Generaciones' Narratives

SECTION	*Conclusión*
TITLE	Panorama, Puentes, Baches *Panorama, Bridges, Potholes*
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OVERVIEW	The *Conclusión* is composed of three sections. In *Panorama*, I add additional details on the ethos of the border and on the participants themselves. *Puentes* is composed of two divisions, both of which introduce data from the survey that further enhance our understanding of participants' experiences and practices on the border. The first division is *Puentes: Sponsors*, and is composed of thirteen tables focusing on responses to questions about sponsors and sponsorship. The second division is *Puentes: Gateways,* and is composed of thirteen tables focusing on responses to questions about gateways where participants learned and practiced electronic literacies. The final section, *Baches,* reflects on the philosophical and economic repercussions caused by technological potholes for those who have lived on these borderlands since 1920.
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Conclusión: Panorama, Puentes, Baches
Panorama, Bridges, Potholes

John Scenters-Zapico

> It [oral history] . . . can give back to the people who made and experienced history, through their own words, a central place. (Thompson 2)

Thompson's insight on an oral history as told by the people who experienced it has been a guiding precept of *Generaciones*. The difficulty of collecting multitudes of oral and written stories has been classifing them, which consequently meant interpreting them, in order to communicate a fraction of the ideas to readers. The process has been akin to a climb up a mountain: tough, tiring, at times disorienting, but in the end one receives the satisfaction of arrival, of making sense of the adventure. The conclusion to *Generaciones* is a panoramic gaze back. With this look, additional details that I could not process in the initial trek come into focus, and I share additional insights on some issues already discussed. At the same time, I also bring into focus details and data that should further deepen readers' insights into Latino/as living on the border and their acquisition and practices of literacies over the last eighty-eight years.

The *Conclusión* is composed of three sections. In *Panorama*, I add additional details on the ethos of the border and on the participants themselves. *Puentes* is composed of two divisions, both of which introduce data from the survey that further enhance our understanding of participants' experiences and practices on the border. The first division is *Puentes: Sponsors*, and is composed of thirteen tables focusing on responses to questions about sponsors and sponsorship. The second division is *Puentes: Gateways,* and is composed of thirteen tables focusing on responses to questions about gateways where participants learned and practiced electronic literacies. The final section, *Baches,* reflects on the philosophical and economic repercussions caused by technological potholes for those who have lived on these borderlands since 1920.

Panorama

Literacies are a panorama of human experience. *Generaciones* began as and remains my wish to share the unheard stories of individuals acquiring and practicing literacies at this international ecosystem of Juárez and El Paso. Research into literacies in a multicultural and linguistic area like this one reveals complex and fragile organisms. The array of stories is complex. They narrate participants' experiences of where they grew up, went to school, learned to read and write, and practiced electronic literacies. Literacy ratings, per capita income, health, quality of life standards, border patrols and walls all serve to erode the fragile ecosystem that has developed over the last five hundred years; these factors obscure the ways those who live here are learning to be traditionally and electronically literate.

Generaciones shares a diversity of experiences that contributed to who an individual was, became, and is still becoming on this understudied border. In this regard I want readers to feel they know the participants in this study, and see the participants as they make life choices, whether they are from Mexico, the U.S., or move back and forth across the border on a daily basis. I would like readers to see that the choices they make, the choices others make for them, and the opportunities that they themselves create can influence the amazing places they find themselves in: geographically, socially, educationally, psychologically, financially, statistically.

Several participants in *Generaciones* made me keenly aware that the first literacy for those who are beginning a new life or find themselves impoverished is one that ensures a roof over their head and food on the table. For these, the need for shelter and provisions, in turn, suggests a means of earning income. Where we are born and our economic standing go a long way in determining what we are able to do next in life, and what our next *Generación* can do. Some of the participants' grandparents and great-grandparents had limited educations because they started working at a young age in order to survive and allow others in the family to become more educated and create a better life. Yet the stories in *Generaciones* also show that such hopes did not always work in a neat cause-effect process, even today. According to The El Paso Times, many immigrants swap one version of poverty for another. Minimum wage is $5.12 an hour in El Paso, and in Juárez it is $4.52 an hour. Ironically, on the same page, the article "English Bolsters Success, Earnings" informs us that learning English will increase earnings for those living on the border (Reveles Acosta). The difference is a

whopping twenty cents an hour! Some local leaders still believe that English literacy will "launch" them into higher economic realms.[1]

In *Generaciones,* we observe participants who grew up in the 1920s, 30s, and 40s, but experienced electronic literacies since the 1980s like a nuclear explosion: Technologies and the literacies enveloping them hit and then hung like a mushroom cloud, and now remain in ever-replicating half-life in societies, cultures, and families. These participants' observations and experiences are important because we can observe the before, during, and evolving effects of traditional and electronic literacies in their lives.

I started my investigation looking into statistics on literacy and income and how they trickled down and affected this area. This voyage led me to no startling conclusion. The border scores low in both areas. I challenged the criteria, and found that the data could and should be challenged, especially in 2009: This is the 21st century in a first-world country! Our notions of literacy inform us that it is a plural concept (literacies rather than literacy) and that literacies must include the languages of this country, especially Spanish as the first alphabetized and formally taught language; electronic literacies; even "illegal" ones.[2] I ended with the realization that literacy on this border is perhaps more complex than anywhere else in the United States and Mexico because of its five-hundred-year-old confluence of border crossers and settlers. The complexity was more than I had imagined.

I looked next at how Latinos and Latinas on the U.S.-Mexico border learned literacies of the spoken, written, and electronic types from remote *colonias* in Mexico to urban areas in Juárez and El Paso. These interviews and surveys required much of my time, forced me to be pushy (not a normal part of my nature), and asked me to depend on the generosity of friends and students to participate in extra credit and classroom projects. I quickly realized that as the literacy statistics and personal narratives came in—arriving in a *dissoi logoi* clash of competing cultural, linguistic, and ethnic interpretations of the societies we live in—that literacy must, in the case of the El Paso-Juárez border, take into account complex social, historical, geographical, and personal qualities. Anything else is a social and political lie. As a person I realized this, but as an academic I realized I still needed to lay out the arguments of what I experienced.

The concepts and terminologies established in the introduction to *Generaciones* and developed in its chapters are continuations of concepts and conversations developed by

[1] Refer to data on average income in Introduction; the two sources do not agree.
[2] See Tomas Mario Kalmar's Illegal Alphabets and Adult Biliteracy: Latino Migrants Crossing the Linguistic Border.

inspirational researchers, from Cooper and Brandt to Selfe and Hawisher. Their experiences and discoveries have been invaluable to this research; they are the broad shoulders I stood on to see a panorama of literacy practices. I discovered that this particular ecosystem had uniquely evolved several of the concepts they had pioneered and created new ones. The new and refined terms helped me share what I discovered in the surveys and interviews and bring to light significant trends in previous chapters. The terms may, I hope, help other researchers to see their research in new ways to keep opening horizons of experience we have previously been unable to appreciate.

In the remainder of the conclusion that follows, I explore quantitative results participants shared about sponsorship and gateways in their lives because this data is important in indicating where and how they practiced electronic literacies or not.

These participants are a unique group in that they are all of Latino/a ancestry. The Participants' Ethnic Heritage Table displays how participants view their ancestry, and the Participants' Racial Background Table shows the terms participants used to classify themselves.

Participants' Ethnic Heritage Table

Ethnic Heritage	Frequency	Percent (%)
Mexican	20	31.7
Hispanic	16	25.4
Other	4	6.3
Mexican-American	5	7.9
Spanish	2	3.2
Mestizo	2	3.2
N/A	14	22.2
Total	63	100

Many on the border here classify themselves as white, because they are light-skinned rather than dark. While participants did not use the terms "Latino" or "Latina," I believe the combination of these two responses emphasize the use of this term.[3]

[3] Please see the introduction for a more extended discussion of the terms Latino/Latina.

Participants' Racial Background Table

Race	Frequency	Percent (%)
Caucasian/White	16	25.4
Hispanic	33	52.4
Mexican	6	9.5
Mexican-American	3	4.8
Blanca	1	1.6
N/A	3	4.8
Human	1	1.6
Total	63	100

When it came to participants' religious backgrounds, most are Catholic, not surprising considering the prevalence of Spanish Catholicism in this region (see Participants' Religious Background Table). The Catholic Church has served as a traditional literacy gateway, as Bibles are frequently referred to by participants, and churches are shared community spaces for reading and other activities.

Participants' Religious Background Table

Religion/denomination	Frequency	Percent (%)
Catholic	33	52.4
Roman Catholic	7	11.1
Católico	3	4.8
Other	3	4.8
Christian	3	4.8
None	2	3.2
N/A	10	15.9
Muslim	1	1.6
Mormon	1	1.6
Total	63	100

In *Generaciones* I realized the undeniable role that traditional literacy serves in developing electronic literacies. Heim observed that traditional "[L]iteracy, the skills of reading and writing, have come to symbolize a higher understanding of reality" (24), and Reinking, McKenna, Labbo, and Kieffer extended this understanding, asking, "So, the critical question we now face as we move into the 21st century is not simply how digital technologies will affect conceptions of literacy and how it is achieved, but also a larger, more self-reflective, question: How does any technology of reading and writing interact

with literacy?" (xvii). Bruce concludes with the realization that "what we are coming to know and appreciate more consciously now is that literacy and technology cannot be divorced from one another" (xxviii). While traditional literacy is a key to electronic literacy, *Generaciones* revealed that the way participants access, learn, and practice electronic literacies is undergoing dynamic changes.

Puentes: **Sponsorship**

Sponsors of literacy became a compound concept in *Generaciones* because of the subtleties embedded within and around them. I recognized this early on, but the complexity revealed itself as I became part of their experiences, as I had also been a sponsor and also recipient of sponsors' actions. Sponsors of literacy took on the role of individuals at a masked ball: The same persons became other, playing out a role indelibly a part of them, but one not easily recognizable because their masks usually appear in private places and times, such as micro-literacy zones in the household. The masks are everywhere, but closely tied to personal spaces and relationships. It was only through the qualitative approach of this research that multiple masks became evident.

A clear delineation exists between direct and indirect electronic literacy sponsorship. An example that surfaced with several participants in *Generaciones* was a digital camera they received as a gift. A camera is a gift that becomes a form of indirect electronic literacy sponsorship if the gift-giver does nothing to train the participant to use the camera. Additionally, a digital camera has other implications, such as a need for a personal computer to download the images and software to manipulate them. Notice that the computer and software are potential areas for someone to be an indirect electronic literacy sponsor by giving them as a gift. Additionally, if the recipient needs to learn to work with the computer and software, there is potential for direct sponsorship.

The most difficult sponsorship to talk about is psychological sponsorship; the masks sponsors wear can positively and negatively affect participants. These became "micro-tear zones," because in most instances they create an opening in the ecosystem, one experienced both positively and negatively by participants. In *Generaciones* the participants, especially students (who I was able to spend more time with), made me aware of the positive and negative psychologies we impart on participants. A positive micro-tear zone occurred with Gabriela Valdez in Chapter 5, who had the class laughing when she said, "ya finishiamos," in order to indicate the lesson was done, in Spanglish.

This same example could of course have the opposite effect on others; the laughter easily could be taken as ridicule. Some of my student-participants recalled negative comments from teachers from more than a decade ago. These students were successful, students about to graduate or already graduated, but they wanted to return to these former sponsors and tell them off, show them their success.[4] Others indicated the important role some sponsors had in motivating them to succeed. Words, looks, and attitudes really do affect all of us, some in significant ways.

The psychological became a significant theme in the shared stories, which were private and emotional. Thus the micro-tear zone became extremely useful as a powerful tool to help me see and understand such moments. A micro-tear zone is unique in that the results are internalized by participants and surface in varying ways throughout their lives. While many composition teachers are aware of concept thanks to research in the field over the last three decades demonstrating the impact of oral and written comments on students' attitudes, family members can be less aware of the impact of comments on others; significantly, family members are often in contact with others in the family more frequently than teachers. Several participants help us observe the internalized consequences of such experiences: Victoria Montoya in Chapter 1 and Elisa Alvarado in Chapter 5, who both recalled being hit by a teacher, and Natalia Jiménez in Chapter 4, who wanted to go back to tell her teacher off and show her how smart she really was. We need to be aware of these experiences so we can act more cautiously, whatever mask we may wear, and instruct others how to let go of negative experiences that may be bottled up.

When it comes to electronic literacies, money is a significant variable. Unlike traditional literacy, which is embedded in schools and libraries as well as in the static nature of the book (it always remains the same book[5]), electronic literacy is an expensive and time-sensitive investment. Buying technology depends on what a family can afford or what the breadwinners feel is a sound investment. The Sponsorship and Cost Table shows

[4] Their stories also brought back positive and negative mtz experiences of my own involving art. The positive mtz occurred when a piece of art I had painted and manipulated with cut paper art shapes to create a modern neighborhood won an award and was placed in a local museum. Another year, as an example of a negative mtz, a teacher made clear to me I had no talent and was taking away from those with talent. Needless to say, I did not return to art and visual design until 1995 when I was equipped with a computer lab and digital editing software for my composition classes. It was then that I began to see life visually again. I still remember that teacher's name and wouldn't mind chatting with him. ;)

[5] I do not wish here to discuss the nature of situational and sociocultural readings of the same book. I agree with the socially constructed nature of reading.

participants' responses to compound questions, such as the story of buying a computer, who bought it, and how much the computer cost. Of the fifty-five participants who answered this question, almost half (25) said they purchased their own computer. Next were the husband (9), father (7), and mother (3).

Sponsorship and Cost Table: Who Bought Technology? How Much Did They Spend?

Purchased By	Number	Cost (Average in U.S. Dollars)	Total Average (U.S. Dollar)
Self	25	28740/21=$1,369	
Husband	9	9300/6=$1,550	58140/40=$1,453.5
Father	7	7000/5=$1,400	
Mother	3	4700/3=$1,567	
Parents	3	3300/2=$1,650	
Daughter	2	2100/1=$2,100	
Sister	1	2000/1=$2,000	
Uncle	1	N/A	
Employer	1	N/A	
Mother-in-law	1	1000/1=$1,000	
Father-in-law	1	N/A	
Son-in-law	1	N/A	

Column three in the Sponsorship and Cost Table indicates that the average cost of $1,369 was calculated by dividing $28,740 by 21. Some respondents who purchased a computer themselves did not provide a purchase price. The rest of the numbers were calculated using the same formula. In column four, the total average, $1453.5, was calculated by dividing $58,140 by 40. In Chapters 1-5 we discovered that many of the participants and their families made the types of commitment the Sponsorship and Cost Table reveals.

An important realm where we need to focus on electronic literacies is in the minimum wage workplace because these are often the types of employment participants find themselves in. It is in these minimum wage settings that a complex of indirect and direct sponsorship takes place. Many employers know that employees need to develop electronic literacies, such as a cash register operator at a fast food chain, where the employees must know how to read and how to input orders, make changes to orders, and make special orders. By accomplishing these tasks, they may develop a competency that leads them to more complex uses of technology that demand

additional literacies. The business becomes a direct sponsor by training workers to use the new technologies. In some cases employees remain at a basic level, making orders as described and nothing more. In others, the exposure to what I have termed "cubbyhole gateways" in *Generaciones* leads employees to know they can do more after they mastered basic technological literacies that had earlier been too difficult or unavailable.

While we serve as direct and indirect sponsors of literacy to others, we also sponsor ourselves. This takes form in direct, yet subtle ways. A sponsorship result that stood out in *Generaciones* is that participants sponsored themselves more than anyone else. Self-sponsorship is a form of direct sponsorship I became aware of only after analyzing the quantitative data from the survey. In Sponsorship Table 1, nineteen of forty-nine participants said they self-sponsored by teaching themselves how to use e-mail; sixteen noted that their direct sponsors were friends and family, and fourteen mentioned teachers.

Sponsorship Table 1: Who Taught You about Email?

Taught By	Number
Self	19
Friend	10
Some other instructor	5
Professor	3
Teacher-Not specified	2
Teacher-High school	2
Teacher-Junior high school	1
Colleague	2
Wife	1
Son	1
Kids	1
Sister	1
Technical support center staff	1

Sponsorship Table 2 asked about learning to use the Web for research. Of the forty-three participants, eighteen indicated they were taught by a teacher, fifteen indicated they taught themselves, and the remaining ten were directly sponsored by a family member or friend.

Sponsorship Table 2: Who Taught You about Doing Research on the Web?

Taught By	Number
Self	15
Teacher-High School	7
Friend	6
Teacher-Not specified	5
Professor	5
Daughter	1
Husband	1
Wife	1
Cousin	1
Librarian (teacher)	1

Sponsorship Table 3 asked about participants' use of computer games. Of the forty-five participants who indicated they had played video games, twenty-six had learned on their own, sixteen were directly sponsored by friends or family, and only three were directly sponsored by a teacher. This latter result is unsurprising, yet we need to explore more the roles that gaming will play in the classroom; I suspect that gaming today is at the point that classroom computer use was in the mid 1980s. As teachers we are generally untrained in how to use games and gaming in our classrooms to teach writing, math, science, library literacies, etc.

Sponsorship Table 3: Who Taught You about Playing Computer Games?

Taught By	Number
Self	26
Friend	7
Brother	2
Daughter	2
Sister	2
Teacher-Not specified	1
Husband	1
Relative	1
Teacher-Elementary school	1
Professor	1
Brother	1

Sponsorship Table 4 enquired about participants' use of oral presentation slides like PowerPoint. Of forty-seven participants who indicated they had prepared some form of presentation, twenty-eight teachers directly sponsored participants, twelve self-sponsored, and seven were sponsored by family or friends. This is not surprising given that such literacies are frequently practiced in school and at work.

Sponsorship Table 4: Who Taught You about Preparing Oral Presentation Slides (PowerPoint, etc.)?

Taught By	Number
Self	12
Friend	6
Teacher-High school	5
Boss	1
Teacher-Not specified	13
Professor	8
Relative	1
Some other instructor	1

Sponsorship Table 5 reveals that participants overwhelmingly taught themselves to take and/or manipulate digital images. Of the thirty-two who responded to this question, seventeen indicated they were self-sponsors, nine that a family member or friend had sponsored them, and six that a teacher had taught them.

Sponsorship Table 5: Who Taught You about Taking Digital Photographs or the Manipulating of Photographs?

Taught By	Number
Self	17
Friend	6
Professor	4
Daughter	1
Son	1
Brother	1
Tech Service Guy	1
Best Buy Associate	1

Sponsorship Table 6 surprised me by the number of participants who indicated they make greeting cards. On occasion, they described this practice in detail. Of the thirty-three who responded to this question, twenty-five indicated they were self-sponsors, six that a family member or friend had sponsored them, and, not surprisingly, only two said a teacher had taught them. This type of software and the type of communication it involves is less "academic" and consequently less likely to be used in the classroom. However, as a genre of technological literacy, it is one of these spaces that we need to explore in more depth in our classes because it requires several literacies, such as digital, textual, and print manipulation.

Sponsorship Table 6: Who Taught You about Making Greeting Cards?

Taught By	Number
Self	25
Friend	3
Wife	1
Roommate	1
Professor	1
Sister	1
Some Other Instructor	1

Sponsorship Table 7 addressed who taught participants to download music from the Web.[6] Of the thirty-four participants who responded to this question, sixteen indicated they were self-sponsors, and, not surprisingly, only one said a teacher was the sponsor, again considering this is not an activity frequently taught or used in school. Seventeen indicated that a family member or friend had directly sponsored them.[7]

[6] Downloading music from the Internet is a relatively new activity: Napster started on June 1, 1999 ("Napster"), and iTunes began as Sound Jam in 1999 (Smith). Now a host of other sites sell songs for $0.99 each.

[7] It is increasingly common to read about university students being sued for illegal music downloads. One recent article indicates that "At least 500 university students nationwide have paid settlements to avoid being sued" (Bratton).

Sponsorship Table 7: Who Taught You about Downloading Music from the Internet?

Taught By	Number
Self	16
Friend	10
Brother	3
Cousin	1
Son	1
Kids	1
Professor	1
Wife	1

Sponsorship Table 8 asked who taught participants to design Web sites. Of the twenty who responded to this question, eight indicated they were self-sponsors. Only two indicated that a family member or friend had directly sponsored them and ten said a teacher had taught them. This seems fitting as web page creation is frequently taught in the classroom.

Sponsorship Table 8: Who Taught You about Designing Web sites?

Taught By	Number
Professor	8
Self	8
Friend	2
Teacher-Not specified	2

Sponsorship Table 9 asked participants if they had downloaded software from the Internet, and if they had, who taught them. Of the thirty-two who responded to this question, none said they were taught by a teacher! This is revealing because it shows that purchasing or downloading software and music in school settings is not often practiced. Most likely this is because IT managers prohibit such practices. Twenty-three were self-sponsors, and nine indicated a family member or friend had directly sponsored them.

Sponsorship Table 9: Who Taught You about Downloading Software from the Internet?

Taught By	Number
Self	23
Friend	6
Husband	1
Wife	1
Kid	1

Sponsorship Table 10 asked who sponsored participants to create multimedia projects. Of the eighteen who responded to this question, the majority (eight) said that a teacher had directly sponsored them. This seems logical because of the multiple electronic literacies needed to produce such projects, yet I am surprised that this number is not higher. This leads me to believe, because seven participants self-sponsored, that participants bring together their multiple traditional and electronic literacies in order to produce these projects. Only two indicated that a family member or friend had directly sponsored them.

Sponsorship Table 10: Who Taught You about Creating Multimedia/New Media Projects?

Taught By	Number
Self	7
Teacher-High school	3
Professor	2
Friend	2
Teacher-Not specified	2
Teacher-Junior high school	1
Boss	1

In Sponsorship Table 11, of the thirty who responded to the question of who taught them to participate in chat rooms, one was taught by a teacher. While this number is low, I believe this number will grow as more teachers use chat rooms as a part of their classes. An overwhelming fifteen participants taught themselves how to use chat rooms, and fourteen were directly sponsored by a family member or friend. This last sponsorship does not surprise me because I suspect many individuals invite their friends and family to use such sites.

Sponsorship Table 11: Who Taught You about Participating in Chat Rooms?

Taught By	Number
Self	15
Friend	9
Cousin	2
Sister	2
Professor	1
Wife	1

The question for Sponsorship Table 12 asked who taught participants about designing and publishing printed documents. This question seems especially relevant because it reflects a nexus between traditional literacy, with its residual hard copy culture, and electronic literacy. The ability to perform these combined literacies is essential to function in most school, work, and home settings. Of the thirty-one who responded to this question, twelve were taught by teachers, twelve self-sponsored, and seven were directly sponsored by a family member or friend.

Sponsorship Table 12: Who Taught You about Designing and Publishing Printed Documents?

Taught By	Number
Self	12
Teacher-Not specified	8
Friend	3
Professor	2
Daughter	1
Colleague	1
Some other instructor	1
Teacher-High school	1
Kid	1
Wife	1

Sponsorship Table 13 also reflects a nexus with traditional literacy and with residual hard copy culture. In this case participants are aware of "correctness" in traditional literacies as displayed by proper spelling, grammar and vocabulary. However correctness has now been complicated by electronic media. The question highlights how traditional literacy practices and needs become synthesized with electronic

software. Participants must be literate in many ways in order to even work within these new hybrid manifestations. Of the thirty-nine who responded to this question, twenty-six self-sponsored, eight were taught by teachers, and five were directly sponsored by a family member or friend.

Sponsorship Table 13: Who Taught You about Consulting Online Dictionaries, Thesauruses, Language Translation Software, Bibliography Software?

Taught By	Number
Self	26
Teacher-Not specified	4
Professor	2
Friend	4
Teacher-High school	2
Son	1

The Summary Data of Sponsors Table highlights that participants overwhelmingly self-sponsored, bringing several questions to the forefront with no clear answers: Are participants self-sponsoring because they lack educational opportunities? Do participants fear training in educational settings? Do teachers in schools simply not offer enough training to students?

Summary Data of Sponsors Table

Type of Sponsor	Number
Self-Sponsor	221
Family/Friend	120
Teacher	107

My hunch is that most participants do not learn from teachers because they simply do not offer formal training opportunities. Many teachers assume students already know how to use technologies, that they will learn from peers, that they will drop the class, or, even worse, that they will drop out of school. The result is that the participants in *Generaciones* overwhelmingly relied on themselves, family, or friends to learn electronic literacies.

The next discussion of gateway data highlights that, ironically, most participants learned electronic literacies in school settings, yet as the sponsorship data above highlights, teachers were not the ones directly sponsoring them.

Puentes: Technology Gateways

My impression is that much of the literature on technology gateways conflates "gateway" and "sponsor," thus overlooking important subtleties. I agree with many researchers that the factors and variables are indeed intermixed when considered in their ecosystems. I may be the one who leans too atomistically in my analyses and uses of these concepts. I realized, nevertheless, that *Generaciones*' participants necessitated evolved tools to see where and how they learned. This simple insight required that I reorganize, expand, and create classificatory terms. "Technology gateway" was one such concept needing some tweaking. I came to see technology gateways in their spatial manifestations, not omitting that it is people who occupy gateways and bring them to life, but, nevertheless, the roles they occupy are as participants and sponsors.

Technology gateways are "where" technology is and, just as importantly, participants' "awareness" that technologies exist in a place. For example, many in the El Paso and Juárez community are aware that computer labs exist on the UTEP campus. However, unless they are students, they cannot use the technologies available within the UTEP labs. Similarly, Gabriel Aragon from Chapter 5 was aware of the technology gateway his father had created in his home, but he was ostensibly not allowed to use the computer (yet he managed to use it despite his mother's protests). Cristina Gonzalez from Chapter 3, who was aware of her grandfather's traditional writing paraphernalia, would explore these instruments whenever she visited his home. My own children are aware that my computer exists in the garage, but they cannot use it without permission; they are aware of video arcades at the mall, but know that without their parents and money they cannot explore them. I am aware of servers on campus and elsewhere, but without permission to access them, I cannot use them. If we have awareness of and access to such sites, my research suggests that we have better opportunities to experience varying levels of sponsorship, as the last section on sponsorship revealed. Access and sponsorship suggest more advanced traditional and electronic literacies for participants.

Consequently, the *Generaciones'* survey queried participants about the actual physical locations where they learned electronic literacies. The patterns that emerged are shown in each of the following thirteen gateway tables. Because three patterns revealed themselves in each case, I summarize this data into three narrower categories—home, school, and work—at the start of each table.

Gateway Table 1 reveals that participants learned to use email mostly in school settings, while Sponsor Table 1 divulged that only fourteen of forty-nine total participants said teachers taught them. Despite the setting, then, many participants learn to use email from family, friends, and by self-sponsoring.

Gateway Table 1: Where Did You Learn about Email?
Home: 15 School: 23 Work: 8 Total: 46

Place	Number
Home	13
College class	8
School-Not specified	8
Junior high school	3
Senior high school	3
Military	2
Friends' home	1
Relative's home	1
UTEP class	1
Workplace	6

Gateway Table 2 shows that school settings dominated (twenty-six of thirty-nine total) where participants learned to do research on the Web, while Sponsor Table 2 revealed that eighteen of forty-three participants said a teacher taught them in these settings.

Gateway Table 2: Where Did You Learn To Do Research on the Web?
Home: 8 School: 26 Work: 5 Total: 39

Place	Number
College	9
High school	8
School-Not specified	5
Workplace	5
Home	5
UTEP	3
Friend's home	3
University	1

Gateway Table 3 focuses on where participants learned to play computer games. Not surprisingly, twenty-two of thirty-six said they learned gaming at home. Surprisingly, twelve indicated they learned at school! Sponsorship Table 3 revealed that only three of forty-six participants said a teacher taught them. The implication is that participants do play games in school settings, yet gaming is not explicitly taught pedagogically.[8]

Gateway Table 3: Where Did You Learn To Play Computer Games?
Home: 22 School: 12 Work: 1 Total: 36

Place	Number
Home	18
School-Not specified	4
High school	3
College	3
Relative's home	3
School-Elementary school	2
Workplace	1
Military	1
Friend's home	1

Not surprising in Gateway Table 4 is that thirty-four of forty-nine participants learned oral presentation literacies using PowerPoint in a school setting, and twenty-eight of

[8] My son's best friend's dad is an engineering professor. He has all the latest gaming systems and games. Moreover, he regularly has social computer gaming gatherings at school and at his home for his graduate engineering students.

forty-seven said a teacher instructed them (Sponsor Table 4). Such teacher sponsorship is closer to what I believe should be the norm. If we leave such learning to friends, family, and self, inevitably much of the population will experience *baches*, not *puentes*.

Gateway Table 4: Where Did You Learn To Prepare Oral Presentation Slides (PowerPoint, etc.)?

Home: 7 School: 34 Work: 8 Total: 49

Place	Number
School-Not specified	11
College	9
Workplace	8
High school	7
UTEP	6
Home	5
University	1
Friend's home	2

Despite the wide use of programs like PowerPoint for presentations, Gateway Table 5 demonstrates that most participants learned to take photos or manipulate images in their homes. The implications are that such practices are not supported in school settings, and from what I have informally observed, most participants in school and workplace settings tend to use clip art in their deliveries.

Gateway Table 5: Where Did You Learn To Take Digital Photographs or Manipulate Photographs?

Home: 15 School: 5 Work: 3 Total: 25

Place	Number
Home	14
Workplace	3
UTEP	3
Party	1
Friend's home	1
University	1
College	1
Best Buy	1

Gateway Table 6 understandably highlights that the home is a usual gateway for making greeting cards, with a total number proportionate to those who self-sponsor (see Sponsorship Table 6).

Gateway Table 6: Where Did You Learn To Make Greeting Cards?
Home: 22 School: 4 Work: 1 Total: 27

Place	Number
Home	19
UTEP	2
Friend's Home	2
School-Not specified	2
Workplace	1
University dormitory (home)	1

Gateway Table 7 communicates that nineteen of twenty-five participants downloaded music from home. This is not surprising since most schools do not allow students to illegally download music and/or potentially contract computer viruses.

Gateway Table 7: Where Did You Learn To Download Music from the Internet?
Home: 19 School: 6 Work: 0 Total: 25

Place	Number
Home	16
Friend's home	3
College	3
High school	1
Military (school)	1
School-Not specified	1

Gateway Table 8 reveals that schools are where students use the Web the most, and Sponsor Table 8 indicated that ten of twenty participants said a teacher instructed them in such settings.

Gateway Table 8: Where Did You Learn To Design Web Sites?

Home: 2 School: 16 Work: 1 Total: 19

Place	Number
UTEP	9
College	5
Home	2
Military (school)	1
School-Not specified	1
Workplace	1

Similar to where participants download music, Gateway Table 9 shows they also chose home as the gateway to download software. I believe this is more a school restriction than any other.

Gateway Table 9: Where Did You Learn To Download Software from the Internet?

Home: 12 School: 7 Work: 1 Total: 20

Place	Number
Home	12
College	3
UTEP	3
Workplace	1
Military (school)	1

The responses shown in Gateway Table 10 match participants' responses to Sponsor Table 10: School settings are where they learned to create their projects and they were sponsored for the most part by teachers.

Gateway Table 10: Where Did You Learn To Create Multimedia/New Media Projects?

Home: 2 School: 9 Work: 3 Total: 14

Place	Number
UTEP	3
Workplace	3
Home	2
School-Not specified	2
College	2
High school	1
University	1

Gateway Table 11 shows that the gateways where participants accessed and became involved in chat rooms are fairly close, with home at fourteen and school at nine. Sponsor Table 11, however, indicated that only one of the thirty participants was taught by a teacher.

Gateway Table 11: Where Did You Learn To Participate in Chat Rooms?

Home: 14 School: 9 Work: 9 Total: 23

Place	Number
Home	10
College	5
School-Not specified	2
Cousin's home	2
Friend's home	2
UTEP	1
Military (school)	1

While sponsorship for this type of project was well balanced (Sponsorship Table 12), Gateway Table 12 also indicates that the gateway of choice for learning to design and print hard copy documents is school.

Gateway Table 12: Where Did You Learn To Design and Publish Printed Documents?

Home: 6 School: 15 Work: 4 Internet Café: 1 Total: 26

Place	Number
School-Not specified	7
Home	6
Workplace	4
College	3
High school	2
UTEP	2
Internet café	1
University	1

Home and school were the overwhelming choices for practicing literacies such as using online dictionaries, as Gateway Table 13 illustrates. This could be because they are where most participants must practice and need such literacies.

Gateway Table 13: Where Did You Learn About Consulting Online Dictionaries, Thesauruses, Language Translation Software, and Bibliography Software?

Home: 12 School: 18 Work: 4 Total: 34

Place	Number
Home	12
School-Not specified	9
Workplace	4
College	4
High school	3
UTEP	2

The Summary Data of Gateway Tables pulls together the results from all thirteen gateway questions. It reveals that school is where most participants learned and practiced electronic literacies. In the early chapters of *Generaciones* we saw that few individuals had a computer at home and most saw it as an extension of work. In later chapters, computers became more visible and used for multiple purposes.

Summary Data of Gateway Tables

Place	Number
School	184
Home	156
Work	47

Baches: Final Thoughts

The most prominent *baches*, or potholes, that stood out in the survey data on sponsorship and gateways is that teachers have played a minor role in sponsoring participants to learn new electronic literacies, yet it is overwhelmingly in school settings where participants learn new literacies (with home a close second). This dynamic is both inspiring and alarming; it is exciting because participants are learning on their own and through dynamic social networks of friends and family.

Yet it is disquieting for two reasons that stand out at this point. First, many people lack access, exposure, or motivation (or are intimidated) to seek out places and people who can assist them in their own struggles to learn new electronic literacies. Second, if the pattern follows nationally, our youth will be learning alone, self-sponsoring, or with instruction from peers. This is, perhaps, less significant for the 1920-1985 *generaciones,* and more important for younger ones who navigate the great open spaces of the Web and who come into contact with every type of predator and outlaw possible, ranging from MySpace and Facebook predators and pornographers to unscrupulous online sellers. Because I am the father of twelve-year-old twins, I am alarmed. I must assume a new direct sponsor role in teaching my children about these predatory practices. In this regard I must teach them to rhetorically read landscapes, to feel open to electronic exploration, but to recognize 21st century electronic criminals. For example, in my new direct sponsorship I must set the computer (and TV) sites with parental controls, which are only partially useful at best, and overly limiting in others. I must, moreover, instruct them how to read "hooks" or invitations from such predators, and to trust me to intervene when they are in doubt. Chapter 5's Gabriel Aragon was the only participant to mention that his mother was concerned and cautioned him about some of these dangers.

There has been a great deal of discussion regarding the connection between literacy and economic success. I disagreed with this in the introduction, where I argued that

literacy values are prejudiced, as are the types of companies and jobs that come to this Latino/a border community. The low per capita income in El Paso makes clear that economic mobility has a lot of *baches*. This issue is not a single *bache*, something clear like a dichotomous digital divide. This potholed technology road *is* traversed by those who cannot travel on better, faster roads, who may be "unaware" of what faster roads are like. Tyner tells us that "Youth are wired. They daily use all manner of electronic media at home and in their neighborhoods. Students who do not have computers at home encounter them at friends' houses, in stores, libraries, video parlors, and on kiosks in public spaces. In contrast, digital tools are uncommon and precious in the average classroom" (70). The data in *Generaciones* supports this, but I also believe that for each one who does "have" access, another thousand do not.

I enter into the conversation of "having and not having" through an example of two students from a freshman class I taught last semester in which we examined murals in various ways: visiting them, viewing them digitally, and watching them on video. One student, Mario, who has no computer and was unable to work from home or the other "multitudes" of "free" wireless locations, had to come to campus to wait to get a computer station, and then hope it had the software he needed to edit text, images, video, and post his work to the Web in his developing webfolio. He worked hard on his projects because his father was involved in early mural painting in El Paso in the 1980s and he was able to share many firsthand insights into the early movement and painters here. On the one hand, he is aware of the technology an open gateway on campus offers him, but other socioeconomic factors prevent him from using these technologies: he works full time, is an involved father of two, and though he creates time in his schedule, he cannot create time to wait in line for a computer on campus. As importantly, he cannot afford a home computer, much less a laptop with wireless connectivity.

Another student from the same class, Miguela, has ideal mobile micro-literacy zones, including a digital camera and a laptop with wireless. She can work anywhere on campus, at home, or wherever wireless is available. She can create work in more places, show others her work easier, get feedback and criticism, and move about easier. Money has allowed her to access and practice electronic literacies with fewer challenges. The difference between these two participants, I stress, is that Mario is on the *camino de tierra lleno de baches* (he gets by on frayed bootstraps) while Miguela cruises on a superhighway. Mario experiences one bump after another. Miguela has opportunities laid smoothly ahead of her. While Tyner argues that "there is some evidence that new technologies hold promise to break down the barriers of social inequity" because "they enhance the curriculum and expand the resource base outside

the four walls of the classroom by providing teachers and students with community mentors, information, and tools," my experience has shown the opposite (86). In the end, the wonder of wireless is playing out to maintain superhighways and *caminos de tierra llenos de baches*. The words of Chapter 4 participant Corina Jiménez's *bache* perspective reflect the technology challenges for parents and educators:

> I think the educational system places much value on computer use and tends to take it for granted that most people can afford a computer. The reason school can be difficult if you don't own a computer is because of assignments in class that require you have a computer. For those who cannot afford one they have to make special trips to school just to use a computer or have to use a relative's or friend's computer. I think that teachers and professors have to stay on top of their students or even two steps ahead of them and learn the newest updates, software, websites that sell papers so that they are not fooled by students.

Corina's reflection is important because she keenly observes that the educational system (as much as the workplace system) places a lot of value on electronic literacies, yet no school states what students should know, should have access to, or should own to be competitive and successful. The other issue, teacher technology preparedness, is indirectly sponsored by schools when they supply teachers with a computer and basic software. Direct sponsorship at schools, which would help teachers to be "a few steps ahead" of their students, do not exist. The sponsorship table results in this conclusion make this point clear.

While teachers are affected by their lack of both technology access and sponsorship needed to be competitive in their teaching, we also see an ominous trend developing in this country for students. While old technologies were bought by schools districts—sewing machines, shop class machines, even supplied or rental band equipment—more and more students are expected to purchase newer technologies to support the demands from institutions of higher education. The demands are not as evident in economically stronger areas of the country. However, in weaker areas like the borderlands, such purchases are difficult, especially for families. As noted in the introduction, the average family in El Paso makes $15,630 annually. With more and more schools going wireless, the implication is that students will be required to purchase the necessary wireless laptops to work in these modern settings. The good news is the bad news: No longer do we have crowded computer labs full of cables. Students can sit anywhere and have access to their work, as they go into more debt, as Bill Gates retires at fifty-eight, the wealthiest man in the world. Of course in these newly

improved wireless campuses, students are expected to pay for their hard copy black-and-white and color printouts. The *baches* keep those with less technology at their fingertips moving slower, or, in too many untold stories, stalled by the side with limited opportunities to even get into the slow lane.