programs and educational resources that help them to develop new media skills. By supporting parents, these kind of interventions would also support youth and contribute to level up the playing field.

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