

Globalized Students vs. Unglobalized Families: Limiting Family Participation in Education

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Abstract

In today's society, the use technology is no longer a luxury but a need (Machado-Casas, 2009; Sánchez, 2010). Considering this, countless education stakeholders have explored the concept of the *digital divide*, the gap that exists between people who have access to digital technology and those who do not. Oftentimes, this divide exists between parents, particularly, Latino parents who lack access to technology and their children who have more access to it via school technology-based curriculum and the creation of afterschool technology programs. Countless afterschool technology literacy programs have been created to help students improve technology literacy skills; however, many do not offer families the same opportunity. Therefore, expanding the digital divide that exists between students and families. Based on a three year qualitative and quantitative research study, this manuscript raises questions about the ways schools continue to develop technology programs aimed at schooling ("globalized") students, yet they do not take into account that while schools are globalizing students their families continue to be less technologically developed ("unglobalized"). This study explores the digital divide that often times is present at home, creating a multigenerational gap between parents and their children, a border that children have crossed and their families have not. The study looks at the example of *La Clase Mágica*, a technology literacy afterschool program for student and their families, in which parent workshops were used to explore the technology needs of family members to create a program that was culturally, linguistically, and technologically diverse. The program not only helped parents forge connections with their children, but also facilitated their successful participation in society as they use technological tools to perform everyday tasks and strive to create a "*familia global*" (globalized family).

Introduction

Technology is no longer a luxury, but a basic need (Machado-Casas, 2009; Sánchez, & Salazar, 2012), and increasingly, educators are creating innovative ways of working with students to enhance their technology skills, including offering afterschool technology programs. Although these programs are necessary in order to enhance and better educate our student population, often they do not consider the issue of technology literacy among Latino families (Tartakov et al., 2003). Research has shown that student performance and academic achievement can be positively influenced by the effective use of technology (Cradler, McNabb, Freeman, & Burchett, 2002). Hence, technological tools designed for the Web 2.0 such as computers, iPads, iPhones, and tablets have become a central focus of academic curricula and have been integrated into everyday tasks. This article focuses on the growing technological disconnect between Latino parents and their children.

Numerous school districts have created technology education standards that stipulate what students should know and be able to do with technology. Overall, technology education is a program of studies that leads to students' technological literacy. Yet, although technology education has become standard in many schools, a major assault occurs when administrators often fail to recognize the need to work with families and community members to address their technological needs in terms of skills/training, labor, social, familial and economy. During a time when inequalities are still rampant, not working with families has led to a major technological generational and multilayered gap between students and family members, particularly among marginalized Latino and immigrant families, exacerbating an existing generational and cultural divide that affects family dynamics. And as schools aim at "globalizing" students by providing them with the technological tools to be globally competitive (Machado-Casas, 2011), many ignore the fact that without incorporating students' home lives and families, their

efforts may remain static. In many ways, ignoring the family members of students enrolled in K-12 schools has created a contrast between developed (“globalized”) students and less developed (“unglobalized”) family members. The use of the term unglobalized here does not mean families do not have ways or don’t necessarily take the steps to use technology to engage in globalization or even to be transnational. Rather, the use of the term brings to light the fact that only fragmented parts of the family (those enrolled K-12 schools) are learning the new ways of being global. This is especially true for Latinos, since many do not have access to computers and are likely to be computer illiterate, thus rendering them unqualified for many jobs (Pruitt-Mentle, 2002).

In a recent report titled *Latinos and Digital Technologies, 2010*, Livingston (2011) asserted that Latinos tend to utilize technology (except cell phones) at lower rates than their Whites counterparts. Additionally, although Internet use among Latinos increased about 10% from 2006 to 2008 (Livingston, Parker, & Fox, 2009), usage rates continue to lag behind those of whites and African Americans. Just 80% of Latinos in the United States use the Internet, compared to 94% whites and 87% of African Americans (Livingston et al., 2009). According to the U.S. Department of Education (2000), only 7% of Latino students in first through sixth grades reported using a computer at home compared to 31% of white students. In fact, Latino families are half as likely to own a computer as white families, and they are 2.5 times less likely to use the Internet. Of all races, Latinos have the fewest number of years of experience with computers (Badagliacco, 1990).

Challenges in Technology Education

Research has consistently shown that children learn well when their parents are actively involved in their learning (Delgado-Gaitan, 1990). Further, parental support and modeling helps to enhance and secure student achievement and provides long-lasting educational gains (Darling-Hammond, 1997). Although many Latino parents express a desire to be involved in their children’s schoolwork (Quiocho & Daoud, 2006), they often show little or no school involvement (Bauch, 1992; Costa, 1991; Ferrer, 2007) this is because they are expected to follow traditional involvement methods (volunteer at PTA, go to field trips, donate money or goods, etc). And Latino families engage in non-traditional school involvement practices that are more difficult to quantify and observe (Valdés, 1996). Thus, some teachers perceive that Latino parents do not care about their children’s education (c.f., Smith, Stern, & Shatrova, 2008). Nevertheless, Valdés (1996) explained that Latino parents may not understand the concept of involvement, while Bauch (1992) confirmed other obstacles encountered by Latino parents in their children’s schools, including a language barrier, failure to understand school operations, and their own lack of formal education. These hurdles and computer literacy challenges make school involvement difficult for Latino parents, particularly when the subject is technology.

Politicians, professionals, and scholars alike have explored the concept of the *digital divide*, the gap that exists between people who have access to digital technology and those who do not. The digital divide exists at work, in schools, and most importantly, at home, creating a multigenerational rift between parents and their children. Not having the opportunity to co-learn with their children often creates a digital divide between Latino parents who lack access to technology and their children who have availability to technology. This divide exacerbates the sense of separation many Latino immigrant parents already feel when communicating with their children and leads to decreased family communication and closeness, and anxiety about child rearing practices (Machado-Casas, 2009b). Although understanding the impacts of this divide is important, it is even more beneficial to explore how it can be bridged, so families can begin to see technology as a resource, not an obstacle.

Afterschool technology programs. One way schools attempt to bridge this digital divide is by providing afterschool technology programs for parents. In one study, Duran (2001) assessed an afterschool technology program for low-income Latino immigrant families in terms of computer awareness, computer basics, word processing skills, and multimedia and telecommunications familiarity. As parents and children wrote together using computers, they engaged in focused problem solving about language content, language organization, and language form as mediated by the computer and its software. Further, through working together with their children, parents began to show evidence that they understood the importance of desktop publishing in

computer communication. By exchanging the role of expert and novice, parents and children were able to explore a range of dimensions relevant to literacy and literacy practice (Duran, 2001). Latino parents showed significant gains in every area of assessment over the course of the project, especially in Internet knowledge and multimedia and telecommunications familiarity. Overall computer literacy for parents in the program rose from 32% to 73%.

Afterschool computer learning programs for immigrant Latino parents and children are beneficial because they interconnect family members, teachers, university students and faculty, and community members (Duran, 2001). Such programs help familiarize parents with the use of computers and information technology by utilizing their children's knowledge (Duran, 2001). Valdés (1996) also suggested that Latino immigrant families may benefit from exposure to school personnel who potentially can help parents understand schooling practices and expectations.

In another afterschool program called Learning Together, three university professors and teacher educators recruited seven elementary school students and their parents (Tartakov, Leigh, & Phillips, 2003). Participants were low-income families of various ethnic backgrounds, including Latinos. The aim of the program was to improve literacy and technology skills, and parents committed to actively engage in the literacy programs with their children. As a result of the program, students experienced increased self-efficacy with computers, and were excited to be able to work independently and experiment with new programs.

As the aforementioned studies show, afterschool technology programs can be pivotal educational tools for Latino parents and children. Not only do afterschool technology programs allow Latinos to gain technology skills, but they facilitate increased interaction between Latino parents and their children as they contribute to each other's development. By participating in the parent meetings offered by *La Clase Mágica* (LCM), families had opportunities to engage in a political act, a movement that enable them to find better and less dangerous ways of incorporating into society by using technology tools for everyday tasks, and in the process they begin to dismantle the rapidly growing *muro tecnológico digital* (technological digital gap) among Latino and minority families.

Methodology

This study explored the impact of workshops (*talleres*) offered to parents and/or family members during LCM, an afterschool technology program in the computer literacy and skills of the program participants. The term *family members* was used in addition to parents, as it is more inclusive and representative of the reality of our Latino students who are often raised not just by parents but by grandparents or other relatives (Valdes, 1996). The study sought to identify the technology needs of family members and provide them with technological skills as needed to develop or enhance their technology literacy. Thus, the research question(s) addressed in this study were:

- 1) What are the technology needs of the parents and/or family members of the participants in the LCM afterschool program?
- 2) What is the impact of the *talleres* in enhancing and developing technology literacy to the parents and/or other family members?
- 3) How did the afterschool program help parents forge connections with their children, and facilitate their successful participation in society as they use technological tools to perform everyday tasks and strive to create a "*familia global*" (globalized family)?

The *La Clase Mágica* (LCM) afterschool program which was held at Los Árboles Elementary School was created as part of two courses for undergraduate bilingual teacher candidates at the University of Texas at San Antonio (UTSA). As part of the classes requirements the teacher candidates attended *Los Árboles* Elementary

school every Tuesday afternoon for 3 hours over a 14-week period. Each teacher candidate was paired with a young elementary student in grades K-5, called *amigas/os*. Funded through the Academy for Teaching Excellence (ATE), teacher candidates were provided with netbooks and iPhones/iPods to use with the elementary school students. Adult-child pairs were organized to create an opportunity structure in which each learner collaborated with a more experienced peer (Vygotsky, 1978). This approach provided the researchers and participants alike with opportunities to test technology's potential to create innovative learning environments and to study its effect on language, literacy, and cultural development.

As the teacher candidates and their *amigas/os* worked together during LCM, parents and/or family members were invited to attend technology workshops (*talleres*) on the third Tuesday of every month in. Between 18 and 30 family members ranging in age from 18 to 80 years old, including young mothers and fathers as well as grandparents, participated in the *talleres* offered each month. Most families were Mexican nationals or Mexican Americans, one family was from Honduras and one was from El Salvador. Each family had one or two children enrolled in the program whose ages ranged from 5 to 10 years old. In an effort to increase family participation, free childcare was provided.

In Spanish, the term *talleres* conveys something beyond the simple top-down approach utilized in most workshops; they require what Vásquez (2003) calls a participatory approach, where researchers are mediators and families are full participants in their learning processes, determining what they would like to learn and how they would like to learn it. Because all participants were immigrants, families were invited to reflect on their own journeys as immigrants in the United States and how using technology would help them in their new lives. During the *talleres* families worked on a series of technology activities ranging from the most basic (turning the computer on) to more difficult tasks (sending an email or creating a powerpoint or a movie). Family participants took a communal approach to learning, sharing, and teaching based on the knowledge they found most useful and necessary for their everyday lives (Machado-Casas, 2010). During the workshops family members were asked about the importance of technology in school, at work, and with their families.

Family members were asked which specific skills they would like to learn and once there was consensus on the desired technology task to learn about, that was what was taught that day. First, they wanted to learn computer and iPod basics, because those were the technologies being used by their children in the LCM afterschool program. In addition, participants' created utility knowledge lists (Machado-Casas, 2009a) of skills that would be useful in their everyday lives, such as sending money home online. The use of the utility knowledge list came about because as busy adults they must not only learn new skills but also skills that have utility to their realities. They named and listed the most important components of their everyday lives and how technology can help do these in a more efficient ways. Through this activity, LCM families were asked to become researchers, observers, and users of technology in multi-situational spaces in everyday life.

As participants in the LCM after school technology and literacy program, the families engaged in monthly in-class discussions. These discussions focused on their experiences and thoughts about the need to include families in the development of a globalized population. Fifteen to 20 parents were given pre- and post- open-ended surveys and were interviewed twice about the afterschool program. Families were asked about what they felt their technology needs were, whether the *talleres* were helping in developing and/or enhancing their technology literacy, and whether they felt they were connecting more with their children, especially in regards to technology.

Analysis of Data

The data collected included surveys, interviews, researcher field notes, and in-class discussion notes. All data collected were transcript, coded and analyzed for themes and patterns. Two major themes emerged from the data: (a) the existence of a digital divide within families, and (b) challenges encountered in adult technology education programs.

Findings

Participants in the LCM afterschool technology program took part in a pre-program survey. Our

findings reveal that while schools work toward globalizing students, many home environments continue to be unglobalized, creating a wider gap between schools and families.

A Digital Divide

Afterschool technology education programs are available for children, but many do not include families. Thus, families have become global invisibles. Global invisibles in this context mean those who do not have equal access or any access to technology as an everyday tool. Yet, technology is a growing presence all around them. When these families' needs to learn about technology are not taken into consideration in any setting but particularly in academic educational settings, they are left out, without access, and virtually invisible to our ever growing globalized world. One mother, Juana, explained:

Si han hecho programas para nuestros hijos. Y si queremos que aprendan... claro que sí! Pero el problema es que pues cuando ya ellos aprenden, nosotros nos estamos quedando atrás. Ellos si pueden mandar correos, y meterse a la computadora pero nosotros no.

[Yes, they have developed programs for our children. And yes we want them to learn... of course, yes! But the problem is that when they learn we stay behind. They can send emails and get into the computer but not us.]

Echoing these thoughts, Martina, a mother from Mexico, said:

Si han hecho programas para nuestros hijos. Y si queremos que aprendan... claro que sí! Pero el problema es que pues cuando ya ellos aprenden, nosotros nos estamos quedando atrás. Ellos si pueden mandar correos, y meterse a la computadora pero nosotros no.

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Fernanda also worried about limiting her children's technological abilities at home because she and her husband lacked the proper knowledge:

En la escuela le enseñaron a mis hijos a hacer absolutamente todo. Hasta se pueden comunicar con otros países ocupando una aplicación que se llama esquipe [Skype]. Mi hijos se pueden comunicar con cualquier parte del mundo en la escuela pero al llegar a la casa siento que estamos limitados porque ni yo su papa podemos hacer eso. Y pues me gusta que aprendan pero—ya en la casa como que nos quedamos atrás.

[In school they teach my children how to do absolutely everything. They can even communicate with other countries utilizing an application called Skype. My children can communicate with any part of the world in school, but when they get home I feel that we are limiting them because neither I nor their father can do this. And I like for them to learn, but at home it's as if we are staying behind.]

Thus, for parents, simply understanding the *importance* of technology is not enough. When parents do not have the technology skills to help their children, technology can become another *muro a muro tecnológico digital* (a digital technological wall) that divides families. Ruby reflected:

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Martina understood the importance of technology, but partly blamed technology for a lack of communication within her family:

A mi hija le encanta todo que ha aprendido de la tecnología. Y le he pedido que me enseñe pero no me tiene paciencia. Ahora creo que la tecnología cuando un padre de familia no la sabe ocupar— nos afecta porque no sabemos de algo que es tan importante para ellos—no lo tenemos en común. Entre mas tecnología menos nos hablan y mas nos separamos mas.

[My daughter loves learning about technology. I have asked her to teach me but she does not have patience with me. Now I believe that when a parent does not know how to use technology it does affect us because we do not know something that is very important for our children... we do not share this knowledge. The more technology they have available the less they talk to us and the more distant we become].

Marta spoke of being torn between wanting her children to develop the technology skills and feeling isolated from them because of it:

Desde que la tecnología llego a mi casa – ya casi ni conozco a mis hijos. Pero no se que hacer porque si lo quito también les hago mal. Yo como no se – no puedo meterme como ellos a eso.

[Since technology came into my home, I barely recognize my children. However, I don't know what to do because if I get rid of it, I am doing a disservice to them. Since I don't know, I cannot get involved with it like they do.]

Challenges Associated with Adult Technology Education Programs

It seems as though adult technology education programs could provide a simple solution to the digital divide problem. However, Latino and immigrant families face challenges associated with such programs. Eloisa said:

A mi hijo mayor lo llevaba a la biblioteca donde le enseñaban de las computadoras, y por eso compramos una computadora. El curso era en ingles y pues no pude tomarlo, ademas no tenia cuidados de niños. Todos los cursos en la escuela son para los niños y muy pocos para mamas como yo.

[My oldest son was taken to the library where they would teach him about computers and that is why we bought a computer. The class was in English and I could not take it. In addition, I had to care for the other children. All the courses at school are for the children and very few for mothers like me.]get involved with it like they do.]

Opportunities for family members like Eloisa's are seldom available, particularly with childcare, which is another limiting factor. Many programs also fail to consider language or cultural barriers. However, as Eloisa shared, even when accessible, participating in such programs does not always solve the problem.

Creo que como papas tenemos que ser proactivos. Creo que lo sigo. He tomado clases de tecnología pero siempre cuando pienso que ya—ya los alcance ellos me demuestran que no... porque ya lo que yo estoy haciendo ya es algo que ellos ya aprendieron y ahora ya están en otras casas. Siempre estoy tratando de alcanzarlos.

[Parents need to be proactive. I think I am because I have taken technology classes, but when I feel like I am caught up with my children, I am doing something and the children are doing something different. I am always trying to catch up to them.]

When the content of parent education programs does not include what students are learning in schools or the skills students already know, parents may feel that they do not understand or know how to help their children. In many ways this disempowers parents, and they may not know how to guide their children through this learning process. Thus, leaving parents with a feeling of constantly falling behind. Fernanda said:

Yo fui a a una clase de computación, pero no en la escuela de mis hijos, pero en un Cyber cerca de mi casa. Y si aprendí algo, pero no lo que mis hijos están haciendo en la escuela. Y por eso se me hace difícil, ya que a mi me enseñaron como manejar la computadora básica, y a mis hijos ya les están enseñando otra cosa. Y pues aunque trate—ellos ya iban mucho mas adelantados que yo.

[I attended a class on computers but not in my children's school but in another cyber place near my home. And I did learn something, but not what my children are doing in school. And because of that it has been difficult since I was taught basic computing and my children are already learning something else. And even if late, they are way ahead of me.]

In addition, many existing programs are designed for advanced users, but really are not very beneficial for family members with little technology knowledge. Marta shared her experience as a student in a technology class:

Creo que si hay programas para padres en la comunidad. Yo fui a dos ya, pero al llegar ya esperan que sepamos algo de la tecnología. Y a las dos clases que fui, no me tenían paciencia. Ya esperaban que yo supiera como usar la computadora pero yo no los sabia.

[I believe there are programs for parents in the community. I attended two already, but when I arrived there they expected us to know something about technology. And in both classes I attended, they were not patient with me. They already expected that I knew how to use the computer, but I did not know.]

It is easy to forget that some family members may not have had the opportunity to work with computers before. Some participants sit in front of a computer for the very first time in these programs.

Towards a “Familia Global” (Globalized Family)

Although the literature shows that technology is increasingly becoming a major component of school curricula, our findings show that technology education fails to include families. Studies have shown that when parents are actively involved (Delgado-Gaitan, 1990), supportive, and model for their children what is being taught in schools, student achievement and educational gains increase (Darling-Hammond, 1997). Other studies have shown that Latino parents want to be involved and want to help their children at home (Quiocho & Daoud,

2006). Ortiz, Green, and Lim (2011) surveyed a large number of minority parents to assess the importance they place on computer usage for themselves as well as for their children. In their study, most parents (82%; $N = 486$) felt that technology training is critical and should be offered in school along with other content subjects; participants in our study also agreed that technology skills are important.

Ortiz et al. (2011) similarly found that fewer minority parents (73%; $N = 437$) reported participating in their children's education with the help of a computer. Findings from our study may help provide an explanation. First, parents in our study found it difficult to help because they lacked technology knowledge compared to their children, which created digital divides in their families. Second, when parents tried to bridge this divide by participating in technology education programs, they faced other challenges such as limited availability, language or cultural barriers, a lack of childcare, and discontinuity in technology curricula for parents and children. Lastly, parents in our study understand that they are in a constant state of surveillance and assault not only from societal discrimination and oppression but also from schools who fail to recognize that they play a critical role in the development of tomorrow's society.

Implications

These findings have several implications for educators and administrators who serve Latino and immigrant populations. First, schools must make an effort to bring technology curricula into the home. Technology training workshops for parents can help mitigate this problem. When workshops are made available to parents, childcare for younger children should be provided, local language and cultural norms should be considered, and family members should be asked about their needs before a program is designed. According to Clark (2005), "there needs to be an increased focus on the needs of people as learners – finding out why, when, what, and how people prefer to learn, discovering new learning methods, and identifying the basic skills that people need to learn better" (p. 431). Instructors must be prepared to teach students with a wide range of abilities, from those who are technology literate to those who have never used a computer.

Principals can support these efforts by ensuring that parent technology curricula mirror student curricula. Principals also can provide teachers with resources such as equipment and access to wireless Internet connections, which allow teachers to feel comfortable without fear of technical difficulties during a lesson. Additionally, principals can ensure that teachers have time and space to collaborate on lesson plans and discuss how they are taking advantage of technology as a teaching and learning tool.

Conclusion

Today, technology skills are critical for survival and success. This requires an education perspective which arises from the fact that contemporary people live and interact in an increasingly globalized world. This makes it crucial for education to give learners the opportunity and competences to reflect and share their own point of view and role within a global, interconnected society, as well as to understand and discuss complex relationships of common social, ecological, political and economic issues, so as to derive new ways of thinking and acting (Maastricht Global Education Declaration, 2002).

Suarez-Orozco and Qin-Hilliard (2004) explain that, particularly in schools, two domains must be considered as the greatest challenges for education and globalization: "the domain of difference, and the domain of complexity" (p. 3). The differences and complexities of technology knowledge also must be considered as factors influencing education. As children in schools continue to build technology skills, they become more global. Their worlds open to possibilities, both present and local, and future and global. In this way, children nurture the skills necessary to "fully engage the larger world and master its greatest challenges, transforming it for the betterment of humanity – regardless of national origin or cultural upbringing" (Suarez-Orozco & Qin-Hilliard, 2004, p. 6). Yet, students' families often are not provided with the same opportunities to learn about technology, which creates a digital divide between technology savvy children and their less knowledgeable family members.

Bridging the digital divide requires more than helping parents recognize the importance of technology or

providing access to technology training. Here, we presented findings from a study of the LCM technology and literacy afterschool program, in which *talleres* were used to explore the technology needs of family members to create a program that was culturally, linguistically, and technologically diverse.

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